B.S.B.I. NEWS

September 1980 No. 25

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



Pulmanaria 'Mawson's Blue' (see P. 16) del. P.G. Barnes 1980 ©

ADMINISTRATION

Addresses

HON. GEN. SEC. (General Enquiries)

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

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

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

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

HON. FIELD SEC. (Information on Rare Plants, Field Meetings etc.) Miss L. Farrell, N.C.C. P.O. Box 6, Godwin House, George Street, HUNTINGDON PE18 6BU.

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N.B. ANNUAL EXHIBITION MEETING 1980 is on Saturday NOVEMBER 22nd at B.M. (Nat. Hist.) Cromwell Road, London. NOT on November 29th as in BSBI 1980 Calendar.

BSBI NEWS 26

Contributions intended for publication in this issue must reach the Editor BEFORE 27th OCTOBER 1980

HON. GEN. SECRETARY'S NOTES

Royal Occasion

On July 17th the President and Secretary accompanied by their spouses had the honour to be invited to the Garden Party at Buckingham Palace, held to celebrate the 80th birthday of our Patron, Her Majesty Queen Elizabeth the Queen Mother. Although the sky was overcast the rain kept away and the 7,000 visitors were delighted to see Her Majesty so happy and smiling. The botanical visitors also noted *Carex acutiformis, C. pendula* and *Cyperus longus* at the edge of the Lake in the Palace Garden. We did not however see the *Ophioglossum vulgare* found recently by David McClintock who keeps the wild plant records for the Palace Gardens. In *Proc. S. Lond. ent. nat. hist. soc. 1963, pt. 2* there is a collection of his papers on the Natural History of the Garden at Buckingham Palace.

A telegram of special congratulations was sent by the Society to Her Majesty for her 80th birthday in August and a gracious telegram to BSBI and members was received in reply.

CONGRATULATIONS to Clive Jermy, Dept. of Botany B.M. (Nat. Hist.) who recently gained the Royal Geographical Society's Murchison Award for botanical field work with the Mulu (Sarawak) Expedition, on which he was Scientific Co-ordinator. Clive follows in illustrious footsteps as both J.D. Hooker and F. Kingdon-Ward were gold medallists of the R.G.S.

Congratulations too to the British Museum (Natural History) – familiar to us in our official address – for winning the Museum of the Year Award for the Hall of Human Biology and the Ecology Exhibits.

Members visiting the B.M. are strongly recommended to see the Threatened Plants Exhibit, currently on display. Designed by Frank Brightman the exhibit comprises 12 panels with introductory sections on "How plants are endangered" and why: a number of causes are shown, followed by examples of endangered plants (lovely photos of World Red Data Book Species), and finally a section on "What can be done?" with illustrations of nature reserves and botanic gardens.

Calendar

A rather unusual calendar is published by the Royal Meteorological Society; for each month there is a picture of a land or seascape illustrating a particular cloud formation or other weather feature. Seven are from Britain, others from around the world, and a few seasonal weather notes are included. Calendars are available at £1.70 each (including postage) from R.M.S., James Glaisher House, Grenville Place, Bracknell, Berks RG12 1BX. It is hoped to show samples of the recycled stationery and the meteorological calendars at the Annual Exhibition Meeting on November 22nd.

Personal News

Graham Bell of ITE returned recently from Iles Crozet in the sub-Antarctic where he was surveying the bryophytes. While there he also noted some forty alien vascular species which had been introduced recently to the islands probably largely as a result of importation of soil from France in which to cultivate vegetables. En route home he visited Ile Amsterdam where an introduced European thistle *Cirsium vulgare* had colonised the beaches to such an extent that it is making life uncomfortable for the fur seals who use these as their traditional mating grounds !

BSBI Council member, Mrs. Joan Duncan has the distinction of being President of the Yorkshire Naturalists' Union. Her Presidential Address "Botanical Investigations in Wharfedale" (given in Skipton in 1978) included a report on studies by local botanists of the causes of 'the phenomenal increase of crowberry, *Empetrum nigrum*.

BSBI Authors

The Lynn News & Advertiser recently carried a feature on Gillian & Ken Beckett under the headline "Idyllic cottage garden is author's research plot", with photos of the authors, both in the garden, and indoors by a table-top covered with their 'beautifully illustrated books on plants.' Their notepaper heading reads: "writers, editors and photographers. Horticulture, botany, topography and other aspects of natural history."

Another freelance member is Roy Lancaster who now offers a range of lecture and guide services including garden tours and advice on plant selection. For details, write for his leaflet "Horticultural Consultant and Plantsman" to:

Roy Lancaster F.L.S., V.M.H., 2, Poets Way, Winchester, Hampshire.

We wish all of these success in their activities.

We have before mentioned the interdependance of plants and animals – especially man. Peter D. Moore wrote in *Nature* vol. 283:246 January 1980, on the 'Ecology of the Footprint'. He describes the effect of footprints on sphagnum bog where the impact of a foot may form 'relatively deep depressions' which 'may fill with water, modifying the microenvironment and creating small scale pool successions'. Slater and Agnew's investigation of footprints on Borth Bog in West Wales are described; also mentioned are the germination experiments of Harper, Williams and Sagar on *Plantago* spp. in which accidental trampling of the plots (by pigs) led to groups of *Plantago* seedlings appearing wherever a hoof-print had been made.

Vasculum

One vasculum, kindly donated by Miss D.E. de Vesian, is now on offer. Please contact the Hon. Gen. Secretary if you have a special need for a vasculum.

Save the Trees

For members interested in making a small contribution to save trees, Recycled Paper Products (UK) Ltd., 47 Princess Road, LONDON, NW1 8JS, sell a range of notepaper, jotter pads, cards and envelopes.

FLORA as well as FAUNA

At the A.G.M. of the Fauna Preservation Society on July 9th, the recommendation of their Council to alter their rules so as to include flora as well as fauna in the remit of the Society, was passed. The F.P.S. has now become the FFPS, and with the permission of the Editor we quote from its Journal Oryx Vol. XV (3) p. 217 April 1980: "There are several good reasons for this change. In the modern world, it is increasingly unrealistic to suppose that fauna can be protected or conserved and flora ignored. Any habitat is an interwoven amalgam of plants and animals, neither of which can survive without the other, and increasingly, wildlife conservation is seen to mean conservation of habitat and whole ecosystems, not just species. Most plants need insects to pollinate them - even if botanists are prone to regard the large fauna as merely the tiresome creatures that eat their plants. Moreover, the World Wildlife Fund and IUCN have both set the modern trend by catering for all wildlife, plant and animal. At present there is no society in the world that offers membership for those interested in international plant conservation. So FPS, which was the first international animal conservation society in the world, is now about to celebrate its 77th birthday by becoming also the first international *plant* conservation society in the world."

We wish the FFPS well in this new venture. Professor V.H. Heywood spoke at the meeting on the endangered flora of the world, particularly underlining the critical situation of tropical rain forests, especially in Central America where, it is now thought, an area the size of Kew Gardens is being destroyed *every* $1\frac{1}{2}$ minutes. It is planned that Oryx should in future carry articles on flora as well as fauna. Further details from: FFPS c/o Zoological Society of London, Regent's Park, LONDON NW1 4RY.

Mr. Charles Lister writes that from a recent visit to Teesdale he recommends bed and breakfast at Hood Gill, Newbiggin-in-Teesdale, Nr. Middleton-on-Teesdale: Mr. & Mrs. P.M. & A.B. Beveridge, Tel: Middleton-in-Teesdale 682.

Refusal Of Drainage Grant

An application for grant aid to reclaim 100 acres of bog at Bowness Common, Cumbria, under the Farm and Horticulture Development Scheme, has been refused by Mr. Jerry Wiggin MP, the Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food. The land forms part of a Site of Special Scientific Interest (Grade 1) and is one of the few remaining examples of a raised mire in the country. It is important for its uncommon plant assemblage.

Primrose prosecution – a warning

The first prosecution for uprooting wild plants under the Conservation of Wild Creatures and Wild Plants Act 1975, took place on June 24th at Horsham Magistrates Court, when a Mr. & Mrs. Collins who had uprooted primroses from a local wood and planted them in their garden, were fined by Horsham Magistrates. The couple had been spotted by a keen-eyed and conscientious observer, digging up the primrose plants in April, and putting these in the boot of their car. The couple pleaded guilty, saying that they had not realised their actions were against the law. They were each fined £20.

(Para 4 of the above mentioned Act states: "If, save as may be permitted by or under this Act, any person, other than an authorised person, without reasonable excuse uproots any plant, he shall be guilty of an offence.")

BOOK PRICES

Academic Press has increased the price of books on special offer to BSBI members. A form from A.P. with the new prices (until February 1981) is enclosed with this mailing, and the old prices (as announced in *BSBI News* 24, p. 5) are no longer valid.

It should be noted that *The Pollination of Flowers by Insects* listed as "Linnean Society Symposium No. 6" is also BSBI Conference Report No. 16.

Enveloping

A plea from the Secretary of the Committee for Scotland. When requesting a copy of the Scottish Newsletter (BSBI News 24 p.30) and sending s.a.e. please send an envelope of suitable size (The BSBI Scottish Newsletter is the same size as BSBI News). Peter Macpherson has given a graphic description of trying to squeeze this into the miniature envelope sometimes sent -I can endorse this, as many times I have had requests for half a dozen leaflets accompanied by a 6 x $3\frac{1}{2}$ inch envelope. By contrast, I received a huge envelope with the request for a publication which was not ours. All I could only put into it was a post card with this information! So, when in doubt as to envelope size required, I would suggest a stamped addressed *label* be sent.

Bequests

Recent legacies left to the Society include £500 bequeathed by the late Miss Beryl Morgan. Acknowledged in the 1979 Annual Report were £500 each from the estates of the late Dr. Cecil T. Prime and Mr. Gilbert S. Adair F.R.S.; donations of £25 guineas from a member celebrating his 25 years with the Society, £50 from the Horsham Natural History Society's Conservation Fund and £200 from an anonymous donor. All these bequests and donations were very gratefully received; they are a very considerable help in maintaining the balance in the Society's funds, and in enabling us to undertake special projects.

T.A.W. Davis

With regret we report the death in July of Mr. T.A.W. Davis of Haverfordwest. Tommie Warren Davis had many friends in the Society, was Recorder for V.c. 45 and author of *Plants of Pembrokeshire*. He was elected an Honorary Member at this year's A.G.M. An obituary notice will be published later in *Watsonia*.

Our thanks again to Kathleen Lawson who being "ready, able and willing", once again typed much of the copy for BSBI News 25.

FRANKLYN PERRING

There cannot be many members of the BSBI who do not know Frank Perring. His interest in botany began at the age of eight when his Uncle, a biology teacher, came to stay with the family which was then living on the edge of Epping Forest at Woodford Green. His earliest botanical memories are of pollarded hornbeams in Highams Park.

At boarding school in north Essex during the war he thought of becoming a plant pathologist and worked in tomato greenhouses during the holidays, but his progress in that direction was rudely interrupted when in December 1945 he was drafted into the Army where he served in Ireland, India and Malaya. Vernal Squill found whilst lying prone on a mortar range on the coast of Co. Down is an abiding memory, though he freely admits having wasted most of the opportunities for botanical discovery those 2½ years abroad should have given him. It could well have been different had he gone to University *before* his army service.

He went up to Queen's College Cambridge in 1948 to read Natural Sciences and quickly came under the influence of Max Walters, and the other keen field of botanists of that generation. He stayed on to do research in chalk grassland and perfect his ability with a punt pole. Later this interest in punting led to his carrying out a vegetation survey of Newmarket Heath for the Jockey Club.

In October 1954, he began to earn his living as the 'senior worker' for the BSBI Mapping Scheme, then under the directorship of Dr. Max Walters. He became director in 1959 and continued until 1964. The fruits of that period are well known to British botanists, the 'Atlas of the British Flora' (1968) with P.D. Sell. Frank believes that the hundreds of days he spent leading BSBI mapping meetings during those ten years were amongst the happiest in his life.

The BSBI Scheme evolved into the Biological Records Centre and, in April 1964 Frank with the botanical records and mapping recording equipment moved from the Botanical Gardens in Cambridge, 23 miles to Monks Wood. Here, under the influence of many colleagues whose main interest was nature conservation he rapidly appreciated the need for biological information as a basis for conservation planning and set out to encourage the establishment of County Biological Records Centres. There is little doubt that his boundless energy and ability to talk to biologists of all walks of life were an important factor in what he achieved: the success of the BSBI Maps Scheme and the Recorders owed a great deal to Frank's amiable but far-seeing nature.

With this new nature conservation-minded environment at Monks Wood, and his own concern for conservation which had involved him in the Cambridgeshire and Isle of Ely Naturalists' Trust from its inception in 1956, it is not surprising that his next botanical interest should centre on our rare and endangered species which led to the publishing with Lynne Farrell of the 'Red Data Book for Vascular Plants' in 1977.

In the last 18 months conservation has been his primary concern since his appointment as General Secretary of the Society for the Promotion of Nature Conservation. He says that one of the major pleasures of his new work is how often he meets BSBI members, especially county recorders, during his visits to one or other of the 42 Nature Conservation Trusts.

Outside interests include campanology, (a thorough knowledge of which was gained during the holidays spent under canvas in Dorset and Devon in the 40s and 50s), and he can often be seen ringing the changes at the local parish church. Of course, when it came to choosing a BSBI emblem, there was only one candidate as far as he was concerned the bluebell. He is particularly fond of music, art, punning (or should it be punting?), and his daughter, Emma.

Profile

NOTICES

OFFICIAL BSBI NOTICES

BSBI FIELD MEETING, MAJORCA, APRIL 14 - 21 1981 – (Advance notice)

Leaders: Mary Briggs, Margaret and Frank Perring.

This meeting will be based at Puerto Pollensa, away from the main tourist centres of the island, and at the best time of year for the Western Mediterranean flora, seeing the many endemic plants and the profusion of *Ophrys* and *Orchis* spp. there. Further details will be available in the 1981 Field Meeting Programme, but the maximum number for the party is 25. Any interested members should write, as soon as possible for further details and booking, to:

MRS. F.H. PERRING, Oundle Lodge, Oundle, PETERBOROUGH PE8 5TN.

Referees/Specialists

We have persuaded DR. H.D. SCHOTSMAN, who wrote the account of *Callitriche* for *Flora Europaea* to act as our referee for this genus. She asks that all material sent to her has fruits and flowers, if possible. Do not forget the return postage. The address is:

MUSEUM NATIONAL d'HISTOIRE NATURELLE, Laboratoire de Phanerogamie, 16 Rue Buffon, F75005 PARIS.

OTHER NOTICES

THE WINSTON CHURCHILL MEMORIAL TRUST

Travelling Fellowships for 1981 include an Award for the study of conservation in relation to development, with special reference to world conservation strategy or to our national heritage. To apply for an award in this category, or for the open category for individual projects, send your name and address on a post card to: THE WINSTON CHURCHILL MEMORIAL TRUST, 15 QUEEN'S GATE TERRACE, LONDON SW7 5PR as soon as possible asking for an application form. The closing date for completed application forms is 1st November 1980.

The British Naturalists' Association are holding their seventy-fifth anniversary conference on "What future for the natural world: the ecological basis of nature conservation" at the Hayes Conference Centre, Swanwick, Derbyshire, November 7th - 9th 1980. Further details and application forms available from the Conference booking secretary: MR. R. FREETHY, 15 Lower Manor Lane, BURNLEY, Lancashire.

Sussex Botanical Recording Society

Following the publication in June this year of the Sussex Plant Atlas by P.C. Hall, the SBRS will continue recording and the collection of records for an eventual supplement. Any additional records can be sent to the BSBI/SBRS Recorders for East (Roger Minor) and West (Mary Briggs) Sussex. It would be very helpful if records of species widespread in Sussex could be sent as tetrad records. Those for any plant with less than 10 vc. dots, or away from the main distribution on the Sussex Plant Atlas maps, should be sent with 6 figure grid references and locality details. At the time of writing, Joan and Peter Hall are facing the upheaval of moving house, leaving Surrey to set up home in Gwent, and we wish them well in their new home.

MARY BRIGGS

BTA Guide

The British Tourist Authority Guide to Outdoor Britain is planned as a series of six books of which the first: *The North of England* was published by Croom Helm Ltd., for the B.T.A. in June 1980. Following the introduction by Norman Shrapnel the book is divided into 5 areas: Cumbria, The Isle of Man, Northumbria, the North West, and Yorkshire and Humberside with two further sections on cross-country trails. Your country holiday, 2 Appendices – Organisations (including BSBI) and recommended books (with *Pennine Flowers* the only flower book!): finally an index. The 158 pages include much general information on outdoor sites and country activities. Although the book does not offer botanical information as such, nature trails are listed for each of the 5 areas, also nature reserves (indexed under wildlife). This would be a useful book for members to take when visiting unfamiliar areas in Northern England, and an invaluable book to recommend to the overseas visitor interested in natural history and the countryside. I hope that others in the series will soon follow. Copies £8.95 hardback and £3.50 paperback from bookshops or directly from: CROOM HELM LTD. Publishers, 2-10 St. John's Road, LONDON SW11., post free.

Mary Briggs

Uppingham School Herbarium

Through the kind offices of Mr. K.G. Messenger, the Uppingham School Herbarium has been donated by the Trustees of the School to the Leicestershire Museums Service, to whom it was transferred on the 3rd July 1980. It is housed in the Biology Section, Museum, New Walk, Leicester and may be consulted by arrangement with the Keeper of Biology, Dr. J.H. Mathias. Prior notice is helpful but not absolutely necessary during normal working hours (weekdays 0900 - 1700 hrs.).

The Herbarium is composed of six separate collections, containing respectively: British bryophytes, British phanerogams (pre-1950), British phanerogams (post-1950), Sark phanerogams, Shetland phanerogams and the voucher collection for Messenger's *Flora of Rutland* (1971). The whole is contained in 164 genus folders and probably amounts to more than 2,000 specimens. The phanerogams are all ordered according to Dandy (1959) and further details are available on request.

I.M. EVANS, Leicestershire Museums Service, 96 New Walk, LEICESTER.

Botanising Abroad in 1981?

If so, and you are keen to do it under the leadership of our indefatigable Hon. Gen. Sec., Mary Briggs, you will be interested in the preliminary announcement from Cox & Kings the travel firm that organises these special interest holidays. As far as we know at present, Mary will be conducting botanical tours to Crete in March, the Algarve in April, the Berdun Pyrenees in May, and Wengen in Switzerland in June, the Dolomites (Selva, Val Gardena) early July, and Zinal, end July.

For further details, when these are finalised, get yourself on the mailing list of Cox & Kings Ltd., 46 Marshall Street, London W1V 2PA. Telephone: (01) 439 8292.

ALIENS and ADVENTIVES

ADVENTIVE NEWS 17

compiled by Eric J. Clement

STREET ALIENS

A remarkable selection of alien plants can often be found simply by walking along even the most urban of streets. R.T. Mabey has written a delightful, popular book on this topic – Street Flowers (Kestrel Books by Penguins, 1976), but it is not always sound on the alien details. Miss R.M. Hadden has produced an exciting paper on perhaps the most built-up piece of Britain, Wild Flowers of London W1, in London Naturalist 57:26-33 (1978) – 157 species were recorded in the one year, adventives featuring prominently. R.C. Palmer gives some pavement alien records in BSBI News 13, p.13, of plants escaping from window-boxes. I continue this urban story, listing here some unusual finds:

Eccremocarpus scaber (D. Don) Ruiz & Pavon: Pavement at the base of a wall in Cranbrook High Street (Kent), 1979. Mrs. M.J. Oldaker. Also as obvious escapes were *Linaria purpurea*, *Anemone* \times *hybrida* and *Hebe* sp. All were cleared away before the *Hebe* could be named.

Kochia scoparia Schrad.: Waste place, High Street, Hull (SE York), Sept. 1978. Miss F.E. Crackles. Hb. FEC. Det. EJC. One plant, with a shaggy inflorescence, very unlike the garden form of the species. Close by, mostly occurring along the street edge were other aliens: Amaranthus retroflexus, Ammi visnaga, Linum usitatissimum, Phalaris canariensis, Panicum miliaceum and Setaria italica. Also two well-established patches of Trifolium resupinatum. The seed warehouse opposite was the obvious source: they advertise themselves as grass and clover seed importers, but clearly they also import bird-seed.

Malva alcea L.: Pavement by school, Charlbury (Oxon), 1977. W.D. Campbell, comm. Dr. H.J.M. Bowen. See drawing in last News. I might add that this species is often, currently, wrongly distributed as Lavatera cachemiriana, even in one University Index Seminum.

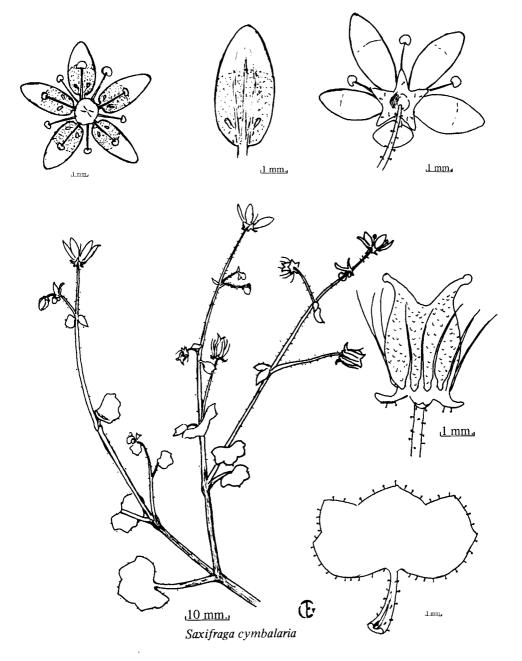
Verbascum bombyciferum Boiss.: In cracks of pavement, near Tewkesbury Abbey (Glos.), 1978. Dr. H.J.M. Bowen. Has anyone studied the ecology and microclimate of pavement cracks? – it might be surprisingly interesting.

ANNUAL YELLOW SAXIFRAGES

Saxifraga cymbalaria L. (incl. S. huetiana Boiss.): Abundant weed over many years in garden greenhouse, Great Alne, near Alcester (Warwick), Oct. 1979. G.R. SP 1159. J.K. Wheeldon, comm. Mrs. P.J. Copson. Conf. EJC. This is "a second county record, the former being from Leek Wootton, SP 2868, in 1961."

Some 30 - 40 plants mysteriously appeared, in Nov. 1978, in the wild garden of T.G. Evans at Chepstow (Monmouth) and are now flourishing, the seeds germinating in the autumn. TGE has kindly drawn his plant to illustrate the short description in *CTW*: 452. Contrary to normal?, the distal part of the petal was a shiny buttercup-yellow, and the proximal part was duller and darker; two small prominences in the basal area appeared to be nectaries.

This small, fleshy annual is rather frequent in gardens and easily gets naturalized, especially on damp rockeries or at the foot of shady walls. In Hb. EJC are specimens coll. Dr. P. Macpherson in Berwickshire (nursery weed, G.R. 881.662, 1976) and coll. Rev. G.G. Graham in Durham (damp, gravelly soil in Darlington, Oct. 1978). Many other records exist.



del. T.G. Evans 💿

Three varieties (*not* subspecies, as ascribed by *Flora Europaea* 1:370) of this species were recognized in the monograph by Engler & Irmscher in *Pflanzenreich* 67 (IV.117): 202-203 (1916), but they clearly state that numerous specimens were compared and the characters were by no means constant. Two have been claimed for BR, differing as follows: Lvs with 7–9 broadly triangular, \pm acute teeth;

petals 5 mm. long var. *cymbalaria* Lvs with rounded crenations or subentire; petals less than 5 mm. long var. *huetiana* (Boiss.) Engler & Irmscher.

Errors abound in the literature and are very confusing.

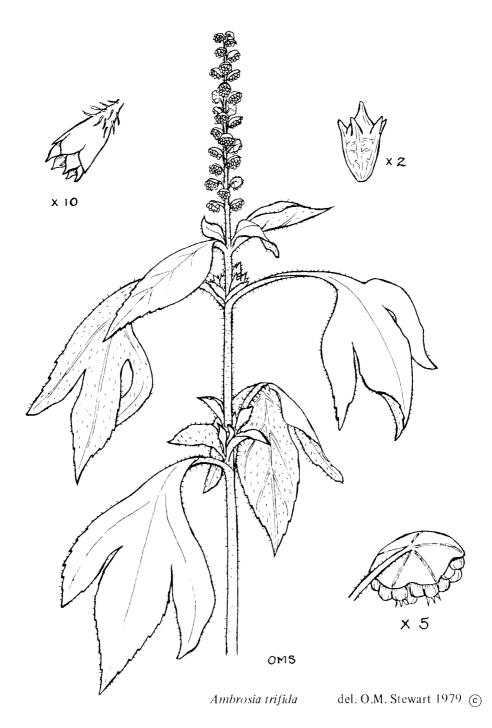
S. huetiana of Flora USSR (Engl. trans.) 9:129 is certainly not Boissier's plant, and even S. cymbalaria (p. 129-130) is also attributed with the wrong petal colour. Most gardening literature, and all early Br records assigned our plant to S. sibthorpii Boiss. (incl. Druce's British Plant List, 1928): I presume that all the records were incorrect. S. sibthorpii is easily separated by the larger and richer, orange-yellow petals and the deflexed (not erect to patent) sepals at anthesis (=flowering stage), but the true plant (from Greece and Aegean) appears to be absent from (current) Br horticulture. W. Harding, in his excellent Alpine Garden Society Guide Saxifrages (1970), agrees (p. 114), and gives a good photograph of S. cymbalaria ssp. huetiana (p. 98). "S. cymbalaria" of Sibthorp's Fl. Graeca, tab. 378 was a very early error for S. sibthorpii Boiss., whence the specific epithet.

Back in 1964, D. McClintock, in *Wild Flower Magazine* **340**:26 suggested that all Br plants were *S. huetiana*; Prof. D.A. Webb kindly confirmed (Nov. 1979, *in litt.*) that "it is only subsp. *huetiana* that occurs as a weed or a casual or naturalized alien in Europe. I have never personally seen it in wild ground; the greatest quantity I ever saw as a weed was in the Jardin des Plantes in Paris, where it was not quite up to nuisance value, but fairly abundant." What a pretty weed, too!

DOCK AND GRANARY ALIENS

Dock aliens are very much scarcer than in former times, although granaries still provide some excitement. No longer do we import weedy Turkish barley: rather clean N. American wheat is the norm these days. *Lepidium densiflorum/virginicum* and *Camelina microcarpa/ sativa* appear to be typical impurities; in both genera I often find it difficult to determine specimens to specific level. Variation certainly occurs, but it appears in varying combinations: self-perpetuating 'races' appear to be involved, due to the self-pollinating flowers. Indumentum characters, in particular, appear to me to be of rather dubious taxonomic value (contrary to much literature!).

Mrs. O.M. Stewart explored the Leith Docks (Edinburgh), and has preserved many specimens in Hb. OMS. In 1977 there was Lepidium virginicum; in 1978 L. bonariense and Lappula squarrosa (L. echinata). Near the granary, in 1979, Erysinum repandum L. (det. EJC) was the best find – nowadays a very rare casual. Also there were Amsinckia sp., Bromus diandrus, L. cf. virginicum and the above-mentioned Camelina complex, one of which was "quite hairy and the flowers overtopped the buds, the other with very short pubescence and the buds above the flowers." I failed to correlate these field notes with size of seeds – the only character that I rely upon (capsule size, shape and stem pubescence characters overlap?). A plant of Ambrosia trifida L. was rather covered with flour, but Olga Stewart managed to produce a fine drawing for us. Described briefly in CTW:816, it occurs in Br most years, being especially characteristic of soya-bean waste. The enlargements show a male capitulum, one male floret, and a fruit which are produced inconspicuously in the leaf axils below the male racemes.



C.W. Bannister found in 1979, introduced with grain at Gloucester Docks, Aegilops cylindrica Host and Bromus japonicus Thunb.: CWB added that "the latter seems more or less regular at the docks". Vouchers are Hb. EJC & CWB. One fine plant of Camelina rumelica Velen. was also there. "Last seen at Sharpness Docks, 1953. Easily recognised by its white flowers and densely hairy leaves persisting in a rosette at time of flowering." I have no other records for this sp.

P. Macpherson, A. McG. Stirling *et al.* explored in 1979 the large granary complex at Clyde Docks, Glasgow (Lanark). *Amaranthus* sp. (too young), *Lepidium densiflorum* (overlooked as "*L. ?ruderale*") and *Setaria viridis* were sent to me for checking. *Agrostis* scabra was still present (see *BSBI News* 13, p. 22), whilst *Glasgow Nat.* 19:431 (1978) gives an Oct. 1977 record as "well established on waste-ground, Cowcaddens, Glasgow", and "reported from derelict land in several places around the city", the "Whiteinch area of the city" being specifically quoted. Truly a plant to be in the next *CTW* edition. **MIXED BAG**

Allium subhirsutum: Dr. H.J.M. Bowen and R.J. Pankhurst point out 5 additional records to the one given in BSBI News 23, p. 10, as follows:

Roadside, near Teignmouth (S. Devon), June 1954. R. Thompson. BM.

By mill stream, Exwick (S. Devon), K.E. Bull (1959) and J.E. Lousley (1962), RNG. Collected as A. zebdanense.

Top of low wall near main road, Bishopsteignton, Teignmouth, May 1961. Miss K. Bigg-Wither. BM.

Hedge below Coastguard Cottages, the Garrison, St. Mary's (Scilly), 1962. R.C.L. Howitt. RNG. The specimen has hairy leaves and "may be this" (HJMB).

Roadside bank, Ware Barton Farm, Bishopsteignton, June 1964. Miss K. Bigg-Wither. RNG.

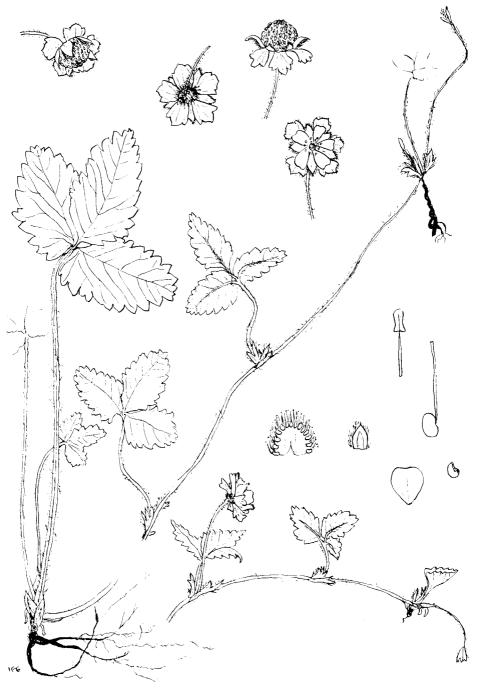
Diplotaxis erucoides: In BSBI News 22, p. 12, I promised to summarise all recent records for this species. This follows, largely due to the efforts of Mrs. M.C. Foster who kindly searched the literature for me. Clearly this species should be removed from a future edition of CTW.

- 1937. Brewery alien, Burton-on-Trent (Staffs.). R.C.L. Burges. RNG.
- 1948. Bomb-crater, Brockham Hill (Surrey). J.E. Lousley. BM, RNG. All species were apparently sown at this site, some persisting for many years.
- 1954. (Inhams, Bisbrooke (Rutland)). Record unconfirmed.
- 1958. Wool-alien, Fladbury (Worcs.). C.W. Bannister. RNG. No other wool-alien records exist.
- c. 1970 On pile of soil excavated for new pond in the Botanic Gardens, Cambridge. J.M. Mullin. Det. Dr. J.G. Dony.

Duchesnea indica (Andr.) Focke (Fragaria indica Andr.): Mariner's Path, Stoke Bishop, Bristol (W. Glos.), Nov. 1978. Miss B. Sydenham. Comm. Miss I.F. Gravestock. Inspection of a nearby garden revealed the probable origin: this species never seems to get far from estates. Described briefly in CTW:391, but drawings are few, hence Florence Gravestock has kindly filled the gap. The ternate leaves and 3-toothed epicalyx segments are distinctive; and it is the only strawberry-like plant with yellow petals. No-one eats more than one of its solitary, red fruits!

Please continue to send in records, most preferably on slips of paper 5 x 3"; and more drawings are needed, too.

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



Duchesnea indica

del. I.F. Gravestock ⓒ

A NEW ALIEN PULMONARIA (see Front Cover)

In 1974 the writer and Mrs. J.F. Leslie found an unknown *Pulmonaria* (fig.1) established on streambanks near Ewhurst, Surrey (V.c.17). Reference to neither Flora Europea nor the herbarium at **BM** enabled a convincing determination to be made and living and herbarium material were submitted to Dr. W. Sauer (Munich), co-author of the FE account. He reports that it is a tetraploid (2n=c.28) and matches only rare plants of the *P. dacica* group from north Yugoslavia. An up to date account of this group and the genus as a whole is given by Sauer in *Bibliotheca Botanica* no. 131 (1975). However, the possibility of garden hybridization could not entirely be ruled out and he agrees that, for the present, it would be best to refer to these plants under their well-known cultivar name – 'Mawson's Blue'.

Thomas Henry Mawson (1861 - 1933) was a landscape architect who laid out a number of gardens for the minor nobility at the turn of the century, one of these being Hartpury House, Gloucs. (now the Gloucs. College of Agriculture). Plants believed to have survived here from the original plantings are an exact match for those in question.

'Mawson's Blue' may be distinguished as follows: Perennial, with slender rhizome and stems up to 1 ft. Leaves deciduous (not overwintering), lamina $9 - 13 \times 3.5 - 5.5$ cm, dark green, and unspotted, the earlier ones often \pm obovate or broadly elliptic, the latter narrower and more attenuate above; upper surface soft to touch, with numerous long and short eglandular hairs and a very few glandular hairs. Stem leaves often rather short and broad, abruptly contracted to apex. Inflorescence with more numerous glandular hairs, but not sticky (as in *P. mollis*). Calyx teeth obtuse, c. 2x as long as broad at anthesis. Corolla 10-20 x c. 10-13 mm., purplish blue in bud, bright blue at anthesis (RHS Colour Chart Violet-Blue 95B). Corolla tube glabrous below the apical ring of hairs. It is a "thrum" form with a short style and the stamens inserted just below the corolla mouth.

It is sometimes incorrectly referred to as a variety of *P. angustifolia* L. which has longer, narrower and rougher evergreen leaves and should not be confused with *P.* 'Munstead Variety' (syn. 'Munstead Blue') which *is* a form of the latter species and has "pin" flowers. *P.* 'Blue Carpet' (from the National Trust, Hidcote) is another thrum selection very similar to 'Mawson's Blue', but its stems are noticeably decumbent. A further and apparently unnamed form grows in Bowles' Corner, RHS, Wisley; it has more acute basal and stem leaves and is a pin form.

The following are the records traced so far for P. 'Mawson's Blue':

- V.c.17 Surrey (a) Ewhurst, west of Holmbury Farm. Established on streambanks below an artificial pond, GR51/107.420 A.C. & J.F. Leslie, 9th April 1974. Hb. ACL no. 225/74. Still there 1979.
 - (b) Oxshott, north-west of Prince's Coverts. Established on roadverge in front of houses, GR51/155.617 E.J. Clement & J.L. Mason. 2nd May 1966. Hb. EJC (as *P. ?alpestris*). Roadverge tidied up, plants gone, 1980, ACL.
- V.c.18 South Essex Brentwood, Great Warley Place. Relic of earlier cultivation, GR52/58.90, E.J. Clement & J.L. Mason, 24th April 1966, Hb. EJC (as *P. ?alpestris*).
- V.c.83 Midlothian (a) Roslin Glen. R.M. Smith & R.M. Davidson. May 1951. E (as *P. longifolia*). Status unknown.

(b) Musselburgh, Carbery Tower. Woodland on old estate. Relic of earlier cultivation. E.P. Beattie. 30th April 1959 and 1st May 1965. Specimen *in hort*. ACL.

It is no doubt elsewhere and further records, with specimens, would be welcome. I am most grateful to the numerous correspondents and others who have provided information for this note.

A.C. LESLIE, Monksilver, 72 Boxgrove Road, GUILDFORD, Surrey GU1 1UD.

ALIENS GALORE AT BRISLINGTON TIP

Brislington Tip is situated above the south bank of the River Avon approximately four miles east of the centre of Bristol; until recently in Somerset, Brislington is now part of the new county of Avon. Tipping was discontinued in June 1978 and, contrary to normal practice, large areas were not covered with topsoil after levelling. The tip was first visited by the writer, accompanied by Messrs. C.M. Lovatt and A.C. Titchen, on October 7th 1978 when its exceptional botanical interest was immediately apparent: this and further visits by the writer and Mr. T.G. Evans yielded the plethora of records here described. (New records for V.c.6 are prefixed with an asterisk).

Large expanses of luxuriant growth were dominated by huge quantities of Panicum miliaceum, Lycopersicon esculentum, Amaranthus retroflexus, Lepidium sativum, Phalaris canariensis, Chenopodium spp. and the North African Guizotia abyssinica. Many grasses, mostly of bird-seed origin, were abundant, notably Setaria viridis, S. lutescens, S. verticillata, Echinochloa crus-galli, *Sorghum halepense, the uncommon Echinochloa utilis, Ohwi & Yabano, true E. frumentacea Link. and *E. colonum (L.) Link. More exotic grasses included the decreasing Panicum capillare L., *Setaria geniculata (Lam.) Beauv., S. italica, *Eragrostis cilianensis (All.) Lutati, *Eragrostis neomexicana Vasey, the very rare *Diplachne uninervia (Presl.) Parodi, *Lolium rigidum Gaud., *Oryzopsis miliacea, *Digitaria ciliaris (Retz.) Koel., D. sanguinalis (L.) Scop., *Triticum durum L., Lolium temulentum L. var. arvense Lilj. and Phalaris paradoxa L. var. praemorsa Coss. & Dur. Amaranths, in addition to A. retroflexus, were represented by A. albus, A. cruentus Mansf. and much *A. standlevanus Parodi ex Covas, new to the Bristol Adventive List.

The leaves of the garden throw-out *Cleome spinosa Jacq. were at first mistaken for those of Cannabis sativa, which was present in quantity: neither these nor the many plants of Carthamus tinctorius L. were to flower before the onset of winter frosts. However, the brilliant autumn hues of Chenopodium spp. and Kochia scoparia s.l., precursor of the garden Burning Bush, provided ample compensation for these omissions.

Bird-seed was undoubtedly the origin of *Vaccaria hispanica*, North American *Salvia reflexa Hornem., *Portulaca oleracea L. and Centaurea diluta Aiton. A single plant of the rare umbellifer *Cuminum cyminum L., cultivated in Mediterranean regions for its aromatic fruits and added to bird-seed as a sweetener, was almost hidden by a plastic drum: related species were Anethum graveolens L. and Coriandrum sativum L., the latter increasing in the Bristol area possibly in connection with a large immigrant population.

*Eruca vesicaria ssp. sativa, Rapistrum rugosum ssp. orientale, Malva parviflora, Melilotus indica, Vicia villosa, *Citrullus lanatus, Datura stramonium and Nicandra pyhsalodes completed an impressive list in which many uncommon plants were present in quite exceptional abundance. No less than seventeen of the species found were new to V.c. 6; as indicated by the prefixed asterisk. Predictably, the majority of the species referred to above did not re-appear in 1979 but a few, notably the *Setaria* and some *Echinochloa* spp., persisted and *Digitaria ciliaris* increased quite considerably. The ubiquitous lettuce, *Lactuca serriola*, present in very small quantity in 1978, now dominated most of the tip and *Epilobium* spp., in particular *E. adenocaulon*, were abundant.

Most notable of the 1979 newcomers was undoubtedly *Chenopodium ambrosioides* L., expertly drawn by Trevor Evans in BSBI News 24, a plant now seldom recorded in Britain. Fullers' Teasel, *Dispsacus pilosus* L., which appeared in some quantity, was formerly grown commercially in Somerset and *Euphorbia platyphyllos* was found just a few miles from where Ray had first recorded it in Britain centuries previously. Bird-seed again was surely the source of several plants of *Lythrum junceum* and single plants of *Amaranthus blitoides* S. Watson and the rare grass *Panicum dichotomiflorum* Michx., both of North American origin.

My thanks are due to colleagues Trevor Evans, Clive Lovatt and Tony Titchen, to Captain R.G.B. Roe and Professor A.J. Willis for invaluable help with records, and to Eric Clement and Dr. C.E. Hubbard for their help with identification problems.

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

ADVENTIVE TIP SPECIES FOUND IN THE LONDON AREA 1969 - 79 – A SUMMARY

An enthusiastic 'tip' walker for botanical purposes during the last ten years I thought that the accompanying notes might be useful to those with a similar esoteric interest.

The following data must not be thought of as complete or absolutely accurate because repeated visits to the same sites in the company of other botanists have nearly always resulted in more species being observed only a week or so later; particular people notice certain types of plant more readily than others. Weeds widespread on waste ground in the London area are mostly omitted — the lists aim to represent those species directly introduced with the refuse, and so normally exclude the typical weed flora of the neighbourhood. Most listed species are 'casuals', which normally fail to reappear in the 2nd (or 3rd) year; the garden ornamentals are often an exception. Only a very few tips are responsible for the soya bean impurity aliens; species in this unique category are marked with an asterisk, most have also been grown this year in cultivation from soya bean waste. The remainder are mostly either bird-seed aliens or garden outcasts — the latter group are doubtless under-recorded because of my stronger interest in the former!

In all, just 80 cards (a 'card' representing the species found on one tip in one year) were built up during the period 1969 - 79, those sites near my home at Ware were visited numerous times throughout each season and a record card built up for the year; those sites further afield were visited only once or twice. It has become clear that repeated visits to the same site will result in a much greater tally of alien species being noted.

The Sites

Of the 80 cards built up, the breakdown of tip species was as follows:

No. of spp.	No. of cards		
per site		30 - 39	12
0 - 9	10	40 - 49	5
10 - 19	37	50 - 59	2
20 - 29	14	60 - 69	1

The Species

Miss R. Sedergreen has very kindly looked through all 80 cards and has extracted alphabetically the 220 different tip species observed which were in the following order of frequency.

(a) Very frequent species (on 50% or more cards)

Avena sativa, Cucurbita pepo, Echinochloa utilis, Helianthus annuus, Linum usitatissimum, Lycopersicum esculentum, Panicum miliaceum, Phalaris canariensis, Setaria italica, Setaria viridis.

- (b) Frequent species (on between 10% to 25% of the cards) Cannabis sativa, Coriandrum sativum, Datura stramonium, Echinchloa crus-galli, Fagopyrum esculentum, Guizotia abyssinica, Lolium temulentum, Nicandra physalodes, Papaver somniferum, Setaria glauca, Vitus vinifera.
- (c) Occasional species (on between 10% to 25% of the cards) Abutilon theophrasti, Amaranthus caudatus, Amaranthus quitensis, Amaranthus retroflexus, Antirrhinum majus, Beta vulgaris, Brassica rapa, Carthamus tinctorius, Centaurea diluta, Chenopodium ficifolium, Cicer arietinum, Citrullus lanatus, Galega officinalis, Glycene max, Hordeum sp., Iberis umbellata, Lepidium sativum, Lolium multiflorum, Phoenix dactylifera, Raphanus sativus, Sisymbrium loeselli, Sisymbrium orientale, Solanum nigrum, Sorghum halepense, Triticum sp., Zea mays.
- (d) Sporadic species (seen on from three to eight sites on between 5% to 10% of the cards) Amaranthus albus, Amaranthus hybridus, Ambrosia artemesiifolia, Ambrosia trifida*, Anethum graveolens, Artemesia absinthium, Artemesia verlotiorum, Atriplex hortensis, Bidens frondosa, Borago officinalis, Brassica juncea, Brassica oleracea, Calendula officinalis, Camelina sativa, Capsicum annuum, Cassia sp.*, Centaurea cyanus, Centaurea montana, Chenopodium hybridum, Chenopodium murale, Chenopodium opulifolium, Chenopodium polyspermum, Chenopodium probstii, Chenopodium rubrum, Chenopodium strictum, Citrus sp., Colutea arborescens, Consolida sp., Coronopus didymus, Cosmos bipinnatus, Cucumis melo, Datura tatula, Digitaria ascendens, Digitaria sanguineus, Dipsacus fullonum, Echinochloa collonum, Fuschia sp., Galinsoga ciliata, Galinsoga parviflora, Hesperis matronalis, Hibiscus trionum, Hirschfeldia incana, Hyoscyamus niger, Ipomoea hederacea*, Ipomoea purpurea*, Kochia scoparia, Lathyrus latifolius, Lens culinaris, Lythrum junceum, Malcolmia maritima, Melilotus indica, Melilotus sulcata, Mentha gentilis, Nicotiana alata, Ononis baetica, Onopordon acanthium, Phaseolus coccineus, Pisum sativum, Polygonum cuspidatum, Polygonum pensylvanicum*, Puccinellia distans, Rapistrum rugosum, Ridolfia segetum, Salvia reflexa, Sida rhombifolia*, Sida spinosa*, Silybum marianum, Sisymbrium altissimum, Sisymbrium orientalis, Solanum americanum, Solanum nitidbaccatum, Solanum nigrum var schultzii, Solanum rostratum, Sorghum bicolor, Trachyspermum ammi, Trigonella foenum-graecum, Vaccaria pyramidata, Vicia faba, Vicia sativa, Vicia varia, Vigna radiata, Xanthium strumarium.

(e) Rare species seen only once or twice

90 species; details on application.

Note

The majority of the above adventive species are of cage bird-seed origin. During the same decade 1969-79, Dr. John Mason and I have raised in cultivation almost 300 different bird-seed aliens while a further 150 are on record as having appeared under garden bird tables or on other tips growing in close association with definite bird-seed aliens. It is planned that a separate paper on this subject will emerge in the near future.

Acknowledgements

I am, as always, greatly indebted to Eric Clement for his unstinting help. This article was his original idea and he has carefully amended my nomenclature. Thanks are also due to Miss R. Sedergreen who interpreted the field cards by arranging all the noted species in alphabetical order. Finally I must mention the London Natural History Society who kindled my interest with those memorable 'alien hunt' coach trips from 1969-1973.

C.G. HANSON, 1 Coltsfoot Road, WARE, Herts.

PHOTOGRAPHY FOR PLANT IDENTIFICATION – Part 1 by D.M. Turner Ettlinger

Some months ago, smarting under yet another repetition of the canard that all botanical photography was undesirable because it always resulted in the photographer destroying most of the adjacent rarities while working on one of them. I wrote a rather intemperate letter to the Editor, who, in reply, tactfully suggested that an article on the subject would be of great value to readers, so here it is.

The most precise records of plants undoubtedly come from a combination of exact measurement and the accurate drawing from life of those parts on which identification depends; this requires someone who is both a highly competent draughtsman and sufficiently knowledgeable to know which features need to be portrayed in detail. Contributors to *B.S.B.I. News* clearly come into this category, and I read with interest Mrs. L. Richard's notes on her technique in the Dec. 1979 issue. Incidentally, I have had the privilege of seeing some of Mr. David Piper's superb paintings of Irish orchids, accurate to the last detail as well as highly attractive aesthetically, but there are few in his class and one could quote some very poor artist-illustrated books published in recent years.

Unfortunately, the time required for such skilled work is considerable – much more than is normally available to portray a living plant in the field. If I read Mrs. Richards right, her work is done on picked plants taken home; I am sure that neither she nor her colleagues would deliberately pick or dig up a rarity in order to draw one, but that still leaves the problem of how such a thing is to be depicted. Incidentally, even if an artist were to settle down to portray a rarity in the field, would not he -- being necessarily slow – run an even greater risk of trampling adjacent plants, if careless, than the much quicker, if equally careless, photographer.

To my mind, the only practicable way of portraying a rare plant (or an unknown one that might turn out to be rare) for subsequent identification or confirmation by experts is by a photograph. The ex-cathedra statement in *B.S.B.I. News* of March, 1975, that "it is almost impossible to identify unknown plants from photographs" is quite untrue; its author can only have seen photographs of the quality I hope this article is aiming to improve. In 1977 the *Ophrys bertolonii*, found in Dorset, was identified clearly from what I am sure Mr. Robin Webster will forgive me for describing as a pretty indifferent photograph. Similarly, the improbable U.K. appearance of *Pseudorchis frivaldii* was also identified from a photograph at about the same time. My own record of the hybrid x *Pseudorhiza bruniana (Watsonia* 12:3) was accepted by appropriate experts on the basis of photographs that were far from good. In truth, the highest photographic quality is rarely necessary for species whose diagnostic features are not absolutely minute.

Relatively simple photographic techniques, capable of being used quickly in the field, *can* produce results enabling most "difficult" plants to be identified satisfactorily. The photographic expertise that would have been required only a few years ago has largely been replaced by automation, so there is really no reason for anyone intelligent enough to be a plantsman to claim that photography is too complicated.

This article is aimed at the photographic novice, the more experienced must forgive me for sometimes stating what to them is the obvious, or for omitting some things I think superfluous in this context. I am assuming that transparency material will be used, since this not only shows the colours (albeit with some allowance to be made, when viewing, for the film's characteristics and the light conditions) but it also removes a major technical worry because of standardised commercial processing. I am also assuming that a maximum reproduction ratio of 1:1 on the film is the largest needed for our purposes, giving x8 magnification if printed or viewed through a good hand-glass. If smaller detail than this really needs to be resolved then it is not a field operation anyway, by whatever means the record is made. In actual practice, a repro. ratio of 1:2 is quite good enough in the great majority of cases.

The Requirement

Sharpness. Detail must be recognisable in the final result. Obviously, the bigger the film area occupied by the image the better, and we can conclude one thing at once – nothing smaller than 35mm. film will do; Instamatics and 110 cameras are definitely not good enough. The quality of 35mm. cameras and lenses these days is, however, quite adequate even using inexpensive items.

Focus. The range setting of the lens must be adjusted so that the sharpest focus is on the target. Automation in this respect has started, but has not yet become accurate enough for our purposes; it is still a manual operation, and far and away the easiest and most accurate way of achieving it is by the viewing screen in a Single-lens Reflex (S.L.R.) type of camera.

Close-focus. Most 35mm. S.L.R.s will not, with their standard lenses, focus closer than c.18 inches. This is good enough for "whole-plant" shots of all but the smallest; but for detail in the flower-spike, or even in the individual flower, we must go closer still. In the second part of this article I shall deal more fully with this.

Shake. If the camera is wobbled during the time that the shutter is actually open the picture will not be sharp — an extremely common fault. To be quite sure of eliminating shake, one needs a firm tripod and a cable release for the shutter at any shutter speed slower than 1/60 second (using a 50 or 55mm. lens); one may at times be able to handhold the camera down to 1/30, but there will be some failures. For plants at ground level, bracing the camera against one's eyebrow while at the same time putting one's elbows firmly on the ground, forms a *de facto* tripod and one can get down to perhaps 1/15.

Exposure. The days when one carried a separate exposure meter and made complicated allowances for various factors has gone. Virtually every S.L.R. these days has "T.T.L." (in-camera) metering, usually requiring adjustment of controls until an indicator needle is centred or L.E.D.s are aligned. However, most manufacturers now offer, at little extra cost, models with fully automatic exposure control, with which one does not have to twiddle anything in order to get the exposure right. Some choice is still necessary; exposure is a function of both aperture size and shutter speed. Auto-exposure works (usually) by the photographer setting one factor in advance and the camera setting the other at the moment of exposure. The more important requirement, to my mind, is depth of field which is governed by the aperture; this must be the item set in advance by the photographer, and the type of auto-exposure we need. This is called "aperture-priority". But it is useful (from a camera-shake point of view, if no other) to know what shutter-speed the camera has set, so one needs an aperture-priority camera with shutter-speed read-out in the viewfinder. Unfortunately the cheaper auto-exposure cameras do not have this facility.

Film Types. Apart from Orwo, all modern transparency films will give acceptable results. Kodachrome 25 is many people's *beau ideal* – it is extremely sharp and fine-grained (more so than most lenses are capable of utilising fully) and the colours are good; but it is slow – too slow for convenience in all but sunny or flashlit situations. Kodachrome 64 is almost identical but faster, and rather more contrasty. The Agfa amateur films (CT18 and CT21), to my mind, give the best greens at any time and the best overall colour in

shady situations, but they are distinctly grainy; this does not really matter unless one is going to make 10 x 8 inch colour prints. For this the "professional" Agfa 50S and the newly-introduced 100S are better in this respect. The Kodak Ektachromes are different in several respects from the Kodachromes, and their longevity without fading is poor; it is hard to see why anyone should prefer Ektachrome 64 to Kodachrome 64. Ektachrome 200 and 400, however, have a great advantage in speed: their colours are reasonable, grain and sharpness are good, and one could make a good case for using Ek. 400 as a standard film if one is not chasing the highest quality.

Photographs Required. Personally, I like to have a minimum series of four shots of any plant I am studying. First, a "habitat" shot, showing the plant (or, preferably, a group) at a small scale but recognisable, in its habitat and showing the other plants around it; these may often give clues to its light or pH requirements. Secondly, a "whole-plant" shot, taken at whatever range allows the plant to fill the frame. Often, some "gardening" will be required, i.e. the removal of intrusive grasses, leaves of other plants, etc., which are hiding part of the target. This must be done with some sensitivity to ensure an aesthetic effect and must not be destructive if the intruders are themselves rarities. Third and fourth are the close-ups of the diagnostic or doubtful features of the flower, leaves or whatever. In the case of flowers, one needs both frontal and side views, and for leaves, both upper and lower sides; the reproduction ratio should be as large as practicable with one's equipment.

It is very advisable to get a copy of "The Nature Photographer's Code of Practice", obtainable free (with S.A.E.) from the R.S.P.B., The Lodge, Sandy, Beds. The great advantage of photography as a means of identifying rare plants is that it is essentially non-destructive, so do not let carelessness or poor technique lessen that advantage, thereby justifying the jibes of the orthodox.

D.M. TURNER ETTLINGER, Royden Cottage, Cliftonville, DORKING, Surrey RH4 2JF.

ORCHIDS AT WALTHAM ABBEY – ESSEX

Dr. Beck's note in *BSBI News* 24 interests me greatly, but he probably never saw the site in the early days of colonization. I understand the fly-ash from the nearby power station was mixed with water and pumped into the pit as a liquid, which eventually dried out to form a deep sterile soil. When I first visited this in-filled gravel pit in the late sixties, it was indeed an astonishing sight. Never before had I seen *Dactyorhiza* species growing in countless thousands on bare soil so that one could see all stages from minute seedlings a few millimetres high to flowering-sized plants. The other successful seedlings, apart from a few grasses, were *Salix* species (probably hybrids), still only a few inches high. It was clear to me then that the *Salix* should be controlled at an early stage if this unique population of orchids was to be retained and not smothered by fast-growing sallow carr.

Apparently the Nature Conservancy (as it then was) whom I approached were not able to get it scheduled as an SSSI, nor was it possible for the Essex Naturalists' Trust to organise work parties to clear away the *Salix* (perhaps because of the tight security control over access to the area).

Two years ago I visited the site to find a few small areas where the *Dactyorhiza* orchids still just survived among a jungle of sallow carr. It was sad to see that this one-time remarkable population had largely been lost through lack of active conservation management before it was too late.

Whilst some of the orchids could still be saved by removing areas of *Salix*, it can never be restored to the unique orchidetum which covered much of the pit in those early days. S.T. Jermyn (Fl. Essex:182 (1974)) I see attributes the records to me, yet I was unaware that the site had been visited by my colleague Professor J.P.M. Brenan, in 1970, as stated by Dr. Beck. *D. incarnata* is a decidedly uncommon plant in Essex, and it is of particular interest that it should have turned up in great quantity from seed in this most unusual man-made habitat, together with hybrids and the two other species present. Can anyone explain how *Dactyorhiza* seed can germinate in sterile fly-ash? What a chance experimentation may have been lost!

E. MILNE-REDHEAD, 43 Bear Street, Nayland, COLCHESTER CO6 4HX.

NOTE on a Visit by BSBI members to PERME at Waltham Abbey 5th June 1980

The purpose of this visit was to view the diminishing number of Marsh Orchids (*Dactyorhiza* spp.) which appeared spontaneously when some old gravel pits were filled with fly ash from a nearby power station. This visit was the result of a letter to the Editor of *BSBI News* from Dr. C. Beck, a member of the staff of PERME.

On this occasion the party consisted of: Dr. N.R. Campbell, Mr. R. Bateman, Mr. R. Day, Mr. A.W. Blackman, Miss S. Gorton and the Editor. They were accompanied by three members of the staff of PERME, Messrs. Gooding, Kendrew and Williams, the last named being the botanist.

Very few orchids were to be seen on the original site, now vastly overgrown with birch and willow scrub and an increasing shrub and ground flora. Although the rise of competing species has been blamed for the gradual decrease in numbers and vigour of the orchids, the basic cause would seem to be the lowering of the water table over the whole valley (by the Lea River Board) which took place in this locality about 1975. The site now is seldom damp and is so overgrown that any attempt at rescue or conservation at this time is unlikely to succeed.

However, new colonies have been appearing at nearby, but quite dissimilar habitats. The lagged steam pipes which connect the various separated units of the research complex are supported on brick or timber piers about 4 ft. from ground level, and at intervals steam traps are fitted to allow condensation water to escape. Beneath these traps a marshy area develops, several square metres in extent, and on two of these, colonies of marsh orchids were established, including the same range of hybrids as was found on the original site.

It is gratifying to note that the senior staff at PERME are keen conservationists and promised to take immediate steps to see that these colonies were protected. As one of them put it, with the extremely high level of security maintained at PERME (every member of the party had to be personally 'vouched for'), it must be one of the safest nature reserves in the country though not scheduled as such.

Dr. Campbell also provided the information that at Rye House Power Station, Hoddesdon where Fly Ash had been used to fill in hollows, there had been a similar appearance of Marsh Orchids amongst which he had identified D. *incarnata* and D. *fuchsii*. On the occasion of this visit soil samples were taken from the new sites, also specimens of flower buds for chromosome study and we await the results of these with interest.

REQUESTS

AMSINCKIA IN E. ENGLAND

This year I have started an investigation into the species of *Amsinckia* in E. England. It appears that colonies of *Amsinckia*, which I am mapping by tetrad, are now wellestablished in parts of East and West Suffolk, East Norfolk and East Yorkshire. Typically, the plant is found along the edges of arable fields, often in great abundance, but it also occurs to a lesser extent on waste ground, roadsides, and rubbish tips. It has a wellmarked preference for light sandy soils. The following is a summary of the number of post-1960 tetrad records I have assembled so far. All species of *Amsinckia* are included (except *A. lycopsoides* in the Farne Islands), whether established or casual, but records where the tetrad is not definitely known are excluded.

East Suffolk	57
West Suffolk	2
East Norfolk	18
East Yorkshire	<u>16</u>
	<u>93</u>

As well as the current distribution of the plants, I am interested in any evidence as to when *Amsinckia* spp. started to become established as weeds in E. England, how they were originally introduced, and also how they subsequently spread and at what rate. There is also the question as to how many species are involved.

I would therefore be very grateful for any records, specimens or seeds of any species of *Amsinckia* from E. England. Specimens from outside this area would also be of interest. Ideally, specimens should be fresh, not pressed, so that the important corolla characters can be more easily examined. In addition, the date, the six-figure grid reference and an indication of the quantity and habitat of the plants would be very useful. All information will of course be acknowledged and postage refunded.

I would like to thank everyone who has contributed records and information so far and especially Dr. H. Bowen, Mr. E.J. Clement, Miss F.E. Crackles, Mr. E.T. Daniels and Mr. E.D. Williams.

MARK A. HYDE, Parkside, Woolverstone, IPSWICH, Suffolk IP9 1AR.

SEEDS OF CENTAUREA SCABIOSA

I am undertaking a project on a comparative study of the incidence of B-chromosome in *Centaurea scabiosa* in various populations, and the effect of the B-chromosome on the growth of this plant. I should be very grateful if members could collect a few seeds picked from 20 - 25 seed-heads from a variety of locations, keeping each population separate with map reference of locality; some notes on the habitats would also be very helpful.

I will refund postage and undertake to share all findings of significance. The seeds should be sent to:

MISS V. F. MOTT, Wentworth College, York University YORK YO1 5DD.

CAREX MURICATA nomenclature

Dick David and I are writing the Biological Flora of Carex muricata agg., which comprises:

	CTW nomenclature
Carex divulsa subsp. divulsa	Carex divulsa
Carex divulsa subsp. leersii	Carex polyphylla
Carex muricata subsp. lamprocarpa	Carex muricata
Carex muricata subsp. muricata	Carex muricata
Carex spicata	Carex contigua

We would appreciate hearing from anyone who has any information on the biology/ ecology of any or all of the taxa in the aggregate.

Please communicate with either:

R.W. DAVID, 50 Highsett, Hills Road, CAMBRIDGE. JOHN G. KELCEY, 3 Manshead Court, Galley Hill, MILTON KEYNES.

INTERMEDIATE ENCHANTER'S NIGHTSHADE

Professor P.H. Raven writes from the Missouri Botanical Garden, U.S.A. He would be very grateful for fixed material of flower buds or small pieces of living rhizomes of the above plant from anywhere in Britain or Europe. Preliminary results suggest that plants in Europe may show different chromosomal pairing at meiosis from plants in North America, and he would like to try to confirm this.

If anyone feels able to provide some material of the above type, please contact Dr. C.A. Stace, Department of Botany, University of Leicester, who will be able to supply details of the method of transit to the U.S.A., or be pleased to forward it himself.

Co En Co

In *BSBI News* 24 we reported our new association with CoEnCo (Council for Environmental Conservation). BSBI is a member of the CoEnCo Wildlife Link Committee the purpose of which is "to provide a forum to help its members and observers bring together their views on national and international issues affecting wildlife and if possible to co-ordinate action on issues of mutual interest."

Tom Caitus, who was in June appointed as Secretary to this new Wildlife Link Committee, is a keen field botanist (and recently joined BSBI). He assures us that botanical interests will not be neglected in the environmental issues under discussion. We wish him well in this new appointment

The Chairman of the Committee is Lord Peter Melchett, and BSBI is represented at meetings by the President and/or the Hon. Gen Sec.

Mary Briggs

LETTERS

HERBARIUM LABEL and INDEX CARD

Anyone consulting a major herbarium must be struck by the enormous variety of labels used, and by the resulting variation in the quality of information given on each sheet.

Many of those consulting herbaria are not particularly anxious to examine the actual specimen itself, but are mainly interested in the data on the label e.g. locality etc. With this in mind, a card index system, duplicating the information on the sheet, would prevent unnecessary handling of, and consequent damage to, the actual sheets.

Would it be possible for the BSBI, acting in conjunction with museums and herbaria to devise a "British Standard" herbarium label? This could be printed on paper backed with pancake dry gum, and an interleaf of one-time carbon inserted between it and a thin card, all three being bound together as a unit. The top would then form the label for the relevant sheet, and the bottom copy could be filed in a card index.

Such labels could be produced in bulk by the Society and sold to institutions as well as to those members who maintain herbaria. This would bring a degree of uniformity into the labelling of specimens as well as creating an efficient information retrieval system.

Of course this does not guarantee that all the information asked for on the label got filled in, but at least the blank spaces would act as a reproachful spur to memory!

ROBIN STEVENSON, 13 Brookside Gardens, SUNDERLAND, Tyne & Wear.

NATIVE TREES

I was interested in the note entitled "DED – but resurrection is coming" which appeared in *BSBI News*, No. 24 page 29. Whilst I am delighted that farmers are eager to plant native tree species like oak, ash, alder, etc., I wonder if we could go one step further and encourage the use of young trees of local provenance in these planting schemes.

At present considerable numbers of young trees for planting are imported from the Continent. It would be much more acceptable ecologically, not least in terms of conserving our native gene pools, if the young trees being used had originated in the particular locality where they are to be planted.

I should like to see local authorities and other interested organisations establishing nurseries for propagating locally collected tree seeds and seedlings for this type of project. After the initial outlay in setting up such nurseries, they would probably prove to be a cheaper source of young trees for planting.

P.F. WILLIAMS, 31, Exmouth Court, Lynmouth Cres., Rumney, CARDIFF CF2 9AT.

THANKS – for the "Memories"

I would like to express my sincere appreciation to all members who replied to my appeal for information in respect of the above Flora. Your excellent response provided sufficient encouragement to enable me to prepare an illustrated paper (pp. 18) entitled 'Memories of Bagnall and his Flora' which appeared in 'Proceedings' of the Birmingham Natural History Society, Vol. 24, No. 2, 1980. Unfortunately supply of reprints js exhausted, but if any member would like a copy of the paper in the aforementioned 'Proceedings' I would be pleased to supply a copy at 66p including postage.

J.M. PRICE, 10 Bishopton Lane, STRATFORD UPON AVON, Warwickshire.

FRIENDS IN THE GARDEN

Botanists should welcome allies in the fight for conservation, from whatever sphere they come. None are more welcome than gardeners who are finding their own apparently inexhaustible resources of genetic diversity being remorselessly reduced by restrictive international regulations and commercial interests.

It is especially pleasing to see gardeners who so often regard our less spectacular wild species just as 'weeds', appealing in one of their leading journals for the conservation of native plants. This year *The Garden*, (formerly *J. Roy. Hort. Soc.*) has carried no less than three articles on this theme within the space of five months. The latest, by Miriam Rothschild in the July 1980 issue, follows earlier contributions from Dr. Gibbons of the NCC and Lawrence Banks, Chairman of the R.H.S's National Garden Plant Conservation Committee (both in the March issue) on similar lines. She explains for the benefit of gardeners the gist of the IUCN booklet on World Conservation Strategy and propounds the idea of establishing three types of conservation scheme. These are: (1) on site; in which the whole habitat and its ecosystem is preserved, (2) off site; as seed or similar banks, and (3) off site; in botanical and other collections. Under the last heading she discusses motorway verges, roundabouts and similar places. (Lead, salt and other pollutants permitting? Ed.)

She deplores the tendency hitherto where "we only realise a plant species is threatened when it becomes so rare that it is almost extinct". She continues, "Now is the time to protect those species which are still plentiful but getting rarer every day", and she cites cowslips and ladies smock as examples.

All this is preaching to the converted so far as BSBI members are concerned, but it is gratifying to note that the gospel is being spread into possibly philistine camps. One could soon be socially ostracised for *not* supporting – and practising – plant conservation. Incidentally, in the same March issue was a paragraph in 'Tradescant's Diary' recommending Kenneth and Gillian Beckett's *Planting Native Trees and Shrubs*.

Ed.



BOOK NOTES

In the January part of *Watsonia*, Vol. 13(3), reviews of all or most of the following books will be included :

Landscape History and Habitat Management, edited by J. MacConnell.

Aspects of the Structure, Cytochemistry and Germination of the Pollen of Rye (Secale cereale L.), by J. Heslop-Harrison.

Atlas Florae Europaeae – Polygonaceae, by J. Jalas and J. Suominen.

Plants and Islands, edited by D. Bramwell.

Orchids of Britain. A Field Guide, by D. Lang.

Experimental Biology of Ferns, edited by A.F. Dyer.

Wildlife Introductions to Great Britain, report by Working Group on Introductions of the U.K. Committee of International Nature Conservation.

The Flora of County Carlow, by Evelyn M. Booth.

The Biology of Flowers, by E. Holm.

Vegetation Dynamics, by J. Miles.

Flowerpot Gardening, by Grete Herz.

The Guinness Book of Wild Flowers, by Mary Briggs.

Discovering Botany, by P.F. Hunt.

The Flora of Wiltshire, by J.D. Grose (reprint).

Flora Europaea, Vol. 5, edited by T.G. Tutin et al.

The Flora of Aldabra and Neighbouring Islands, by R. Fosberg and S. Renvoize.

Tropical Botany, edited by K. Larsen and L.B. Holm-Nielsen.

Shetland's Living Landscape, by D.H.N. Spence.

Grasses. A Guide, by S. Renvoize.

Bryophyte Systematics, edited by G.C.S. Clarke and J.G. Duckett.

Topics in Plant Population Biology, edited by O.T. Solbrig et al.

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

Flora of East Ross-shire, by Ursula K. Duncan.

The Northwest European Pollen Flora, II, edited by W. Punt and G.C.E. Clarke.

The Common Ground, by Richard Mabey.

Science and Colonial Expansion. The Role of the British Royal Botanic Gardens, by Lucille H. Brockway.

Sussex Plant Atlas, by P.C. Hall.

Atlas of the Netherlands Flora, 1. Extint and Very Rare Species, by J. Mennema, A.J. Quene-Broterenbrood and C.L. Plate.

The Brassey Nature Reserve, edited by Sonia C. Holland.

*The Flowers of Faversham, by Joe Gurr. Faversham Papers, No. 17 The Faversham Society, Fleur-de-Lis Heritage Centre, Preston St., Faversham, Kent ME13 8NS. Price 50p (by post from above address, 70p).

This "survey of the walls, roads and dykes of the borough, 1975-6" includes, not only an apparently comprehensive list of the flowering plants and ferns of the area (mostly according to locality or street), but also comments on them, their habitats and their status. There are frequent quotations from 16th to 18th century authors. The easily readable text helps to make this a pleasant companion for the botanical visitor to the town.

- *Rotherham Naturalists' Society, 1880-1980, editor unnamed. Rotherham Naturalists' Society, Rotherham. 1980. Price 65p including postage.
- *The Story of Our Society, 1945-1979, by Wharfedale Naturalists. Wharfedale Natural History Society, Ilkley. 1980. Price 50p, from Mrs. A.C.M. Duncan, 23, Rupert Road, Ilkley LS29 0AQ.
- *The Harrogate & District Naturalists' Society Report for 1979, edited by Margaret Sanderson. Harrogate and District Naturalists' Society, Harrogate. 1980. Price (to non-members) 50p.

Most naturalists' societies publish an account of their activities, frequently those of the previous year (Harrogate and District). From time to time however, a need may be felt to draw the attention of a wider readership to the Society, when a milestone such as a centenary is reached (Rotherham) or merely at a convenient period, such as the end of a decade (Wharfedale). All three of these publications provide ample evidence of the assiduity with which the members of the respective societies study the local plants and animals (not to mention weather and minerals); but the two reviews (Wharfedale, Rotherham) will be of most interest to the general reader.

*The Tropical Rain Forest, by P.W. Richards (paperback edition).

- Cambridge University Press, Cambridge 1979. Price £9.95.
- *British Mosses and Liverworts, ed. 2, by E.V. Watson (paperback edition). Cambridge University Press, Cambridge 1979. Price £9.95.
- *Isle of Man Natural History and Antiquarian Society. Proceedings (New Series), 8(3), April 1976 to March 1978. Edited by R.A. Curphey. Price £5.00.

NORMAN K.B. ROBSON, Dept. of Botany, British Museum (Nat. Hist.), London SW7 5BD.

APPEALS

The South London Botanical Institute

Since this important London institute was described in *BSBI News* 17 (Dec. 1977) p.25, inflation has seriously eroded its small endowment and investment income, consequently £25,000 is urgently needed now:

- 1. To pay for essential repairs to the Institute premises. The most urgent of these are under way at a cost of £15,000.
- 2. To maintain the reference library and periodical collection up to date. The library must continue to purchase new books or its value to the serious botanist, amateur and professional, is destroyed. At least £1,250 annually is needed for this purpose.
- 3. To extend the small lending library which has been established recently, largely through gifts from members. This provides an important service.

Through its many distinguished members and officers the Institute has made major contributions to botanical knowledge. Names associated with the Institute include:

Allan Octavian Hume, C.B., F.L.S., F.Z.S. Founder and first President 1911-1912, a leading amateur botanist of his time.

A.B. Rendle, M.A., D.Sc., F.R.S. President, 1912-1938 Keeper of Botany at the British Museum, President of the Linnean Society, author of "The Classification of Flowering Plants".

W.R. Sherrin, Curator, 1919-1955. A distinguished field botanist, President of the British Bryological Society.

John Ramsbottom, O.B.E., M.A., D.Sc. President, 1938-1968. Keeper of Botany at the British Museum, President of the Linnean Society. Author of "Mushrooms and Toadstools" in the 'New Naturalist' series.

J. Edward Lousley. President, 1968-1976, Vice-President and Hon. Curator for many years. His publications include "Wild Flowers of Chalk and Limestone", "Flowers of the Scilly Isles", "Flora of Surrey".

C.T. Prime, M.A. PhD., F.L.S. President 1976-1979. A schoolmaster, lecturer and a botanist of distinction.

The South London Botanical Institute is a scientific institution uniquely dedicated to the amateur botanist. It has helped hundreds to find a satisfying and absorbing interest, to become better botanists than if they had worked alone, and to contribute to knowledge of our national heritage.

The Institute, which is a registered charity, is open to all who are interested in any aspect of botany. Its members, library, herbarium and garden, represent a major educational resource and amenity for the people of South London. Please help us to maintain this worthwhile activity.

Any contribution will be welcome, and these should be sent to the Appeal Treasurer: R.N. Gutteridge, 323 Norwood Road, LONDON SE24 9AQ.

THE TRADESCANT TRUST

The 'Friends' of this Trust, who, it will be recalled, are raising funds to restore the riverside church and churchyard of St. Mary's, Lambeth, just across the bridge from Millbank, (see *BSBI News* 20:28) report with pleasure and some pride that they can now proceed with a further stage of the work, having achieved the £20,250 target set by the Department of the Environment to match its own grant. The building is at last weather-proof, the window reglazing nearing completion.

Work now goes ahead on the restoration of the interior, and the conversion of the graveyard to become the Tradescant garden containing representatives of species introduced to this country by the two Tradescants, father and son, in their nursery which was situated not far away.

The church, in which there is a bookstall and shop selling the usual miscellany of fund raising items, is open Mondays, Wednesdays and Fridays 11.15 am. -3.00 pm., and on Sundays 10.30 am. -5.00 pm. until November 30th.

When it is realised that the progress so far has been achieved through generous assistance from such eminent bodies as the Pilgrim Trust, The Goldsmiths Company and The Baring Foundation it is clear that this is a major project, and to create The Museum of Garden History deserves the support of all botanist/gardeners.

A series of events is held in the church and details of these and of membership of the Trust can be obtained from:

ROSEMARY NICHOLSON, 7 The Little Boltons, LONDON SW10 9LJ.

EDITOR'S NOTE – Illustrations

BSBI News has more than once been complimented on the excellence of the line drawings, usually of adventive plants, which appear in its pages. For these we have to thank the small band of talented artists who freely make their expertise available to us. Nor should we forget our printers who ensure that these illustrations reach the printed page exactly as they left the artist's drawing board.

We set great store by these illustrations as they are often the only extant representation of the species in question, and for this reason are fully protected by copyright.

Regrettably we do receive some drawings, no less meticulously executed, which are unsuitable for reproduction because of technicalities despite all the skill the printer can bring to bear on them.

For the benefit of the many aspiring young artists we know we have amongst our members, we append what we hope will be some helpful notes for their guidance.

First of all, **proportions**. The print area of a page of *BSBI News* is 18.5 cm. x 12.5 cm. giving a proportion of height to width of roughly 3 to 2, and to make the best use of the space available drawings should conform generally to these proportions, whatever their actual size. Next, size; as large as possible within reason. Not only is it much easier for the printer to reduce than enlarge, but any blemishes are correspondingly reduced, not magnified. **Evenness of line** is important; not that all lines in a drawing should be of equal thickness or density, that way a drawing looks stodgy or lifeless. But too great a contrast between thick and thin can cause difficulties. Extremely fine lines, which become finer still on reduction, can almost disappear in the final printing.

Scale is best shown by a line marked in millimetres or centimetres, thus <u>1 cm.</u> close to the drawing. Then whatever reduction the printer has to use, the scale is reduced correspondingly. Do **not** use the notation $x \frac{1}{2}$, x 2 etc. This may be correct on the artist's

original but if the printer reduces it to, say, 3/5 of its size what magnification does that then become ?

Labelling is most satisfactory if the separate drawings on a page (showing for example, floral organs) are indicated by identifying letters, these being explained either on the back of the drawing itself or on an accompanying sheet.

Lest any budding illustrator is put off by the excellence of some of the drawings already published, let it be said that any drawing is welcome and if it is of an alien or adventive, so much the better. If not suitable for reproduction it will be returned together with a letter explaining why it was not acceptable.

To convey as much information as possible about a species, an illustration should include a whole plant drawing to show habit and such anatomical and/or floral details as are helpful in identification.

It should be stressed that the Editor does not consider himself competent to pass judgement on botanical accuracy, the responsibility for which must rest with the artist.

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"BSBI News" (ISSN 0309-930X) is published by the Botanical Society of the British Isles. Enquiries concerning the Society's activities and membership should be addressed to :-

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

Printed by Suffolk Offset, 50 Victoria Street, Felixstowe Tel. 77117