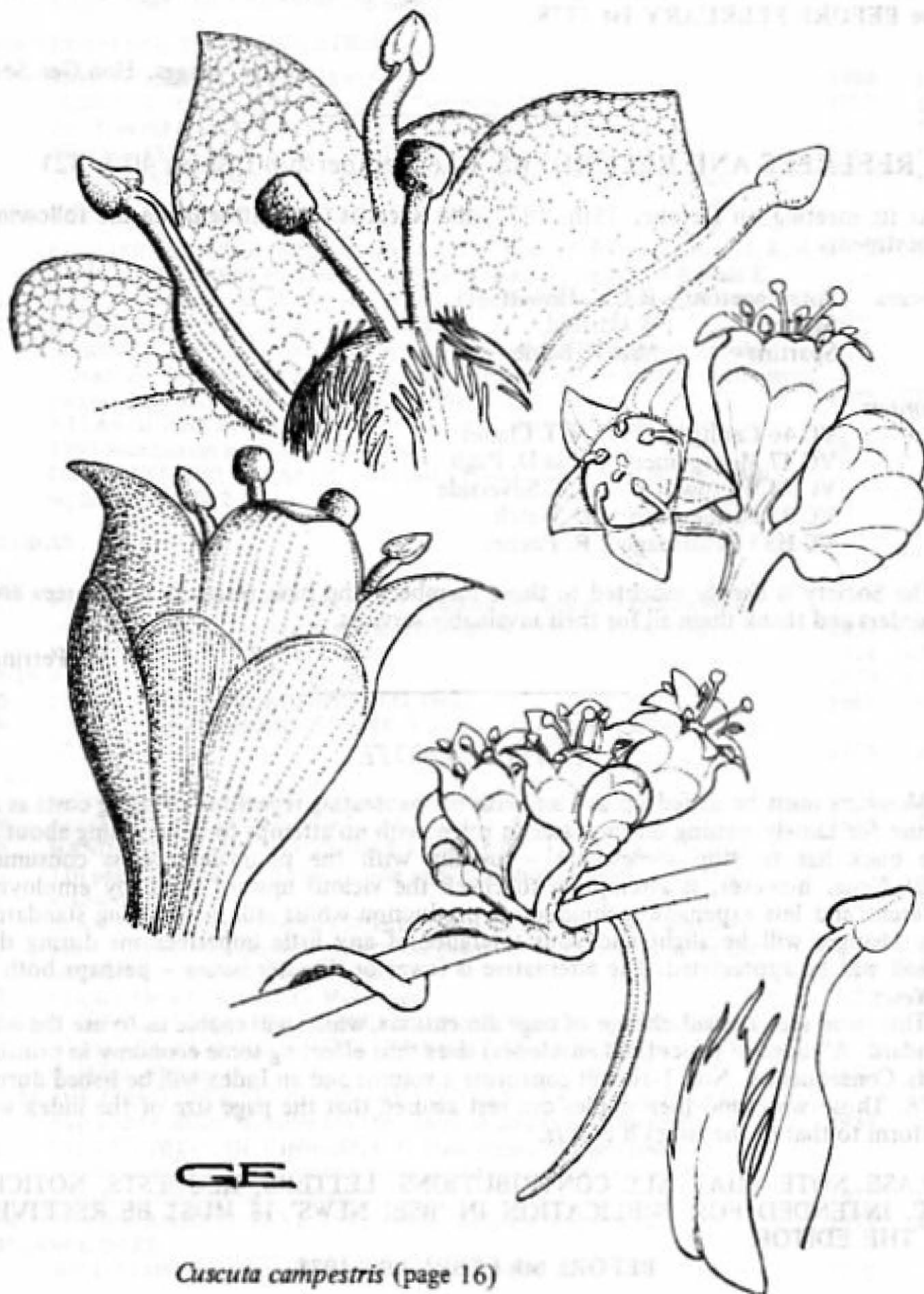


Edited by EDGAR D. WIGGINS

Cowpasture Farm, Felixstowe, Suffolk IP11 9RD



GE

## IMPORTANT NOTICE BSBI COUNCIL

Nominations for vacancies, in writing, signed by two members of the Society and accompanied by the written consent of the candidate to serve, if elected, should be sent to the Hon. General Secretary, White Cottage, Slinfold, Horsham, West Sussex, to arrive **BEFORE FEBRUARY 1st 1978.**

Mary Briggs. Hon.Gen.Sec.

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### REFEREES AND RECORDERS (see Membership List pp 40 & 42)

At its meeting on October 18th, 1977, the Records Committee made the following appointments :

*Referees:* Potamogeton : R.C.L. Howitt  
Sagina : P. Harrold  
Spartina : Miss P. Boyle

*Recorders:* VC 46 Cardigan : A.O. Chater  
VC 47 Montgomery : Miss D. Pugh  
VC 74 Wigtown : A.J. Silverside  
VC 93 N.Aberdeen : D. Welch  
VC H33 Fermanagh : R. Forbes

The Society is deeply indebted to those members who have resigned as Referees and Recorders and thank them all for their invaluable services.

F. H. Perring.

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### EDITOR'S NOTE

Members must be as fed up as I am with the nauseating repetition of rising costs as an excuse for tamely passing on increases in price, with no attempt to do anything about it. The buck has to stop somewhere — usually with the poor defenceless consumer. *BSBI News*, however, is attempting to check the vicious upward spiral by employing different and less expensive techniques of production whilst still maintaining standards. Any changes will be slight and your tolerance of any little imperfections during this period will be appreciated. The alternative is fewer or slimmer issues — perhaps both — of *News*.

This issue sees a small change of page dimensions, which will enable us to use the now standard 'A' range of paper (and envelopes) sizes thus effecting some economy in printing costs. Consequently, Nos. 1-16 will constitute a volume and an Index will be issued during 1978. Those who bind their copies can rest assured that the page size of the index will conform to that of the issues it covers.

PLEASE NOTE THAT ALL CONTRIBUTIONS, LETTERS, REQUESTS, NOTICES ETC. INTENDED FOR PUBLICATION IN 'BSBI NEWS' 18 MUST BE RECEIVED BY THE EDITOR

**BEFORE 6th FEBRUARY 1978.**

## HON. GEN. SECRETARY'S NOTES

Birthday greetings were sent to our Patron H.M. Queen Elizabeth, the Queen Mother, with particular reference to this special year of her daughter's, H.M. the Queen's, Silver Jubilee. The following reply was received:

"I am extremely touched by your telegram of good wishes on my birthday and send my very sincere thanks to you and to all who joined in your kind message"

Elizabeth R. Patron.

### Nostalgia ?

An early field meeting mentioned in the BEC Report for 1928 was held on May 12th that year at Breccles near Thetford. You will see in the 1978 Meetings Programme that Mrs. Gigi Crompton will be leading a party to the same locality on April 29th to mark the 50th anniversary of that early BEC meeting – (not their first, as that was to Jersey in 1925). The report for 1928 mentions nine titled members "and others" attending, and lists seven plants, including *Veronica verna*. We hope that the meeting in 1978 will match the numbers of interesting plants – even if not those of titled members !

Thanks firstly to the far Northern botanists for supporting BSBI Referees, (Letter *Osmunda regalis* BSBI News 16: 25). Many of our Referees, with little time to spare, donate much of this to the BSBI on an arduous and exacting task which must at times be very tiresome. Members are fortunate that the specialised knowledge of these experts is available to them, and the Society is very appreciative and grateful to them. If at times they are over-burdened with requests, please be patient. Throughout the Summer season Eric Clement receives 3-4 specimens a day for identification (I hope that all those members remember stamps for reply ?). Among those who generously give time and skill to the Society are those who prepare the *Watsonia* Index. Vol.10 Index with the last mailing was compiled by our BSBI News Editor Edgar Wiggins, and he is now working on the Index to Vol.11. Indexes for the three preceding volumes of *Watsonia* and the last Vol. of *Proceedings* were compiled by Dick Brummitt, Secretary of the Publications Committee. Our grateful thanks to them for this time-consuming task.

### Life-savers and Life-takers

Two plants recently hit the headlines: "Cabbage Saves Boy" was the report of a boy who fell over a cliff in Dorset, but he was able to cling to plants of *Brassica oleracea* for an hour until rescuers arrived to haul him unharmed to safety.

In Sussex three Dutch boys – one a student of botany – collected *Oenanthe crocata* in mistake for *Apium graveolens*, adding the leaves and stems to their evening stew, as self-cookers at Blackboys Youth Hostel. Within 10 minutes they were seized by violent convulsions and rushed to hospital where they were fortunately saved by intensive care. Medically interesting was their complete memory loss of the frightening events; botanically interesting is the distribution of the very poisonous *O. crocata* which, not occurring in Holland, was unfamiliar to the Dutch boys who took the plants to be the wild Celery frequent in their homeland. Dr. J. Mennema, at Cambridge in August, told us that *Oenanthe crocata* had in fact a first record in Holland in July this year.

### What type are you ?

Contributions from some members (bless them !) arrive neatly typed – double spaced. Others seem to have been written by a spider rescued from an inkwell, alive but discouraged. Others again need the services of a cryptographer, and in the deciphering mistakes could occur. Are there perhaps a few members with both typing ability and some spare time who would be willing on occasions to type a few pages for the Society ?



## Stamp on it

A campaign in *Habitat* by the Council for Nature and the Council for Environmental Education (in their recently produced sources for, and guidelines on, environmental enquiries for teachers) urges correspondents to send S.A.E. with all their queries. We hear this has had a noticeably beneficial effect. BSBI still receives all too many requests of the type "please send all information available on British botany", without a stamp for reply.

## Hat trick

In July the BSBI took posters to the Game Fair at Woburn Abbey, as part of 'Conservation in Action' organised by the World Wildlife Fund (British National Appeal). The positioning of our exhibit in the vast show grounds did not enable us to sell many posters — it did however enable Chris and John Dony, on duty for us on one day of the Fair, to re-find *Limosella aquatica* just behind our tent. That very week John's reference to this plant as "last seen in Woburn Park in 1948" had just been published in "Changes in the Flora of Bedfordshire, England, from 1789 to 1976" in *Biological Conservation*. The paper was one of three published by Dr. Dony within a few weeks in 1977: "Species-area relationships in an area of intermediate size" in *Journal of Ecology* 65(2), also in July, the first paper by an amateur to be published in that Journal for some time; and "J. Edward Lousley (1907-1976)", *Watsonia* 11 (4) in August.

## New names

A question which I am frequently asked is "should we be using the new *Flora Europaea* names?" The answer, I am sure is yes, and it will not be long before new editions of the Society's Handbooks and standard British Floras will be using the "new" names. It is hoped that lists of synonyms will be available before long — we will keep you informed. Changes are seldom welcomed, but I can remember how very quickly the "Bentham & Hooker" names became obsolete in Britain when the 1st Edition of C.T.W. was published.

## Linnean Limerick

There once was a chap called Linnaeus  
Who discovered all nature was chaos  
He set out to describe  
every species and tribe  
so that chaos would no longer dismay us

By F. Scott, Nova Scotia Museum, and left on Pierre Taschereau's desk after his visit to the Linnean Herbarium in London to study the "chaos" of *Atriplex* sp.

October 1977

Mary Briggs  
Hon.Gen.Sec.

## CONSERVATION

### Threats and Damage

Tim Sands from SPNC came to the Recorders Meeting at Beamish Hall in September and spoke of the need for extended vigilance for the protection of our native flora. If any member knows of threats to particular plants, or habitats, please send these in to the Conservation Secretary Dr. P.E. Brandham, c/o The Jodrell Laboratory, R.B.G. Kew, Richmond, Surrey if action is required — or if the damage has already been done please send a report to *BSBI News*.



## Cephelanthera rubra

Over-visiting and too many trampling feet at sites of *Cephelanthera rubra* have caused deterioration of the habitat and consequent reduction of the numbers of plants. Members are therefore requested NOT TO VISIT at all, for a year or two at least. This would enable those responsible for the conservation of the sites to carry through planned projects; hopefully the situation would then improve and the ban could be at least partially lifted. Meanwhile co-operation now could save this threatened plant for the future.

## Awareness Campaign

From the Threatened Plants Committee Newsletter No. 2 (issued by G.L. Lucas at Kew), we learn that the International Union for Conservation of Nature and Natural Resources (IUCN) is planning an expanded plant programme for the future. A campaign to make people at all levels in society in all countries more aware of the fundamental role that plants play in man's survival is now under consideration. At a recent symposium held at Uppsala University the delegates recognised that "although plants are the world's basic life-support system, our plant knowledge is not adequate to be able to make satisfactory suggestions for plant conservation in any but a few temperate areas of the world".

Mary Briggs.

## FRITILLARIES

Readers will be interested to know that the fund to secure the Framsdén fritillary field in Suffolk has progressed far enough towards its target to warrant the signing of a contract to purchase.

Contributions are still needed but it is gratifying to learn that those BSBI members who responded to the appeal in *BSBI News* 16 have added a significant sum to the total so far. Full details of opening times will be announced in *News* 18.

## THE EASTERN ENGLAND RARE PLANT PROJECT

It is a pleasure to be able to follow my rather pessimistic report in *News* 14, with good news about the status of some of the rare plants in Eastern England.

As the many "flag and cane" bearers, who so nobly helped me with field work in the Broads already know *Dryopteris cristata* has increased considerably judging from the number of new colonies seen. This plant is now found typically on small islands of slightly raised ground with young birch scrub and hummocks of *Sphagnum*. Such islands constitute a narrow transition zone between reed swamp and old fen carr. Tall, old birch trees, when present in this situation, are nearly always dead or dying. The sterile hybrid *D. x uliginosa* is often present, but in very small numbers. However, the distribution of *D. cristata* within the Broadland area remains restricted and little altered from what was previously known, and a number of old sites have been lost.

Although pollution in the Broads was sometimes an all too evident factor, two new sites for *Najas marina* were discovered by Michael Jackson. Many of the old sites for *Liparis loeselii* have unfortunately indeed been lost. In its surviving stations it was perhaps more widespread than had been thought, though this may have been due to the fact that this has been an exceptional year for many species of orchids.

Other species which flowered in unusually large numbers in 1977 were *Muscari atlanticum*, and the annual Veronicas in Breckland; *Veronica spicata* making a remarkable recovery after the drought of 1976.

I am particularly grateful to the people who have sent me corrections to the date of the last record in the list published last year: *Cynodon dactylon* - 1977(1970), *Filago gallica* - 1977(1955), and *Melampyrum arvense* - 1977(1970). May I also thank most sincerely the field-workers who hastened to inform me of their discoveries of new sites.

## Confidentiality

There is always justified concern about the confidentiality of records for rare, endangered species sent to me. This whole Project is being undertaken under a Nature Conservancy Contract, and the Nominated Officer is Mr D.A. Wells of the Chief Scientist's Team. Hence, when the survey of a county has been completed, it is handed to Mr Wells and it ultimately resides in the appropriate NCC Regional Office under lock and key. Normally the only other person to be informed of the precise locality of a confidential record is the owner of the land.

The objectives of the Project are to provide information which will contribute to the conservation of the species in the wild, and this procedure follows very closely that recommended to members of the BSBI in *News* 14.

Although the survey of rare species in a county may be formally completed, I hope that records will continue to be sent to me; the reports are in loose-leaf folders, and can only improve by being added to !

G. Crompton (Mrs)  
University Botanic Garden, Cambridge.

## DR. MARGARET BRADSHAW M.B.E.

*In the last issue of BSBI News, we had only time to announce briefly the award of her M.B.E. in the 1977 Birthday Honours. We are pleased to add some further notes on her work by one who knows her well.*

Margaret Bradshaw was born and bred in Yorkshire. She took her degree at Leeds, and after taking a diploma in education, taught for some years at Bishop Auckland Girls G.S. Through Dr S.M. Walters, she became interested in the genus *Alchemilla*; and she was invited to Professor Valentine's department at Durham University under an NERC grant to do biosystematic research on *Alchemilla*. She subsequently took her Ph.D. and published a series of papers on *Alchemilla*. She was next appointed to the post of Tutor in Biology in the Extra Mural Department at Durham, a post which she still holds. Here she has been a highly successful lecturer and teacher and has developed a strong interest in Nature Conservation. She played a leading part in the opposition to the dam at the Cow Green site at Upper Teesdale, and has continued to be active in this field. At the same time, she has been carrying out important research on the population dynamics of some of the rare Teesdale species.

The award of the M.B.E. will please all her many friends, who know it is exceedingly well deserved.

D. H. V.

# NEWS FROM MONKS WOOD

## ORCHID SURVEYS

For the past 10 years Terry Wells from Monks Wood has been studying several orchid species populations including *Aceras anthropophorum*, *Herminium monorchis* and *Spiranthes spiralis*. For three years I have mapped *Orchis militaris* and this year have started to look at *Himantoglossum hircinium*.

The observations are based on a co-ordinate recording system enabling one to go back to the individual plants at regular intervals.

Recently I have been informed of *Orchis ustulata* flowering in July, which is somewhat unusual. It is this type of information which we are interested in collating. We are hoping to set up a system of synoptic recording and would be interested to hear from botanists who feel they could undertake a regular recording project (probably annual) of orchid species, especially those mentioned above.

L. Farrell.



## MONKS WOOD OPEN DAYS

This popular event took place in mid-October and attracted visitors from a wide area, 3500 in all. Botanical work seemed to be concentrating on specialised habitats: chalk quarries, railway embankments, roadside verges, turf grass, shrublands and country parks. The first two are ecological surveys, the remainder are projects in land management research. Conservation, by definition, calls for management which must be both efficient and economical to stand any chance of adoption.

Areas worthy of preservation need protection not only from natural vegetation changes but from the activities of the visitors they attract. This particularly applies to Country Parks where the wildlife is what the public comes to enjoy.

Shrubland is the antecedent of climax woodland, but by planned cutting it should be possible to re-create all stages in the succession, from open grassland through young shrubs to mature scrub. Intensive farming demands weed-free pastures, but in many situations, e.g. parks, roadsides, productivity is not a factor and attempts are being made to establish floristically rich grassland.

Surveying and recording are essential preliminaries to meaningful research and at Monks Wood 321 rare species are being monitored. The fickle behaviour of orchids which disappear for years at a time and then mysteriously turn up to the delighted surprise of botanists, is being studied. Entomologists have for ages recorded the plants their insects feed on, but the converse, a systematic study of the insects associated with plant species, is less well documented. In this work a computer, once a satisfactory programme has been devised for it, facilitates the work. An outstanding example of computer aided survey was the Flora of Warwickshire (1971), adapted later to mapping the Flora of Breckland, a project now virtually complete. Nearby, the vegetation and invertebrate fauna of the Stanford Military Training Area is being studied.

Unwittingly, man with his industrial activities leaves niches which provide havens of refuge for species capable of some adaptation. Quarries and railway land are examples of these currently being surveyed at Monks Wood.

In a separate marquee the Nature Conservancy Council demonstrated its management, research and education activities and on the adjoining National Nature Reserve where a Nature Trail was laid out, and Volunteers of the British Trust for Conservation were working.

E.D.W.

## FORTHCOMING PUBLICATIONS

Part I of the revised 'Atlas in Parts' covering the Pteridophyta has gone to press. It will be published jointly by the BSBI and the British Pteridological Society. The Atlas includes maps of all species and hybrids native or naturalised in the British Isles with textual comment on each prepared by A.C. Jermy.

Maps for the 'Ecological Flora of Breckland' being edited by P.J.O. Trist have been prepared by the Biological Records Centre on microfilm. They follow the pattern of those in *A Computer-Mapped Flora of Warwickshire*, and show distribution in tetrads, the habitats and abundance. About 570 maps are to be included in the Flora which is expected in 1978.

Agreement has been reached with E.P. Publishing for the re-printing of a number of important but out-of-print local Floras. Amongst the first batch to appear will be Cornwall (including the Supplement), West Yorkshire and North Lancashire. To reduce costs of printing and postage the species portion of these books will be reproduced 4 pages to one page, but will be easily read with a hand lens provided.

F.H. Perring.



# NOTICES

## PLANT-COLLECTING ABROAD

New regulations for importing wild plants from other countries came into force on 3 February 1977, following the Endangered Species (Import and Export) Act 1976. These regulations enabled Britain to formally implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora. If you are planning to collect plants while on holiday overseas, the lists of controlled species and application form for licence to import are now available from :-

Department of the Environment  
Wildlife Conservation Licensing Section  
17/19 Rochester Row  
London SW1P 1LN  
(Tel: 01-834-8181 Ext. 258 or 259)

Northern Ireland issues licences separately and applications from residents of Northern Ireland should be sent to :-

The Department of Agriculture for Northern Ireland  
Animal Health Division  
Dundonald House  
Upper Newtownards Road  
Belfast BT4 3SB  
(Tel: 0232-650111)

There are 2 lists of controlled plant species :-

List A is of *Endangered* species on a world basis, and permits to collect these are only given if very stringent conditions can be met. At present the list covers over 40 species including 5 Aloes and 7 tropical orchids, in addition to all members of the genus *Encephalartos*.

List B is of *Vulnerable* species and it is knowledge of these that may be particularly important to members on holiday since the following are included :-

All species of Orchidaceae  
All species of Cactaceae  
All succulent species of the genus *Euphorbia*  
and all species of *Cyclamen*.

To bring any of these plants into this country a licence obtained in advance from D.o.E. is now a legal requirement.

We would remind travelling BSBI members to respect at all times the flora of other countries, following the same guidelines for conservation as we have approved for our British flora. A good general rule is to take only sparingly plants known to be common or plentiful in the locality, but whenever you can, leave them for others to enjoy.

There are special arrangements for *Herbarium Specimens* sent between recognised botanical institutions, which are not subject to the above regulations.

Many thanks to Hugh Synge, IUCN Unit at Kew, for checking these notes for accuracy.

OCTOBER 1977

M.B.

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## FROM ZERMATT TO THE GLACIERS

This is the title of an open public lecture, to be given at the British Museum (Nat. Hist) on 11 March 1978 at 3 pm by Desmond & Marjorie Parish using their own photographs. As the title suggests this lecture surveys the changing vegetation between the 5,000 and 10,000 foot levels in the vicinity of the Matterhorn.

# BOTANICAL SOCIETY OF THE BRITISH ISLES

## AQUATIC AND MARSH PLANTS

a week-end symposium to be held at

### BRATHAY FIELD STUDY CENTRE

### OLD BRATHAY, AMBLESIDE, CUMBRIA

(by kind permission of the Director of Studies)

on

OCTOBER 27th – 29th, 1978

### OUTLINE PROGRAMME

On Friday 27th Afternoon arrival 5pm, address by M.A.E. Mortimer and, after dinner, an introductory paper

On Saturday 28th Morning – papers  
Afternoon – field excursion  
Evening – papers, discussion, slides

On Sunday 29th Morning – papers  
Afternoon – field excursion  
17.00hr – depart

Speakers will include : P.J. Brown (Alismataceae); Prof. C.D.K. Cook; Dr. G. Halliday (Cumbria); Dr. Sylvia Haslam; R. Driscoll and A.C. Jermy (Norfolk Broads); Jenny Moore (Charophyta); Dr. A.B. Seddon (Lake flora – Wales); Dr. D. Spence (Scotland); Dr. Winifred Tutin, née Pennington (Wetland ecology of the Lake District); P.M. Wade (Drainage channels); Dr. J.F. Westlake (Aquatic macrophytes).

Limited accommodation at the Centre will be available, mainly in bunk-fitted rooms sleeping 2-8, for which cost with full board (Friday-Sunday) will be £14.00. Some members may prefer to make their own arrangements to stay in Ambleside (2 miles) Local organiser: Mr. T.H. Blackstock.

The final programme, with instructions for application, will be published in *BSBI News* 18, and circulated to all members in *April 1978*.

### COURSES AT ARDTORNISH, 1978

I am once again intending, from the spring to the autumn of 1978, to run a number of weekly residential courses at Ardtornish, and once again, as in 1977, the majority of them will be in field botany. Although I myself hope to be there throughout the season, partly in order to show the less experienced the special plants of a very rich area, each course will be directed by a recognised expert in some particular branch of botanical knowledge. Besides courses on bryophytes and lichens, I could for instance, if there were sufficient demand, organize specialist courses on ferns, sedges or grasses. Unfortunately, owing to the difficulty of complying with all my chosen leaders' preferences as to dates, I shall probably be unable to finalise the programme much before the end of 1977. But if meanwhile all potential participants would write me a brief note to tell me their final choice both of date and of subject to study, I will do my best to satisfy the requirements of as many as possible.

John Raven,  
Docwra's Manor, Shepreth, Royston, Herts, SG8 6PS.

## B.S.B.I. WALES QUADRENNIAL MEETING

NOTICE IS HEREBY GIVEN that a Meeting of Members of the Society, normally resident in Wales, will be held at St. David's College, Lampeter, Dyfed on Saturday July 22nd 1978 at 15.30hrs.

### AGENDA

1. Election of Chairman
2. To elect a member to serve on Council.
3. Any other business.

Wales now consists of the counties of Gwynedd, Clwyd, Powys, Dyfed, Gwent, Mid, South and West Glamorgan, and the vice-counties of Monmouth, Glamorgan, Brecon, Radnor, Carmarthen, Pembroke, Cardigan, Montgomery, Merioneth, Caernarvon, Denbigh, Flint and Anglesey.

Nominations of members for election to Council must be in writing, signed by two members normally resident in the Welsh Region and accompanied by the written consent of the candidate to serve if elected. Such nominations should be sent to the Honorary Secretary of the Committee for Wales, Mr. R.G. Ellis, Dept. of Botany, National Museum of Wales, CARDIFF, CF1 3NP not later than 20th May 1978.

The Programme (full details in *BSBI News* 18) will include talks on Brambles (E.S. Edees) and Flowers of the Gower Peninsula (Dr Gillham), a field meeting on Sunday 23 July and a 4-day Bramble foray.

Accommodation is available at St. David's College at approx. £6.00 per night, including meals.

All B.S.B.I. members are welcome and further details can be obtained from The Secretary to the Committee for Wales at the above address. Please apply before June 1st.

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## WILD FLOWERS OF SOUTH-EAST ENGLAND – EXHIBITION

Conservationists in Kent, Surrey, Suffolk and Essex may like to note the dates when a travelling exhibition of large (25 x 38cm) colour prints showing plants typical of fens and marshes, downlands, sea coast, and woodlands, will be touring. The photographs, taken by Desmond & Marjorie Parish are usually accompanied by a slide show of the transparencies from which the colour prints were made.

The display is organised by the Museum Service for S.E. England which has announced the following arrangements for 1978 :

28 Jan. -	26 Feb. -	CHELMSFORD & ESSEX Museum, Chelmsford.
4 Mar. -	2 April -	CANTERBURY; Royal Museum.
8 April -	7 May -	IPSWICH; The Museum.
13 May -	11 June -	KINGSTON-UPON-THAMES; The Polytechnic.
17 June -	16 July -	TUNBRIDGE WELLS; Museum & Art Gallery.
22 July -	20 Aug. -	HARLOW; The Museum.

It is suggested that BSBI members make these exhibitions known to their non-botanical friends, in order to spread the conservation message.

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# POLLINATION

## Bees and flowers

Members of the B.S.B.I. may be interested in some of the publications sold by the International Bee Research Association. This Association covers honeybees and apiculture, other species of bees, the plants from which they collect (nectar, pollen, honeydew and propolis), and the bees' pollinating activities on these plants. The Association's journal, *Bee World*, also constitutes the official organ of the International Commission for Bee Botany of IUBS.

*Pollen loads of the honeybee* by Dorothy Hodges (reprinted 1975) includes accurate colour charts of the pollen of 120 species worked by bees in England, with superb drawings of their pollen grains, and of bees packing and carrying pollen loads.

*Honey: a comprehensive survey* edited by Dr. Eva Crane (1975, reprinted 1976) has a chapter on "The flowers honey comes from", and a world list of important honey plants and their honey characteristics. It includes much more that is of interest to botanists.

A booklet by M.F. Mountain, *Trees and shrubs valuable to bees* (revised 1975) describes 96 ornamental species and varieties of horticultural merit that are valuable to bees. Reprints from *Bee World* include *Solitary bees and wasps* by Sir Christopher Andrews, *Trap-nesting solitary bees for students of biology* by Dr. I.H. Williams, and *The rearing and management of bumble bees for students of biology* by P. Morgan and Dr. M. Percival.

Full descriptive catalogues are available free of charge from the Association at Hill House, Gerrards Cross, Bucks. SL9 0NR, England.

## Pollinators of common plants

from the President of BSBI, Prof. D.H. Valentine

As was pointed out at the recent symposium at Newcastle on Tyne, there are many gaps in our knowledge of the pollinators of common British plants, and this in spite of the valuable contributions recently made by Proctor and Yeo in their New Naturalist book "*The Pollination of Flowers*". I should like to commend this line of investigation to members of the BSBI, especially those who combine entomology with botany. I append a short list of plants which, in my view, would repay investigation :-

### 1. Naturalised aliens

*Impatiens capensis*  
*Acaena novae-zealandiae*  
*Fuchsia magellanica*

### 2. Groups of related species which are known to hybridize

*Potentilla reptans*, *P. erecta*, *P. anglica*  
*Geum urbanum*, *G. rivale*  
*Silene alba*, *S. dioica*

3. It has been suggested that some normally wind-pollinated species, such as *Plantago lanceolata* may be visited by insects. Can this be confirmed ?

It would be useful to record not only the nature of the pollinator, but also the frequency of the visits and the time of day. Observations on night-flying Lepidoptera would also be valuable !

## Note

For the identification of insect visitors Collins *Field Guide to the Insects of Britain and Northern Europe* by Michael Chinnery is recommended, but for specific identification Mr G.R. Else, a BSBI member in the Entomology Dept. and the B.M. has kindly offered to identify insect specimens sent to him at Dept. of Entomology, British Museum (Nat. Hist) Cromwell Road, London SW7 5BD. M.B.

## BUTTERFLIES AND POLLINATION

Butterflies feeding on flowers in the wild were studied by a small group of recorders near Hastings and the results of their first year of a 3-year project were reported in *The Hastings and East Sussex Naturalist* (1977), 12(2) : 37-42. The total count of feeding (usually indicative of 'pollinating') butterflies was 1,742 belonging to 24 species, on 58 species of flowers. The results have been tabulated to show the number of visits to each species, and to attempt a correlation between proboscis lengths of the butterflies and corolla depths of the most visited flowers. There are also notes on weather, season, habitat etc.

The following are some examples of the results obtained in 1976.

<i>Senecio jacobaea</i>	— Large White, Peacock, Painted Lady, Comma Small Tortoiseshell, Hedge Brown, Common Blue, Small Copper.
<i>Eupatorium cannabinum</i>	— Red Admiral, Peacock, Comma, Hedge Brown, Small Heath.
<i>Rubus fruticosus</i>	— Red Admiral, Large White, Peacock, Painted Lady, Small Tortoiseshell, Comma Heath.
<i>Cirsium arvense</i>	— Large White, Painted Lady, Small Tortoiseshell, Small Heath.
<i>Centaurea nigra</i>	— Wall, Common Blue, Small Copper.
<i>Pulicaria dysenterica</i>	— Wall, Small Copper.
<i>Cirsium palustre</i>	— Wall.
<i>Mentha aquatica</i>	— Wall.
<i>Mentha spicata</i>	— Hedge Brown.
<i>Succisa pratensis</i>	— Wall, Common Blue.
<i>Origanum pratensis</i>	— Hedge Brown, Common Blue, Small Copper.
<i>Solidago virgaurea</i>	— Small Copper.
<i>Calluna vulgaris</i>	— Common Blue, Small Heath.

During the count, *Senecio jacobaea* received the highest total of butterfly visits — 255. *Rubus fruticosus*, despite most of its microspecies being apomictic and producing seeds from unfertilized ovules, recorded the largest number of butterfly species — 16. Members interested in butterfly food plants are referred to the paper quoted above for further details, or to the Author, Mrs Mavis Coates BSc. who has particulars of the remaining 46 plant species studied in 1976 plus additional ones recorded in 1977. Her address is :

46 Westfield Lane, St Leonard on Sea, East Sussex. (S.A.E. for reply). [see also p.30].

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## BRATHAY EXPEDITION TO RONAS HILL, SHETLAND, OR A BOTANISTS SUMMER HOLIDAY. ('The Hill' - 'X' Certificate - over 16's only)

Instead of writing a scientific note about plant records, etc., I thought that readers might like a change.

After a somewhat laborious journey 24 members of the Brathay Exploration Group (BEG) arrived at Ollaberry Village Hall, North Mainland, Shetland on July 26th, 1977. We established base camp there and the next day moved up to Camp One on the north shore of Ronas Voe, south of the Hill itself.

The two main objectives of the expedition were to produce a vegetation map of Ronas Hill SSSI and to study the patterned ground formed by frost and wind action, recently described by Ball and Goodier (1974).



Despite the inclement weather, we orienteered a 300m grid over the Hill, recording 64 quadrats with botanical and environmental data, and amazed ourselves when the 2 recording groups met, within 100m of where they were supposed to coincide over the 5 square miles of Ronas. The meeting has been entered in the historical files of BEG. A vague orange shape (our leader R. Thompson) loomed out of the mist to greet damply a black ensemble (L. Farrell) with 'Dr. Livingstone, I presume?' We took photographs on the summit, although there was some debate about whether it actually was the summit as we had never seen the upper 500 feet of the hill for 5 days. Anyone visiting 'The Hill' in future should go to the trig. point and search diligently for a glass pop bottle, inside which they will find interesting messages.

Of course there was a great deal of botanical work undertaken, with T. Blackstock (Brathay F.S. Centre botanist) and myself endeavouring to interest geographers in Latin names by reverting to colloquialisms such as :-

Trifids	— Juncus trifidus	Big E	— Carex bigelowii
Auntie D	— Antennaria dioica	Plantmat	— Plantago maritima
Empty Tram	— Empetrum nigrum		

This latter species proved a bone of contention. It was all over the hill extending from 1486 ft. down to sea level. On the open debris areas it had small, almost triangular-shaped leaves covered in white, woolly hairs, whilst further down the slopes, and in the closed communities it was more its normal self with long, strap-like, green, glabrous leaves. We were baffled by the woolly form at first and tried valiantly to turn it into a *Gnaphalium* but only came to the conclusion that it really was *P. maritima*. One misty morning a gentleman arrived suddenly in our quadrat (his approach being unannounced owing to the thick mist) and enquired as to our purpose. He also asked about the aforementioned woolly and when told it was *P. maritima* seemed totally unconvinced but prostrated himself, produced his lens (although purporting not to be a botanist but merely on holiday nearby) and had to admit that the floral parts did look remarkably like a *Plantago*.

After a short busman's holiday to the Keen of Hamar NNR, Unst, where we spent ¼ hr. on hands and knees searching for *Botrychium lunaria*, and a visit to Hermaness to be dive-bombed by bonzies (Great Skuas) and peered at by Puffins, we returned to the fray at Ronas.

A second, advanced, botanical camp was eventually pitched precariously on the extremely inhospitable northern slopes of 'The Hill'. We set up our permanent quadrats on the different types of patterned ground — turf-banked terrace, hill dune, wind stripe and crescent — by painting convenient granite boulders bright orange. But all good things come to an end, and the temperature dropped suddenly, the mist descended, the rain began. At 10.30 I took a vital decision that all 5 of us should remain in our 3-person tent as it was definitely impossible to move.

I won't go into details, it is sufficient to say that storm force 10 and 1½ inches of overnight rain were recorded by the Met. station nearby, and that there were only two completely dry people the next morning — the botanists (there must be a moral in that!).

We attempted to walk out, but were literally blown out, to the NATO base at Collafirth where we were welcomed by cups of hot tea, hot showers, drying rooms and a table tennis table. "We were expecting you last night" they said.

Having learnt at first-hand why periglacial features are so well developed on Ronas Hill, we then experienced the absolute beauty of the area in calm, sunny, clear conditions. The botanical survey of patterned ground was continued and all went swimming (or should that be swimmingly?) at Ollaberry where some brave soul stayed in for one whole minute.

The expedition was a success despite the shortage of coffee, and custard that would not thicken, and if anyone would like to look at several hundred moss samples, I should be delighted.

Lynne Farrell.



# ALIENS and ADVENTIVES

ADVENTIVE NEWS 9

compiled by Eric J. Clement

## DEMOLITION ALIENS

The demolition of buildings and the clearing of sites with the subsequent levelling of soil should not be overlooked by alien enthusiasts: they are potential sources for adventives, especially if commerce or produce features in the history of the locality. Three excellent examples follow:

### (a) MALTINGS

The demolished site of a former maltings near the docks at Mistley (Essex) attracted Mark Hyde and Mrs E.M. Hyde in June 1977. The longevity of legume seeds was demonstrated by *Trifolium spumosum* L. (a pretty, pink-flowered plant with greatly inflated calyces), *T. nigrescens* Viv. (conf. Dr D.E. Coombe — determination to subspecies is  $\pm$  impossible without ripe fruits; this species could be overlooked as *T. hybridum* ssp. *elegans* — but does this plant still occur in Br as a casual?), *T. lappaceum* L. and fruiting *Astragalus hamosus* L. Voucher specimens, all det. EJC, have been presented to BM et al. Apart from *T. lappaceum*, these are all very rare casuals these days. Also present were *Medicago polymorpha* (including a var. completely lacking in spines on the fruits; BM), *Melilotus indica*, *Hyoscyamus niger*, *Ranunculus arvensis* and *Sisymbrium orientale*.

### (b) COTTAGES

The bulldozed site of some cottages at Rickmansworth (Herts) in late 1976 produced for Mr & Mrs T.D. Walker, Miss J. Colthup, Mrs M. Wraith and many other members a host of interesting plants, the origin of which was almost undoubtedly from the factory on the Grand Union Canal of Soya Foods Ltd. which existed at the near-by Springwell (Mddx) between about 1945-1951. Earth moved from this cottage site to a nearby building plot also produced similar adventives. Presumably workers from the factory lived in these cottages and they carried home the debris (with or without soya-beans!) for some purpose like feeding pigs, chickens, etc., or perhaps for garden manure? From seeds, then, at least 25 years old came (all conf. EJC):

<i>Abutilon theophrasti</i>	<i>Ipomoea hederacea</i>
<i>Ambrosia artemisiifolia</i>	<i>I. lacunosa</i>
<i>Chenopodium probstii</i>	<i>Setaria faberi</i>
<i>Datura stramonium</i>	<i>Sida spinosa</i>
<i>Hibiscus trionum</i>	<i>Solanum rostratum</i>

Other species were probably seen but not reported to me — the one *Amaranthus* sp. submitted was too young to determine but was probably a N. American dioecious plant.

Details of the Springfield records appear in D.H. Kent's recent *Flora*, whilst similar *Glycine max* adventives in Kent are written up in *BSBI News* 9: 15-17 and by J.R. Palmer in *Trans. Kent Field Club* 6(2): 85-90 (1977).

### (c) CHICKEN-RUNS

The site of a hen-run from about 1955-1970 in the village of Menstrie (West Perth) was levelled off in 1976; R. Cook combed the area during 1977 finding abundant plants of *\*Dracocephalum parviflorum* Nutt., many setting good seed. This is a N. American annual labiate (not a perennial, as stated by H.A. Gleason, 1968) which resembles a *Galeopsis* sp. but with a 15-nerved calyx and a lemon scent like *Melissa officinalis*; its light blue corolla is barely longer than the calyx. Graham Easy has kindly provided the illustration. He found this species at Cherryhinton tip (Cambs) in 1970, and kept it in cultivation for several years. I know of no other recent record for this species.



*Dracopis parviflorum*



There were scattered plants of *\*Althaea hirsuta*, *\*Potentilla norvegica* and *\*Barbarea verna*; and sprawling patches of a form of *\*Vicia villosa* Roth ssp. *villosa* with strikingly white wings (the wings can be variously coloured). Scarcer species were *\*Ranunculus sardous*, *Coronilla varia*, *Papaver somniferum*, *Hyoscyamus niger*, *Melilotus alba* and *Reseda lutea*. One large (60cm) plant of *\*R. inodora* Reichb., which is now partly in BM and RNG, defeated me at first – the anthers were atypically beaked above, but otherwise agreed with specimens in BM from SE Europe. One notes here that *Flora Europaea* 1 is incorrect in capsule size – the fruit may, quite normally, be up to 13 mm long. It was collected, with a query, as the similar *R. phyteuma* which differs in having its sepals strongly accrescent in fruit. The flowers have a slight smell of “dandelion with a buttery component” – but lack the strong, sweet fragrance of *R. odorata* L., which does occasionally escape from gardens. I know of no other recent records for *R. inodora* in Br.

R. Cook has preserved voucher specimens for most of these species, those with an asterisk being confirmed by myself. No other chicken-run aliens records have reached me: this rich source of aliens in the past now seems to have run dry.

## MIXED BAG

*Cotula squalida* Hook. f.: Parkhill, near Arbroath (Forfar), June 1977. Miss U.K. Duncan. Hb. UKD. Det. EJC. Abundant, as a male clone, in a grassed-over disused tennis-court. It was submitted as *Acaena ?anserinifolia* (Rosaceae) – the leaves are, indeed, not unlike those of this Composite which could be similarly overlooked elsewhere.

*Cuscuta campestris* Yuncker: Four records for this species were given in *BSBI News* 14: 13 – more follow here.

C.G. Hanson reports growing this N. American species in 1975 from bird-seed of known Abyssinian origin (it is naturalized in much of Africa !), and in 1976 he discovered it in masses on tomatoes at Roydon Sewage Works (Essex). Hb. CGH. Conf. EJC.

Esholt Sewage Works, near Bradford (Mid-West York), Oct 1977. E.R. Spooner, comm. Dr G.A. Nelson, Conf. EJC. Why has this plant an apparent predilection for sewage works ?

The splendid cover drawing of this species, drawn by Graham Easy from a plant from Cambridge Sewage Works, is very greatly magnified (the fruit is only 2-3 mm in diameter and the flower smaller). Contrast it with the Butcher or Ross-Craig illustrations noting the capitate stigmas (not elongate) and the abundantly fimbriate scales in the throat of the corolla originating below the insertion of the stamens. Genuine *C. epilinum*, which appears in CTW, has not been seen in Br for many years and need not be considered further.

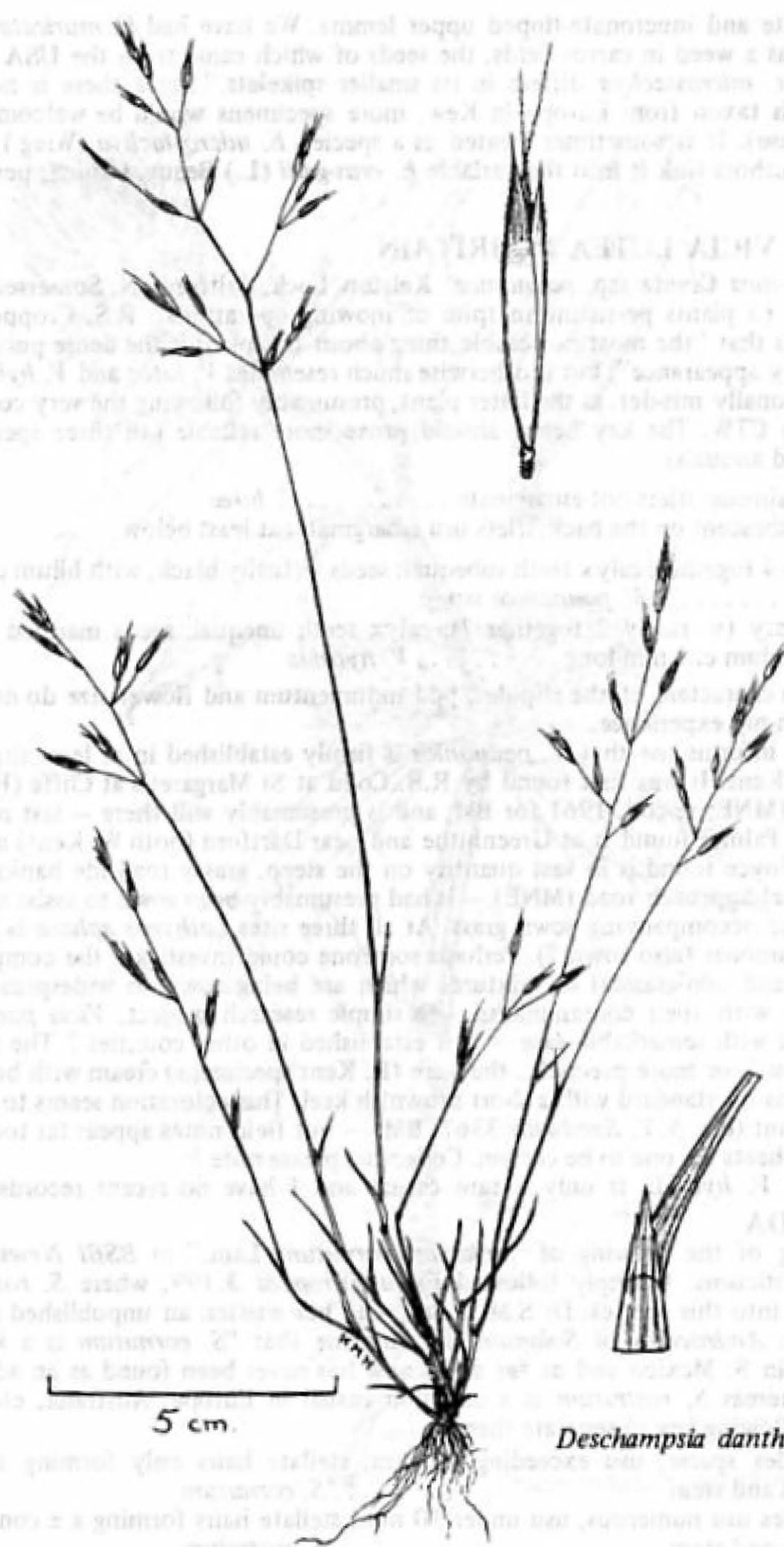
*Deschampsia danthonioides* (Trin.) Munro ex Benth.: Ashbourne (Derbys), July 1977. Miss K.M. Hollick. BM, K, RNG et al. Det. Dr C.E. Hubbard. It appeared immoderate quantity on a newly re-soiled and grass-sown piece of ex-railway land; other unusual aliens here were *Crepis setosa*, *Hordeum jubatum* and *Bromus tectorum* L. var. *hirsutus* Regel. Perhaps the accompanying *Bromus*  $\times$  *pseudothominii* and *B. commutatus* had also come from western N. America with the *Deschampsia*. (All grasses det. CEH). Kathleen Hollick has kindly provided the illustration so that others may look out for this species. It is an annual, but was apparently setting good seed.

Dr & Mrs J.G. Dony also reported this species this year from Woburn Park (Beds); the specimen, det. CEH, was from a colony found on the bare earth banks of a lake. K.

The only previous record for Br was as a contaminant of a plot of *Poa pratensis* (USA seeds) at the Sports Turf Research Institute, Bingley (Yorks), July 1972. J.P. Shildrick. K. Det. CEH. No unpublished records lie in Hb. JEL at RNG (comm. Dr H.J.M. Bowen).

*Echinochloa muricata* (Beauv.) Fern. var. *microstachya* Wiegand: Roadside, Le Douit, St Peter's (Guernsey), Sept 1977. Mrs P.I. Ryan. K. Det. CEH. A North American grass which probably came in with bird-seed. “The most important distinguishing features are the conspicuously echinate spikelets, with the stiff hairs arising from papillae and the





*Deschampsia danthonioides*

coriaceous acute and mucronate-tipped upper lemma. We have had *E. muricata* during the war-years as a weed in carrot-fields, the seeds of which came from the USA ("lend-lease"); the var. *microstachya* differs in its smaller spikelets." Since there is no other material of this taxon from Europe in Kew, more specimens would be welcome (with rootstock, please). It is sometimes treated as a species, *E. microstachya* (Wieg.) Rydb., whilst other authors sink it into the variable *E. crus-galli* (L.) Beauv. (which, personally suits me!).

## ALLIES OF *VICIA LUTEA* IN BRITAIN

*Vicia pannonica* Crantz ssp. *pannonica*: Kelston Lock, Saltford (N. Somerset), June 1976 & 1977 (3 plants persisting in spite of mowing operations). R.S. Cropper. BM. RSC comments that "the most noticeable thing about this plant is the dense pubescence giving it a silvery appearance", but it otherwise much resembles *V. lutea* and *V. hybrida* L. It was professionally mis-det. as the latter plant, presumably following the very confusing descriptions in CTW. The key below should prove more reliable (all three species are yellow-flowered annuals):

Standard glabrous: lflets not emarginate . . . . . *V. lutea*

Standard pubescent on the back; lflets usu emarginate, at least below

Fls (1-)2-4 together; calyx teeth subequal; seeds virtually black, with hilum c. 2 mm long . . . . . *V. pannonica* ssp. p.

Fls solitary (v. rarely 2 together?); calyx teeth unequal; seeds marbled brown, with hilum c. 1 mm long . . . . . *V. hybrida*

The separation characters of the stipules, pod indumentum and flower size do not work satisfactorily in my experience.

E.G. Philp informs me that *V. pannonica* is firmly established in at least three dry, grassy sites in Kent. It was first found by R.B. Codd at St Margaret's at Cliffe (E. Kent) in July 1959 (MNE; re-coll. 1961 for BM, and is presumably still there — last reported in 1970). J.R. Palmer found it at Greenhithe and near Dartford (both W. Kent) in 1971. In 1976 G.S. Joyce found it in vast quantity on the steep, grassy roadside banks of the Dartford Tunnel approach road (MNE) — it had presumably been sown to assist nitrogen fixation for the accompanying sown grass. At all three sites *Lathyrus aphaca* is present and much commoner (also sown?). Perhaps someone could investigate the components (both grasses and non-grasses) of mixtures which are being sown so widespread these days, together with their contaminants — a simple research project. *Vicia pannonica* sets viable seed with remarkable ease — is it established in other counties? The flowers are "pale yellow", or more precisely, they are (E. Kent specimens) cream with brownish olive-green veins on standard with a short brownish keel. This coloration seems to be normal and constant (e.g. *N.Y. Sandwith* 3367, BM) — but field notes appear far too rarely on herbarium sheets for one to be certain. Collectors please note!

In contrast *V. hybrida* is only a rare casual and I have no recent records for it.

## CORRIGENDA

The naming of the drawing of "*Solanum cornutum* Lam." in *BSBI News* 14:12 has elicited criticisms. I simply followed *Flora Europaea* 3:199, where *S. rostratum* Dunal is sunk into this species. Dr S.M. Coles, who has written an unpublished revision of the Section *Androceras* of *Solanum*, informs me that "*S. cornutum* is a separate species found in S. Mexico and as far as I know has never been found as an adventive in Europe, whereas *S. rostratum* is a common casual in Europe, Australia, etc." and suggests the following key to separate them:

Stem prickles sparse, usu exceeding 10 mm; stellate hairs only forming a sparse cover on lvs and stem . . . . . *S. cornutum*

Stem prickles usu numerous, usu under 10 mm; stellate hairs forming a ± continuous cover on lvs and stem . . . . . *S. rostratum*

Dr R.N. Lester (Univ. of Birmingham) agrees that the two species are distinct, but claims that nomenclaturally the correct name for *S. cornutum* is *S. angustifolium* Mill., non Lam. As Miller's type specimen (in BM) is a scrap with no flowers or fruits I wonder if other taxonomists will concur with this opinion.

Please continue to send in records and specimens. I would especially like to see *Physalis* and *Phytolacca* material; no recent records for *Physalis pubescens* are correct, and *Phytolacca americana* has apparently always been wrongly claimed for Britain.

ERIC J. CLEMENT

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

## A SYMPOSIUM OF SEDUMS

An example of a seized opportunity has occurred on the long disused war-time aerodrome at Ashbourne, Derbys, V.C. 57, where numerous sedums are colonising the old concrete bases and runways, helped along by a preliminary layer of moss. They are mostly garden spp., some certainly originating via rubbish-dumping from nearby houses; though *S. telephium* and *S. acre*, both present in quantity, are as likely to be native. *S. album* extends over a vast area, and *S. reflexum* and *S. anacampseros* are well away, though localised. *S. spectabile* and *S. hispanicum* are in small quantity only, the latter lingering on in a vegetative condition. The presence of some of these is probably merely ephemeral and it is a matter of opinion at what stage aliens should be recorded, but a situation involving seven members of one genus seems worth noting. It seems comparable with the somewhat demoralising profusion of exotic cotoneasters on parts of the N. Wales limestone, though on a parochial scale and likely to be of shorter duration.

Kathleen Hollick  
The Old House, Ashbourne  
Derbys, DE6 1AJ

(Authors' names and a key to all the species mentioned above – and many more – will be found in *A Gardener's Guide to Sedums* by R.L. Evans and published by the Alpine Garden Society. E.J.C.)

## CRASSULA HELMSII IN SOUTH HANTS

In July 1976 this small attractive aquatic, native of Australia and New Zealand was discovered in a pond at Gorley, Fordingbridge. Specimens sent to Mr E.J. Clement were identified by him as this species.

Growing on mud and in shallow water the plant formed two adjacent patches about 10 ft. in extent and appeared to be well-established amongst native pond-side vegetation.

There is so far no evidence that it was deliberately introduced at this site. The only previous notice of this species in South Hants is of it having been planted in a pond at the University of Southampton about 1957 (*Watsonia* 5(2) Dec 1961).

R.P. BOWMAN.

22 Kennedy Road,  
Maybush,  
SOUTHAMPTON  
SO1 6DQ.



# LOUSLEY REMEMBERED

## TREASURED SKETCHES FROM

"Now Daniel - bite  
that one".....

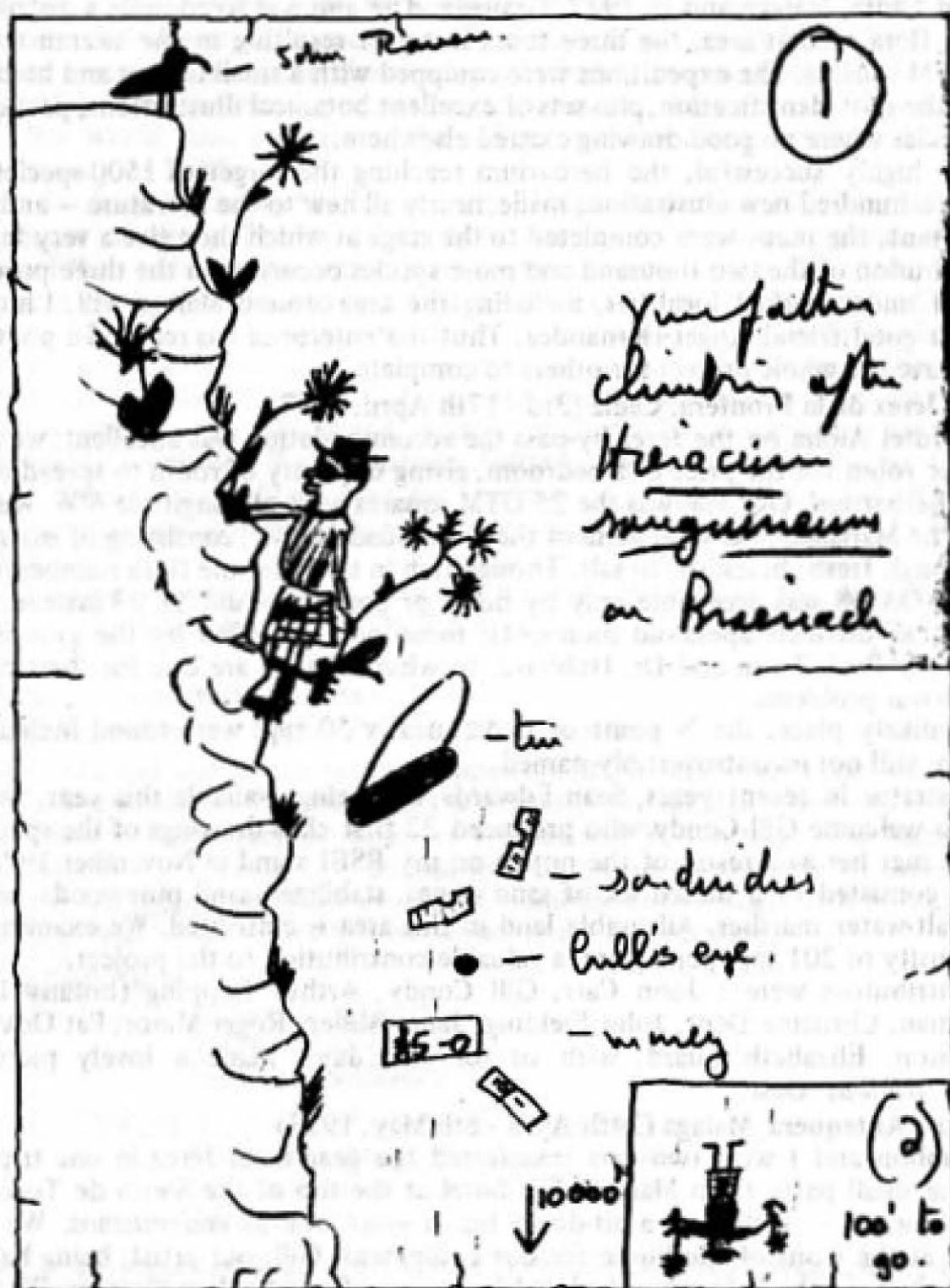


"My WILDEST DREAM"  
(after the Exhibition Meeting - R)

..... a Christmas card sent to Mr and Mrs Lousley in 1955 by Jocelyn Russell who had noted that all the specimens of *Orchis militaris* on the slides shown by Ted at the Exhibition meeting had been attacked by slugs. She had a vision of him specially training the pests to eat this species.

# - LIGHT HEARTEDLY

## THE FAMILY ARCHIVES



### INTREPID BOTANIST

This amusing impromptu sketch showing the late Ted Lousley very much "in action" was drawn by Rex Graham on a piece of scrap paper. It is one of Dorothy Lousley's most treasured possessions and we are greatly indebted to her for allowing us to reproduce it.

Incidentally it throws an interesting sidelight on one of Ted's most endearing characteristics, his sense of humour which was such a delight to all his many friends.

## EXPEDITIONS TO SOUTHERN SPAIN, 1977

By John W. Carr.

For the last four years I have been organizing private group expeditions to the Spanish provinces of Cadiz, Malaga and in 1977, Granada. The aim was to compile a distribution atlas of the flora of that area, the three tours this year resulting in the examination of about 75 UTM squares. The expeditions were equipped with a small library and herbarium to assist on-the-spot identification, plus sets of excellent botanical illustrations, particularly of those species where no good drawing existed elsewhere.

We were highly successful, the herbarium reaching the target of 1500 species, and, with nearly a hundred new illustrations made, nearly all new to the literature – and to us. Most important, the maps were completed to the stage at which they give a very fair idea of the distribution of the two thousand and more species occurring in the three provinces. A couple of under-worked localities, including the area around Malaga will, I hope, be filled by our good friend Angel Hernandez. Thus the enterprise has reached a point such that I can leave the whole project for others to complete.

First tour : Jerez de la Frontera, Cadiz (3rd - 17th April, 1977)

At the Motel Aloha on the Jerez by-pass the accommodation was excellent; we rented half a public room for the price of a bedroom, giving us plenty of room to spread out the books and herbarium. Our aim was the 25 UTM squares west of longitude 6°W. We had a glimpse of the Marismas, the tidal delta of the river Guadalquivir, consisting of marshland, grading through fresh, brackish, to salt. Though rich in bird life, the flora numbers barely 500 species. QA 38 was accessible only by horse or boat so we did TF 33 instead. There were plenty of difficult apetaloid monocots; those not identified by the groups were determined by Prof. Tutin and Dr. Hubbard, to whom thanks are due for their prompt attention to our problems.

At an unlikely place, the N point of Cadiz, nearly 50 spp. were found including an alien *Galena*, still not incontrovertibly named.

Our illustrator in recent years, Sean Edwards, not being available this year, we were delighted to welcome Gill Condry who produced 32 first class drawings of the species we wanted. We met her as a result of the notice on my BSBI stand in November 1976. The 25 squares consisted of a mixed lot of sand dunes, stabilized sand pinewoods, saltings, fresh-and salt-water marshes. All usable land in this area is cultivated. We examined the area at a density of 201 spp. per square, a valuable contribution to the project.

The contributors were : John Carr, Gill Condry, Arthur Copping (botany leader) Mary Daulman, Christine Dent, John Fielding, Janet Miller, Roger Minor, Pat Oswin and Ursula Preston. Elizabeth Luard, with us for two days, made a lovely picture of *Ranunculus trilobus* Desf.

Second tour : Antequera, Malaga (24th April - 8th May, 1977)

Ross Cubbon and I with two cars transferred the gear from Jerez in one trip, then collected the small party from Malaga. The hotel at the top of the Sierra de Torcal had every convenience – including a sit-down lunch – as well as *endemismos*. We had a spare room at the front of the house for our equipment. Gill, our artist, being happy in the window half on the balcony completed her quota of outstanding pictures. We took a little time to discover that it was not always necessary to go from first principles and work through the keys instead of having a quick look at the herbarium and albums of illustrations to see if the species was already represented.

We did of course, find *Linaria anticaria* Boiss & Reuter (*anticaria* means of, or appertaining to Antequera, a settlement from Roman times); it is in no danger. A good time was had by all, despite Ross and I being fined £36.00 each for crossing a white line on the way to the airport.

Participants were : John Carr, Gill Condry, Ross Cubbon, Robert Mill (leader of botany), John Topp and Janet Webb.



Third tour : Lanjaron, Granada, (15th-29th May, 1977)

This expedition — the most popular — finished up with a total of 13 but the omens turned out well. With three vehicles we were able to make three sallies a day, covering a total of 33 squares at a density of 226 species per square. This expedition was a fitting climax to the four years' work. The flora of Granada was noticeably different from that of Cadiz and Malaga. Some of the species common in Cadiz faded a bit in Malaga and were not to be found hardly at all in Granada — for example: *Allium triquetrum* L., *Anagallis monelli* L., *Anemone palmata* L., *Anogramma leptophylla* (L.) Link, *Anthoxanthum ovatum* Lag., *Arctotheca calendula* (L.) Levyns and dozens more. The opposite trend was also noticeable, especially amongst those species labelled in the book as from the mountains of South-East Spain. We seemed to be at the western boundary of S.E. Spain as defined. Dozens more species followed the pattern of *Anthyllis tejedensis* Boiss., *Antirrhinum barrelieri* Boreau, *A. hispanicum* Cav. etc. Then there was a curious patch of gypsum — we didn't know what made VG OO so good last year — it was calcium sulphate. In the squares affected, VG 10, 20 & 30, we noticed also a curious occurrence of salt-marsh plants, confined usually to the coast — I remembered that after the Great Tide of 1953 when Canvey Island was covered in sea-water they put gypsum on the land in vast quantities to save the trees and bring the earth back into good heart. I have a theory that has to do with Calcium ions — there should be something in the literature anyway — I am prepared to hear other people's theories. See maps in the Distribution Atlas for *Frankenia thymifolia* Desf., *Helianthemum squamatum* (L.) Pers., *Salvia lavandulifolia* Vahl for interesting patterns.

No group reached the top of the Sierra Nevada — the snow sometimes persists until August or September — but some of the plants of the 'tundra' were found lower down. One square had to be abandoned when the Range Rover was confronted by a wall of ice.

The explorers included: Hilary Broad, John Carr, Eric Clement (botanical leader), Ross Cubbon, Beryl Daulman, Harold Fowkes, Vera Gordon, Rosalind Hadden, Mark Hyde, Malcolm Latto, Allan Stirling, Ted Wallace & Rosemary Wise. Welcome visitors were Angel Hernandez from Malaga and Stellan Holmdahl from Sweden and Marbella.

The artists were Rosemary Wise and Hilary Broad: Rosie was tickled, because she made 32 beautiful drawings during the fortnight.

Lists of the more outstanding finds in the localities can be ascertained by contacting Mr John Carr at 117 Vicarage Hill, South Benfleet, Essex, SS7 1PD.

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## THE INSTITUTE OF TERRESTRIAL ECOLOGY (ITE)

*For those who have not kept up with Monks Wood's nomenclatural changes, here is an extract from this year's Open Week Guide.*

ITE is a young organisation, having been established in 1973 as one of the Natural Environment Research Council's 14 research institutes. The research staff and stations of the former Nature Conservancy form the core of ITE and these have been augmented by the addition of the Institute of Tree Biology at Edinburgh, and the Culture Centre of Algae and Protozoa at Cambridge. Two thirds of the Institute's staff are scientists based at 8 research stations within England, Scotland and Wales. Monks Wood Experimental Station is one of these.

The Station was part of the Nature Conservancy for 10 years and, as a result, it still does research on the conservation of wildlife, much under contract to the Nature Conservancy Council. However, our present remit is far broader than this, hence our current interest in such things as hormonal changes in birds as a result of organochlorine and heavy metal pollution, sports turf trials and Country Park management.

## NETWORK RESEARCH SURVEYS

Reports of these can be found as follows:

**Campion Enquiry:** Introductory Paper, J.P. Savidge. *Proceedings* 7(4) : 557-9 (1969)

**Holly Survey:** G.F. Peterken *Watsonia* 10(3) : 297-9 (1975)

**Symphytum Survey:** F.H. Perring *Proceedings* 7(4) : 553-5 (1969)

*Watsonia* 10(3) : 296-7 (1975)

T.W.J. Gadella, E. Kliphuis and F.H. Perring *Acta Bot. Neerl.* 23(4) : 433-7 (1974)

Summary: "122 British plants of the genus *Symphytum* were investigated cytologically. White flowered diploid ( $2n = 24$ ) and white - and purple-flowered tetraploid ( $2n = 48$ ) plants of *S. officinale* occur in Britain. *S. x uplandicum*, the hybrid between *S. officinale* ( $2n = 40$  or  $2n = 48$ ) and *S. asperum* ( $2n = 32$ ) is variable, but two types can be distinguished, the first of which has  $2n = 36$ , purple flower-buds and purple (or blue-purple) corollas, the second  $2n = 40$ , pink flower buds and pink corollas which turn blue when the flowers age. The way in which these hybrids arose is discussed".

**Mistletoe Survey:** F.H. Perring *Plants wild and cultivated*

BSBI Conference Report 1973 (139-145)

**Arable Weeds:** R.J. Chancellor *Watsonia* 10(3) : 294-5 (1975)

*Weed Research* 17. 283-287 (1977)

Summary: "Details and results are given of the first two surveys, which are designed to measure the changes taking place in the incidence of forty species or arable weeds in Britain".

The Surveys on Black Poplar, Wild Service Tree and Irish Ivy are nearing completion and final Reports will soon be published.

Interim reports:

**Black Poplar:** E. Milne-Redhead *Watsonia* 10(3) : 295-6

and published in *BSBI News* :

2(2) : 32-33 (1973); 9: 10-12 (1975); 15: 9 (1977); 16: 13-14 (1977)

**Wild Service Tree:** P. Roper *BSBI News* 3(3) 8-11 (1974). 13: 17 (1976)

(also on Radio in *Living World*).

**Irish Ivy,** Alison Rutherford. *BSBI News* 13: 17-19 (1976). (Also in *Country Life* January 1976, with illustrations of Irish Ivy, on pottery, book covers etc.)

This Autumn 1977, the *Atriplex* Survey has been launched by P.M. Taschereau who reports a good response already from members.

Forthcoming Projects: Black Nightshade Survey, selected Plant Galls, and, we hope, some projects helpful to the authors of the new Flora of Great Britain and Ireland.

Our thanks to all members who have taken part in these Surveys, and particularly to the organisers of each project.

M.B.

## Footnote

A recent letter from Mr E.B. Bangerter, in which he asks to be remembered to all his BSBI friends, enclosed a cutting from a New Zealand newspaper in which quite a long article — with picture — describes the work of various network research projects in UK.

Credit is given to BSBI for devising the technique which, it says, has been adopted in Australia and New Zealand. The survey work done at the Institute of Terrestrial Ecology and the part played by Franklyn Perring are warmly praised for the way in which they are preserving endangered species.

Is this another British export?



## CSSF EXHIBITION MEETING, NOVEMBER 1976

Some of our long established institutions may not be well known to younger members of the Society. From time to time we hope to feature some of them.

Founded and endowed in 1911 by Allan Octavian Hume, the Institute occupies premises at 323 Norwood Road, London SE 24 (near Tulse Hill B.R. station). It is an entirely independent and self-supporting body whose aims include the study of botany in the widest sense. The terms of its foundation empower it to form collections of specimens, maintain libraries and a small botanical garden.

It attracts people interested in the plants of Britain and Europe as well as horticulturists and those specialising in such groups as ferns, mosses, seaweeds and microscopic forms, both beginners and advanced students, amateur and professional being welcomed. The late Ted Lousley, it will be recalled, had his early leanings towards botany fostered by his close association with the Institute.

The three-storey building in Norwood Road, houses a meeting room, seating 50, with projection equipment, and the 3,000 volume Library, one of the finest botanical libraries outside of those in national and government organisations. Here the emphasis is systematics and this with the fine herbarium of 100,000 plants — mostly British but with a large European section — is designed to facilitate the identification of specimens. There are also collections of seeds, seedlings and documents on the history of botany, especially in Surrey.

The Institute is managed by a President (at present Dr. C.T. Prime) and a Council of Management to which ordinary members may be nominated. Membership of this unique centre for the study of Botany is open to all and is not restricted to those resident in South London. A prospectus — with a map showing the location — informs that the subscription is only £1.00 per calendar year, though if joining after 1st October it lasts until December of the following year. It is available from the Institute's Secretary, Mr C.E. Wickling, who lives on the premises, at 323 Norwood Road, London SE24 9AQ.

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## THE SOUTH LONDON BOTANICAL INSTITUTE

Further to the list of exhibits shown at the CSSF Exhibition Meeting on 6th November 1976 (see *Watsonia* 11(4): 432) we have some additional notes from Miss Rosalind Smith.

The "Scottish Moss new to science" shown by Mr A C Crundwell is *Anoetangium warburgii* now known from 35 localities in the Highlands, Mr E C Wallace's 'Plants from Alaska' included specimens of *Carex atrofusca* and *Ranunculus reptans*. Though numbered amongst Dr. Perring's rapidly declining British Plants, *Limosella aquatica* seems to be spreading in Kinross and Fife. The Macaulay Institute's exhibit gave information on its new publication *Plant communities and soils of the Lowland and Southern Upland regions of Scotland* which should make a worthy companion to Mc Vean and Ratcliffe's *Plant Communities of the Scottish Highlands*. The re-discovery of *Carex elongata* in 1976 on the site in Kirkcudbrightshire from which the original herbarium specimen was obtained, featured amongst other species from Glasgow University Botany Department.

Also included in the programme was an illustrated account by M.E. Ball of the Nature Cons. Council, of the Isle of Rhum NNR, whose geological diversity results in a varied range of habitats, except woodland. Experiments are in progress on extending woodland planting, on the effects of fencing-off areas against grazing animals; besides all this, new finds of *Mertensia maritima* and *Mercurialis perennis* have been recorded. The event concluded by the showing of slides; sedges by Mr Silverside, willows by Mr Brookes and pictures from Poland.

# REQUESTS

## RUNUNCULUS AURICOMUS

I should like to thank all the members concerned for the magnificent response to my request for material in 1976 and 1977. I am still interested in receiving specimens (postage refunded) but would now prefer at least 3-4 well collected, complete, pressed plants, collected for preference in full flower (late April to early May in south England) with special attention paid to collecting all the variation in basal leaf form. Notes about the range of petal number and habitat are useful. Please remember the provisions of the Plant Protection Act when collecting material. Members might also be interested in visiting their local churchyards next spring (especially if they are on a clayey or calcareous soil) to see if *R. auricomus* occurs. In chasing up this species in E. Anglia (on the chalky boulder clay) I have found this a very good place to start looking in an otherwise unexplored area. I would be interested to know if any such positive or negative records (plus grid reference and note of soil type if known) but cannot undertake to refund postage for this.

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

## BOOK REQUESTS

Mrs G. Crompton, of the University Botanic Garden, Cambridge, is anxious to trace the late Mr Ronald Burn's annotated copy of Hind's Flora of Suffolk (1889).

Mr Burn's annotations may be the only source for substantiating some records for rare plants in Suffolk. If anyone knows the whereabouts of this book, would they contact Mrs Crompton direct.

Dr S.R.J. Woodell, Botany School, South Parks Road, Oxford OX1 3RA, writes: "I am attempting to get together a reasonably comprehensive collection of Floras, partly in relation to the new Flora of Oxfordshire, partly for some investigations I am doing on the history of local floras, and perhaps most importantly, for the distributional, ecological and bibliographical data they contain". If any member has copies of local or county floras they are willing to dispose of, will they please write direct to Dr Woodell at the above address.

I hope this is O.K.

Yours sincerely,  
S.R.J. WOODELL.

## PLANT RECORDS FROM MORVERN AND ARDNAMURCHAN

John Raven is trying to amass complete information on the vegetation of the Peninsulas of Morvern and Ardnamurchan, and if anyone has any records of interest from this area, he would be very grateful to hear from them, with, if possible, map references.

Any records please to Mr J.E. Raven,  
Docwra's Manor, Shepreth,  
Royston, Hertfordshire.



## IRISH IVY AND AFTER

The Irish Ivy Survey has elicited a good response even allowing for lingering hederophobia ! And many people have added valuable observations to their records. If anyone has any further sightings I would be very grateful if these could be sent, as the Survey will close this autumn.

The researches into the origins of *Hedera helix* var *hibernica* have led into that of *H. canariensis* which was so frequently entwined in the minds of 19th century writers, and since the ivy many of us know as Canary seems to be a European plant, the whole field of *Hedera* warrants closer inspection.

As it was the custom for botanists till quite recently to gather only the flowering portion many herbarium specimens are decorative rather than useful and some are at the fruiting stage so that even scale-hairs, a good guide to the species, are shed. Ivies at the flowering stage are so alike it is not possible to be certain of even species. Lawrence and Schulze who wrote the most recent work on ivies, use the 'typical element' as a distinguishing feature. There is a length of climbing stage (sterile) branch about 6" long bearing leaves mature enough to give the characteristic impression of that plant, that is neither at its primary stage nor fertile (flowering) stage, which is not only like too many others, but is hard or impossible to root, so cannot be grown on.

Samples of 'typical element' living *Hederas* are required to be rooted for chromosome counting and other work which cannot be carried out with pressed material. If any reader is able to gather whippy sterile shoots from France, Central or North Spain, Portugal, Greece, Germany, Poland, Austria, Hungary, Rumania, Italy, North Africa, the Azores, Canaries or Madeira, Corsica, Yugoslavia, Bulgaria, Turkey, Syria, Iraq, Iran, Cyprus or any part of Asia, they would be very gratefully received and materially assist towards a future monograph on *Hederas*.

Wild colony samplings are preferable, but older plantings are useful in the study of garden ivies. Sprays of ivy keep well if wrapped in damp tissue then put in a polythene bag. Crushing does not harm them, but drying out is often fatal. My sincere thanks to all who have helped to plot the spread of Irish Ivy.

ALISON RUTHERFORD.

Roslyn Cottage, Church Road,  
Rhu, HELENSBURGH, Dumbartonshire.  
G84 8RW.

## GENISTAE - INSECTS

Biology Department,  
Building 44,  
The University,  
Southampton.  
SO9 5NH.

"I am studying the taxonomic aspects of plant-insect relationships in the tribe Genisteae (brooms, gorses etc.)

The British Genisteae are *Cytisus scoparius*, *Ulex europaeus*, *U. gallii*, *U. minor*, *Genista tinctoria*, *G. pilosa*, and *G. anglica* plus *Laburnum* sps. and *Spartium junceum* which are introduced.

Could anyone seeing an insect on a member of the Genisteae (and with a test-tube handy !) collect it for me. Please send it, with a fragment of the plant it was on, a note of where it was found and what the insect was doing, to me at the above address.

Margaret Adey

# LETTERS

Dear Editor,

## *NONEA LUTEA* (DESR.) DC IN BANGOR

I was pleasantly surprised to see a drawing of *Nonea lutea* gracing the cover of *B.S.B.I. News* No. 16. However, I was rather more surprised — and, of course, quite interested — to find that this boraginaceous waif merited inclusion in E.J. Clement's article on 'Aliens and Adventives' (*Adventive News* 8, pp. 18-19), particularly since it arrived in the spot where my friend, Dick Roberts, and other botanists noted it as a direct result of the combined activities, albeit unwitting, of myself and a building contractor and not, so to speak, "under its own steam". Even more unexpected was the publicity about *Nonea* in Bangor disseminated by BBC Radio 2 in a religious broadcast on Sunday morning, October 9th — fame indeed for our stranger from the other side of the Iron Curtain!

I have had *Nonea lutea* in cultivation since 1965. In that year I transferred to my garden in Lon-y-Bryn, which adjoins Belmont Road, one mature plant from the former U.C.N.W. Botanic Garden in Deiniol Road, Bangor. When the latter was converted into a car-park, after the development of our present Botanic Garden on a new site at Treborth, surplus or otherwise unwanted plants were offered to interested parties, of whom I was one. *Nonea* was deemed by the horticulturalist in charge at that time (no longer with us) to be not worth transferring — so I rescued it! I have been unable to discover the source of the original U.C.N.W. plant, but it could well have come from the Cambridge Botanic Garden; we have received material from there many times over the years.

The single plant which I moved in 1965, being fully mature, did not transplant well and soon died, but not before it had shed seed. Every year since then I have been hard put to it to confine it within an area of reasonable size! It seeds prolifically, germinates readily and overwinters in our mild climate (the plants from this year's seeding are already large-leaved, coarse, bristly rosettes, up to 35 cm. diameter, not unlike *Picris* in texture). It grows vigorously, flowers profusely and continuously for many weeks (flowering, though beginning early in the year, is by no means confined to the Spring, as E.J. Clement's remark might be taken to imply) and eventually forms a rather straggling plant about 45 cm. high.

I do not know the nature of its habitat or habit of growth in its native Russia. In my own garden it prefers (and I confine it to) the edges of a gravel-topped terrace. Here it is clearly a plant of open situations or disturbed ground and its spread appears to be favoured by spells of dry weather, when quite small plants rapidly turn to seed production. E.J. Clement refers to *Nonea*'s "potential for spreading". I can confirm from my own observations in Bangor that, given the right circumstances, it does indeed get around very well without my help! Last year's terrible drought produced in my unwatered lawn a number of temporary "thread-bare" patches, with virtually no grass. In these, some twelve metres from the parent plants, *Nonea* appeared in quantity and for the first time since I have had it in cultivation. It also appeared for the first time in the gravel-covered drive of yet another neighbour in Belmont Road. It may be coincidence, but it really does seem that the exceptional drought provided the necessary combination of rapid seed production and relatively bare stony ground to facilitate the spread of this aggressive, but not unattractive weed, and apparently, like Romeo's love for Juliet, "stony limits cannot hold (it) out"!

Yours sincerely

William S. Lacey

Professor of Plant Biology, University College of N.Wales.

# ARBUTUS FRUIT

The Editor,  
B.S.B.I. News

Dear Sir,

Somewhat over a year ago there was correspondence in *B.S.B.I. News* about the palatibility of *Arbutus unedo* fruit. Tins of Arbutus fruit, originating from the People's Republic of China, are on sale in grocers' shops in this town. The fruits look very similar to those of *A. unedo*, and as far as I can trace there are no Chinese native species of the genus, so presumably the Chinese have thought it worthwhile to plant *Arbutus* for its fruits.

Yours faithfully,

J. K. Jackson,  
P.O.Box 1200, Chiang Mai,  
THAILAND.

## ONONIS RECLINATA IN V.C. 74 (WIGTOWN)

Dr. H. A. Lang, Westwood, Newton Stewart, Wigtownshire DG8 6DY writes: "It was found growing close to sea level, at the foot of a rocky spur, on fine earthy scree about 2-3 miles NW of the Mull of Galloway and had been reported from that area in 1830-1840.

Associated species were: *Geranium sanguineum*, *Aira caryophyllea*, *Lotus corniculatus*, *Bromus mollis*, some *Anthyllis vulneraria* and *Centaureum erythraea*. It was in sufficient quantity to make its future survival probable.

It was found on 15th June 1977 when some plants were still in flower but many already over-flowered".

## NICOTIANA RUSTICA

Dear Sir,

Having published only last year this species as a NCR for Cambridgeshire, I was fascinated to read the following account of its possible uses over a hundred years ago in Worcestershire.

"*Nicotiana rustica* as having been found near Bewdley. Mr Jorden accounts for this from the fact that it was formerly used when dried, as a wash for sheep to kill lice, and that it was also placed in hayricks green and when taken out resembled in small and appearance the leaf tobacco from America". (Trans. Worcs. Nat. Club 7:299).

I wonder whether there is any other evidence for this "new" alien having been grown as a crop elsewhere in Britain?

Yours sincerely,

G. Crompton (Mrs),  
University Botanic Garden, Cambridge.



# BUTTERFLIES AND POLLINATION

Observations made during 1977

Flowers receiving 10 or more visits by butterflies

	<i>Total visits</i>	<i>No. of visiting species</i>
<i>Buddleia davidii</i>	262	9
Bramble ( <i>Rubus fruticosus</i> )	97	5
Creeping Thistle ( <i>Cirsium arvense</i> )	53	5
Iceplant ( <i>Sedum spectabile</i> )	45	6
Marjoram ( <i>Origanum vulgare</i> )	38	4
Knapweed ( <i>Centaurea nigra</i> )	34	5
Purple Loosestrife ( <i>Lythrum salicaria</i> )	32	5
Hemp Agrimony ( <i>Eupatorium cannabinum</i> )	31	4
Lavender	29	5
Aubrieta	18	6
Hebe	13	5
Dahlia (Coltness type)	11	1
Red Valerian ( <i>Centranthus ruber</i> )	10	6

M.T. Coates 8/11/77

## BOTANICAL SOCIETY OF THE BRITISH ISLES PUBLICATIONS LIST, 1978

### CONFERENCE REPORTS.

1.	BRITISH FLOWERING PLANTS AND MODERN SYSTEMATIC METHODS.	1948	£2.10
2.	THE STUDY OF THE DISTRIBUTION OF BRITISH PLANTS.	1951	£2.10
4.	SPECIES STUDIES IN THE BRITISH FLORA.	1955	£2.70
5.	PROGRESS IN THE STUDY OF THE BRITISH FLORA.	1957	£2.50
6.	A DARWIN CENTENARY.	1961	£2.50
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8.	THE CONSERVATION OF THE BRITISH FLORA.	1963	£2.30
11.	FLORA OF A CHANGING BRITAIN. Paperback reprint (1973)	1970	£1.70
12.	TAXONOMY, PHYTOGEOGRAPHY AND EVOLUTION.	1972	£7.50
13.	PLANTS WILD & CULTIVATED	1973	£2.90
14.	THE OAK: ITS HISTORY AND NATURAL HISTORY.	1974	£6.55
15.	EUROPEAN FLORISTIC AND TAXONOMIC STUDIES.	1975	£3.80

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## MISCELLANEOUS BSBI PUBLICATIONS

BRITISH HERBARIA. D.H. Kent	1958	£2.70
FLORA OF ISLAY AND JURA. (V.C.102) J.K. Morton	1959	£1.00
WEST NORFOLK PLANTS TODAY. C.P. Petch & E.L. Swann	1962	£1.50
BRITISH SEDGES. A.C. Jermy & T.G. Tutin	1968	£1.95
THE TARAXACUM FLORA OF THE BRITISH ISLES. A.J. Richards	1972	£2.30

## OTHER PUBLICATIONS FROM OUNDLE LODGE

ENGLISH NAMES OF WILD FLOWERS. J.G. Dony, F.H. Perring & C.M. Rob	1974	£1.90
BRITAIN'S RAREST PLANTS. E.A. Ellis, Franklyn Perring and Ronald E. Randall, 32 pages and 41 coloured plates (Paperback). Accounts of 41 rare plants including all those protected by law.	1977	£0.50
PICKING WILD FLOWERS. D. McClintock, Franklyn Perring and Ronald E. Randall, 32 pages and 40 coloured plates (Paperback). Accounts of common plants which may be safely collected throughout Britain.	1977	£0.50
ATLAS OF THE BRITISH FLORA. Ed.2. F.H. Perring & S.M. Walters, 1700 distribution maps and 12 overlays	1976	£25.00
OVERLAYS FOR ATLAS OF BRITISH FLORA. These may be purchased separately for Ed.2.		£1.50

## FLORAS

### V.C.

5	FLOWERS OF EXMOOR. Caroline J. Giddens, 48 pages (Duplicated). A preliminary check-list of 700 species recorded in Exmoor 1974-1976	1977	£0.30
17	FLORA OF SURREY. J.E. Lousley	1976	£10.75
18-19	FLORA OF ESSEX. S.T. Jermyn	1974	£10.75
20	FLORA OF HERTFORDSHIRE. J.G. Dony	1967	£3.00
29	A FLORA OF CAMBRIDGESHIRE. F.H. Perring, P.D. Sell & S.M. Walters (Paperback)	1964	£2.00

### V.C.

30	BEDFORDSHIRE PLANT ATLAS. J.G. Dony	1976	£3.30
39	FLORA OF STAFFORDSHIRE. E.S. Edees	1972	£2.75
40	HANDLIST OF THE SHROPSHIRE FLORA. L.C. Lloyd & R.M. Rutter, 110 pages and map (Paperback). The only published account of the flora available in print.	1957	£1.20
47	PLANTS OF MONTGOMERYSHIRE. Janet Macnair, 82 pages, portrait, map, 6 plates (Paperback). A handbook based on the records made by the late Miss V.J. Macnair over 30 years	1977	£0.80
55	FLORA OF RUTLAND. G. Messenger	1971	£3.25
72-74	A CHECK-LIST OF THE FLOWERING PLANTS, FERNS AND FERN-ALLIES OF DUMFRIES, KIRKCUDBRIGHT AND WIGTOWN. H. Milne-Redhead	1972	£0.85
82-84	THE FIELD-CLUB FLORA OF THE LOTHIAN. I.H. Martin, 318 pages, map and 16 plates. Includes keys to genera, descriptions & localities.	1934	£3.40
85	WILD FLOWERS OF KINROSS. G.H. Ballantyne, 78 pages and map (Duplicated). A thorough account of one of the smallest counties in Britain - surrounding L. Leven.	1977	£1.50
104	THE BOTANIST IN SKYE. C.W. Murray, 82 pages (Duplicated)	1974	£1.30
<b>CHANNEL ISLES</b>			
	WILD FLOWERS OF GUERNSEY. D. McClintock	1975	£5.25

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