

B.S.B.I. NEWS

April 1978
No. 18

Edited by EDGAR D. WIGGINS
Cowpasture Farm, Felixstowe, Suffolk IP11 9RD



Tagetes minuta

SPECIALISTS AND COUNTY RECORDERS (see Membership List pp. 40-42)

At its meeting on 21st February 1978, the Records Committee made the following appointments :

Recorders :

VC 5	S. Somerset	Capt. R.G.B. Roe
VC 7	N. Wiltshire	Mrs Swanborough, Amberley, Pew Hill, Chippenham.
VC 38	Warwickshire	Mrs P. Copson, The County Museum, Market Place, Warwick.
VC 70	Cumberland	Dr. D.A. Ratcliffe

Thanks are due to those members who previously acted as Recorders for these Vice Counties serving the Society long and well.

Specialists :

Vice-County boundaries: R.J. Pankhurst, who is willing to help anyone wishing to consult the original maps kept at the British Museum (Natural History).

Biographical details of British botanists: D.E. Allen is willing to assist D.H. Kent.

Mr. R.W. David, one of the referees for *Carex*, with a special interest in *C. elongata*, the *C. muricata* aggregate, and sections *Digitatae*, *Montanae*, *Limosae*, and *Distantes*, has moved house. His address this season, for parcels or other communications, will be CLARE HALL, HERSCHEL ROAD, CAMBRIDGE CB3 9AL.

EDITOR'S NOTE

No Editor could wish for more appreciative readers or helpful contributors than those of *BSBI News*. An ample supply of good 'copy' — legibly written or typed — and submitted well before deadline, makes the job a pleasure. It is most gratifying to see so much excellent material continuing to flow in; no worry about filling the pages, rather the reverse. More and more members are finding they have something worthwhile to report or comment on. We want to print as many communications as possible. This *will be* possible if contributors remember that the operative word in our title is 'News'. It means that items should be topical, brief, and concisely written. Those tempted to submit a mini thesis are reminded that the 'Short notes' section of *Watsonia* exists precisely for such.

Concise writing is essential; most writers use too many words to express what they have to say. *BSBI News* is no medium for florid prose or chatty dissertation. Of course, the Editor can do some 'pruning' and may have to, if space is at a premium. But it is far better if authors discipline themselves in this matter of word-economy; the Editor, though, will always gladly help.

E.D.W.

APOLOGIES — BSBI NEWS 17

We apologise for the unfortunate transposition of titles which appeared on p. 25 of this issue and for the wrong type face of the heading to Mr. Jackson's letter on p. 29.

HON. GEN. SECRETARY'S NOTES

B.S.B.I. Emblem

Council adjudicated on a plant for B.S.B.I. emblem from those proposed by members (*B.S.B.I. News* 15), and selection was narrowed to a choice between Bluebell (*Endymion non-scriptus*) and Cowslip (*Primula veris*) with Grass of Parnassus (*Parnassia palustris*) as runner-up. The final choice will be made from drawings of the plants as an emblem design. It is planned then to use the chosen emblem on letterheads and our publications, and possibly on a tie and brooch.

Since we discontinued using the obviously unsuitable *Victoria regia* we have been unable to comply with requests for our "logo", which seems frequently to be requested these days by official bodies.

The distribution of Bluebell is particularly associated with Britain, and for this reason it would be very suitable, but its shape perhaps challenging to a designer? Some Societies using flowers as emblem have a design of 2 or 3 plants. This would be a possibility if sufficient clarity could be retained after reduction, for identification of the plants; the Primrose (*Primula vulgaris*) for example, disqualified as a single design because of prior associations, could possibly be included in a 2-flower emblem.

Designs drawn by members will be welcomed for consideration and should be sent to the Hon. Gen. Sec. at White Cottage, Slinfold, Horsham, West Sussex RH13 7RG before **May 3rd 1978**.

All designs sent in will be on display at the Exhibition Meeting (25. xi. 78), or published in a future *BSBI News* — both if practicable.

Spirals

Mr. C.R. Nodder writing from Co. Antrim mentioned the spirals in climbing plants, and leaves of some grasses; he asks do these plants spiral in the opposite direction in the Southern hemisphere?

Jenny Moore of the B.M. Dept. of Botany, tells me that in some sp. of *Chara* there is spiralling in both directions in the same plant. This can be clearly seen in *Chara tomentosa* in which the fruits show spiral torsion to the left on the oogonium, while the cortical rows on the stem spiral, to the right. We are particularly pleased to include a paper by Jenny Moore on charophytes at the Aquatics Symposium (see programme on p. 19), as one of the objects of the Society as laid down in our Rules is to "promote the investigation of Charophyta in the field and to encourage their botanical study".

Hybrids

Those members who have not yet purchased their copy of the Hybrid Book will see that the special offer to members for one copy at privilege price is still available (p. 29). They may find as did Stan and Vera Heyward who, writing for their application form, said "at the time the offer was first made we felt it was a book we could manage without, but as time has gone by we have come to feel increasingly that it ought to be on the shelf somewhere".

I am grateful to David McClintock for drawing my attention to the reference to the account by Arvid Nilsson of the hybrid *Cerastium arvensis* x *tomentosum* in *Svensk Botanisk* (1977), 71(3). C.A. Stace in *Hybridization and the Flora of the British Isles* gives localities in Germany, Switzerland and Canada, but the many new localities now reported from Sweden and Denmark would suggest that it could be equally common in this country and David McClintock suggests that this would account for the puzzling forms found in S. England where the parents do often occur together.

Wild Plants For Sale

Those involved with legislation for conservation want to know if the sale of wild plants does in fact present a serious threat. If any member sees wild plants for sale, or hears of these, could they please send in a report with as many details as possible to the Secretary of the Conservation Committee; Dr. P.E. Brandham. c/o Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey.

It may be that there is not as much selling going on as we think ?

Field Studies

John Sankey, Warden of Juniper Hall Field Centre, Dorking, has arranged a number of special courses in 1978 covering a wide range of country interests. These include some weekend courses e.g. Spring on the Downs 28th-30th April, and Later Summer on the Downs 11th-13th August, and a weekend with orchids 16th-18th June. Titles for longer courses include: Trees 5th-11th August, Art in the Country 21st-28th July, Garden Natural History 27th May-1st June (Sat.-Thurs.). Also Botanists' Bonanza 30th June-7th July (Wild Flowers of the Chalk), and an introduction to the Study of Flies 10th-14th, July (Mon.-Fri.) by Dr Henry Disney, who has appealed to B.S.B.I. members for records of scuttle flies (page). John Sankey writes "There is a warm welcome for all, and a real desire to help others learn about the countryside and to increase their appreciation of our environment".

The Field Studies Council Field Centres organise many courses of interest to our members. Programmes for all F.S.C. Centres are available from:

F.S.C. Preston Montford, Montford Bridge, Shrewsbury, Salop.

Danywenallt, The Study Centre in Brecon Beacons National Park also sends a leaflet for 1978. Flowers in the National Park, July 17th-22nd, led by Michael Porter, past Secretary of the B.S.B.I. Welsh Committee, promises a delightful programme for a week, with visits to varied habitats. Other courses include painting, photography, and Ambling-in-the-Beacons for the over fifties, possibly of interest to some members ? This centre is 9 miles south-east of Brecon near the village of Talybout-on-Usk. For details write to John Jones, Study Centre, Talybout-on-Usk, Brecon, Powys – who tells me that the Centre can also be booked by groups arranging their own courses.

Field Work in France

Any member taking holidays in Northern France who would like to assist in recording for the Franco-Belge Mapping scheme please contact Dr F. Vignon, Station d'Etudes en Baie de Somme, 80230 Saint Valery sur Somme, France.

Calligraphy

The Editor's hand-writing plea (News 17. p.3) – while obviously very necessary for copy for *B.S.B.I. News* (corrections at proof stage are very costly as well as time consuming) – does not however apply to correspondence with the Hon. Gen. Sec. ; two at White Cottage having had between them many years of practice in deciphering prescriptions have yet to be completely beaten by a handwriting, although B.S.B.I. membership, without mentioning names, does include some particularly challenging examples.

Change of Date

The Lecture, From Zermatt to the Glaciers, advertised in *B.S.B.I. News* 17 p.8., has been postponed from March 11th, and will now be given on *Saturday May 6th*. 3.00pm. at the British Museum (Natural History). This new date unfortunately clashes with the A.G.M. of this Society. (Programme inside cover of Annual Report).

See you get everything

In opening large numbers of envelopes daily I am frequently reminded by practical demonstration how easy it is for a slip of paper out of a bundle of enclosures to be *left in the envelope*. I do hope that members check their envelopes before discarding, particularly with the New Year mailing of programmes, calendars etc. which often contains up to a dozen items in the envelopes (10 in 1978).

An Onlooker's Notebook in the *Pharmaceutical Journal* 1977 (540) refers to a vital link between the Dodo and the large saponaceous tree *Calvaria major*.

Both were endemic to Mauritius and an ecologist from the University of Wisconsin in a recent issue of *Science* has pointed out that the Dodo became extinct in 1681 and by 1973 only 13 aged and dying trees of the formerly common *Calvaria major* were known to survive in the remaining native forests of the island. These few trees are estimated to be more than 300 years old, and no young trees are known, although the old trees annually produce fertile seed. In skeletal remains of the Dodo, endocarp and seeds of *Calvaria major* have been found, and it is suggested that only the Dodo had the size and strength to swallow the fruits which are 50mm in diameter, and in its gizzard (which contained large stones) to grind down the 15mm thick woody endocarp. Thus the *Calvaria major* was dependant for germination on the presence of the Dodo, and once the bird was extinct the tree was doomed to sterility. In recent times we have seen the dramatic fluctuation of Swan populations with the disappearance (then fortunately the re-appearance) of the *Zostera* sp on which the birds feed, demonstrating their similar inter-dependance.

My apologies to members who looked in vain in their Field Programmes for a meeting at Breccles of May 12th (Nostalgia p. 3 *B.S.B.I. News* 17). This meeting had to be cancelled between *B.S.B.I. News* 17 going to press and the publication of the Field Programme. A much earlier reference to an East Anglian rarity seen on a botanical excursion is quoted by G.S. Boulger and J. Britten in the *Journal of Botany* (1918) from an account by James Petiver, when he and James Sherard went to Sudbury and "met with Mr. Andrews an Apothecary, a very obliging and curious Botanist, who carried us to ye Alsine Rutae fol. & tennifolia (*Veronica triphyllos* L.)" on June 28th 1716.

There is a specimen of this plant in Joseph Andrews' herbarium in the British Herbarium Dept. of Botany, B.M.

Finally an *address reminder* : The B.M. (Nat. Hist) is the official address of the Society, but members should send general enquiries direct to the Hon. Gen. Sec. Mrs Mary Briggs, White Cottage, Slinfold, Horsham, W. Sussex RH13 7RG.

Changes of address and subscriptions to: BSBI, Harvest House, 62 London Road, Reading RG7 5AS.

Mary Briggs.

Change of address

Mr. E. B. Bangerter has moved yet again, having decided not to buy his previous residence due to unsatisfactory negotiations. In sending us his new address – shown below – he wishes to be remembered to all his friends in B.S.B.I. (An interesting article by him will be found on p. 26).

NEW ADDRESS: Flat 4, 110 East Coast Road, Milford AUCKLAND 9, NEW ZEALAND.

POLLINATION

INSECT POLLINATION OF ANEMOPHILOUS FLOWERS

We received a long and interesting contribution from Prof. A.D.J. Meeuse of the Hugo de Vries Laboratorium, Amsterdam. As this was rather too long to print in its entirety, we have asked Dr. Richards to prepare this slightly shortened version.

Regarding the question of anemophiles visited by insects (*B.S.B.I. News* 17, page 11), during the joint Linn. Soc. – B.S.B.I. Symposium on *Pollination of flowers by insects* held in Newcastle in April 1977, my pupil P. Stelleman (now working on his thesis) gave an account of his studies on relations between (reputedly) anemophilous taxa and flies. The papers read will be published by Academic Press under the same title with A.J. Richards as editor. Two papers by Stelleman (in co-operation with my younger student Leereveld and myself) also appeared in *Tijdschr. Entomol* 119: 15-31 and in *Acta Bot. Neerl.* 25: 205-211 (both 1976). Stelleman demonstrated pollen transfer beyond reasonable doubt (using stained pollen) by small syrphid flies visiting *Plantago lanceolata*. Visits not necessarily leading to efficient pollination have been recorded for several grasses, (*Arrhenatherum*, *Dactylis*, *Glyceria*, *Helictotrichon*, *Molinia*, *Phleum*, etc.) Cyperaceae (*Rhynchospora*), *Typha*, palms, many species of *Salix* and at least three species of *Plantago*. Syrphids belonging to the genera *Melanostoma*, *Platycheirus* (almost all) and some related taxa are (almost) specialised; their gut contents may contain 75%-100% pollen of *Plantago* and/or grasses and/or sedges. One still has to prove an effective pollen transfer in most cases (*Plantago* excepted) – even in the dioecious *Salix*.

Concerning introduced species *Impatiens capensis*, *Fuchsia magellanica* are ornithophilous but (occasionally) I have seen bumble bees on typically bird-pollinated aliens grown in our botanic garden, viz on *Clematis viorna* and on *Mimulus cardinalis*. *Bombus* individuals may stumble upon the source of nectar 'by accident'; the yellowish throat of the red corolla of *M. cardinalis* or the ivory rims of tepal tips in *C. viorna*. *Bombus* individuals are not seen on one of the species concerned in certain years which means that these flowers are not normally pollinated by these insects. Both species under discussion set seed in our garden but I must find out if the seed is viable! I believe I have seen syrphid flies on *Acaena* (*Melanostoma-Platycheirus* group and/or *Syrirta pipiens*). These – and other insects – visit the somewhat similar *Plantago coronopus* and *P. maritima*.

Yellow-flowered species of *Potentilla* are visited by, e.g. Syrphidae of the *Cheilosia*-group but also by other Diptera, some at least also by solitary bees such as species of *Andrena*, *Halictus*, *Osmia* etc., and presumably by small nitidulid beetles. The range of visitors is rather similar to that of *Geum urbanum* and ordinary species of *Ranunculus*.

THE POLLINATION OF FLOWERS

[Adapted from an article by Dr. A.J. Richards of the Department of Plant Biology, University of Newcastle upon Tyne, written for the Schools Natural Science Society whose permission we gratefully acknowledge].

One of the themes at the Newcastle Pollination Conference in April 1977 was the contribution amateur natural historians, without specialised scientific knowledge or expensive equipment, could make to the study of insect pollination. There is still very little information on the species of insects that visit various sorts of flowers. For instance, how exclusive is a species of insect (or even an individual insect) in the choice of flower it visits?

Selectivity

Bees in the same hive are known to use several different sources of pollen and nectar, but a single bee may be more constant. Bees “signal” to each other the direction and distance of a newly discovered source, and once taught an individual bee is likely to remain “faithful” to the new source until the supply is exhausted. Is such constancy typical of other pollinating insects? We do not know. Conversely, how exclusive is any particular flower type in the pollinators it attracts? Clearly, it is more economic – from the plant’s point of view – if only one sort of insect is attracted since all the pollen produced will only go to a flower of the same species, hence fewer visits and less pollen are needed. The main factor limiting success is then the rarity of the insect concerned. On the other hand more generalized flowers, visited by a miscellany of insects, will need to produce more pollen since much of it will be wasted, being taken to other species.

Information is also lacking on the insects visiting successful adventives despite their being far from their usual pollinators, e.g. *Impatiens capensis* is habitually visited by humming birds in its native North America but seeds regularly in this country.

Listing the visitors and their frequency to a certain species of flower is useful but the identification of both flower and (more difficult, this) the insects must be correct. (Most butterflies, moths, bees, hover-flies and wasps should be identifiable with the aid of such books as Collins Field Guides; but beetles, sawflies and true flies – Diptera – may be more difficult to identify below genus or even family).

Furthermore, definite pollination i.e. the actual deposition of pollen (seen as a whitish or yellowish dust) on an insect and its transfer to the stigma of another flower, must be observed to take place. Many insects visit flowers they cannot pollinate, e.g. tube flowers too small for the pollinator to enter; others, including bees, cut holes in the base of flowers and ‘steal’ the nectar.

There is evidence to show that visits by insects are not confined to showy flowers, many normally wind-pollinated species – plantains and sedges, for instance – may be visited by pollen-eating insects. If such inflorescences contain both male and female flowers, cross pollination is likely to occur.

Distance

Little is known about how far pollen is carried; important for commercial fruit growers. Observing the distance insects travel between plant visits, and noting seed-set on isolated female or self-sterile plants can provide clues, as can pollen dyed with methylene blue. “Bee following” is a fascinating exercise which can be extended to other insects. Such insect-watching among flowers showing colour variations could indicate whether pollination is influenced by colour preferences. Bees are thought to confine their visits to flowers of one specific colour, thus reducing inter-breeding; this way, new species might originate.

Timing

The male and female parts of flowers are not always “ready” at the same time. The start and finish of pollen shedding, the receptivity of the stigma (white with swollen pimple-like papillae on the surface when receptive) can easily be studied with just a hand lens.

Many plants exhibit ingenious mechanisms for ensuring cross pollination, illustrated in that excellent 400-page volume by Michael Proctor and Peter Yeo *The Pollination of Flowers* in the Collins “New Naturalist” series. One such is the cunning device of the

Arum for trapping flies and imprisoning them with a fringe of downward pointing hairs, while first ovules and later stamens ripen. This is well described in Dr. C.T. Prime's book "Lords and Ladies" in the New Naturalist Monograph series, and is shown in the accompanying scraper-board illustration by Dorothy Lousley. But much more detail about the timing relative to weather conditions, of this succession of events, including the rise in temperature of the spadix, needs elucidating.

Problems involving pollination and the inter-relationships of flowers and insects offer wide scope for investigation in which careful and accurate observations by amateurs can contribute valuable information.

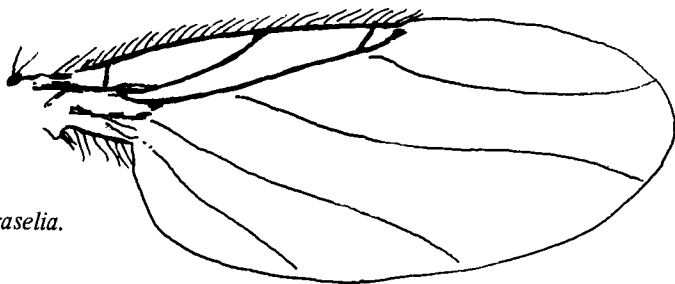


PHORIDAE – SCUTTLE FLIES

Certain species of Phoridae regularly visit certain flowers. At times the dominant insect visitors to a particular flower species may be Phoridae. Angelica and Hogweed umbels are particularly favoured by some species but others concentrate on yellow compositae, daffodils or other species. There is very little published information on which species of Phoridae visit which species of flower; and many of the earlier records need to be treated with caution because of taxonomic problems with the Phoridae.

The Phoridae are characterised by their small size (0.5 - 8 mm in length, most between 1 and 3 mm); black, brown or yellowish colour; very rapid, scuttling gait; and, on capture, by their distinctive wing venation (see Fig.) The family is easily recognised. The species identification is a matter for the specialist (the existing literature being full of pitfalls for the non-specialist). There are about 300 species in Britain, with about two-thirds in the giant genus *Megaselia*.

Scuttle flies are readily secured with a pooter or by carefully putting specimen tubes over them. They should be preserved in fluid (e.g. 70% alcohol), for subsequent slide-mounting by a specialist. Specimens, duly labelled (at least with locality, date and name of flower) should be sent to Dr. R.H.L. Disney, Malham Tarn Field Centre, Settle, N. Yorkshire, BD24 9PU.



Wing of a species of *Megaselia*.

CSSF MEETING 1977

Notable features highlighted by Rosalind Smith

The exhibits – a fuller list of which will appear in *Watsonia* – showed an increasing emphasis on photographic, artistic, old herbarium material, and critical species. Showing his two *Atriplex* species new to Britain (*A. longipes* and *A. praecox*) Mr Taschereau offered to identify members of this genus sent to him. New plant records from about ten vice-counties were on view; of particular interest were Mrs Clarke's *Carex ? flacca/nigra*, and Mr Kenneth's *Carex ? rostrata* from Loch Tronlee.

Mr Edmans displayed the Napier College work at Holyrood Park where vegetation changes will be monitored, and Dr. Dickson showed remains of Roman food plants excavated from a fort at Bearsdon. Conservation projects of national importance were prominent, and a talk, illustrated by slides, on the compiling of a check-list for the Isle of Skye by Mrs Murray was notable for demonstrating the diversity of its flora, and the part played in the project by the pupils of Portree High School.

Others exhibiting transparencies – after an excellent meal – were Messrs. Brookes (Kindrogan Waterplants), Silverside (Summer records) and Dr. Lang (unusual plants of Galloway).

ALIENS and ADVENTIVES

ADVENTIVE NEWS 10

compiled by Eric J. Clement

ALIENS INTRODUCED WITH WOOL

It is not easy to locate wool shoddy being used in the fields as manure, so Mr. E.R. Spooner tackled the problem at source. In November 1977 he inspected, at Dewsbury (SW York), merchant's stock awaiting disposal to farmers. Unfortunately, most of the plants were very immature with few or no flowers, but with the help of Dr. G.A. Nelson several were identified.

Tagetes minuta L. was one of the typical wool alien species involved, never abundant, but so often present. It gets a nonsensical mention in CTW, p.818, as "a still smaller plant" – it is, in fact, a huge, erect, strong-smelling annual up to 4 feet tall; the specific epithet refers to the tiny diameter of the flowers due to the short, near-absent rays. Our very attractive cover depicting this species is the work of Lysbeth Kemp who kindly drew for us a plant from the Wateringbury locality (see *BSBI News* 13: 22). The slightly flexuous stem is a curious feature of the species, not usually mentioned in descriptions (the specimen was *not* bent in the post !). It is of S. American origin, but now a common weed in parts of S. Africa, Australia, etc. It is rarely grown in British gardens supposedly "as a weed suppressor on account of its root excretions, but hardly ornamental" (S.B. Whitehead, 1970).

Matricaria grandiflora (Thunb.) Fenzl ex Harvey was also present, but surely this is not an annual as stated by Hayward & Druce (1919) and others. Is it not a perennial – and currently established on the riverside at Galashiels (Selkirk) ? Miss M. McCallum Webster *et al.* have collected it from here 1963-1971, **E, BM, K**, etc. It is often placed in the genus *Pentzia* which is scarcely worth maintaining, but, surprisingly, under neither name does it appear in J.E. Lousley's *Census List of Wool Aliens* (1961).

Other species seen were *Bidens bipinnata* L., *Cosmos bipinnatus* Cav., much better known as a garden escape, *Erodium botrys* (Cav.) Bertol., *Hordeum leporinum* Link, our native *Marrubium vulgare* and *Trifolium angustifolium* L. Attempts are being made to grow on the unidentified plants.

ALIENS INTRODUCED WITH COTTON

The indefatigable Rev. C.E. Shaw has hunted far and wide for aliens for very many years. I should have mentioned some of his finds long before now ! In July 1976 he discovered a small dump of carding material outside a mop-making factory in Rochdale (S. Lancs), where perhaps some wool as well as cotton was involved. The possibility of such mixtures here and elsewhere makes the separation of *definite* cotton aliens difficult in some localities. The species present here were *Medicago arabica*, *M. laciniata* (L.) Miller, *Trifolium scabrum* (a monstrous form with one calyx segment much enlarged and developed almost into a leaflet), *Bidens bipinnata* L., *Conyza bonariensis* (L.) Cronq., *Tagetes minuta* (see above !), *Setaria verticillata* (L.) Beauv. and other grasses in leaf only.

The waste dumps of a cotton spinning mill in Oldham (S. Lancs) – the home town of CES – are, predictably, very closely and regularly scrutinized by him. In October 1976 the cardings produced a good crop of aliens. *Echinochloa crus-galli* and *Setaria verticillata* were, typically of cotton waste, abundant.

Some of the specimens I originally named as *Setaria adhaerens* (Forsk.)Chiov., a species much mentioned in the literature these days, but Dr. C.E. Hubbard does not recognise it at specific level. "This variant from warm regions is said to have $2n=18$ chromosomes, whilst the warm temperate *S. verticillata* (L.)Beauv. has $2n=36$ chromosomes. It also differs from the latter by the margins of the leaf-sheaths being hairless (pilose in ssp. *verticillata*), in the blade bearing stiff papilla-based hairs (not in ssp. *verticillata*) and in having slightly smaller spikelets 1.5-1.8 (rarely 2)mm long, whereas in *S. verticillata* s.s. they are 2-2.3mm long. Ssp. *adhaerens* has been recognized as a distinct species by several authors, but Clayton at Kew, following Stapf & Hubbard (*Fl. Tropical Africa*) have placed it and other variants of this large complex in *S. verticillata* (which requires experimental investigation under cultivation). Because of its supposedly cytological differences, it could be treated as a subspecies".

Among other species seen, and conf. EJC, were *Amaranthus albus*, *A. blitoides* S. Wats., *Atriplex heterosperma* Bunge, *Chenopodium glaucum*, the enigmatic *C. probstii* Aellen which scarcely gets a mention in any of the world's floras!, *Echinochloa colonum*, *Polygonum monspeliensis* and a lot of *Poa infirma*.

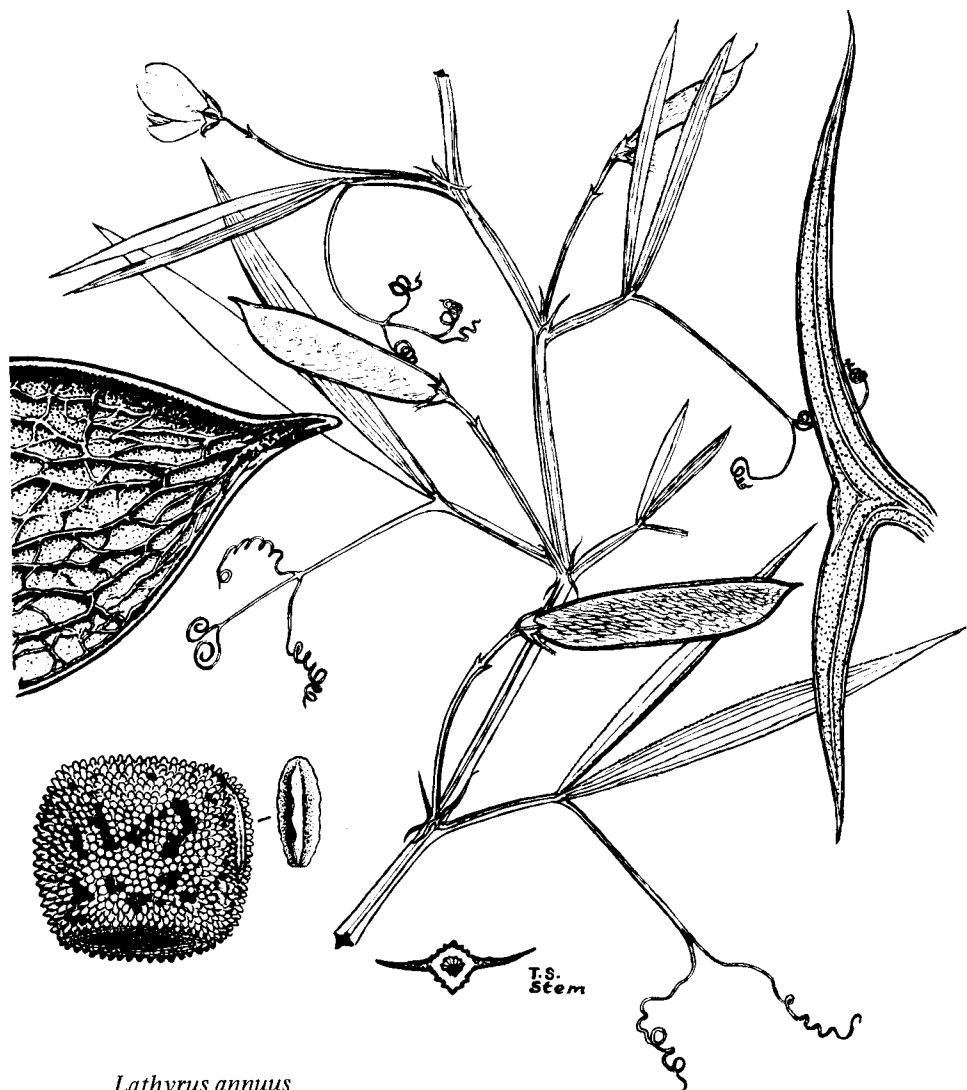
A tiny seedling was undoubtedly of the malvaceous cotton, probably *Gossypium herbaceum* L., but even mature plants are not easily named to the species ! The prize find, new to Britain, was of "*Sorghum lanceolatum* Stapt (s.s.) which has recently been sunk under *S. arundinaceum* (Desv.) Stapf (s.l.) by students of these African Sorghums at Kew and in USA. As more material of these annual weed Sorghums has been accumulated, they have become more and more difficult to distinguish from one another". Det. CEH. K. and Hb.EJC.

The next year most of the mill waste was bagged-up, but CES searched out "a pile of cotton dust and cow muck in a field. Evidently the farmer used the cotton dust in the place of sawdust in the shippin [cattle-shed]". Before it was spread he found, in September 1977, amongst others (all conf. EJC) *Amaranthus retroflexus*, *Bidens pilosa* L., cf *Cynodon dactylon* (no fls/frs present for checking), *Digitaria ciliaris* (Retz.)Koel., *Portulaca oleracea* L. and *Tagetes minuta* (again !). An *Eleusine* was *E. indica* (L.)Gaertner, s.s. — this contrasts with wool waste where the corresponding species involved is always the segregate *E. africana* Kennedy-O'Byrne. A rarity was the S. African grass *Brachiaria marlothii* (Hack)Stent, which looks not unlike an *Echinochloa* sp. with small spikelets. Hb.EJC.

At the mill, in September 1977, was one noteworthy plant, *Malvastrum coromandelianum* (L.)Garcke, named by myself on leaves only — flowers rarely occur in Britain on this tropical weed, so it could be not quite so scarce as records suggest. It was, for example, a wool alien at Wateringbury (Kent) in 1976, with ill-formed fls in October-November. Hb.EJC. We were, incidentally, informed by the farmer here that chicken manure had also been used on the hop-fields, but we did not consider at the time that this was a significant vector for alien plants (but see below under *Abutilon* !).

MIXED BAG

Abutilon theophrasti Medicus: Potato field, Winterbourne (Glos), October 1977. A.L. Grenfell. Conf. EJC. The plant reached 3½ feet, but frosts prevented it developing its flower buds; indeed the foetid smell reported was apparently due to frost damage. For an illustration showing fls and frs, see *BSBI News* 11:9. Its origin here was considered to be the chicken manure which had been applied. Has anyone other records from various manures ?



Lathyrus annuus

1 2 3 mm

1 2 3 cm.

GE
1977

Grindelia rubricaulis DC. var. *robusta* (Nutt.) Steyermark; Sandstone cliffs near the harbour, Whitby (NE York), September 1977. J.A. Newbould. Hb. EJC. Some 15-20 plants, near the Kyber Pass Cafe, in one small area which may have been cultivated in the past. This coarse, hardy perennial with viscid young parts is known as Californian Gum Plant and has rather little horticultural merit being an undistinguished yellow-rayed composite; it is unmentioned in the 4 volumes of RHS *Dictionary of Gardening*, but is listed in *Sanders' Encyclopaedia of Gardening*.

Iris sibirica L.: Bank of ditch, Shalford Common (Surrey), June 1977. R.C. Stern. Hb. RCS. Det. EJC. Although such a well-known garden plant needing no attention, records of its escape from cultivation are very few. I saw several clumps established in grassland beside the refuse tip on Hazeley Heath (N. Hants) in May 1970, but have not personally encountered it elsewhere. Hb. EJC.

Lathyrus annuus L.: Since my mention of this annual in *BSBI News* 11:11, three more records have been communicated:

Garden Weed, Bishop's Cleeve, Cheltenham (Glos), May 1976. Mrs. S.E. Herbert. Det. EJC. Growing in an undug part of the garden on and off for a number of years – and bird-seed has *never* been thrown out.

Tolvaddon, Camborne (W. Cornwall), July 1977. R. Smith. BM. Det. EJC. One large plant scrambling three feet up a chain-link fence, growing with *Vicia bithynica* on disturbed ground by an abandoned garden. The flowers were “pale yellow with crimson-purple lines on the standard. The standard was 15mm across when fresh”.

Thriplow tip (Cams), 1977. G.M.S. Easy. It was growing, curiously, again with the very scarce *Vicia bithynica*. Graham Easy has very kindly drawn the *Lathyrus* for us, together with enlargements of the characteristic seed, hilum, pod and stipule. How is this species getting about? – no-one has ever definitely grown it from bird-seed mixtures (comm. C.G. Hanson). It is mentioned in the *Supplement*, 2nd edn, to RHS *Dictionary of Gardening*, but it is scarcely garden-worthy.

Oenothera rosea L'Her. ex Aiton: Established in chicken run, Wearde Quay, Saltash (E. Cornwall), August 1975. A.C. Leslie. Hb. ACL. No other aliens were present. This perennial species, a native of the warmer parts of America, has pinkish-red petals less than 1cm long and hence is readily mistaken for an *Epilobium* species until the winged fruits or plume-less seeds are seen. It is occasionally grown as a garden plant, but has gone out of favour.

Oxalis valdiviense Barn.: Weed of ornamental gardens, Great Orme, Llandudno (Caerns), July 1977. Dr. L.S. Garrad and Miss M. Devereau. Hb. EJC. Flowers were “yellow with marked purple veins”. An upright, glabrous species from Chile, without vegetative propagules, but it readily sets seed in any garden to its liking.

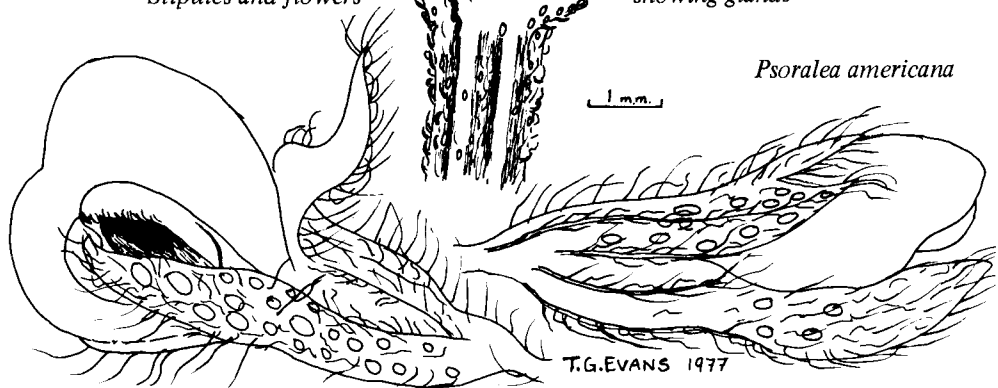
Phacelia tanacetifolia Benth.: Garden weed, Southampton (S. Hants), 1977. Mrs. M. Tuson. Hb. R.P. Bowman. Det. EJC. It was collected as “*Echium* ? sp.” It is a Californian annual with blue or lavender flowers in scorpioid racemes; it belongs to the family *Hydrophyllaceae* and has puzzled many a good botanist when it self-seeds about.

Phytolacca latbenia (Buch.-Ham.) H. Walt.: Appeared (uninvited) in garden, Gnosall (Staffs), 1976-7. Mrs. M.L. Castellan. DBY and Hb. EJC. This may be the commonest species posing as *P. americana*. I counted 8-9 free carpels and 14-16 stamens per flower; tepals were uniformly light green with filaments and anthers white; the pedicels and rhachis were papillose. Closely related species – which appear to me to be somewhat dubiously separable! – differ in these characteristics which are best observed on fresh material.



Stipules and flowers

showing glands



Psoralea americana

T.G. EVANS 1977

Psoralea americana L.: Single plant in a *Dahlia* border at Sheffield Park, Scunthorpe (N. Lincs). August 1976. J.M. Cressey. Det. EJC. "Sewage had been dug in the border the previous autumn; no fruits were formed". This is a not infrequent bird-seed alien, not from America – Linnaeus was wrong about its origin, but the ICBN – see *BSBI News* 16: 16 if you have forgotten the meaning of this awesome abbreviation ! – will not let us alter inappropriate names; it comes from the W. Mediterranean region. The foliage is reminiscent of *Glycine max*, but the sickly smell and gland-dotted stems and leaves readily identify it; the small, whitish flowers, often with a violet-tipped keel, are in long-peduncled axillary racemes. Trevor Evans has kindly provided the drawing of this species made from sketches of a plant which occurred at Newport tip (Monmouth) – see *BSBI News* 15: 19.

Sisymbrium irio L.: Road-side, Freston (E. Suffolk), March 1977. M.A. Hyde. Det. EJC. Flowering on a heap of soil dumped in a lay-by. Away from wool-alien localities this is nowadays a rare casual; yet it is established about the Tower of London (Middx) and apparently also in shoddied fields at Flitwick (Beds).

Torilis leptophylla (L.) Reichenb.: Mr. Rutherford's hen-run at Lakenheath (W. Suffolk), June 1950. W. Farren. CGE. Re-det. J. Bevan, 1978 – it was originally determined (not by the finder !) as "*Caucalis daucoides* L.," now known as *C. platycarpus* L.

This *Torilis* species has also been grown more than once from bird-seed by C.G. Hanson. Another *Caucalis* imposter has been *Orlaya kochii* Heywood – see *BSBI News* 15:14 – a name, incidentally that is still seriously questioned as to its priority. Work by Greuter in *Boissiera* 13:92 (1967) proposes that the correct name is *O. daucoides* (L.) Greuter. In view of all these pitfalls no record of *Caucalis platycarpus* should be accepted without a pressing: the British record of 1962 – see *BSBI News* 15:8 – has, alas, no voucher specimen, and as it cropped up from budgie seed in an Ealing garden (Middx) its true identity is much in question.

Trifolium echinatum Bieb.: Old railway track, Glenfield (Leics), August 1977. Mrs. E. Hesselgreaves. BM and Hb. EJC. At least 30 plants in long, rough vegetation on disturbed soil. No other unusual species were present, except for a solitary, huge plant (3 ft tall) of the annual *T. diffusum* Ehrh. which I passed over as a form of the perennial *T. pratense* L. – I wonder if others have made this mistake in the past ! – Dr. D.E. Coombe (Cambridge University) determined it and specimens are now in BM, CGE and Hb. EJC. These two S. European annuals are very rare casuals in Britain – their arrival here is a mystery.

ERIC J. CLEMENT

13 Shelford, Burritt Road, Kingston, Surrey KT1 3HR.

BIDENS CONNATA

Bidens connata Muhl. was discovered in the late summer of 1977 by the Grand Union Canal near Greenford, Middlesex (v.c. 21) by Mrs M.V. Marsden who sent me material for identification. There are no other British records of this American species, but as there are numerous reports of it from nearby continental countries, almost invariably referring to single plants or colonies beside navigable waterways. I think it likely that the plant has also occurred more widely in this habitat in Britain and been overlooked because of its general similarity to our two native species.

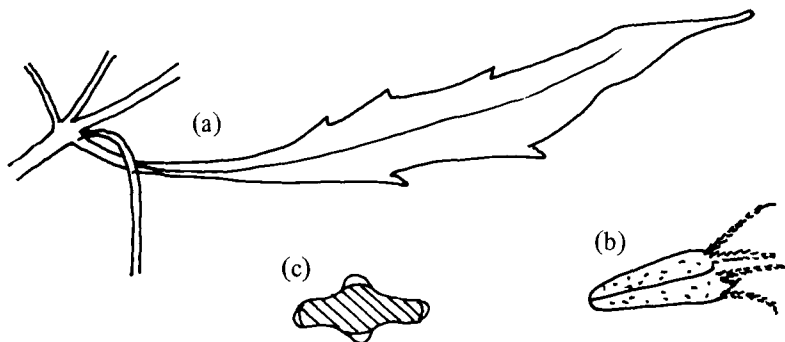
The form of the foliage varies considerably in native American plants. Some of the continental ones have leaves similar to those of *B. tripartita*, though with more distinct petioles, but most of the French ones are, like Mrs Marsden's, with unlobed leaves

bordered by rather irregular teeth and contracted into a winged petiole. These are not at all like the leaves of *B. cernua* which are sessile on a broad base, but a little like those of *B. tripartita* var. *integra* Koch. Plants which seem to be possible *B. connata* are best left (except for the removal of a single leaf as a voucher in case the whole plant disappears soon after) until September or October when ripe fruit can be obtained, as these are essential for the certain identification of most *Bidens* species. It is generally best to examine achenes from the centre of a head at the top of the plant. Marginal achenes tend to be untypical in shape and achenes from lower lateral heads are smaller than those from the terminal one. The achenes of *B. connata* are similar in outline to those of *B. tripartita*, tapering downward fairly evenly, and are strongly compressed, the two margins being marked by a strong rib prolonged into an awn; however in *B. connata* each of the two faces also has a strong rib running up its middle, with the result that the achene is narrowly rhombic in section. In this they are more like *B. cernua* but the achenes of that species are slightly convex across the top whereas those of *B. connata* are truncate. A further character is provided by the faces between the ribs which are verrucose, that is there are small areas raised above the general surface; this character is not strongly developed in Mrs Marsden's plant. The awns of *B. cernua* and *B. tripartita* achenes have stiff bristles pointing downwards (retorse) by which the fruit easily gets hooked on to the clothing of passers-by; in *B. connata* the bristles can point either up or down, and any *Bidens* with antrorse bristles, like those of the Middlesex plant, should be looked at carefully.

I would recommend members living near canals to search for this plant in 1978 and let me know of any further finds, which I will then publish, or display at an Exhibition Meeting.

R.M. Burton

Sparepenny Cottage, Sparepenny Lane, Eynsford, Kent DA4 0JJ.



Bidens connata : (a) leaf; (b) achene, side view;
(c) achene, cross section.

ICELAND VENTURE 1976

Warburg Memorial Fund Award
(Botanical Society of the British Isles).

This was a three-man expedition to Northern Iceland, concentrating on aspects of the botany and geology of the country. We were 'A' level biologists with a desire to organise, raise funds for, and carry out an adventurous activity before embarking on university. Apart from the enormous educational value of such an experience, it was hoped to be a demonstration of how any school-leavers could do just the same thing with as few resources, in expertise and funds, as we started with. We wished to inspire more young people to put into practice the adventurous ideas which they may have felt impossible for these reasons.

"Great things are done when men and mountains meet, this is not done by jostling in the street" (Wm. Blake, *Gnomic Verses* i).

The aim of our scientific project was to try and analyse the course of events, botanically speaking, that leads up to a climax community. One of the ideal situations in which this is possible is behind a retreating glacier. Given that the glacier is retreating at an even rate – or you know how fast it has been retreating – the moraines nearest the snout will have the youngest community and those furthest away will have the best developed. By taking a line from one to the other and analysing quadrats at intervals along the way one can build up a picture of the stages in the formation of the climax community.

We did this project on the Ytri-Jokulsa glacier, which runs into the Flateyardalur valley – North-East of Akureyri. We also visited Lake Myvatn, famous for its bird life, where we carried out a superficial study into the geological history of the area as well as comparing the types of plant communities found here in relation to the Ytri-Jokulsa glacier district.

The method of analysis is far from easy to decide upon. One way is to record the presence or absence of every plant in about 16 small squares (40 x 40 cm) – these being spaced across a line equidistant from the glacier snout. This '16 squares' analysis was done at regular intervals (in our case about 50 metres) progressing away from the snout. Actually we placed all our small squares within one large square and got a very limited view of the plant frequency at each interval. This is because the large square may well not have been representative of the flora across the valley. But we obtained results (see full report).

Given the presence or absence of a plant out of a total of 16 squares, a percentage can be calculated for every plant at every interval for display on a belt-transect type diagram.

It is advisable to research into your project beforehand, and a knowledge of the type of flora that you expect to come across is particularly useful. Without a visit to the site previously it is difficult to devise a definite method of analysis until you reach it.

The method we used is not infallible. To give accurate results the bedrock, climate, aspect and biological factors must be similar throughout the sere – otherwise deflected successions occur (Plagioseres). In our case they differed so that, without knowing the exact influence of each of the varying factors, our results do not necessarily represent the stages leading up to the particular climax community in this valley.

Altogether the expedition was a wonderful experience and we are most grateful to those groups and people, particularly the Botanical Society, who were so generous in their advice and support. We shall not forget them.

Copies of the full report, which includes much information useful to others organising small expeditions, with notes on fund raising and publicity, expedition members, equipment, legal matters and general notes on Iceland, together with the full scientific report is available for 20 pence (in postage) from:

C.Shackleton, Coombe Head, Bunch Lane, Haslemere, Surrey.

NOTICES

OFFICIAL B.S.B.I. NOTICES

B.S.B.I. WALES QUADRENNIAL MEETING AND A.G.M.

The A.G.M. and Quadrennial Meeting for Wales will be on **Saturday July 22nd 1978** at St. David's College, Lampeter, Dyfed, at 15.30.

Members resident in Wales are reminded that nominations of members for election of a Representative from Wales to B.S.B.I. Council must be in writing, signed by two members normally resident in the Welsh region and accompanied by the written consent of the candidate to serve if elected. Such nominations should be sent to the Hon. Secretary of the Committee for Wales, Mr. R.G. Ellis, Dept. of Botany, National Museum of Wales, Cardiff, CF1 3NP, **before 20th May 1978.**

The programme will include:

SATURDAY JULY 22nd

14.30 "Brambles, an introduction" illustrated talk by Mr. E.S. Eedes.

16.45 "Plants of Glamorgan" illustrated talk by Dr. Mary E. Gillham.

SUNDAY JULY 23rd. Meet at St. David's College 10.00 a.m.

Field Meeting to interesting sites in the Lampeter area, at which Mr. A. Newton and Mr. E.S. Eedes will be present to give guidance on the identification of Brambles. In conjunction with this meeting there is a 4-day Bramble Foray (July 21st-24th). All B.S.B.I. members are welcome. For further details write to Gwynn Ellis at the address above before **June 1st 1978.**

Mary Briggs.
Hon. Gen. Sec.

The **B.S.B.I. Committee for Scotland** was elected by members resident in Scotland at a meeting called on 5th November 1977 :

Mr. B.S. Brookes (Chairman). Dr. P. Macpherson (Hon. Secretary). Miss E.R.T. Conacher (Hon. Meetings Sec.), Mr. R. McBeath (Hon. Field Meetings Sec.), Mr. P. Harrold, Mrs. C.W. Murray, Mr. A.J. Silverside, Dr. R.A.H. Smith, Mrs. O.M. Stewart, Mr. A. McG. Stirling.

Mary Briggs.
Hon. Gen. Sec.

Important Notice: RIVER EXCURSION May 7th 1978

We have to announce that this excursion is overbooked. It has not been possible to arrange a second boat, and at present we have 26 members on the waiting list. If any members who have booked find that they will be unable to come, could they please let the Hon. Field Secretary, Miss L. Farrell, Monks Wood Experimental Station, Abbots Ripton, Huntingdon PE17 2LS, know immediately, so that any cancelled bookings can be re-allocated. Meanwhile priority will be given to those members who filled in the booking form (sent out in the New Year Mailing) by 31.1.78 as requested. We do regret having to disappoint some members, but it is hoped to arrange a walk along the river bank to see some of the *Leucojum aestivum* sites, for those unable to join the boat. **M.B.**

AQUATIC AND MARSH PLANTS

The weekend symposium to be held at Brathay Field Centre, Old Brathay, Ambleside, Cumbria, (by kind permission of the Director of Studies).

OCTOBER 27th - 29th 1978

Programme:

FRIDAY OCTOBER 27th

- 17.00 - 19.00 Arrival and Registration
- 19.00 Dinner (to 20.30 if booked)
- 20.30 Welcome - Introductory Lecture Dr. M.E. Mortimer

SATURDAY OCTOBER 28th

- 9.30 - 10.30 Prof. C.D.K. Cook: *Distribution of aquatic macrophytes*
Dr. Winifred Tutin (née Pennington): *Wetland ecology of the Lake District*
- 10.30 COFFEE
- 11.00 - 12.30 A.C. Jermy & R. Driscoll: *Waterplants of the Norfolk Broads*
Dr. S. Haslam: *Identification of watercourse habitats*
Mrs. J. Moore: *Charophytes*
- 12.30 - 14.00 LUNCH
- 14.00 - 18.00 Field excursion: Leader Dr. G. Halliday
- 19.00 DINNER
- 20.00 - 21.30 Dr. M. Wade: *Flora of drainage channels*
Dr. G. Halliday: Slides of Cumbrian aquatics. Discussion.

SUNDAY OCTOBER 29th

- 9.30 - 10.30 Dr. D.F. Westlake: *Ecology of chalk stream plants*
Dr. A.B. Seddon: *Lake flora of Wales*
- 10.30 COFFEE
- 11.00 - 12.30 Dr. M. Liddle: *Recreational effects on Welsh lakes*
P.J. Brown: *Some aspects of the Alismataceae*
Dr. D. Spence: Title to be announced
- 12.30 - 14.00 LUNCH
- 14.00 - 17.00 Visit to Esthwaite Fen and to Freshwater Biology Association, Ferry House, Ambleside (by kind invitation of the Director).
Leaders: Drs. W. Tutin and G. Halliday

Local organiser: Tim Blackstock

Limited accommodation at the Centre will be available, in bunk-fitted rooms sleeping 2-8 for which the cost with full board (Friday-Sunday) will be £14.00; Some members may prefer to make their own arrangements to stay in Ambleside (2 miles), but booking for the Symposium is essential even if accommodation is not required.

Reservations can be made from April onwards, but not later than **September 18th 1978**

This programme will **NOT** be separately circulated to all members. Those wishing to book. Please apply as below.

BOOKING FORMS from:

Mrs. Anne Mullin, Hon. Meetings Secretary,
43 Woodstock Avenue, West Ealing, London W.13. (with s.a.e. 18½ x 4" approx).

A.M.

Pollination Meeting at Cambridge

Following the request at the Pollination Conference, Newcastle 1977, for members to record insects visiting plant species, a day has been arranged in Cambridge on August 12th 1978, when members of B.S.B.I. and the International Bee Research Association can meet and have instruction on identification of insect pollinators and plants. It is hoped that members will be able to help each other with information about identification of the visiting foraging and pollination insects and the plants visited.

The morning and early afternoon will be spent at the University Botanic Garden for observations, and for laboratory identifications, and books and dissecting microscopes will be available. At the kind invitation of Mrs. Marjorie Townley, tea will be provided at Fulbourn Manor, and this will be followed by a walk through Cambient's Fulbourn Educational Nature Reserve, for observations in a natural habitat.

Peter Yeo has organised this meeting, and he and Oliver Prys-Jones will be the leaders, assisted by William Palmer. Please see Field Programme for booking details.

The Report of the Conference "The pollination of flowers by insects" will be published by Academic Press later this year. The volume is illustrated by the superb photographs of Dr. Michael Proctor of the University of Exeter, and there will be a pre-publication offer for members.

Mary Briggs.

ADDITIONAL NOTICES

Amberley Wild Brooks in Danger

The Southern Water Authority plans to further lower by one metre the water table of the Amberley Wild Brooks. The effect on these 900 acres of unique and famous wetlands would be disastrous from the point of view of naturalists including botanists, ornithologists, entomologists and country lovers generally.

The cost of the scheme has been variously quoted at £300,000 - £500,000 most of which would come from the public purse and the acreage capable of "improvement" is estimated at about 600. The economics are obvious!

The Amberley (West Sussex) Society has campaigned since June 1977 for a public enquiry into the desirability of the drainage proposals and has been joined in protesting to both the SWA and the Minister of Agriculture, Fisheries and Food by our own Member of Parliament, Richard Luce, many Sussex societies and a number of important national bodies, including B.S.B.I.

The Minister has now agreed that a public enquiry be held. In order to present a properly coordinated and persuasive case as well as to counter the arguments of the SWA and NFU, the organisations concerned have agreed that *one* counsel and *two* expert witnesses on land drainage and agricultural economics should be engaged. The campaign is not merely to save Amberley Wild Brooks from further despoliation but to protect the all too few remaining wetlands of England.

If you wish to support this important cause, your donation will be welcomed by:

The Treasurer,
Amberley (West Sussex) Society,
Willow Cottage, Amberley,
West Sussex BN18 9NA.

200th ANNIVERSARY OF THE DEATH OF LINNAEUS

At eight o'clock on the morning of 10th January 1778 the great Swedish biologist Carl von Linné (Linnaeus) died at his home in Hammerby. To mark the 200th anniversary of his death the **Linnean Society of London** is arranging a series of events in London in close collaboration with its Swedish counterpart, the Swedish Linnaeus Society.

A SYMPOSIUM is taking place in the Society's rooms at Burlington House, Piccadilly, from 22nd-23rd May on the theme 'Research on Linnaeus today – Progress and Prospects', with special attention to his zoological and medical work. Contributions will be made by some of the world's leading authorities, including Prof. W.T. Stearn, Dr G. Broberg (Sweden), Dr H. Goerke (W. Germany), Dr. J.L. Heller (USA), Prof. J.K. Larsen (USA) Dr. P. Smit (Netherlands), Dr. B. Strandell (Sweden) and Dr. C.O. von Sydow (Sweden).

During and after the Symposium an Exhibition of Linnaeus the Man, and of Linnaeus' contribution to science, with special reference to insects, fish, plants and medicine will be on show in the Library of the Society where a catalogue of objects in the Society's possession, specially prepared for the 200th anniversary, will be on sale for 60p (70p by post).

THE EXHIBITION will be open to the public from Thursday, 25th May until Saturday 10th June from 10 am. to 5.00 pm. daily, except Sundays. All welcome, please bring your friends.

Programmes for the SYMPOSIUM and further details are available from the Executive Secretary, Linnean Society, Burlington House, Piccadilly, London W.1.

Visit to Sweden 25th-30th May 1978. Vacancies are still available for this visit at a cost of £120.00 each person (£5.00 extra for single room) for air fare and hotel accommodation. Booking fee of £10.00 each person. Further particulars from the Botanical Secretary or Linnean Society's Office, Burlington House, LONDON W.1.

Fritillaries

The Framsdén (Suffolk) Fritillary field (see *BSBI News* 17 p. 5) will be open to the public on 29th and 30th April 1978 from 11 am to 3.30 pm. (Map ref. TM 187608). A small charge will be made – towards the purchase and maintenance of this famous site – to non-members of the Suffolk Trust.

Trooping the Orchid

In the midst of a forest of dark conifers lies a small chalk pit of unknown age. In this pit stand two squadrons of little soldiers. Protected by silver birches, confined within a stout wire fence and secured by a brass padlock they parade in splendid isolation. To that spot on the Queen's Birthday 1977 came battalions of well-wishers to pay homage to that gallant little 'army'. The scene is, of course, the Rex Graham Reserve in Suffolk where plants of *Orchis militaris* erect and dignified, carry on their eight-inch stems a score of blooms, from pink to mauve each a hot-house orchid in miniature. This year the "Trooping" will take place on **Saturday 3rd June**.

BOOK NOTES

The July part of *Watsonia* Vol. 12 (2), will include reviews of the following books :

The Wild Flowers of Britain and Northern Europe (enlarged edition), by R. & A. Fitter and M. Blamey.

Wild Flowers of Britain, by R. Phillips.

Flore du Sahara Septentrional et Central, by P. Ozenda.

Biological Nomenclature (second edition), by C. Jeffrey.

Pennine Flowers, by J.E. Duncan & R.W. Robson.

Henslow of Hitcham, by Russell-Gebbett.

The Physiology of the Garden Pea, by J.F. Sutcliffe & J.S. Pate.

Cytological Atlas of the Pteridophyta, by A. & D. Love and R. Pichi Sermolli.

Population Biology of Plants, by J.L. Harper.

I continue to receive books for review that, for one reason or another, are not suitable for a full review in *Watsonia*. Nevertheless, even a mere mention in *B.S.B.I. News* may be sufficient to arouse the interest of a potential reader, as has recently proved to be the case. I shall therefore continue to list all the books that are received, giving short notices where these seem desirable and indicating those which will receive fuller treatment in *Watsonia*. Here is a list of books that have been received recently. Those that will not be reviewed in *Watsonia* are marked by an asterisk.

Introduction to Ecological Biochemistry, by J.B. Harborne.

**Recent Developments in Nitrogen Fixation*, ed. by W. Newton, J.R. Postgate & C. Rodriguez-Barrueco. Pp. xxiv + 622, with numerous text-figures, Academic Press London. 1977. Price £16.00.

This important work comprises the Proceedings of the Second International Symposium on Nitrogen Fixation, Salamanca 1976.

**Flowers of the Mediterranean*, by O. Polunin & A. Huxley, Paperback edition, Chatto & Windus, London 1978. Price £3.50.

**Spore Research* 1976, Vols. I & II, ed. by A.N. Barker, L.J. Wolf, D.J. Ellar, G.J. Dring and G.W. Gould. Vol. I: Pp. xviii + 436; Vol. II : Pp. xviii + 485. Academic Press, London 1977. Price £16.00 per volume.

Advances in Botanical Research, Vol. 4, ed. by R.D. Preston & H.W. Woolhouse. Pp. xii + 240. Academic Press, London. 1977. Price £9.80.

**Advances in Botanical Research*, Vol. 5, ed. by H.W. Woolhouse, Pp. xii + 240. Academic Press, London 1977. Price £9.80.

This volume includes an interesting paper by J.A. Raven on "The evolution of vascular land plants in relation to supracellular transport processes".

**Key to the Names of British Plants*, by R.D. Macleod. Pp. x + 94 (Pitman, 1952). Only obtainable from D.G. McCleod, 57 Somerset Avenue, WESTCLIFF ON SEA. Price £1.12 incl. post.

Although this is not a new book, its re-appearance prompted me to ask for a review copy. Dr. Sprague's original review (*Watsonia* 3:127) is still relevant, and nothing has been published since that covers the same ground. An introductory section is followed by three lists (respectively of generic names, specific epithets and common names) in which the derivation of each name or epithet is given.

**Wild Flowers*, by Francesca Greenoak. Pp. 96, with numerous black and white and coloured illustrations. Macdonald Guidelines. Macdonald Educational Ltd., London 1977. Price £1.00

This is a rewarding book for both the botanical tyro and those who, having learned a certain amount of (British) botany, want to 'read around' the subject. It is well written with a light touch, the text being divided into three main sections: Information, Activities, Reference.

**British Wild Orchids*, by Heather Angel. Pp. 16, with 40 coloured photos. Jarrold & Sons Ltd., Norwich 1977. Price £0.40p.

**Picking Wild Flowers*, by D. McClintock, F. Perring and R.C. Randall, Pp. 32, with 57 coloured photos, Jarrold & Sons, Norwich 1977. Price £0.40p.

**Britain's Rarest Plants*, by E.A. Ellis, F. Perring and R.E. Randall (text), Heather Angel (photographs). Pp. 16, with 41 coloured photos. Jarrold & Sons Ltd., Norwich 1977. Price £0.40p.

These are the latest members of Jarrold's admirable series of photographic studies on British plants. The photographs, which are all of high quality and enable the subject to be recognised immediately, are complemented by relevant and interesting textual notes. The last two are concerned with plants that respectively can and cannot be picked.

**'Wonder Why' Book of The World of a Tree*, by Allen Paterson, illustrated by Elsie Wrigley. Pp. 32, with numerous coloured illustrations. Transworld Publishers Ltd., London 1977. Price £0.50p.

Following the 1973 B.S.B.I. Conference on "The British Oak", here is a booklet on the same subject, written for children by one of our members. It deals with the oak itself and the animals and plants that live on it or grow on or near it. Readers are encouraged not merely to read about them, but to observe the trees and their inhabitants for themselves.

**Index to Biological Flora of the British Isles*, by R.C. Caddel, E.W. Groves & J. Patrick. Pp. i + 39. Durham University Library, Durham 1977. Available to B.S.B.I. members from Science Section, Durham University Library, Science Laboratories, South Road, Durham DH1 3LE. Price £0.65p. incl. postage.

This is an index to all the 140 parts of the *Biological Flora* that have appeared in the *Journal of Ecology* since 1941. Each account consists of a complete summary of the available information on a single species, or small group of species of British plants. As such, it will no doubt be very useful; but it does highlight the fact that only comparatively few species of our native flora have so far been treated in this series – for example, to date it includes no species of the Geraniaceae, Umbelliferae, Euphorbiaceae, Primulaceae or Rubiaceae and only 11, 4 and 1 species respectively of the Compositae, Labiatae and Scrophulariaceae.

N.K.B. ROBSON.

BSBI NEWS 19

Contributions for this issue must reach the
Editor **BEFORE** 1st AUGUST 1978.

REQUESTS

WATSONIA VOL. 11 No. 4 (WANTED)

Stocks of this, the Lousley Memorial Issue, are very low, and members who may have copies they are willing to dispose of are asked to send them to the Treasurer,
M. Walpole, Outwoods Road, LOUGHBOROUGH, Leics.

RARE PLANTS

Dr. S.D. Prince and Mr. A.D.R. Hare, of Queen Mary College are currently investigating the ecology of certain rare plants in England, with a view to determining the reasons for their rarity, and recommending measures for their conservation.

Any information on the whereabouts of the following species would be much appreciated, as would the provision of any amount of seed.

The species are:

Pulicaria vulgaris

Arnoseria minima

Filago apiculata

Filago spathulata

Lythrum hyssopifolia

Polygonum dumetorum

Euphorbia platyphyllos

Dianthus armeria

Gastroidium ventricosum

Lactuca saligna

Damasonium alisma

Please contact:

Dr. S.D. Prince or Mr. A.D.R. Hare.

Department of Plant Biology & Microbiology, Queen Mary College, Mile End Road,
London E1 4NS. Telephone: 01-980-4811. Extension: 281.

TAXONOMIC RESEARCH ON THE MEDITERRANEAN FLORA

The Commission on Current Research of OPTIMA (Organization for the Phytotaxonomic Investigation of the Mediterranean Area) is planning to compile a list of scientific projects relating to the taxonomy of vascular plants in the Mediterranean area.

Some members of B.S.B.I. will already have received a questionnaire; the purpose of this notice is to draw the attention of those who were not on the mailing list to the OPTIMA Commission's initiative, and to invite them to write to me at the address below for copies of the questionnaire form.

Data received in the replies will be compiled as a register entitled 'Current Taxonomic Research on the Vascular Plants of the Mediterranean Flora', to be published by OPTIMA in 1978. The scope of the research technique included is wide: morphological, anatomical, cytological and chemical studies are covered, as well as those involving field-work and herbarium investigations.

John Edmondson

Flora of Turkey Unit, Royal Botanic Garden, Inverleith Row, Edinburgh EH3 5LR.

DEVON ROSE HERBARIUM LOST

The herbarium sheets of Roses (including at least 200 authenticated for the 1939 Flora of Devon) have "gone missing" from the Royal Albert Memorial Museum, Exeter. I wonder if anyone has any clues as to their whereabouts; have they been loaned for instance ? I had hoped to work with this material in connection with my study of the pea-galls which occur on wild rose leaves. Please send any information to :

Maureen A. Turner,
Belford House, Kennford, Exeter.

EPILOBIUM SPECIES

Dr. P.H. Raven of the Missouri Botanical Garden, makes this request.

WANTED: dried material of *Epilobium* leaves and stems. Dried material or extra herbarium sheets of the European species of *Epilobium* are desired for analysis of flavonoids. *Epilobium angustifolium*, *E. anagallidifolium*, *E. hornemannii*, *E. lactiflorum* and *E. ciliatum* (*E. adenocaulon*) are not needed but if there is any uncertainty about the identification, the material would be appreciated. As many as several sheets of each collection and several collections of each species would be most welcome together with a notation of whether vouchers of this material exist in some herbarium. Costs involved in sending the material to St. Louis will promptly be refunded if requested. Send to Peter H. Raven, Director, Missouri Botanical Garden, 2345 Tower Grove Avenue, St. Louis, Missouri 63110 USA.

HISTORICAL FLORA OF THE AVON GORGE

With the aid of an NERC Funded Research Studentship I am attempting to compile the above. I would be pleased to hear of any **annotated** Floras (e.g. Swete's Flora Bristolensis 1854, White's Flora of the Bristol Coal-Field 1881-6, Murray's Flora of Somerset 1896, White's Bristol Flora 1912 or Riddelsdell, Hedley and Price's Flora of Gloucestershire 1948) that may be in private collections, and also I would be interested to know of any herbarium sheets of plants collected in the Avon Gorge, that might be in private herbaria.

Please send to:

C.M. Lovatt, Department of Biology, Woodland Road, Bristol BS8 1UG.

IRISH HORTICULTURAL HISTORY

I am engaged on research into the above, with particular emphasis on the development of garden hybrids of the Narcissus since the late 19th century. However, other horticultural plants are being included where they form an economically important section of Irish horticulture, or if they have been subject to improvement in Ireland by selection or breeding. Into this group would fall apples, mushrooms, roses and nursery stock.

Should any of your readers have information on any of these topics I would be pleased to hear from them.

D. Willis,
Superintendent of Grounds,
The New University of Ulster, Coleraine Co. Londonderry, Northern Ireland BT52 1SA.

LETTERS

THE BRITISH FLORA IN NEW ZEALAND by E.B. Bangarter

During my first few days in New Zealand I was greatly impressed by the abundance around me of the British flora. Early exploration of my garden revealed *Bellis perennis* and *Taraxacum officinale* in the lawn, *Stellaria media*, *Capsella bursa-pastoris*, *Fumaria muralis*, *Veronica persica* and *Senecio vulgaris* in the flower-beds. A stroll to the beach discovered *Daucus carota*, *Foeniculum vulgare*, *Rumex crispus*, *R. conglomeratus*, *Cirsium vulgare*, *Sonchus oleraceus* and many other familiar weeds of waste-ground. Poplars, oaks, birch and willows were among the exotic trees. *Anagallis arvensis*, *Ranunculus repens*, *Spergula arvensis* and grasses galore – *Bromus*, *Festuca*, *Poa*, *Lolium* with two or three species of each, *Dactylis glomerata* and *Holcus lanatus* to name a few – colonised waysides and road-verges. My experiences, however, were those of a suburbanite residing in the coastal outskirts of the city of Auckland, now best described as a sprawling conurbation rivalling Greater London. Later acquaintance with true native bush showed some penetration by the weed followers of man along the ridges and by the sides of his access roads. Early botanists prophesied a conquest by the invaders over the indigenous vegetation but it is now happily recognised that the natives can hold their own and if man were to retreat from the scene scores of species such as *Plantago major*, *P. lanceolata*, *Rumex acetosella*, *Geranium robertianum*, *Cerastium holosteoides*, *C. glomeratum*, *Trifolium repens*, *T. dubium*, *T. pratense* and many more would subsequently surrender.

The total number of species, native and adventive, common to both countries must be in the neighbourhood of one thousand. Our Editor has suggested that I write a note or two about some of these shared species; I had told him that articles and illustrations referring to alien plants in *B.S.B.I. News* often proved useful to me in my work at the Auckland War Memorial Museum. On looking back through past numbers I was inspired by the cover illustration of No. 9, to re-read A.O. Chater's contribution on *Amsinckia in Britain*. Of the three which he says are most likely to be found in Britain, *A. calycina* was recorded as long ago as 1883 for New Zealand by D. Petrie, whose gathering, labelled *A. angustifolia*, from Alexandra, Otago, is the only one in the Herbarium. This record is mentioned by successive authors, T.E. Cheeseman, G.M. Thomson and H.H. Allen (all great names associated with the adventive flora) until more recent times when A.J. Healy, who wrote in 1969 on the introduced plants in Canterbury, pointed out that it was brought in as a seed impurity and subsequently spread by cattle and sheep to stockyards. The latest information I can find reports it as far north as Ashburton, Canterbury, in cereal crops. I wish I could find it in the North Island!

Just above Chater's article I see a note on *Oxalis*; the species discussed therein being also recorded for New Zealand. *O. corniculata* is considered, at least in part, indigenous. Its little yellow flowers are peeping out of lawns and grass verges right now whilst its much larger cousin, *O. pes-caprae* the Bermuda Buttercup, is decorating several roadside banks with bright golden patches. The latter has been known for some time in New Zealand whereas the other horticultural introductions *O. corymbosa*, *O. latifolia* and *O. articulata* apparently came in much later; they are all somewhat of a nuisance to gardeners and nurserymen, I understand, but never to me. Several other species of *Oxalis* are recorded here, of which I have collected *O. incarnata* and *O. purpurea* from roadside verges or "berms". From my window I can see the former lurking under my

garden hedge alongside a few stray plants of *Allium triquetrum*, a frequenter of railway and roadside banks, often in dense colonies. According to F.W. Hilgendorf, author of *Weeds in New Zealand*, three-cornered garlic was introduced as a vegetable and has escaped to become "established as an aggressive weed".

Tracking down adventives both in the literature and the field I find a fascinating pursuit and I trust an informative one for both you and me.

Flat 4, 110 East Coast Road, Milford, Auckland 9, New Zealand (Note: New address).

FRAGARIA MOSCHATA Duchesne and FRAGARIA VESCA L.

As a result of being asked to comment on a specimen of ? *F. moschata* collected by Lady Anne Brewis (Morley Bridge, Roughty River, Kerry, Ireland 4th June 1977) I have examined the material of these two species in CGE. It is clear that considerable confusion exists regarding the most reliable diagnostic criteria. I would separate them on the following characters :

At least the uppermost pedicels with appressed or ascending hairs, lower pedicels sometimes with a mixture of reflexed, spreading or appressed hairs; leaflets thin *vesca*.

Pedicels with spreading or reflexed hairs throughout; leaflets thick, often relatively broader and less pointed at both ends *moschata*.

(The commonest garden strawberry is *F. x ananassa* Duchesne which has the sepals appressed to the ripe fruit, not patent to reflexed as in *vesca* and *moschata*).

Several other characters are repeated by various British and Continental floras. It appears that stolons are fewer or absent in *moschata*, but this is often difficult to appreciate from an herbarium sheet. Similarly the presence or absence of achenes at the base of the receptacle, visible only on the ripe fruit (?), is not readily discernible from a dried and squashed fruit. Some drawings of *vesca* (eg. in the CTW illustrations 2, 1960), if reliable, would indicate that this is an uncertain criterion or at least one requiring careful qualification. I can see no value in whether or not the lateral leaflets are stalked. The relative length of the leaves and scape (a key character in FE 2) is not consistently reliable; nor is size. A few sheets of *moschata* in CGE were misnamed plants of *vesca* and tended to be of plants at the upper end of the size range of the latter; they differed in no other character from small plants of *vesca*. In particular specimens collected on a 'roadside one mile west of Aberfeldy, Mid Perth 6th June 1962' by Miss McCallum Webster (no. 7488) and described as "common in the district" are in this category and so is the Roughty River plant; The flowers of *vesca* are universally described as hermaphrodite, but *moschata* may be 'usually unisexual' (FE 2) or 'commonly hermaphrodite rarely gynomonoeious, andromonoeious or gynodioecious' (Hegi, *Illustrierte Flora von Mittel-Europa* 4(2) 1923). Lousley (*Flora of Surrey*, 1976) reports two apparently long-established colonies of *moschata* in Surrey, one of which 'never fruits', so sexuality may be a useful character; field notes on specimens are obviously useful here.

Since there are very few correct modern records for *moschata* (it lost popularity as a source of fruit long ago) perhaps members would like to check up on this species, both in gardens and in the field. As Lousley says it can be persistent so try following up old records in your local floras and let me know the results (preferably with a voucher specimen). Any information that may accrue will be summarized in a further note in *BSBI News*, incidentally E.J. Clement tells me that he has never seen the genuine article, nor has he received any correct records for it.

A.C. Leslie 64B Montague Road, CAMBRIDGE.

RELATIVE HUMIDITY METER

Dear Sir,

Members who wish to make hygrometric observations may be interested to know that a relative humidity meter is made by Brannan Ltd. of Cleator Moor, Cumbria.

The instrument is approximately 55 mm diameter x 15 mm deep overall and is calibrated on a scale of percentage humidity. It sells for the apparently reasonable price of about 84 pence and is obtainable, in the north London area, from the hardware stores, Robert Dyas.

I have no other hygrometer or wet/dry bulb thermometer to test this one against, but all the instruments in the shop indicated the same reading except one rogue which was obviously incorrect.

This hygrometer takes time to respond to a sudden change in humidity, so if it is carried by car or protected in a box in a ruck-sack for use in the field an interval must be allowed to lapse before a reading is taken.

J.G. Samson,

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

LIFE - TAKERS

Dear Sir,

I was interested to read the item in the December 1977 issue, in the Hon. Gen. Secretary's notes, about the unfortunate Dutch boys who ate *Oenanthe crocata*.

Some years ago when in Guernsey, a friend who had spent the War Years on the island, pointed out *O. crocata* to me and told me how many continental Europeans had died during the occupation from eating the plant. An unfortunate mistake for *Apium graveolens* of their homelands. Perhaps it is as well that *O. crocata* does not grow widely in Europe, otherwise the vegetables celery (*A. graveolens* var. *dulce*) and celeriac (*A. graveolens* var. *rapaceum*) might not have been developed. Celery was developed in Italy and introduced into France early in the 17th century.

Yours faithfully

Dr. F.M. Taylor,

39, Grosvenor Road, Billingham, Cleveland, TS22 5HQ.

List of the Flowering Plants and Ferns of Cumbria

G. Halliday

Centre for North-West Regional Studies, University of Lancaster

Occasional Paper No. 4

This list covers vice-counties 69 and 70. For each of the 1500 species, subspecies and hybrids an indication of the number of localities (0, 1, 2 or +) is given pre and post-publication of the *Atlas* (1962) for each of the three constituent areas: Westmorland, Furness and Cumberland. It is expected to be published in May at a price not exceeding £1.50. Orders (please do not include payment) should be sent to :

The Secretary, Centre for North-West Regional Studies, The University, Lancaster LA1 4YQ.

IMPORTANT

New instructions for obtaining publications

BACK NUMBERS of BSBI Journals, *Watsonia*, *Proceedings* and *BSBI Abstracts* are now handled by Wm. Dawson & Sons Ltd.

RECENT ISSUES (i.e. those of **current and previous year**) will be held by the Hon. Treasurer.

ORDERS for the above should be sent as follows :

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2. For numbers published **during** 1977 and 1978

(i.e. *Watsonia* Vol. 11, parts 3 and 4

Vol. 12, part 1

BSBI Abstracts Nos. 6 and 7) to

MR. M. WALPOLE, HON. TREASURER,

68 OUTWOODS ROAD, LOUGHBOROUGH, LEICS.

Payment to BSBI (at the above address).

NOTE – Messrs. E.W. Classey no longer carry any stock of BSBI journals.

From time to time members kindly donate to the Society copies of back numbers of older Journals that they no longer require. The Hon. Gen. Sec. has a limited number of these and can occasionally lend odd parts to members requiring specific papers or working on a particular project.

For **BSBI PUBLICATIONS** (other than journals) the Agents are :

F. & M. PERRING, OUNDLE LODGE, OUNDLE, PETERBOROUGH PE8 5TN.
who stock Conference Reports, miscellaneous reports and floras, see lists in *BSBI News* 17 (p.30) and on page 30 of this issue.

BUT PLEASE NOTE THE FOLLOWING

Hybridization and the Flora of the British Isles C.A. Stace. Academic Press.

Members are offered one copy at £8.80 (published price £14.80). Application form for this special offer from the Hon. Gen. Sec. White Cottage, Slinfold, Near Horsham, West Sussex. (Additional copies must be purchased from booksellers).

Modern Methods in Plant Taxonomy V.H. Heywood. Academic Press 1968.

(B.S.B.I. Conference Report No. 10) From booksellers. £9.00.

Hedges and Local History Report of Conference held jointly by B.S.B.I. and Standing Conference for Local History. 1969. From booksellers or by post from Bookpoint Ltd. 90 Blackfriars Road, London SE1 8JT. 90p inc. p & p.

BSBI PUBLICATIONS
 Obtainable from OUNDLE LODGE, OUNDLE,
 PETERBOROUGH PE8 5TN.

The following books have been added to our list since BSBI News 17. For a complete list please send to the above address.

MISCELLANEOUS BSBI PUBLICATIONS

ATLAS OF THE BRITISH FLORA (2nd Edn) F.H. Perring & S.M. Walters (Eds) 1976. 432 pages, 1700 maps. Maps revised of 300 rarer species. Complete with full set of overlays.	1976	£25.00
CRITICAL SUPPLEMENT TO THE ATLAS OF THE BRITISH FLORA. F.H. Perring (Ed.) 1978.(Reprint). 159 pages, 500 maps. (Note, this is a REPRINT not a new edition).	1978	£15.00
OVERLAYS. Set of 12 on same scale as <i>Atlas</i> and <i>Critical Supplement</i> (Some overlays sent out last year were poor quality. If you have received a poor set we will gladly replace).		£1.50
AN ATLAS OF FERNS OF THE BRITISH ISLES. A.C. Jermy, H.R. Arnold, Lynne Farrell & F.H. Perring. 100 pages, 94 maps. Complete revision of maps of the <i>Atlas</i> with many additional taxa and critical comments on each		£3.50

LOCAL FLORAS

V.C.		
6/34 THE BRISTOL FLORA. J.W. White. 1912 (Reprint). 722 pages, 1 coloured map, 1 fig.	1912	£5.25
7/8 SUPPLEMENT TO THE FLORA OF WILTSHIRE. L.F. Stearn. 1975. 150 pages including 5 articles on vegetation and 7 figs.	1975	£5.00
33/34 FLORA OF GLOUCESTERSHIRE. H.J. Riddelsdell, G.W. Hedley & W.R. Price. 1948 (Reprint). 667 pages, 3 maps, 40 plates.	1948	£12.00
36 PLANTS OF HEREFORDSHIRE. L.E. Whitehead. 1976. 87 pages, 2 maps, 4 figs.	1976	£3.30
44 A LIST OF FLOWERING PLANTS AND FERNS OF CARMARTHENSHIRE. R.F. May. 1969. 88 pages, 1 map.	1969	£0.80
45 PLANTS OF PEMBROKESHIRE. T.A.W. Davis, 1970. 82 pages, 2 maps, and 10 plates.	1970	£0.80
48 A CONTRIBUTION TO A FLORA OF MERIONETH. (Edn. 2). P. Benoit & M. Richards. 1963. 69 pages, 13 maps	1963	£0.80
71 THE FLOWERING PLANTS AND FERNS OF THE ISLE OF MAN. D.E. Allen. 1969. 101 pages	1969	£0.45
85 A LIST OF FLOWERING PLANTS AND FERNS RECORDED FROM FIFE AND KINROSS. W. Young. 1936. 173 pages and map.	1936	£3.50
95/96 A CHECK LIST OF THE FLORA OF THE CULBIN STATE FOREST M. McCallum Webster. 1968. 40 pages, 1 map and 7 figs.	1968	£0.85
107/108 JOHN ANTHONY'S FLORA OF SUTHERLAND. J.B. Kenworthy. 1976. 201 pages, 2 maps and 6 plates.	1976	£4.40
40 HANDLIST OF THE SHROPSHIRE FLORA	} <i>These are no longer available</i>	
102 FLORA OF ISLAY AND JURA		
104 THE BOTANIST IN SKYE		

OTHER BOTANICAL BOOKS FROM OUNDLE LODGE

BRITISH RED DATA BOOKS 1. VASCULAR PLANTS. F.H. Perring & L. Farrell (Eds.) 1977. 124 pages and 3 text figs. Analyses threat to 321 rarest plants in Great Britain.	1977	£3.20
HAYLEY WOOD, ITS HISTORY AND ECOLOGY. O. Rackham. 1975. xx + 221 pages, 33 text figs. and 25 plates	1975	£4.00

SPECIAL OFFER: Conference Reports. Nos. 2, 8 and 13 may be bought together for £5.00.

All prices shown include postage

Please send cash with order: make cheques payable to F. & M. Perring.

PUBLICATIONS FROM OTHER SOURCES

FROM: PUBLICATIONS (SALES), BRITISH MUSEUM (NAT.HIST.) LONDON
SW7 5BD.

(a) <i>Watsonian Vice-counties of Great Britain</i> . 2 maps (folded) plus explanatory booklet (in slip case) £3.00 + 30p postage.	£3.00
Maps only (flat) £2.00 + 20p postage	£2.00
(b) <i>List of British Vascular Plants</i> . by (the late) J.E. Dandy (1958).	1958
£2.50 + 25p post and packing	1958 £2.50

NOTE – Amendments to the above were published in an article by the author entitled “Nomenclatural changes in List of British Vascular Plants” in *Watsonia* 7 (3): 157-178 (1969).

FROM: FIELD STUDIES COUNCIL, PRESTON MONTFORD, MONTFORD
BRIDGE, SHREWSBURY, SY4 1HW.

<i>British Water Plants</i> by S. Haslam, C. Skinner and P. Wolseley (Inc p&p)	£1.20
--	-------

ENVOI !



We are indebted to the Swiss League for the Protection of Nature for kindly allowing us to reproduce this cartoon from the October 1977 issue of their magazine *Schweizer Naturschutz*. It would appear that the Swiss also have problems with thoughtless and over-zealous plant hunters. Or is it the tourists ?

(For those unfamiliar with German, the 'bubble' reads; "Aha, here we've found a 'Lotusmargerite' ! Very rare !!". The object on the right is a sign indicating that the picking of flowers is forbidden). ■

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The Hon. Gen. Sec., BSBI, c/o Botany Dept, British Museum (Nat. Hist.), Cromwell Road, London SW7 5BD.

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