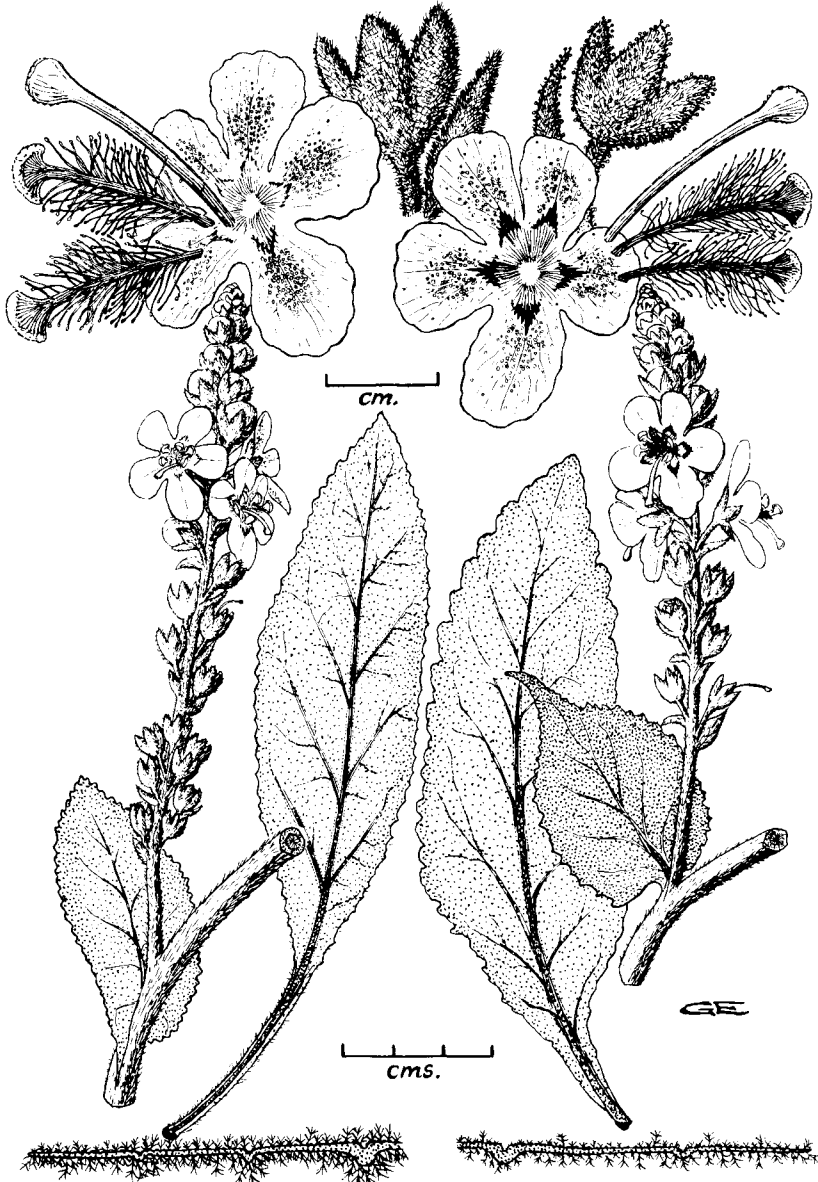


Edited by EDGAR D. WIGGINS

Cowpasture Farm, Felixstowe, Suffolk IP11 9RD



Verbascum pyramidatum x thapsus

Verbascum pyramidatum

ADMINISTRATION

General Enquiries should be addressed to :


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

Changes of address or title should be sent to :

HON. MEMBERSHIP SEC. Mrs.R.M.Hamilton, Shambles,
Whitwell, HITCHIN, Herts.

Matters concerning field meetings, should go to :

HON. FIELD SEC. Miss L.Farrell,
Nature Conservancy Council,
Godwin House, George Street,
HUNTINGDON, Cambs. PE18 6BU.

Note new address 

ANNOUNCEMENTS

Rules of the Society

Updated Rules of the Society have now been printed. Copies are normally sent to new members on joining, but the Rules have been out of print for some months now. Any recently joined member who did not receive a copy of the Rules and would like to have one, or any member interested to have an updated copy please request this from the Hon. Gen. Secretary – address as above.

New membership list

During the first months of 1979 Rachel Hamilton will be preparing the new list of members and subscribers to be published later that year. Will members please check the title and address used on their mailing envelopes and send any corrections to Mrs. Hamilton. Have you sent your new county name and postal code? Cambridge is using a postmark to inform that sorting in Cambridge is now mechanised and postal codes should be used there. This could well apply to many other places before the publication of the following list of members – possibly in 1982 – so please **send post codes now** for this next list.

Hon. Field Secretary's change of appointment

See announcement on page 19.

Referee for Carex (muricata groups)

Mr.R.W.David has moved again but his permanent (he hopes) address is now :

**50, Highsett,
Cambridge CB2 1NZ.**

Council 1978 -79

Mr.B.S.Brookes, Dr.Y.Heslop-Harrison, Mr.J.M.Brummitt,Dr.J.Dransfield, Dr.J.L.Mason, Dr.Q.O.N.Kay, Mr.R.W.David, Captain R.G.B.Roe, R.N., Mrs.A.C.M.Duncan, Mr.S.G.Harrison, Wales, Mr.B.W.Ribbons, Dr.A.O'Sullivan,Ireland, Mrs.O.M.Stewart, Scotland, Dr.P.M.Wade, Mr.E.D.Wiggins.

HON. GEN. SECRETARY'S NOTES

AMBERLEY WILD BROOKS, WEST SUSSEX

The Ministry of Agriculture, Fisheries and Food has informed that the application by the Southern Water Authority for grant aid towards the cost of a proposed scheme for the drainage of the Amberley Wild Brooks has not been approved. A Public Inquiry into objections regarding the proposals was held on 20-23 March at which BSBI submitted written evidence and plant photographs. With support from others David Streeter presented the scientific evidence most competently, using botanical records collected by the Sussex Flora Recorders, and the Scientific adviser to the Inspector was Dr. R.B. Ivimey Cook. The Minister has officially accepted that "the Amberley Wild Brooks Constitute a very important site in respect of unique natural history features, flora, fauna, birdlife and general amenity", and it is hoped that this famous site is now safe for the future.

Our thanks to those members who responded to the Appeal, (*BSBI News* 18 p.20).

INTRODUCTION OF ALIEN SPECIES

The Nature Conservancy Council has set up a working party to review the scientific and professional facts and opinions on the introduction of animal and plant species in Britain. Mr. G. L. Lucas, c/o The Herbarium, Royal Botanic Gardens Kew, is directing the investigation of plant introductions for this working party, and with a student assistant will be documenting historical (garden plants from c. 1750) and recent introductions. They hope to ascertain the proportion of these introductions which escape and become established in rural habitats; and to consider the implications of introductions between Counties as well as those introduced into Britain from other countries.

A detailed study of naturalised and casual alien plant species is at present being organised by Dr. C.A. Stace for the projected *Flora of Great Britain and Ireland*, One of the aims of the new Flora is "to cover a much more realistic selection of aliens than has hitherto been the case in British Floras and Lists".

OENANTHE CROCATI STRIKES AGAIN

Dr Keith Goodway tells me that four students from the University of Keele collected *O. crocata* in the Solway Firth (in mistake for salsify !), cooked it up in a stew for their evening meal with alarming results very similar to those reported in Sussex (*BSBI News* 17 p.3). The students were rushed off to hospital where one was in intensive care for several days. Correct identification before eating does seem to be the moral.

CONGRATULATIONS to Eva Crackles, awarded a Master of Science degree in Plant Biology. The title of her thesis is "Biosystematic and Taxonomic studies of Population of *Calamagrostis stricta* (Timm) Kogl *Calamagrostis canescens* (Weber) Roth and their hybrids". With her retirement from teaching as from the end of this last school year, we send good wishes for further studies on *Calamagrostis* and work on the Flora of East Yorkshire.

BSBI EMBLEM

The final choice of design for this emblem has not yet been decided, but many Council members favour *Hyacinthoides non-scripta* (L.) Chouard ex Rothm. (*Endymion non-scriptus*) as being a most typical British plant. The centre of its distribution is in Britain and no other country can have a better claim to this flower which is a most striking feature of our spring woodlands and some coastal cliffs. Known in Scotland as the Wild Hyacinth, in Irish as the Coinnle Corra and in Welsh as the Clychau'r Gog, in most of England it is the Bluebell.

I was interested to see that in *The Country Diary of an Edwardian Lady*, Edith Holden from Olton, Warwickshire in 1916, called her painting of *Endymion non scriptus*, "Wild Hyacinth". Geoffrey Grigson in *The Englishman's Flora* gives other Welsh and Gaelic names with cuckoo associations, and in Cornish it is Blejen an gucu, Cuckoo flower. He quotes the first reference to the plant in William Turner's *The Names of Herbes* in 1548 "The commune Hyacinthus is much in Englande about Syon and Shene, and it is called in Englishe crowtoes, and in the north partes Crawtees". It was perhaps the most difficult plant for which to select a single standard name – "Bluebell" – for *English Names of Wild Flowers* by Dony, Rob and Perring. In Latin the name was first *Hyacinthus non-scriptus*, indicating a hyacinth which was not inscribed on the petals with *AI* to indicate that it sprang from the blood of Hyacinthus and carried those symbols of grief; *Hyacinthoides non-scripta* will be the name used in *Flora Europaea* Volume 5. However, if selected as the emblem it will be the plant which is chosen and not the name.

While discussing a new emblem I read again the A.G.M. paper of 1951 by J.E. Lousley "Victoria regia – the emblem of the Society", published in the BSBI Year Book of that year. He explained that British botanists first heard of the discovery of this huge new Victoria, Royal or Amazon Water Lily when the Botanical Society of London exhibited the plant at a meeting of the Society in 1837; it had been hailed as a 'vegetable wonder' and with Her Majesty's permission was first named *Victoria regia* (later altered to *V. amazonica*). The Botanical Society of London, which was the forerunner of our Society, had been established only the previous year at a "Meeting of the Practical Botanists in London" convened at the Crown & Anchor Tavern in the Strand, and after the plant had been shown and discussed at what was possibly our first "Exhibition Meeting", the Society adopted the plant as its emblem. It was used on early notices and the Botanical Exchange Club Reports. Later Mrs. Milne-Redhead prepared a new plate for use on *Watsonia* and the Year Books published at that time. Supporters of the design pointed to the rapid growth, great strength and natural radiating pattern of the plant; however having no obvious connection with the Society it was finally dropped as emblem.

BOOK NOTES

Dr Brian Rushton in correspondence mentioned how useful he finds Book Notes in *BSBI News*. Dr Norman Robson has written these brief notes on new books in 15 of the 19 numbers of *BSBI News*. Dr. Robson contributes to the Society in many other ways: as an Editor of *Watsonia* with responsibility for Book Reviews and Obituaries, Chairman of the Meetings Committee, and he contributes especially to the Annual Exhibition Meetings; also as *Hypericum* Referee. We are most grateful to him.

VASCULA AND RUBI

A vasculum kindly donated by Prof. & Mrs John Ferguson belonged to the late Mrs Nesta Ferguson (née Thomas) who was born about the turn of the century and died in February 1975. Dr. Brian Hopkins writes : “Most of her research was published between 1913 and 1926 and earned her a D.Sc. It was mainly in cytology when she was in Bangor. Later she was associated with Flatford Mill Field Centre where there is a memorial seat to her”. Her brother was the plant physiologist, Meirion Thomas, remembered by many members for his text book.

It seemed most appropriate to return this vasculum to Wales, so I was very pleased to pass it on to Gorony Wynne who has two young daughters who are enthusiastic field botanists – we had previously been able to supply a shared vasculum donated by Miss Sylvia Haines. Gorony Wynne was elected as the new Chairman of the BSBI Committee for Wales at the Welsh Annual General Meeting on July 22nd.

At the very enjoyable Bramble Foray associated with this A.G.M. it was seen that the Vasculum is still a useful piece of equipment for many batologists; one of the leaders, Mr E.S. Eedes carried a very capacious vasculum in which the prickly specimens were well accommodated and preserved in good condition.

Our thanks to **Christine Gillen** whose typing of some contributions to *BSBI News* 19 has considerably eased the task of the Editor. Congratulations and good wishes to Christine on her forthcoming marriage.

Tailpiece

With this *BSBI News* comes notice for this year’s Exhibition Meeting. “My Music” fans will have heard Frank Muir’s definition of a “Conversazione” as “a soiree with a binge on top”.

EDITOR’S NOTE

One of the nightmares plaguing every Editor these days is the ever rising cost of printing. He has either to reduce the size or frequency of his publication or raise its price. Organizations like BSBI can, to some extent, offset these effects. This is by having more members. The cost of setting type is the same for five thousand copies as for five hundred and if spread over the larger number, reduces the price since charges for actually running off more copies are low by comparison.

For many societies, a large proportion of members belong solely to obtain the publications they issue, I am sure there are many botanists both here and abroad who would be only too glad to receive our journals for the news and information they contain.

We are a scientific society and there must be many amateurs who aspire to something rather more advanced than the local natural history society can provide, good as many of these are.

Present members could do much by bringing to the attention of their botanical acquaintances copies of *Watsonia* and *BSBI News* both of which are highly regarded – so I am told – by eminent botanists in many countries. By enrolling new members they can keep the costs down.

NOTICES

OFFICIAL BSBI NOTICES

AQUATICS AND MARSH PLANTS SYMPOSIUM

There are still a few vacancies for this symposium to be held at Brathay Field Centre, Old Brathay, Ambleside, Cumbria on October 27th - 29th.

Booking forms are available from Mrs Anne Mullin, Hon. Meetings Secretary 43, Woodstock Avenue, West Ealing, London W.13 (s.a.e. please), and must be returned to Brathay Field Centre by **September 28th 1978**.

Please note the revised title for Dr. Liddle's paper is now "Recreation and Aquatic habitats" and is contributed jointly by Dr. M.J. Liddle and Dr. H.R.A. Scorgie.

REPORTS OF CSSF FIELD MEETING TO THE PYRENEES 1967, AND TO POLAND 1976.

The Report of the CSSF meeting to the Pyrenees is now available. One copy has been deposited in the BSBI Archives, and any member may obtain a photocopy of this report, Also available are copies of the report of CSSF field meeting in Poland, August 1976.

Both reports may be obtained from Mr B.W. Ribbons by sending three 7p stamps (for each report) to him at Dept. of Botany, The University, Glasgow G12 9LD.

An abbreviated version of the Poland meeting will appear in *Watsonia* 12(2).

ADVANCE NOTICE OF FIELD MEETING TO THE CARNIAN ALPS, N. ITALY 1979

The Council of the Istituto ed Orto Botanico, Universita Degli Studi di Trieste has offered to the BSBI the free use of the mountain hut belonging to the University for August 1st - 15th 1979.

We are most grateful for this generous offer, and greatly indebted to Professor S. Pignatti who has organised this arrangement for us. It gives an opportunity to visit these botanically very rich Alps which lie North West of Trieste, East of the Dolomites and West of the Julian Alps.

The accommodation will be simple and the party will be self-catering and house-keeping – Mrs. Pignatti suggests that one member at least should be skilled in cooking spaghetti !

Prof. Pignatti hopes to send a botanist from the Institute to accompany the BSBI party, and Christopher Grey-Wilson from R.B.G. Kew may also be able to come as a leader. The number must be limited to 16 – further details will be published in the 1979 Field Programme, but members interested in joining this exciting field meeting are advised to write as soon as possible to Lynne Farrell at N.C.C., Godwin House, George Street, Huntingdon, Cambs.

OTHER NOTICES

WEEKEND OPENING OF THE DEPARTMENT OF BOTANY, BRITISH MUSEUM (NATURAL HISTORY)

We have recently had occasion to review our policy with regard to weekend opening of the Department. We are aware that some members of the Society particularly value the opportunity to use the collections and library on Saturdays. At the same time, the museum has to weigh the disruption of the normal working week and some overtime payments, against the benefit to the rarer small number of individuals actually involved.

Members will be glad to know that it has been decided to continue with normal Saturday opening for the present, but are asked to note that as from January 1979, THE DEPARTMENT WILL BE CLOSED ON ALL BANK HOLIDAY WEEKENDS (i.e. the Bank Holiday Monday, the adjacent Saturday and any other associated holidays). Those who particularly appreciate the opportunity to work in the Department on Saturdays are reminded that the best way to register their concern, is to ensure that their name is recorded in the visitor's books on every occasion that they come to the museum on a Saturday.

J.F.M. CANNON

FRITILLARY MONEY

Readers may be interested in the results of the weekend open days held at the end of April to view the Framsdon Fritillary field which was the subject of a recent appeal (*BSBI News* 17, p.5). Suffolk TNC who organized the event report that over the two days 1500 people visited the field and gave £550 in donations. They bought £345 worth of goods from the sales stall and the farmer's wife, Mrs Bacon, handed over £34, the profit on the refreshments she provided and served personally. The Trust is extremely fortunate in having such a wholeheartedly co-operative farmer owning the site. Mr Bacon not only gave every possible facility, but supervised the parking and traffic arrangements, as well as ferrying elderly and disabled visitors from the car park to the field in his Land Rover.

The Military Orchids at Icklingham (*BSBI News* 18, p.21) attracted pilgrims from far and wide including Lancs, Yorks, I.O.W., London, and Gloucester.

JOURNAL OF ETHNOPHARMACOLOGY

This new Journal published by Elsevier Sequoia S.A. will include papers on therapeutic agents in the plant kingdom. At present there is an increasing interest in the latent powers of indigenous plants – the British flora is currently being screened for therapeutic substances in a project sponsored by I.C.I.

Members will receive details of this forthcoming new Journal with an offer for personal subscribers. (See following page.)

TRADITIONAL MEDICINE

In recent years there has been a considerable revival of interest in the use of traditionally medicinal plants. Disillusionment with modern drug treatment, due partly to the side-effects from many of the chemotherapeutic products of an ever-expanding pharmaceutical industry, has been one reason for this and hence the re-thinking and reassessment of the efficacy of treatment with herbal remedies.

In man's primitive days, sickness was explained as a curse imposed upon him as a result of wrong-doing or the machinations of evil spirits. The belief was widespread that disease had to be exorcised by means of religious incantations usually accompanied by the application of some herb. Thus the taking of remedies was seen as an essential part of treatment. Whether, in fact, it was always necessary is quite another matter.

All civilizations and communities have developed some form of traditional medicine using plants. As in the European "Doctrine of Signatures", which held that every plant carried a clue to the maladies it could cure, the choice of plant was largely mythical. In certain cases, such as digitalis and belladonna, their use has been justified by results and they have entered modern medicine. But there must certainly exist many untapped sources from traditional medicine the efficacy of which now demands scientific support.

It is this lack of scientific proof which often makes treatment by herbs and the claims made for such treatment, appear to many, and especially orthodox medical practitioners, as out of date and not worth considering seriously. The fact that many pharmaceutical houses are now interesting themselves in the matter and are spending large sums of money on research into plants that have traditionally been believed to have therapeutic value, should be proof enough that they foresee a large untapped source of profit from such development.

What is required today, therefore, is a rational approach to the problem, not in the form of double-blind studies so beloved by Drug Approval Authorities, but by an informed scientific enquiry and the accurate reporting of facts.

It is in order to provide such an interdisciplinary forum that the new *Journal of Ethnopharmacology* is to be published towards the end of this year. As the Editors point out, the scientific search for new drugs from still extant indigenous medicine continues. Anthropological and ethnobotanical field studies provide important leads in this kind of research, and recent advances in analytical techniques have led to the isolation and characterization of the active components in many natural substances. There is a renewed interest in retrieving the medicinal powers of indigenous medicine in which plants play such an important role.

The object of the new journal is to provide such a forum for research concerned with the experimental investigation of the biological activities of plant (and animal) sources used in the traditional medicine of past and present cultures.

The past fifty years has seen the growth of a pharmaceutical chemical industry the results of which leave much to be desired. Perhaps the next fifty will see a return to medical treatment taking account, in a scientific manner, of what our ancestors learned so painfully in the traditional way.

C. B. HOLLIDAY,
1, Chemin de Lucinge,
1006 LAUSANNE,
Switzerland.

BOOK NOTES

The January part of *Watsonia*, Vol. 12(3), will include reviews of the following books:
Population Biology of Plants, by J.L. Harper.
Seedlings of the North-Western European Lowland, by F.M. Muller.
Essays in Plant Taxonomy, edited by H.E. Street.
Flora of Moray, Nairn and East Inverness, by M. McCallum Webster.
Introduction to Ecological Biochemistry, edited by J.B. Harborne.
The Biology and Chemistry of the Compositae, edited by V.H. Heywood, J.B. Harborne & B.L. Turner.
Flowering Plants. Evolution and Classification of Higher Categories, edited by K. Kubitzki.
Badgeworth Nature Reserve Handbook, edited by S.C. Holland.
Flora of West Yorkshire, (reprint), by F.A. Lees.
Flora van Nederland, 19th edition, by H. Heukels & S.J. van Ooststroom.
Advances in Botanical Research, Vol. 5, edited by H.W. Woolhouse.
The Island of Mull, edited by A.C. Jermy & J.A. Crabbe.

In addition the following books have been received recently. Those that will not be reviewed in *Watsonia* are marked by an asterisk.

Plant Communities (Penguin Nature Guides), by A. Bulow-Olsen.

Spotter's Guides (various).

Nature's Use of Colour in Plants and their Flowers, by J. & S. Proctor.

**Transport Phenomena in Plants*, by D.A. Baker. Pp. 80, with 31 text figures, Chapman & Hall, London 1978. Price £1.75.

**Plant, Cell and Environment* Vol. 1, No. 1. Blackwell Scientific Publications Ltd, 1978. Subscription price £20.00 (U.K.), £24.00 (Overseas) \$45.00 (USA & Canada).

This is a new journal covering the whole field of Plant Physiology.

**Irish Wild Flowers*, by R.J. Ross. Irish Heritage Series, No. 17. Pp. 25, with 41 colour photographs. Eason & Son Ltd., Dublin 1978. Price 99p.

The latest volume in this attractive series contains fine photographs of several Irish plants, including some of the rarities. It is arranged by habitat. The text is brief but informative.

I have received notice of the publication of the following books:

Flowering Plants and Ferns of Cumbria. A Check List for Westmorland, Furness and Cumberland (vice-counties 69 and 70), by G. Halliday. University of Lancaster Occasional Paper No. 4, Lancaster Price £1.50

Orchids of Papua and New Guinea, an Introduction, by A. Millar, with photographs by R & M Mackay. University of Washington Press, Seattle & London, 1978. Price \$25.00.

The Young Naturalist's Guide to Conservation, by N. Arnold. Ward Lock, London, 1978. Price £2.95.

Finally, I must correct an error in my last "Book Notes" (*BSBI News*, No. 18, p.23) I attributed the photographs in *Britain's Rarest Plants* to Miss Heather Angel; but Mr. M. J. D'Oyley has written to point out that various photographers, including himself, were responsible for them. I apologise to him and the other contributors for this unfortunate error.

N.K.B. ROBSON

ALIENS and ADVENTIVES

CRASSULA HELMSII (T. Kirk) Cockayne

The recent discovery of a small, semi-aquatic plant, *Crassula helmsii* (T. Kirk) Cockayne, by a pond in Bucks, and more recently in a pond on Epsom Common, Surrey, brings the number of occurrences of this species to at least eight, and so merits being drawn to the attention of British botanists.

Crassula helmsii is a small fairly delicate perennial growing in patches or in masses with procumbent, ascending or submerged stems and linear or lanceolate opposite leaves, in the axils of which slender pedicels bear small whitish 4-merous flowers. It grows at the edge of ponds, can live submerged, or on mud at the edge. It flowers readily when out of the water.

J.R. Laundon (*Watsonia*, 5:59 (1961)) describes and illustrates the plant which he identified in a pond by the village of Greensted, S. Essex in 1956. Since then it has been recorded from ponds at Cockayne, E. Sussex, Sidcup, W. Kent, Southampton, Sheriff Hutton, N.E. Yorks and Dunoon, Argyll. Laundon discovered that the plant, native to much of Australia and part of the South Island, New Zealand, had been sold by a nurseryman in Enfield, Middlesex, since 1927, and considered that all British records originated from that source.

This species came to the attention of J.R. Kirby, writing in the *Cactus and succulent journal of Great Britain* (26:15 (1964), 27:9 (1965)), who described it, grew it from cuttings, but commented that "in view of the ease with which this hardy *Crassula* can be grown, and its sprawling nature, it is hardly likely that it will be grown by succulent plant enthusiasts". However, he noted that the nurseryman had sold the plant as an oxygenating aquatic, and described how it could readily be planted in fish ponds.

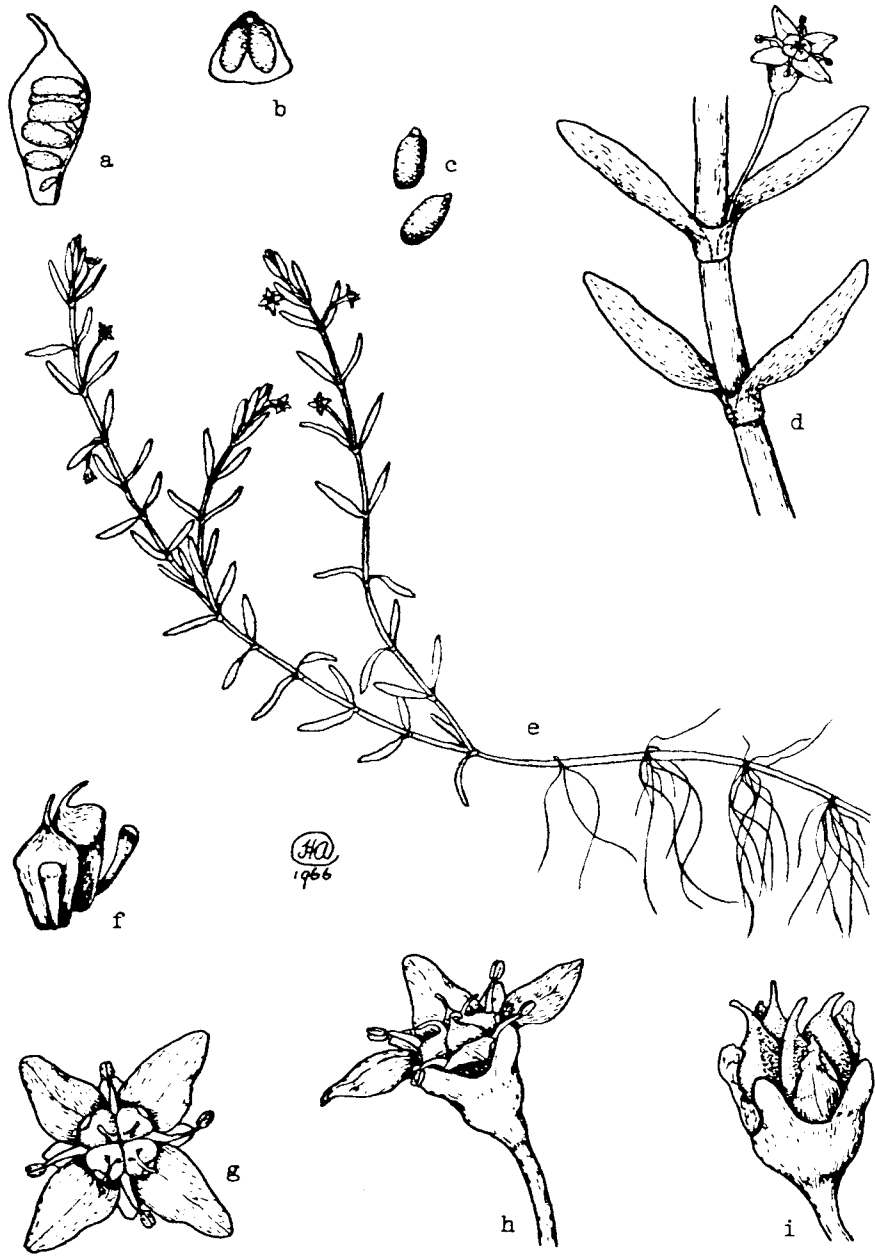
The significance of these finds lies in the plant's obvious persistence in the sites where it has been found. As it flourishes in the cool temperate zone of the Southern hemisphere, there are few climatic barriers to its establishment here. It flowers readily, and seems to set good fruit. The Greensted pond, where it was first recorded, had been dredged out a short while before its discovery, but the plant was still there in abundance. In one of its latest recorded sites — in a pond on Cholesbury Common, Bucks, where it was first seen in 1975, it has similarly successfully survived a cleaning out operation, and was flourishing in 1978.

C. helmsii bears some resemblance to the rare British native *C. aquatica*, but is larger and can readily be distinguished by its pedicelled flowers; otherwise it does not resemble closely any British species. While an individual stem appears insignificant, it attracts attention by its propensity to develop into large masses, where it presents a puzzling spectacle to the British botanist.

This species seems to be a well-established alien, which should be looked for round the edges of other ponds, or in other shallow wet places with a varying water level.

ANTHONY VAUGHAN

Fox House, Fox Road,
Wigginton,
TRING,
Herts.



Crassula helmsii : (a) follicle, L.S. showing seeds attached to inner face, (b) follicle, T.S., (c) seeds, (d) portion of upper part of stem showing opposite leaves with stem-encircling collar, and axillary flower, (e) habit, (f) two carpels with hypogynous scales, (g) flower from above. Note tips of hypogynous scales, (h) flower, side view, (i) fruit, with shrivelling petals.

From *Aquatic Plants of Australia* by Helen I. Aston (Melbourne University Press, 1973) – reproduced with permission.

MIXED BAG

Amaranthus bouchonii Thell.: Several hundred plants in field of rye grass, Woolverstone (E. Suffolk), July 1976. M.A. Hyde. Hb. E&MH. Professionally mis-det. in 1976 as "*A. retroflexus*"; re-det. Prof. J.P.M. Brenan, 1978. This species has had, I suspect, a long and plentiful history in E. Anglia, although it is largely unrecorded, but see several vouchers at K. In 1976, also, it was found "in thousands along the peaty road verges of one of the Breck fens" (E.L. Swann, *Watsonia* 11:192).

Anthemis austriaca Jacq.: In sown grass (*Lolium perenne*) on the top of a reclaimed and replanted old colliery-pit heap, Roddymoor, near Crook (Durham), June 1978. A. Dunn, comm. Rev G.G. Graham. BM, SUN, *et al*. Det. EJC. A hundred or so plants. It runs down to *A. arvensis* in CTW2 but the tall and very stiff habit, more apparent hairiness and the mucronate leaf segments separate it in the field. I know of no other Br record since its occurrence as a wool alien at Blackmoor (N. Hants) in 1960-2, comm. Miss M. McCallum Webster. CGE, K, RNG.

Avena sterilis L.: Outside chicken run, Freston, near Ipswich (E. Suffolk), June 1977 & 1978. E.M. Hyde. Hb. E&MH. Det. Dr C.E. Hubbard. Also there this year was *Amsinckia* sp., the "usual E. Anglian plant", which is normally referred these days to *A. intermedia*. But, not everyone agrees! (A.O. Chater's key to species in *BSBI News* 9:14 does not seem to work very convincingly).

Berberis buxifolia Lam.: East Walton Common, King's Lynn (W. Norfolk), April 1978. A.C. Wilson. Hb. EJC. Long known by E.L. Swann *et al*. from here, but it is unmentioned in the Norfolk *Flora* or *Supplement*. The 8 feet tall bush is some ten minutes walk from the nearest habitation and is near hidden by gorse-bushes. One of the village gardens sports a fine specimen, a potential parent, but the occupant explained to ACW that it was grown from a cutting from the Common plant some 20 years ago! Although in Dandy's *List*, I have not heard of any other localities for this sp. The only two BM sheets are dated 1900 (New Forest, S. Hants) and 1915 (Dundonald, Forfar), comm. Miss R.C. Sedergreen. *B. darwinii* Hook. and others are more frequently grown these days and hence are more likely to occur as bird-sown escapes, but records are very few.

Libertia chilensis (Molina) Gunck. (*L. formosa* R. Grah.): By the Achnamara-Kilmory road, Loch Sween (Kintyre), 1974. Cunningham family, comm. P. Macpherson. Hb. PM. Det. EJC. One clump in marshy ground had been thrown out by a neighbouring garden some 30 years previously, whilst another patch in a small gorge 100 yards away remains unexplained. The colony was apparently setting good seed. The status of this plant in Br is confused by naturalised planting (e.g. at Abbotsbury, Dorset?), but a few records do seem genuine – and see *Irish Nat. Journ.* 18:93 (1974) for a convincing record at Caragh Lake (S. Kerry). It is an iridaceous native of Chile producing snowy white flowers in May-June. Kathleen Hollick has very kindly provided the splendid drawing, from cultivated plants at Ashbourne ex RHS, Wisley as "*L. grandiflora*". This error seems to be widespread – the New Zealand plant, *L. grandiflora* (R. Br.) Sweet, has the flower clusters lax (not dense) with the pedicels longer than the bracts (not shorter) – and it is much scarcer in our gardens.

Two clumps near the sea, the Towans (W. Cornwall), June 1966, Miss M. McCallum Webster. E. Det. J.E. Lousley.



Libertia chilensis

Limnanthes douglasii R. Br. : Tip, Chelmondiston (E. Suffolk), 1974. Mrs E.M. Hyde. from April till September the white flowers, with a yellow centre, of this NW American annual species in the family *Limnanthaceae* (or in *Geraniaceae* in older books) readily produce abundant seed which sows itself in any ordinary garden soil, and occasionally it escapes into more natural sites (see, e.g., **BM** sheets). J.R. Palmer also reported it, as \pm naturalised in rough grass on a roadside bank near a garden, Trimmingham (E. Norfolk), July 1969. Hb. EJC. Joan McLean has kindly provided us with the illustration, drawn from a cultivated plant.

Calandrinia ciliata (Ruiz & Pavon)DC.: Sandy soil, Keyworth Farm, Wareham Marshes (Dorset), June 1978. H.J.S. Clark, comm. Miss A. Horsfall. Hb. EJC. A near-glabrous, slightly succulent annual in *Portulacaceae* having bright magenta flowers with a bright gold centre. A solitary plant appeared on subsoil brought up by the auger when planting some barren, burnt heathland with baby trees (obtained from Surrey, but which had no earth on the roots).

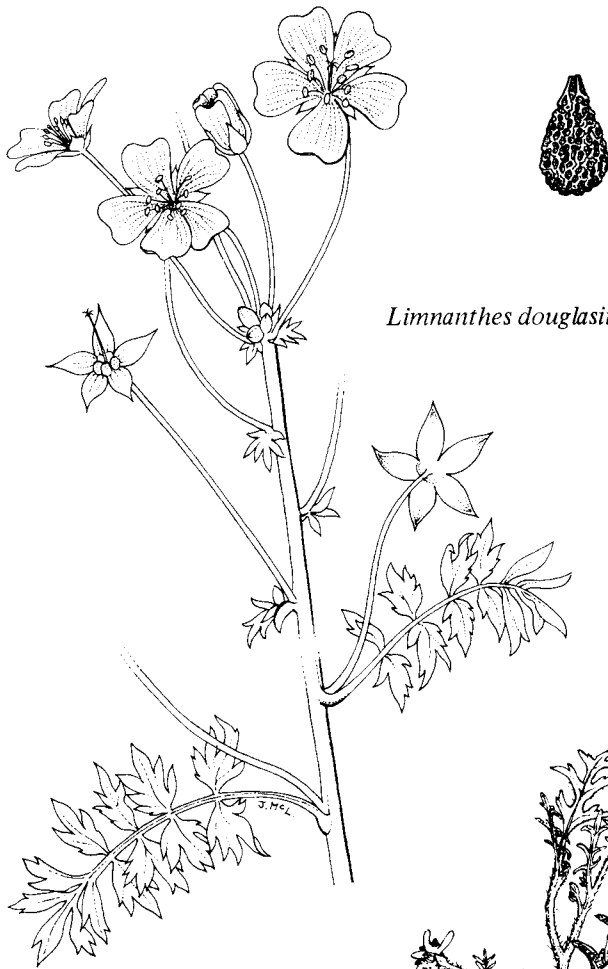
Apart from records from Sark (1957) and Jersey (1971), I have only one post-1950 record – at Brechin (Forfar), where it appeared during 1963 in plantations and was assumed to have arrived from S. America with imported trees or their seeds. Comm. I. Soane. Are there any other records for *Calandrinia* spp ?

Campanula poscharskyana Degan: Shaded, rocky riverbank of R. Wye, Boughrood (Radnor), June 1978. G.M. Kay. Conf. EJC. Often seen questionably wild about gardens, but this record, by the *Potentilla rupestris* site, allows no doubt. It matches endemic W. Jugoslavian material in **BM**; the “appressed-pubescent” description in *Flora Europaea* 4 is incorrect – it has the typical, rather bristly, spreading hairs like several other bellflowers.

Cardamine heptaphylla (Vill.) O.E. Schulz (*Dentaria pinnata* (Lam.) R. Br.): Deep loamy soil in woodland with *Allium ursinum* dominant, Castle Eden Dene (Durham), May 1978. Rev G.G. Graham. **BM**, **SUN**, Known from here since 1966 as “*C. pentaphyllos*” – see the Durham check-list (Graham, Sayers & Gaman, 1972). Re-det. Dr H. Doing (from Holland), conf. J.M. Mullin, 1978. Although a few plants had only five leaflets these were evidently not palmate and most of the plants had well-pinnate leaves each with seven or nine leaflets. The possibility of a hybrid (well known on the Continent) between the two species was considered after GGG inspected the scale leaves on the rhizomes, but clearly these vary much more in size and shape than is allowed for in *Flora Europaea* 1 – fresh scales were up to 5 mm in length and bluntly triangular in shape. The main colony is increasing – this year nearly thirty plants were in full bloom. Apart from the derelict wild-garden of Great Warley Place, Brentwood (S. Essex), Hb. EJC, I know of no other extant Br site for this species.

Cotoneaster horizontalis Decne: Several plants high up on the top of ruined church, Walberswick (E. Suffolk), May 1975. E.M. Hyde. No one doubted that these are not wild, but many other garden wall plants are more dubious. It is often impossible to tell which (if any !) were originally planted: presumably, for this reason, few wall plants are ever sent in – members tend to ignore their local “cliff” habitat !

Solanum triflorum Nutt. : A single, very large prostrate plant, Donna Nook, near Saltfleetby, Theddlethorpe (N. Lincs), 1977. Mrs. I. Weston. IW commented that “it doesn’t look the least like the Norfolk photograph and all the flowers on the plant, as far as I can see, are in pairs”. This is, indeed, a variable species and the leaves vary on different plants from subentire to very deeply pinnatisect; 2- or 3-flowered cymes are the norm. Graham Easy’s drawing at last appears ! – it was first promised in *BSBI News* 13:23, but it was mislaid.



Limnanthes douglasii



Solanum triflorum

Dracunculus vulgaris Schott: Each year this plant seems to pop up somewhere, usually in or close to gardens, but by no means always so. 1977 seemed a good year, judging by its coverage in local newspapers. It appeared in a garden at Uckfield (E. Sussex) — see *Kent & Sussex Courier*, 8 July — where it was wrongly named as “*Amorphophallus abyssinicus*”, and also in a Kingston (Surrey) garden — see *Surrey Comet*, 9 July and 16 July. Several readers reported their unsuccessful attempts to eliminate it from their gardens, chiefly because of the revolting smell of the flowers. It is spreading by such discarded tubers? The Dragon Arum (Araceae), although a native of the Mediterranean area, is quite hardy here. It is seldom mentioned in local floras — e.g. not in *Flora of Essex*. but in BM there are S. Essex sheets from Loughton (1950), Manor Park (1953) and Ongar Castle (1964). It is illustrated in Polunin’s *Flowers of Europe*, plate 183: a line drawing cannot convey the spectacular coloration of the spathe and leaves.

Legousia speculum-veneris (L.) Chaix: Cornfield on the Rank estate, Sutton Down Farm, near Winchester (N. Hants), 1977. Lady A. Brewis. Det. Dr F. Rose. One large group of plants. It is interesting to note that the Rev N.E.G. Cruttwell’s *Flora of Basingstoke* (unpub., in possession of E.C. Wallace) gives a similar record: cornfield, near Wootton St. Lawrence (N. Hants), between 1940 & 1945, G.W. Willis.

Veronica acinifolia L. : Amongst planted shrubs, Brooklands Park, E. Worthing (W. Sussex), April 1978. Mr and Mrs G. Bishop, comm. P.C. Hall. Hb. EJC. The plants were restricted to a few square feet of the bed which is on the site of an old municipal rubbish tip. This is a new V.C. record. The *BEC Report* 35, 1920, gives a nursery garden record for Ashdown Forest (E. Sussex) and a barley field record (“in enormous quantities”) for Chiddingfold (Surrey), but apparently no later records exist for these counties.

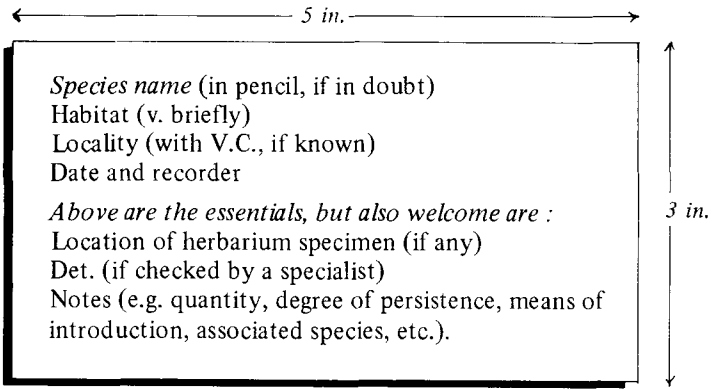
Garden weed, Beaminstor (Dorset), May 1976. A.W. Graveson, comm. Dr & Mrs J.D. Dony. Hb. EJC. Originally, purposely introduced here?

No other recent Br records have reached me — should it remain in Dandy’s *List*?

SUBMISSION OF RECORDS AND SPECIMENS

I am near becoming overloaded with specimens and records. It would be a great help to me if records could normally be sent in on slips of paper 5” x 3” in size (which I can readily supply, if required) and roughly in the format shown below. This applies whether or not specimens for checking accompany the records. I can then immediately file the records, in your own hand (with no fear of miscopying or misinterpretation), for use by me or others.

One “slip” per species, please (continuing either on the back or on further slips).



Also, whenever possible, please send specimens that I may retain – this allows me the opportunity for second thoughts and for possible presentation of specimens to BM, RNG, etc.

Please write and criticise if you spot errors in these articles – or tell me if I am missing obvious records (or even obscure ones !)

ERIC J. CLEMENT

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

LAMPRANTHUS FALCIFORMIS

In and around a long disused quarry at The Gann, St. Ishmael's, Pembrokeshire, my uncle Gilbert Warren Davis introduced garden plants, among them *Carpobrotus* sp. and *Lampranthus falciformis* (Haw.) N.E. Br., in 1919. The *Carpobrotus* persisted until 1946 but did not survive the severe 1946/47 winter. *Lampranthus falciformis* still flourishes.

The *Carpobrotus* was hanging from the top of the quarry while the *Lampranthus* is on an apparently natural rock outcrop of rhyolite (ordovician, Skomer series) with a not quite perpendicular face and many small ledges and pockets, about 3-4 m. high. Associated species include *Ulex europaeus* and *Sedum anglicum*. It is immune to browsing by cattle and rabbits. The plants are small, compact and densely bushy sub-shrubs with fleshy glaucous evergreen leaves and grow to about 30 cm. high with a spread of 40-50 cm. The bright magenta flowers completely smother the little bushes in late June and through July.

During the winter of 1961/62 there were several short periods of frost, sometimes persisting all day, from December to March. The severity of the 1962/63 winter is well known. There were no flowers in the summers of 1962 and 1963 and in November 1963 I found only two small plants and many seedlings. The population soon recovered to its normal level of 30 or more mature plants with abundant regeneration. At David McClintock's suggestion I sent fresh material to Dr. J.P. Rourke at the Kirstenbosch Botanic Garden in Cape Province, South Africa in 1973. He identified it provisionally as *Lampranthus falciformis* but wished to confirm his determination when cuttings he had rooted came into flower. Flowering specimens sent in 1974 arrived in perfect condition and the determination was confirmed. Dr. Rourke wrote "Your specimens are not in the least distorted in their growth habit. I would have expected them to have a lush, luxuriant growth habit but they look exactly like plants of *Lampranthus falciformis* growing in our garden that have just endured the hottest driest summer in the Cape for years. That this species appears to have retained its growth habit in a place as wet as Wales is, I think, most remarkable". In a previous letter he wondered whether it would survive at Inverewe. Would anyone living there like to try ?

In the 1920s or early 30s plants from the quarry were introduced at Dale Point in what are now the grounds of Dale Fort Field Centre, 2 km. south of The Gann. My attention was drawn to it in September 1970 and I found it well established on the Old Red Sandstone cliff right at the tip of the point, exposed to the full force of Atlantic gales. One or two plants were also growing on the face of a rock cutting about 20 yards back from the cliff top, probably the site of the introduction. I have failed to find it on the cliff for the past two or three years but there are two healthy plants at the top of the rock cutting, last seen on 24th January 1978.

T.A.W. DAVIS

South Mullock, Dale, HAVERFORDWEST, Dyfed.

NEWS FROM MONKS WOOD

Revision of the Atlas of the British Isles

Following the publication earlier this year of the *Atlas of Ferns*, work is beginning on the second of a series of Atlases to be published over the next 10 years which, when complete, will constitute a complete revision of the *Atlas of the British Flora*.

The work is being done in close collaboration with the editors of the new *Flora of Great Britain and Ireland* who will use the maps from the revised *Atlas* to illustrate distribution.

The new *Flora* will include descriptions of many intra-specific taxa, hybrids and aliens which have not been mapped previously. For some of these the Biological Records Centre has very little information and we are asking **all** BSBI members for help, particularly with aliens. Revision of the maps of native species will largely be completed with the assistance of County Recorders, many of whom are involved in mapping floras of their area.

The second part of the revised *Atlas* will cover Pinaceae to Fumariaceae in Dandy's *List of British Vascular Plants* (1958) and work will continue in 'Dandy order'. Some aliens in that list will be omitted. Others **not** in the list will be included.

The list of aliens in the next part for which records are needed is as follows (systematic order) :

Abies alba, grandis. Pseudotsuga menziesii. Tsuga heterophylla. Picea abies, sitchensis. Larix decidua, kaempferi. Pinus contorta, nigra, pinaster, radiata, strobus. Cupressus macrocarpa. Chamaecyparis lawsoniana. Thuja plicata. Aconitum x cammarum (= 'Bicolor'). Nigella damascena. Anemone ranunculoides, apennina. Clematis flammula, viticella. Ranunculus muricatus, marginatus. Adonis annua. Aquilegia pyrenaica. Berberis glaucocarpa, buxifolia. Mahonia repens. Roemeria hybrida. Eschscholzia californica. Macleaya x kewensis. Argemone mexicana. Dicentra formosa. Corydalis bulbosa, solida, ochroleuca.

For records to be accepted they must meet the following criteria :

- a) *Trees and shrubs*. Regeneration from seed leading to establishment of saplings over 50 cm high in natural or semi-natural habitats.
- b) *Perennials*. Established in the same locality for several years but not in a garden, or merely extending vegetatively a short distance from a garden.
- c) *Annuals or biennials*. Occurring regularly and to be found in similar localities in most years.

We would like to receive records on pink individual record cards of any of the species in the list which meet the above criteria which you have seen since 1950. A supply of cards with instructions on how to complete them will be sent on application to Biological Records Centre, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, Cambs, PE17 2LS. Records should reach us by the end of September 1979.

A complete list of aliens additional to those given in Dandy, 1958 to be included in the new *Flora* and subsequent parts of the *Atlas* has been prepared by Dr. C.A. Stace. Copies of this list are also available from BRC on request.

[Readers may like to know that Dandy, J.E. *List of British Vascular Plants* is still available from British Museum (Nat. Hist), Cromwell Road, London SW7 5BD. Price £2.50 + 25p postage].

F.H. PERRING

Biological Records Centre

Lynne Farrell is leaving the Biological Records Centre at the end of July to take a post with the Nature Conservancy Council at Godwin House, Huntingdon. She will continue to be involved in work on rare species but to a greater degree than before with the organisation of survey, particularly where it involves NCC Survey and Regional Staff, or those on contract to NCC.

This new appointment at NCC recognises the great importance they attach to rare plant conservation and is aimed at strengthening still further their efforts to protect our endangered plants.

The role of the Biological Records Centre will continue to be that of co-ordinating all available data on rare species and in preparing further editions of the *Red Data Book 1: Vascular Plants*, but we will be expanding to undertake more research on the ecology of the species involved.

Lynne's successor has not yet been appointed so, until further notice, all correspondence about rare species formerly addressed to her should be sent to me. Lynne will only be 7 miles away in Huntingdon, and we expect to meet almost as frequently as in the past.

F. H. PERRING

Rare Vascular Plant Species in Cultivation

The importance of Botanic Gardens in maintaining wild collected stocks of rare plants native in the British Isles is now widely appreciated. What may not be so well appreciated is that, for some time, a group of Botanic Gardens has been working together to ensure that as many of our rare species as possible are cultivated in this way and that, as far as possible, the responsibility for collecting and maintaining stocks is allocated to Gardens within the area in which the species occur.

The scheme has two main aims : first, to act as a reservoir of living material of native origin to be available if and when required for conservation purposes; second, as a source of material for experimental work, so that the need to collect specimens in the field for research purposes is increasingly reduced.

A list of those rare species (as defined in Perring & Farrell 1977, *British Red Data Books: 1. Vascular Plants*) held by Botanic Gardens is now prepared annually by the Biological Records Centre at Monks Wood Experimental Station, and a copy will be sent to research workers, free of charge, on receipt of a self-addressed reply-paid A5 envelope at BRC, Monks Wood Experimental Station, Institute of Terrestrial Ecology, Abbots Ripton, Huntingdon PE17 2LS.

FLORA OF ISLAY AND JURA

Stocks of the *Flora of Islay and Jura* by J.K. Morton were exhausted but the author has kindly donated 25 copies to the Society so that this valuable work is now available again. £1.50 post and packing paid from Oundle Lodge, Oundle.

F & M PERRING

POLLINATION

POLLINATION MEETING, CAMBRIDGE, 12th AUGUST 1978

Dull, the weather may have been, but dull, the programme most definitely was not. Imaginatively conceived and efficiently executed by Peter Yeo of the Cambridge University Botanic Garden, the joint BSBI/IBRA Pollination Meeting was highly successful. More than two dozen participants enjoyed the freedom of the Gardens, and the use of the laboratory facilities not to mention frequent coffee and biscuits.

The objective might be termed an acquaintanceship exercise; Botanists becoming acquainted with the insects that pollinate their flowers and the Bee researchers getting to know the flowers their bees visit. After a welcome by Dr. Max Walters, Director of the Botanic Garden, the meeting was addressed by Dr. Yeo who explained its purpose, and outlined the programme.

There followed an insect collecting foray, conducted, in groups, by Dr. Yeo, Dr. Prys-Jones (a specialist in bumble bees), Denis Unwin of the University Zoology Department, and Sally Corbet, University Demonstrator. The meeting was fortunate in having Dr. Eva Crane, Director of IBRA present for the whole period. A tour around the Systematic beds resulted in a varied catch being brought back to the laboratory for identification. Numerous books, and displays of mounted specimens enabled most of the catch to be assigned to their correct systematic group. The cool overcast weather deterred many insect species from making an appearance and the "bag" was limited to bumble, cuckoo and honey bees, some assorted hover flies, a few Hymenoptera and Diptera, a soldier beetle, plus the ever-present pollen beetles (*Melegethes*).

The afternoon's proceedings consisted of a conducted tour of the Cambridge and Isle of Ely Naturalist's Trust (CAMBIENT) Educational Nature Reserve at Fulborn some miles S.E. of Cambridge by Mr. W.H. Palmer the Trust's Chairman and author of the Teachers Guide to the Reserve*. The area within the reserve provides examples of several types of habitat. The onset of rain unfortunately curtailed the field work by nearly an hour but this was more than compensated for by the cordial welcome that Mrs. C.E. Townley gave the party as she entertained them to tea in her lovely home at Fulborn Manor.

*Obtainable from the Conservation Officer, CAMBIENT, 1 Brookside, Cambridge, price 25p.

POLLINATION RECORDS

Following our request for field records of insect visitors and/or pollinators on plants, Mr Lawrence Burgess, a member of the Selbourne Society, writes to say "it so happens that I have been compiling a comprehensive catalogue of British wild flowers, trees, shrubs and grasses and the insects which are in any way associated with them (though not necessarily as pollinators only). This I have based on personal observations over a period of 40 years, but the greater part has been collated from standard works of natural history dating from 1838 to the present time". If any member working on the pollination of specific species would like to consult Mr Burgess for references in his compilation he will be pleased to help :

Mr. L.P. BURGESS, 18, Old Harrow Road, St. Leonards-on-Sea, E. Sussex TN37 7EG.

(Communicated by Mary Briggs)

VERBASCUM PYRAMIDATUM Bieb. and the hybrid

V. PYRAMIDATUM x THAPSUS along a dismantled railway in Cambs.

(See cover illustration)

Of the several Cambridgeshire records of *Verbascum pyramidatum* (B.S.B.I. News No. 12 p.13 and No. 13 p.16) all the extant or recent colonies lie along the old railway system Swaffham Prior – Fordham:

Fordham old railway/nearby wasteground 52/619715, 1975; 200 plants 1976.

Burwell old railway 52/589657, 1973 large colony, destroyed 1974.

Burwell – Swaffham Prior 52/584656 – 573652, 1969; over 200 plants 1977.

This interrupted lineal distribution along approx. 9 kilometers of varied habitat corresponds with populations of the grass *Apera interrupta* (L.) Beauv. along some other disused railway systems in the country. The interrupted distribution in that species seems to have resulted from the seed brought in the ballast used in the construction of the railways in the 19th century. For almost one hundred years this seed must have lain dormant beneath the clinkered surface while the line was in use. Germination became possible once the ballast was exposed with the removal of the clinker after the railway system was abandoned. *Apera interrupta* is often a conspicuous plant of sand pits on the Breckland fringes and in Cambs. where apparently the ballast involved was originally quarried.

Verbascum pyramidatum also agrees with *Apera interrupta* in the situation favoured:

- (A) it is similarly confined to slightly raised or embanked stretches.
- (B) it is not present in the verge flora, being restricted to the “Plateau” of the track where rails would have rested.

Thus it seems that *Verbascum pyramidatum* owes its recent Cambs. distribution to its introduction with railway ballast at the end of the 19th century. A former sandpit at Kennett 52/707685, on the Breckland border was suggested as the origin of this ballast with the identification of a specimen of *V. pyramidatum* collected from that site in 1971, when the pit was being filled with refuse. Thus the plant was a survivor of the original flora or had been introduced with garden waste. A.C. Leslie has shown that some seed offered in gardening catalogues as *Verbascum olymicum* has proved to be *V. pyramidatum*, which does suggest that the plant was a recent introduction at Kennett.

Several examples of the hybrid *Verbascum thapsus* x *pyramidatum* have appeared where the parent species grow in close proximity i.e. at Fordham 1976-77 and at Burwell 1977. As *V. pyramidatum* this hybrid tends to be perennial, but is less hardy and less likely to persist.

It resembles *pyramidatum*, differing mainly in its more vigorous growth (often exceeding 2 metres in height), the leaves being noticeably woolly beneath and those clasping the stem being decurrent, the flowers having a mixture of yellow-white and less conspicuous purple filament hairs to anthers and the plant being more generally clothed with stellate hairs.

GRAHAM EASY,

11 Landbeach Road, Milton,
Cambridge CB4 4DA.

ALOPECURUS BULBOSUS Gouan

This is a story from a one time agriculturist who on retirement took to conservation as a penance ! It relates to the fact that there are occasions, alas, too few, when all is not lost, following the reclamation of old grassland.

Lowe (1868) recorded *Alopecurus bulbosus* as 'abundant near Yarmouth' and Hind (1889) 'in marshes by the river side at Belton and Burgh Castle' which lie on the south side of Breydon Water, west of Great Yarmouth. It has since been recorded for 'Breydon wall 1962 and Burgh Castle 1963'.

Following the sea floods of January 1st 1953, some 20,000 acres of coastal and estuarine marshes in Suffolk were flooded to a depth of 8-9 feet. In some areas, the salt water lay on the land for up to six weeks. Most swards were killed and very few acres were left in the hope of recovery. Under the Ministry of Agriculture, Fisheries and Food reclamation assistance scheme, no grant aid was available until it was determined that the sodium chloride percentage of the soil was reduced to a safe level for successful re-seeding to grass or conversion to arable.

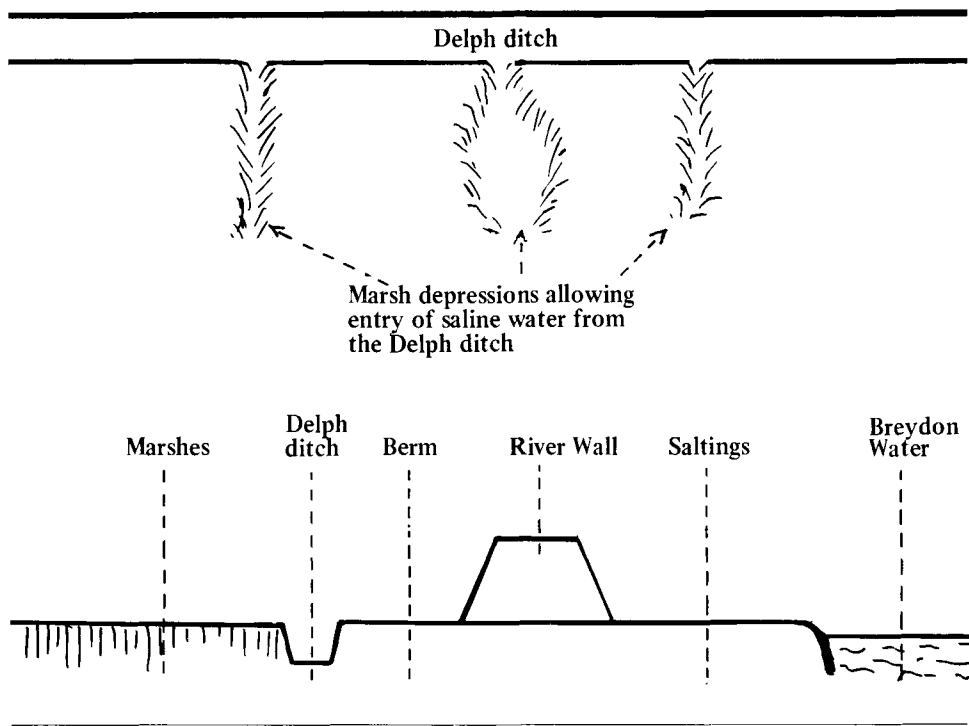
On the Fishers Marshes of Humberstone Farm, west of Southtown GR: 62/504.073 the grass marshes were full fallowed by rotovation in 1955 and re-seeded to grass in 1956. On June 6th 1978, I made a survey of these marshes adjacent to the river wall of Breydon Water. Within 100 yards of the delph ditch, *Alopecurus bulbosus* was abundant and often associated in low places with *Juncus gerardii* and *Glaux maritima*. This grass species was never introduced in a new seeds mixture. Furthermore, the only grass which could be identified from the 1956 re-seeding was *Dactylis glomerata* in very small quantity. The other grasses present included *Bromus mollis*, *Cynosurus cristatus*, *Festuca rubra*, *Holcus lanatus*, *Poa pratensis* and *P. trivialis*, none of which would have been supplied in a modern seeds mixture. The re-seeding has therefore not survived and the sward had reverted to the former indigenous species.

It seems clear that *A. bulbosus* had survived the 1953 floods and the following cultivations. Additionally its habitat had been maintained by a degree of salinity. Prior to 1953 the height of the river wall was 2 foot lower than it is today, but its base, sitting on alluvial silt and clay, allowed a saline seepage which found its way into the delph ditch running adjacent to the wall. These marshes formerly had a very uneven surface with 'furrows' of low depressions which emptied surface water into the delph and equally received saline water from the delph. On the Fishers Marshes, there is still a salt seepage into the delph ditch and this water is still finding its way into depressions in the marsh which were not completely ironed out in the reclamation cultivations. The introduced grasses in the new seeding have not enjoyed the saline habitat in which *A. bulbosus* is thriving.

By contrast, at the west end of the Level on Church Farm, Burgh Castle, only one small area of *A. bulbosus* could be found in a depression and associated with *Juncus gerardii*, again indicating the presence of salinity although *Glaux maritima* was not present. The marshes on this farm had also been reclaimed in 1956 but it appears that the base of the river wall is proving to be a more effective seal against the introduction of salinity. In addition, these marshes are further up river where there is a greater dilution of the salt.

P.J.O. TRIST

Glovers, 28 High Street,
Balsham, Cambs.



THYMUS DRUCEI

I have recently been scratching around old mine waste tips in Lakeland, notably to the west of Derwentwater, and on the north side of the Caldbeck Fells. The former were worked for lead and zinc, with iron, manganese and barytes as secondary, incidental winnings, while the latter were exploited principally for barytes but yielding small quantities of other minerals. I noticed that *Thymus drucei* tends to grow vigorously on these tips and in the vicinity of disturbed ground, whereas elsewhere its growth is sporadic.

Bowen (*Flora of Berkshire*, 1968) writes of the Caryophyllaceae 'Many members of this family are "indicator" or "accumulator" species for copper, lead and other elements, which may account for the peculiar distributions found both within and outside Berkshire'. Of *Silene dioica* he says 'This species is said to indicate soils rich in copper in Scandinavia'. Dony (*Flora of Hertfordshire* 1967) also comments that *S. dioica* has a peculiar distribution that he is at a complete loss to explain'. McClintock & Fitter (*Collins Pocket Guide to Wild Flowers* 1956) describe *Thlaspi alpestre* as growing on old lead workings amongst other habitats, and mentions the same type of habitat for *Minuartia verna*.

Can any member tell me whether *Thymus drucei* behaves similarly or give me any references – preferably in *Watsonia*? I would be most interested in any comments.

J.G. SAMSON

c/o Dep't of Transport, BET Division, Room 4/42
St. Christopher House, Southwark Street, London SE1 0TE.

REQUESTS

FLORA SURVEY FOR THE MINISTRY OF DEFENCE

Since my appointment as Ministry of Defence (M.O.D.) Conservation Officer in 1975, eight botanical surveys of M.O.D. properties have been carried out by B.S.B.I. members (at Newtown, Isle of Wight, Otmoor, Fingringhoe, Thorney Island, Lydd, Defford, Tain, and Dean Hill). Some other surveys have also been carried out, for instance at Porton and Stanford. These surveys have enabled the requirements of individual plant species to be taken into account in estate management plans, and have led to many interesting finds.

I am responsible for M.O.D. property throughout the British Isles, and many thousands of acres remain to be surveyed. The help of B.S.B.I. members would be invaluable in carrying out a complete census of flora on M.O.D. sites in their area, and then in assisting with the year by year monitoring of species.

If you wish to help, please contact me :

Lt-Col. C.N.Clayden (Rtd.), M.O.D. Conservation Officer,
Defence Lands 4, Room 768, Tolworth Tower, Surbiton, Surrey.
Telephone : 01 399 5281 Extension : 47 or 132

ANEMONE NEMOROSA L.

With the aid of an SRC Research Studentship I am investigating the morphological variation and autecology of the above species in the British Isles. I would be very grateful to hear of sites of unusual forms such as colour morphs, double flowers etc. and also of populations in less usual habitats such as heathlands, grasslands etc. Would those who reply please give details of how the plants or the habitat are unusual.

Locations of typical populations in woodlands, anywhere in the British Isles, would also be appreciated as would any information on rhizome growth or pollinators.

DEIRDRE A. CHALMERS

Dep't of Botany, The University, St. Machar Drive, ABERDEEN AB9 2UD.

BEEES AND GARDEN PLANTS – OBSERVATIONS WANTED

A companion booklet to the already published *Trees and Shrubs valuable to bees* (obtainable from the address given below, 25p post free) dealing with Garden Plants is in preparation and a Draft List has been drawn up, and is ready for distribution to anyone who might be able to help with it. Weeds and plants for the wild garden are included and each species will be marked according to whether bees use its Nectar (N), or Pollen (P) and whether Bumble bees as well as honey bees forage in it (B).

The booklet will be published by the International Bee Research Association (IBRA) in collaboration with BSBI. Please write to : Dr. Eva Crane, IBRA, Hill House, Gerrards Cross, Bucks SL9 0NR.

THE GREAT HERACLEUM MANTEGAZZIANUM COMPETITION

What is the maximum height to which *H. mantegazzianum* grows (without manuring) ?
Can you beat 4 metres ?

A small prize, which will grow into a large, handsome, but not very tall plant, is offered for the largest measurement – not the tallest story.

T.G. TUTIN, The University, Leicester LE1 7RH.

HORDEUM MURINUM

I am a graduate student researching into the extent of the genetic variability (monitored electrophoretically) in natural populations of the wild barley *Hordeum murinum* throughout Britain and hopefully Europe. Preliminary indications are that there is very little electrophoretic variation in British *Hordeum murinum*. In order to place more certainty in these findings I need to examine as many populations from as many sites as possible. I would appreciate it if members could send me samples composed of between 10-50 randomly chosen seedheads from (any) single populations. Also, if the population location and a brief habitat description could be included, this would be most useful. Postage will be defrayed if requested.

Thank you kindly for your help.

Yours sincerely

BARBARA GILES

Department of Genetics, University of Cambridge, Downing Street, Cambridge CB2 3EH.

ABNORMAL FLOWERS

It is hoped to gather together in this garden a modest-sized collection of abnormal forms of some British Wild Flowers – in particular forms with unusual flower colours, double and hose-in-hose flowers, viviparous inflorescences, and variegated or purple leaves.

Since the available space is not large the collection must be limited, on the whole, to medium-sized, perennial, herbaceous species with conspicuous flowers, and to species that do not require specialised cultivation or an acid soil. Even with these limitations the scope is wide: the families Ranunculaceae, Caryophyllaceae, Leguminosae, Labiatae, Scrophulariaceae, Dipsacaceae, Campanulaceae, and Compositae, such genera as *Viola*, *Primula*, *Chamaenerion*, *Sedum*, *Geranium* and *Echium*, among others, offer potential candidates.

I shall be grateful if people who share an interest in abnormal forms of British species and who have seed or propagatable portions of plants to spare, would contact us. Details of the original place of collection, where known within 50 miles of Bristol, and any other particulars will be much appreciated.

Yours sincerely

MARK SMITH. University of Bristol Botanic Garden, Bracken Hill, North Road, Leigh Woods, Bristol 8.

DORSET HABITAT RECORDS

A long-term project is planned for re-visiting all Prof. Good's botanical sites in Dorset in order to record the changes in habitat and plant life since the 1930s. The project is being undertaken by Miss A. Horsfall who would be glad to hear from anyone who has already done any systematic comparisons based on Prof. Good's records. Please contact Miss Horsfall at : Barnhill Road, Ridge, Wareham, Dorset.

TO MOW OR NOT TO MOW – CONSERVATION IN CHURCHYARDS

In many parishes the churchyard constitutes the last relic of ancient pasture – one of the richest grassland habitats in this country and one which is disappearing fast under the pressures of modern farming methods. There are 10,500 medieval churches in England; if we include the post-Reformation churches there could be as much as 20,000 acres of ancient pasture in our churchyards. We do not want to lose such species as *Aceras anthropophorum*, *Orchis morio*, *Anacamptis pyramidalis*, and many others whose range, in Suffolk at least, is becoming restricted to churchyards. Churchyards form a most valuable resource and one which should be safeguarded for posterity.

Our reconnaissance of Suffolk churchyards over the last few years has revealed that present management ranges from total neglect to gross over-management. Neglect causes harm by the crowding out of smaller plants by rank growth and shrub species, thus reducing floristic diversity, and adversely affects insect and bird populations by the consequent restriction of food and feeding areas. Over-management, epitomised by the enthusiastic gentleman with his power mower, inspired by the best possible motives, does dreadful damage by reducing flattened and de-tombstoned expanses to a close-shaven mixture of grass, daisies and plantains. Observations to date suggest that the right policy is not to cut the grass until June, after spring-flowering species have set seed, and to cut it again to six inches in August, to prevent the rank growth of tall species, with a final close cut in October. In certain circumstances it may be possible to use grazing animals instead, and this probably produces the best results for the turf.

Churchyard surveys, concentrating largely on the flowering plants, form the basis of an annual course on churchyard conservation at Flatford. This year, with the co-operation of Dr. Frank Perring of the Biological Records Centre, Monks Wood, we have devised a recording card which is available to anyone who would like to help with this project. It is hoped gradually to extend our survey work to other parts of the country, and to build up our knowledge so that we can advise incumbents and churchwardens on the proper management of churchyards in their keeping with a view to wildlife conservation.

Anyone interested in this project, or in joining the course 'Wildlife in Suffolk Churchyards' to be held here from 2nd - 9th May 1979, is invited to write for further information to the Warden, Flatford Mill Field Centre, East Bergholt, Colchester CO7 6UL.

F.J.Bingley

LETTERS

THANKS

I have you to thank for some very interesting correspondence.

Since you published my group's basic tables of butterflies and pollination I have been contacted by three active British botanists, one neighbouring natural history society from whom we can learn a lot, the International Bee Research Association, a doctor from Czechoslovakian Institute of Microbiology and an outstanding artist/naturalist in Ireland who models exquisite porcelain butterflies on their favourite flowers!

Your readers are certainly varied and far-flung!

Mrs M.T. Coates
46 Westfield Lane,
ST. LEONARDS-ON-SEA,
East Sussex TN37 7NG.

APPRECIATION

I should like to thank all members of the Society for the beautifully bound and inscribed copy of the Edward Lousley Memorial Number of *Watsonia* presented to me at the A.G.M. by Professor Valentine. I shall treasure it always and am sure it is destined to become a family heirloom.

Ted gave a great deal to the Society I know, but he also gained a great deal from it. An opportunity to serve others, encouragement and help in his own work and researches, and above all, friends. Friends who were not just his but mine also and whose kindness and help I have greatly appreciated since his death. I feel very proud that as the "back-room girl" or as I used to say that "lowest form of life, the botanist's wife" I may have helped by keeping the domestic machinery running smoothly and enabled him to achieve more than might otherwise have been possible.

Thank you again, most sincerely.

DOROTHY LOUSLEY

COLLECTION OF SEED FROM RARE PLANTS

Our President shares with many senior members of this Society considerable anxiety about the collection of seed from rare plants, where these plants exist today only in very small and decreasing populations. Germination rate must already be low, and in some cases it could be that collection of only a small quantity of a viable seed produced by that population could hasten its extinction. By adding to the adverse conditions by which the plant is already threatened, the removal of seed *could* just sway the balance against its survival.

To guard against this our policy is that all seed collection from the rare plants listed in the Red Data Book should be organised centrally by Lynne Farrell, now at Nature Conservancy Council, Huntingdon, and working through our County Recorders. This plan should ensure that only *one person* will collect seed from any one population of a rare plant. (The invitation to all members to collect seed from some rare plants (*BSBI News* 18p. 24) was an error of judgement which we hope will not be repeated).

The Kew Seed Bank at Wakehurst Place lays down that not more than 20% of seed should be taken in any one collection. We would recommend that from small populations *very few* seeds should be taken — say less than 10 seeds. These can then be grown and further seed from the plants bulked and used as a reserve source of seed for experimental work and so remove the need to collect from wild plants. In this way the Seed Bank could promote the conservation of these very rare species in the wild.

At present we have a chicken and egg situation in that for many of our threatened rarities, not enough is known of the biology of their germination to assess the importance of the seed produced in any one year. In general with annual species, there should be sufficient reserve in the surrounding soil to survive years of poor seed production; but this cannot be proved to be the case in an already dwindling population. For example experimental work has shown that in some plant populations up to 50% of seed produced in one year was destroyed by insect seed predators, fungal diseases, etc. (Kozłowski, T.T. *Seed Biology* III, 26, Academic Press 1972).

(Continued overleaf)

We feel strongly however that no natural colony of a rare plant should be allowed to become extinct if we can prevent it and we would therefore advise that no BSBI member should collect seed from a 'Red Data Book' plant unless individually requested to do so by Lynne Farrell in liaison with the organised policy. We would also remind members that **it is illegal to collect seed from a Protected Plant** without a permit. With this procedure only a very small quantity of seed, and not more than one collection, would be taken at any one site.

MARY BRIGGS.

Hon. Gen. Sec.

SALUTE TO THE CSSF

Members will know from a previous announcement (*BSBI News* 16 p.6) that the CSSF would shortly cease to exist, and although we have already given highlights of their Exhibition Meetings in 1976 and 1977, we now include a summary of their last two (22nd and 23rd) Annual Reports.

The **22nd Annual Report**, (for the year to 31st December 1976). The Committee met twice in Perth and eight field meetings were held, viz Glen Shee, Upper Tweed, Glen Tilt, Kindrogan Field Centre, Dalry, Tyndrum, Huntly & Roxburgh, beside the trip to Poland. From the elected members Mr R. Mackechnie was appointed Chairman, Mr B.W. Ribbons Hon. Sec., Mrs Alice Somerville, Hon. Treas., Miss Elizabeth Conacker Hon. Meetings Sec., and Mr B.S. Brookes, Hon. Field Meetings Sec.

For the Inverness-shire survey copies of a base map were printed on which V.C. recorders of 96 and 97 began entering the records obtained during the period of the survey.

No changes in recorders for Scottish V.C.s occurred and no entries for the Red Data Book were received for checking. Suggestions for further work were (i) an intensified study of the Clyde islands flora, and (ii) an investigation of the sea cliffs. It was during this year that the BSBI proposal for constitutional changes were put forward, and the questionnaire was suggested, together with discussions between the BSE and BSBI.

The **23rd Annual Report** covers the period up to 30th June 1978 and records 2 meetings of the Committee in Perth, and eight field meetings: Moffat Hills, Kinross-shire, Melrose, Newton Stewart, Glen Nevis, Kindrogan Field Centre, Ben Vorlich, and Oban. Mr R. Mackechnie was again appointed Chairman, Mr B.W. Ribbons Hon. Sec., & Mrs A.H. Somerville, Hon. Treas., Miss E.R.T. Conacher, Hon. Meetings Sec., Mr B.S. Brooks, Hon. Field Meetings Sec.

Mr Ribbons was elected as Scottish representative to the Council of the BSBI for four years.

Progress with the distribution maps for V.Cs 96 & 97 were recorded and for the latter with the checklist. The parent societies, BSE & BSBI, were requested to continue the Inverness-shire survey and also put in hand the sea cliffs flora study.

Sadness overshadowed the last months of the CSSF's separate existence. Its much respected Chairman, Robert Mackechnie died in April this year, and only a week later, Prof. J.R. Matthews who presided at the Committee's inaugural meeting in May 1955.

EARLY BOTANICAL RAMBLINGS OF 1978

Cruising down the River on a Sunday afternoon

Although the oak was well out before the ash in Monks Wood this year, the 'splash' has been somewhat prolonged. At the end of April the False Oxlips (*Primula veris* x *vulgaris*) in the wood struggled manfully into flower only to provide an evening meal for the rabbits. The first week in May was one of the wettest on record and the Fen Violets (*V. persicifolia*) not yet in flower, were deluged to a depth of three feet on a nearby reserve.

However, not to be perturbed by this slight dampness, the field meetings secretary took it upon herself to organize a boat cruise along the River Thames to see the Summer Snowflake in all its splendour (very appropriately considering the recent meteorological situation). Suprisingly not one of the 60 cruisers fell overboard, got wet, or failed to observe *Leucojum aestivum*, and a new locality was discovered – one plant on a small island near Temple Lock, closely guarded by a nesting mute swan. A minority party of landlubbers was ably led by Joanna Martin. They inspected several meadows and waved loftily to the cruisers.

Purple patches in Herts

It has been an excellent year for the Pasque Flower. A visit to Royston confirmed reports that the hillside was purple. A banded snail was discovered nestling in one of the flowerheads and the nibbled patches could be seen on the petals. This animal provided at least 15 minutes entertainment when kept under close scrutiny. An important scientific fact was discovered – a snail's mouth is just the right size for biting of an anther of *Pulsatilla vulgaris* in one go. Banded snails will also eat people when they are given the opportunity. The animal in question transferred itself at leisure to my middle finger and proceeded to rasp off the surface cells producing a delightful tingling sensation.

Royston is also a training ground for that rare beast 'The Spotted Cat's-ear Spotter'. There are supposedly two colonies of *Hypochoeris maculata* on the Golf Course. If anyone can find more than one plant, I shall relinquish the title 'The best Spotted Cat's-ear Spotter'.

LYNNE FARRELL.

THE RUGBY SCHOOL NATURAL HISTORY SOCIETY, a subscriber member of BSBI since 1950, sends its one hundred and tenth Annual Report. A photograph of Autumn Ladies Tresses, *Spiranthes spiralis*, in Michell Garden Rugby School, October 1977, with comment by J. LI. R. Baiss reports the appearance of this orchid on the Michell lawn following the drought in 1976. *The Flora of Warwickshire*, Cadbury, Hawkes and Readett, gives no record in the County since 1873. Mr. Baiss then reports that in 1971 he had taken a small piece of turf from the lawn of his home in Dorset on which *S. spiralis* occurred and placed this at the edge of the Michell lawn. Two specimens of *S. spiralis* flowered there in 1976 and one in 1977 "many yards" from his placed turf. This should perhaps give encouragement to those conservationists hoping to establish orchid colonies from the turf taken from sites scheduled for destruction, but shows also the great importance of recording a deliberate introduction.

M.B.

THE HIERACIUM COLLECTION AT MERSEYSIDE COUNTY MUSEUMS

When Merseyside County Museums (herb LIV) acquired the British herbarium of the University of Liverpool (herb LIVU) on permanent loan in 1974, it was realised that the *Hieracium* collection was of considerable interest. The combined *Hieracium* collection numbered some 3,000 specimens, of which rather under 1,000 had already been critically determined by either P.D. Sell, C. West or J.N. Mills. Professor Mills very kindly agreed to look at the remaining specimens, a task that was completed in early 1977. Since then, with help from graduates employed under the Government's Job Creation Programme, the entire collection has been sorted and indexed. The university collection included the important collection of W.R. Linton, one of only five British botanists who have looked critically at the Genus prior to P.D. Sell and C. West's account in the *Critical Supplement to the Atlas of the British Flora* (Perring, F. H. ed. 1968). Linton not only collected widely himself and published several new species, but he also exchanged specimens with his brother E. F. Linton, A. Ley and E.S. Marshall, all of whom made important contributions to the knowledge of the group.

As only one third of the specimens had been looked at prior to the publications of the *Critical Supplement*, and in view of the interest shown by local flora writers in critically determined species, the following list shows the species now present in herb LIV with the vice-counties from which they are represented. If any vice-county recorder would like further details of any particular species record, I would be very pleased to send them.

There are 187 species and 2 sub-species (*H. umbellatum*) represented out of the 245 recorded in the *Critical Supplement*. These species come from 86 vice-counties and reflect the distribution of the Genus, namely ungrazed cliffs in Wales, Derbyshire, Yorkshire, Lake District and Scotland. The best represented vice-county is South Aberdeen, v.c. 92 with 48 species, closely followed by Mid Perth and Forfar (v.cs. 88 and 90) both with 46 species. Mid-west York (v.c. 64) has 40 species, Brecon (v.c. 42) 39, West Sutherland (v.c. 108) 31 and Caernarvon (v.c. 49) 29.

BARBARA D. GREENWOOD

Merseyside County Museums,
William Brown Street,
LIVERPOOL L3 8EN.

N.B. It is hoped to publish the complete list in a future issue of *BSBI News*.

APPEALS

£60,000 NEEDED FOR WILDLIFE IN DYFED

Over the next two years the West Wales Naturalists' Trust intends to raise £60,000 towards the cost of acquiring and managing more nature reserves, together with extending its educational and advisory services.

Founded in 1938 as the Pembrokeshire Bird Protection Society the Trust now manages some 30 nature reserves, some owned, others leased, including sites like Skokholm and Skomer, Dowrog Common, Llyn Eiddwen and Nant Melin.

To continue its policy of endeavouring to protect in its nature reserves a representative series of the habitats and the rich variety of wildlife which they contain, the Trust desperately requires more funds, hence this new Dyfed Wildlife Appeal.

The Trust very much welcomes the letter of support received from HRH Prince of Wales and reproduced on the first page of the Appeal Brochure. In his letter Prince Charles hopes that the Appeal will be generously supported, not only by the people of Dyfed, but also by the many from other parts of Britain who visit this part of Wales.

Trust members have already raised £3,000, and a further £7,000 has been allocated by SPNC & WWF. This provides the Dyfed Wildlife Appeal with a flying start, and a good base on which to work towards the goal of £60,000. The widest support, however, will be necessary if this is to be achieved.

As part of the Appeal the Trust has recently purchased a fine woodland reserve at Nanteos on the outskirts of Aberystwyth. Negotiations are in hand for a major block of woodland in S.E. Dyfed and a wetland site.

Further details from the Appeal Chairman, Ian Watt :
20A High Street, HAVERFORDWEST, Dyfed.

THE HILLIER ARBORETUM

Members of the B.S.B.I. will be interested to know that this world-famous collection of hardy trees and shrubs was given last autumn to the Hampshire County Council by Harold Hillier. Under the enthusiastic curatorship of Roy Lancaster the Arboretum, which extends to 115 acres, is being maintained and enlarged for three main purposes :-

1) Scientific and horticultural interest. The very wide range of plants grown will be valuable as a source of material for botanical and economic study and for propagation. In this connection the British Museum (Natural History) is making a reference collection of specimens from the Arboretum.

2) Conservation. In common with many large gardens, the Arboretum contains several species that are threatened with extinction (e.g. *Elliotia racemosa*, Ericaceae). It will therefore have an important part to play in the conservation of flora from other parts of the world. The wild flora, too, is rich and includes such natives as *Luzula forsteri* as well as some naturalised species (e.g. the North American *Trientalis borealis*).

3) Education. The use of the Arboretum for teaching purposes is being actively encouraged, and a succession of classes from various schools visit it in connection with their biological projects. Those teachers and pupils to whom I spoke all seemed to appreciate the value of the collection for this purpose.

The Arboretum, which is situated at Ampfield, between Winchester and Romsey, is open between 9.00 am and 4.30 pm. from Monday to Friday (except Bank Holidays). It is well worth a visit by anyone with botanical or horticultural interests. Indeed many visits would be necessary in order to appreciate everything that grows in this fascinating collection.

“My most recent visit was made in connection with the launching of an appeal with a target of £200,000, which will help to maintain and improve the collection. Contributions should be sent to :-

The Treasurer, The Hillier Arboretum Appeal Fund, Lloyds Bank, 49 High Street, Winchester”.

NORMAN K.B. ROBSON

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Contributions for this issue must reach the Editor
BEFORE 28th OCTOBER 1978

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