

B.S.B.I. NEWS

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

April 1986
No.42



Photo: Vaughan Fleming

B.S.B.I. Exhibition Meeting.
General Herbarium. Dept. of Botany, British Museum (Natural History).

30 November 1985



CLARENCE HOUSE
S.W. 1

As Patron of the Botanical Society of the British Isles, I join with all the Members in celebrating the sesquicentenary. It is a remarkable milestone, and to have reached it reflects not only the scholarship and enthusiasm of so many people over so many years, but also the value placed on the work of the Society. The fact that the membership is larger than it ever has been and that the scientific publications enjoy an international reputation are sources of much satisfaction.

We must now look to the future and how best to continue to serve a branch of learning which has brought together amateurs and professionals and taught them to enjoy the flora of the countryside.

ELIZABETH R
Queen Mother

PATRON

Her Majesty Queen Elizabeth The Queen Mother

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White Cottage, Slinfold, HORSHAM, West Sussex RH13 7RG.
- HON. TREASURER.** (Payment of Subscriptions and **change of address**) **Mr Michael**
Walpole, 68 Outwoods Road, LOUGHBOROUGH, Leics LE11 3LY.
(Please quote membership number on correspondence concerning membership or
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- HON. FIELD SEC.** (Enquiries on Field Meetings) **Mr Roy Smith**
8 Ripley Road, Sawmills, Ambergate, DERBY DE5 2JQ.

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- CONSERVATION:** Miss Lynne Farrell,
N.C.C., Northminster House, PETERBOROUGH PE1 1UA.
- PUBLICATIONS:** Mr Arthur O. Chater, Dept of Botany,
British Museum (Nat. Hist.), Cromwell Road, LONDON SW7 5BD.
- MEETINGS:** (from 10.5.86) Mrs Ailsa Lee,
3, Rosliston Road, Burton-on-Trent, Staffs DE15 9RJ.
- RECORDS:** Mr David J. McCosh,
13 Cottesmore Gardens, LONDON W8 5PR.

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Chater, R.M. Burton, Dr G. Halliday, A.J. Worland
(*British Pteridological Society*).

The President, Hon. Treasurer and Hon. Gen. Sec. are ex officio members of all the above committees.

With regret we have to announce that this will be the last number of the *BSBI News* to be edited by Edgar Wiggins, as a serious loss of eyesight makes it impossible for him to continue as Editor. The Society owes Wiggy a great debt, not only for producing 27 numbers of 'News', but also for the fact that *BSBI News* in its present form is such a popular and valued feature of the Society. Every member has cause to be grateful to Wiggy for the way he has kept us informed, entertained and fed with unexpected items of information.

We are pleased to announce that Council has nominated Mr Wiggins as an Honorary Member for election at the A.G.M. on May 10th this year.

Pending the appointment of a successor, please send contributions for *BSBI News* 43 to:

Hon. Editor *BSBI News*, BSBI c/o Dept. of Botany, British Museum (Natural History) Cromwell Road London SW7 5BD, and these will be passed to the new Editor when appointed.

HON. GEN. SEC.'S NOTES

Bequests

During 1985 a number of generous members left bequests to the Society in their Wills.

Maybud Campbell left £500 to the BSBI; Mary McCallum Webster left £1000, and also gave the copyright of her excellent *Flora of Moray, Nairn and East Inverness* to the Society; Ron Boniface left to us his herbarium and his botanical books, and Peggy Jaques also left her botanical books to the Society.

The proceeds from these bequests will be used specifically towards the publication of the Charophyte handbook (the next to be published in the BSBI Handbook series), for which a pre-publication offer is enclosed with this mailing.

We are very grateful for the kind thought of these friends among our past members.

Conversazione and missing programme notes

Those members who have cut the back cover of the 1985 programme leaflet to send the AGM booking form (and so lost the information on page 11), will find this reprinted on the inside cover of the Annual Report with AGM Agenda, sent with this mailing.

You will see that BSBI events in 1985 include two Conversazioni. Frances Moffat in *I also am of Ireland* wrote "what a lovely word" and described how as a child she rolled it round on her tongue. Mother and daughter dressed in their best for the occasion, and walked sedately, the girls wearing pelisses with matching bonnets and gloves. Their conversazione was for ladies, with recitation and classical songs at the piano added to the conversation, and followed by tea in Crown Derby cups and cucumber sandwiches without plates - as it was afternoon tea. BSBI conversazioni do not achieve such elegance (and they are definitely not restricted to ladies) but they are still for (botanical) conversation and refreshments; we hope that those members yet to

sample these may be encouraged to try one.

Churchyards - points of view

Having reported on more than one occasion on the lack of botanical interest in Scottish churchyards, it was pleasing to hear from Dr Macpherson that he spotted a letter in his local paper describing an overgrown graveyard as a "disgrace". Hurrying the next day to the site Peter was able to record 112 species in this hidden graveyard in the City centre, including *Iris pseudacorus*, *Polygonum bistortum* and *Juncus tenuis*.

When our Churchyard Survey began we described it as an antidote to the sparse tidiness and close mowing encouraged by the Best Kept Village competitions. Later I heard from BSBI members who are judges for this competition, and of course they are well aware of conservation values and never promote sterile habitats in their areas - a warning against generalisations and my apologies to Audrey Wilson and other members who judge.

Jersey elms

A reference in *Country Life*, December 12th 1985, to Guy Messenger's paper on Elms (*BSBI News* 40:12) brought an enquiry from Jersey where Dutch Elm disease had killed 80-100 trees last year. The islanders were grieving not only for the loss of the trees for their appearance and timber, but additionally as a source of feed for their cattle in times of severe drought.

Dormouse plants

Marion Browne in the Wiltshire Archaeological and Natural History Magazine, on *Small Rodents in Wiltshire: Dormouse*, vol 79: 206-13 (1985), lists 12 different plants used by dormice for nest construction, nest support and food: *Clematis vitalba*, *Lonicera periclymenum*, *Betula pendula*, *Corylus avellana*, *Quercus robur*, *Hyacinthoides non-scripta*, *Picea abies*, *Pteridium aquilinum* and species of *Rosa*, *Rubus* and *Gramineae*.

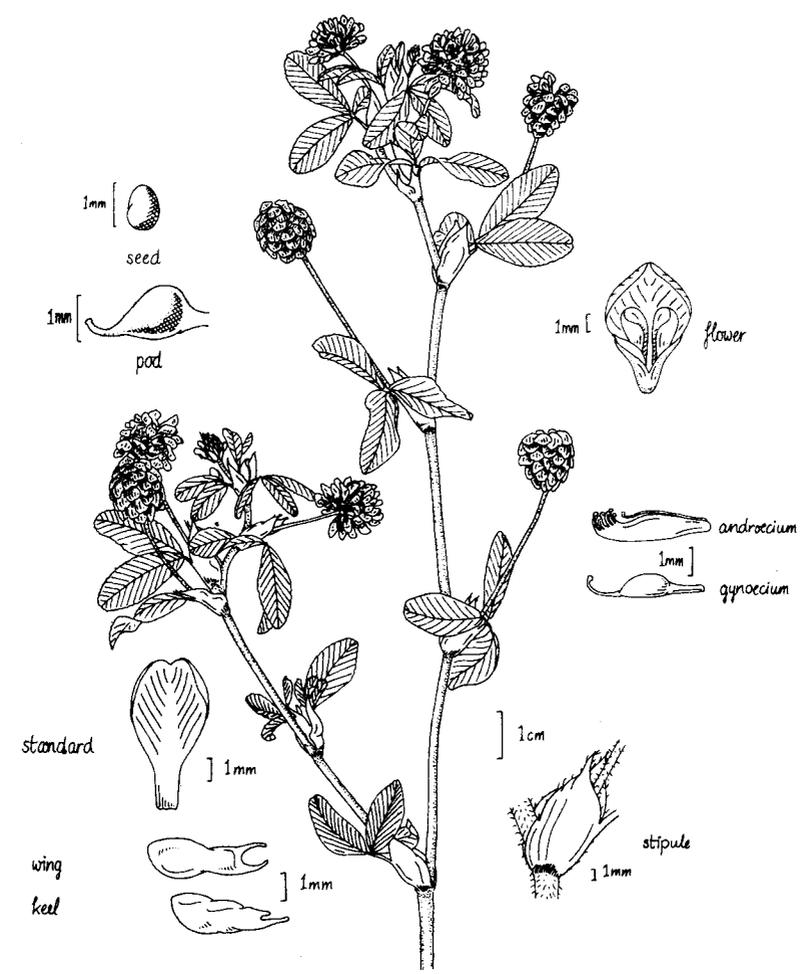
1986 Surveys

As we go to press the leaves of *Arum maculatum* are just above ground in the Sussex weald - a reminder that when this mailing is through your letter box it will be time to match and measure a few last colour variations for the last year of this Network Research Survey and to send these to Philip Harmes, 21, Newthorn Place, Buckley, Clwyd CH7 2EY - see *BSBI News* 41: 10.

Later in the summer there is the opportunity to record for the Arable Weed Survey 1986-7; the instruction notes and a record card are enclosed with this mailing. Completed cards for this survey should be returned to, and further cards requested from: Mrs Ayla Smith, NCC, Northminster House, Peterborough PE1 1UA

Records that are sent in for this Arable Weed Survey, and for the *Potamogeton* and allied general distribution maps (see page 9) will in due course be returned to VC Recorders by Ayla Smith and Chris Preston.

MARY BRIGGS



Trifolium aureum

Golden clover

#11 266/1984

GOLDEN CLOVER ILLUSTRATED

Trifolium aureum Pollich is still of rare occurrence in Britain. The two large plants on a high sandy bank in open country south of Swancombe, v.c.16 in 1984 were just the third colony I've found. They were some distance apart, with no other adventives anywhere near; a portion of one was used for the drawing by Hilli Thompson.

In 1985 the number of plants increased following disturbance of the ground by horses.

The gold-yellow colour of the flower heads, and virtually unstalked terminal leaflets serve to distinguish *Trifolium aureum* from the large forms of *Hop Trefoil* which are occasionally found. Fruits are tiny.

J. R. PALMER

19 Water Mill Way, South Darenth, DARTFORD, Kent DA4 9BB

RECORDERS, REFEREES & RECORDING

VC RECORDERS' CONFERENCE 1986

This will be held on 5th - 7th September at St. Martin's College, LANCASTER. The theme will be the new Mapping Survey, now planned for 1987-89. All VC Recorders will have already received an invitation, programme and application form for the conference. Other members who would like to attend should send their names as soon as possible to: Derek A. Wells, N.C.C., Northminster House, PETERBOROUGH PE1 1UA. Interested members will be welcome, as space permits. ALL MEMBERS will be invited to take part in this new survey; information will be published in BSBI News 43, maps of the selected 10 kilometer squares for survey will be exhibited at the autumn Exhibition Meetings, and further instructions issued early in 1987. M.B.

BSBI COUNTY RECORDERS

Addition to 1985 List of VC Recorders - Supplement No1.

Since the 1985 list was mailed to members with *Watsonia* 16:1 in February, there has been one new appointment:

VC 39 STAFFS, B.R.W. Fowler, 84, Woodthorne Road South, WOLVERHAMPTON WV6 83L and we welcome Bryan to the team.

BSBI PANEL OF REFEREES AND JUDGES

Supplement 5 to 1983 List

Lactuca serriola-virosa: **Dr R. N. Carter**, School of Biological Sciences, Queen Mary College, Mile End Road, London E1 4NS will now referee this group; **Tony Hare** resigns and we thank him for all his help and clarification during his studies of the group. *Chenopodium*: **J.M. Mullin** c/o Dept. of Botany, British Museum (Nat. Hist.), Cromwell Road London SW7 5BD has been appointed - following the sad loss of Pat Brenan. (*Amaranthus*, at present vacant).

Medicago: **C. C. Townsend** has resigned as he is soon to retire from Kew, and he will then be spending his time on his backlog of "literally thousands" of tropical mosses. In sending our thanks for the many identifications for members through many years, we wish Cliff a happy time with his mosses. (*Medicago*, at present vacant).

Prunus: **Prof. D. A. Webb** asks us to remind members that he retired as *Prunus* Referee. (*Prunus*, at present vacant).

Rubus: Alan Newton's change of address, (previously announced as for VC Recorder for Cheshire, without mention of *Rubus* Referee also) is: **A. Newton**, M.A., 10, The Fairways, LEAMINGTON SPA, Warwickshire CV32 6PR.

Rosa: Following Rev. Graham's notes and instructions on *Rosa* in *BSBI News* 41:5 and 24 in Supplement 4 to 1983 List (although not so titled) and *Recording Rosa*, we are pleased now to announce the appointment of a Co-Referee for *Rosa* to act as Rose Referee for Beginners: **Rev. A. L. Primavesi**; F.L.S., Ratcliffe College, Syston, LEICESTER LE7 8SG, and Tony has sent the following note published below.

The Society sincerely thanks all Recorders and Referees, especially those now retiring, or newly appointed.

MARY BRIGGS Hon. Gen. Sec.
DAVID J. McCOSH Hon. Sec. Records Committee.

ROSE REFEREE FOR BEGINNERS

Everyone, including those who eventually become acknowledged rose specialists, has to endure a period of bewilderment bordering on despair when first attempting to study the wild roses. Mr Primavesi will therefore be pleased to accept material from beginners, thus giving them the opportunity of getting acquainted with the roses without embarrassment, and also removing some of the burden from the shoulders of the Rev. G. G. Graham. Fresh specimens should be sent if possible. The best way is in polythene bags (with a reference label for each specimen), enclosed in a padded mail bag or a light cardboard box. Specimens as a rule cannot be returned, so duplicates should be kept by the sender. A stamped envelope should be enclosed for the reply.

It would be helpful if Mr Graham's directions in *BSBI News* No. 41 were followed as to descriptive details to be sent with the specimens.

For the sake of beginners it is worth repeating that it is difficult if not impossible to make firm determinations of *Rosa* specimens in flower. They should be collected shortly before the fruit is ripe, or at least before the sepals tend to fall off.

Rev. A. L. PRIMAVESI Co-Referee for *Rosa*: Ratcliffe College, Syston, LEICESTER LE7 8SG.

RECORDS OF POTAMOGETON AND ALLIED GENERA

The Biological Records Centre is currently preparing distribution maps for the forthcoming BSBI handbook on *Potamogeton* and allied plants. The following genera will be covered by the Handbook: *Aponogeton*, *Egeria*, *Elodea*, *Groenlandia*, *Hydrilla*, *Hydrocharis*, *Lagarosiphon*, *Najas*, *Potamogeton*, *Ruppia*, *Stratiotes*, *Vallisneria*, *Zannichellia* and *Zostera*. BSBI vice-county recorders will be consulted about records from their areas. However, there must be other botanists who have valuable records of these aquatics. I would like to incorporate these records into the BRC databank, so that the distribution maps are as complete as possible. I would therefore be grateful if anyone holding such records would contact me.

The following details of each record, where available, are being placed on computer file: place name; vice-county; full grid reference; habitat; altitude; full date; recorder; determiner; source of record.

There should be no need to send BRC details of specimens of *Groenlandia* and *Potamogeton* determined by J. E. Dandy or jointly by J. E. Dandy and G. Taylor. Dandy recorded the details of these specimens in a card index now kept at the British Museum (Natural History), and we have been able to consult this index by kind permission of the Keeper of Botany.

C. D. PRESTON, Biological Records Centre, Institute of Terrestrial Ecology, Monks Wood Experimental Station, Abbots Ripton, Huntingdon PE17 2LS.

FLORA OF MID-WEST YORKS

Work has been started on recording the flora of mid-west Yorkshire on a tetrad basis. At this stage plant lists for any tetrad in v.c. 64 would be welcome from members of the B.S.B.I. who are either visiting or resident in or near the area.

The area is bounded in the east by the River Ouse, in the north by the watershed between Wensleydale and Wharfedale, in the west by the old (pre 1974) Lancashire border and in the south by the rivers Hodder and Ribble, the Leeds-Liverpool canal and the River Aire.

Anyone who is willing to help and who would like maps, tick-lists and further information should contact; Mrs PHYL ABBOTT, Cedar Croft, 73 Ridgeway, LEEDS, LS8 4DD.

OROBANCHE HOSTS - A CAUTIONARY TALE

Some years ago David Webb and I were botanising on Cape St. Vincent in Portugal. We came across an area of bare sand some 20m in diameter, with a concrete post in the centre. Beside the post was an *Orobanche*; no other plant grew anywhere near. We joked about what an odd taste in hosts this *Orobanche* had, but then realised that if the post had not been a post but any plant at all, a *Ulex* bush, a *Daucus*, or a *Picris*, for example, we would without hesitation have recorded it as the host. All records of host species should be cited as "growing with" or "probably on" unless one has dug down and traced the haustorial connection, and it is obviously unwise, if not illegal, in most cases to disturb the plants so drastically. There are comparatively few reliable records of host plants in the literature and in herbaria. There is also an understandable tendency to assume that, if a species is said in the Floras usually to parasitise, for example, *Ulex*, it must be doing so if one finds it close to a *Ulex* bush. More precision, combined with more open-mindedness, is essential if we are to learn more about *Orobanche* hosts.

A. O. CHATER.

Dept. of Botany, B.M.(N.H.), Cromwell Road, LONDON SW7 5BD.

TARAXACUM

Considerable advances have been made in studies of this problematic genus since the publication of John Richards' *Taraxacum* Flora as a supplement to *Watsonia* in 1972.

That Flora is still indispensable to the student but as time has progressed the extensions to our knowledge have rendered it less and less reliable in the species it covers. More important however are the species not dealt with in that work.

It is a testament to Richards' pioneering work in taraxacology that over 100 of the species he describes out of the 133 in the Flora are still "accepted". However we now recognise about 250 species in the British Isles. In addition, the concepts of the sub-generic sections have been revised and new sections described all of which make the genus more "manageable". It was therefore thought advisable to produce a new list of British and Irish dandelions and this, dated January 1986, is now available. The list includes an introduction which assign all the species to their section. It also deals with unpublished worknames, gives a full

synonymy, relates all the present species where relevant to those in Richards' Flora, deals with "useless" names, has some brief comments on distribution and taxonomic status, and includes an index.

Copies can be obtained for 90p. (including P&P) from:

C. C. HAWORTH, 5 Standings Rise, WHITEHAVEN, Cumbria CA28 6SX. All this implies that many herbaria, county records and Floras are likely to benefit from revision and certainly those not reconsidered since the last decade will be substantially out-dated. I would be happy to advise anybody concerned on this matter.

C. C. HAWORTH

5 Standings Rise, WHITEHAVEN, Cumbria CA28 6SX.

THE CARMARTHENSHIRE FLORA DATABASE

A COMPUTER DATA STORAGE AND RETRIEVAL SYSTEM ADAPTABLE FOR ANY HOME-BASED VICE-COUNTY RECORDER.

A suite of interactive programs to run on the B.B.C. Model B home computer has been written especially for vice-county recorders. It is extremely innovative and exploits the capabilities of the machine to the full but is flexible enough to be adaptable for application to any county or area and to any flora or faunal group. It is also very user-friendly and easily operated by those unfamiliar with computers. The intended primary use of the system is as a tool to enable fast interrogation of the floral data and not to entirely replace the master card index.

In inputting and editing modes the program displays a series of screens of species lists, forty species at a time, based on the Biological Record Centre's field card. These are followed by alphabetically listed "Additional Species" not printed on the card. The species listed are specified by the user when the program is set up and for Carmarthenshire includes 1480 taxa which enables the records for each of the 698 tetrads to be stored within the 1.3 megabytes available on only two floppy discs. Plants recorded are selected with the cursor and habitat, date and status information is appended to each. Working through the successive screens, the records for each tetrad are assembled and when complete are filed to disc. No typing is required: entry is similar to crossing-off each species on the card. Typically a tetrad with 250 species recorded takes about thirty minutes to input.

Interrogation of the database enables the following information to be extracted:

1. Compile a list of tetrads in which a selected species or group of species occurs by date, status or habitat and plot a distribution map.
2. Compile a list of species recorded in a selected tetrad.
3. Compile a list of species recorded in a selected group of tetrads (eg a 10km. square).
4. Compile a list of species-totals in each tetrad by date and status.
5. Compile a map showing tetrads where a species has not been recorded.
6. Compile a list and plot a map of tetrads containing a selected total number of species within a given range (eg the tetrads with from 200 to 250 species recorded in them).
7. Compile a list of species recorded in a given number or range of tetrads (eg the species occurring in three tetrads only).

Using the present hardware, interrogation of the complete Carmarthenshire Database takes about ten minutes, from selecting the search-parameters to plotting the map on the screen. The maps produced may be filed to disc for subsequent recall and when printed, using on-line, dot-matrix printer, are of sufficient quality to be ready for publication.

The minimum hardware to run the system comprises a B.B.C. Model B 32K computer with a disc drive and additional sideways RAM (eg Opus Challenger) and portable television but ideally a B.B.C. Model B 32K computer with additional sideways RAM (64K minimum, eg Solidisk), (or B.B.C.B.+ 128K computer) with twin 80 track, double density, disc drives, monitor and dot-matrix printer are required. The future replacement of the floppy discs with a hard-disc would significantly increase the speed of database interrogation.

S. RHODES

35 Ash Grove, AMMANFORD, Dyfed.

R. D. PRYCE

Rhyd Deg, Maesybont, LLANELLI, Dyfed SA14 7HG

COMPUTER USERS DATA PROTECTION ACT

Individuals who keep in a computer any personal data relating to identifiable living persons, except for their own exclusive private use, are required by law after May 1986 to be licenced by the Data Protection Registrar.

The act is so narrowly worded that the attribution of plant records by name, or even initials, is likely to bring the compiler within its orbit. All members who use a micro computer should be aware of this requirement and can obtain further information in the first instance from David J. McCOSH, *Hon. Sec. Records Committee*, 13 Cottesmore Gardens, LONDON W8 5PR.

IN PRAISE OF HYBRIDS

If identification of species is based on one or two characters only, errors must inevitably result. One wonders, for instance, how often hybrids are recorded as one of the parental species, particularly as there is a tendency to assume that every plant must fit neatly into a species box. Some hybrids are especially prone to be overlooked. Plants of *Stachys palustris* x *S. sylvatica* are often morphologically closer to *S. palustris* than to *S. sylvatica* and need to be carefully examined - and their crushed leaves smelt!

Since becoming aware that the hybrid *Veronica anagallis - aquaticica* x *V. catenata* occurs in this area, I have not seen a single plant with all the diagnostic characters of *V. anagallis - aquaticica*, whilst continuing to receive numerous records for this species. As well as the distinctive highly sterile hybrids, in S. E. Yorks., v.c.61, we have Water Speedwells showing various combinations of the characters of the two species and some degree of fertility. My attention was drawn to this situation, when asked to identify a Water Speedwell 'in the field' and being puzzled by the flower colour which was neither blue nor pink. This led me to examine all Water Speedwells critically.

The BSBI clearly regards the recording of hybrids as important. Hybrid records are welcome for publication in 'Plant Records' and the organization played an important part in the publication of *Hybridization and the Flora of the British Isles*, ed., C. A. Stace.

However one gains the impression that hybrids, even those rare in the British Isles, are discounted when potential Nature Reserves and S.S.S.I.s are being assessed. In the articles entitled 'Plant Records' in recent issues of *BSBI News* only one hybrid has been mentioned. Was this purely accidental or is there some lack of interest in hybrids? If so, why?

I submit that from a Recorder's point of view, hybrids are as important as the species. They do occur.

Some F1 hybrids are totally sterile, but some of these are perennial and persist for many years. I have known a population of the totally sterile *Carex diandra* x *C. paniculata* for over twenty-five years and it shows no sign of decline.

Some hybrids, perhaps most, show some degree of fertility and as a result of backcrossing to one of the parental species may result in variations in that species, perhaps enabling such a species to survive in changed conditions. The evolutionary potential of such taxa is surely of general interest to botanists.

EVA CRACKLES

143 Holmgarth Drive, HULL, North Humberside HU8 DX.

HYBRID WILLOW-HERBS AND DOCKS AT A GLANCE

Although it is traditional to regard *Epilobium* and *Rumex* as difficult genera, mature healthy specimens can usually be named with confidence in the field. There remains, however, a natural, but misplaced, apprehension that if the putative parents are hard to distinguish, their intermediate hybrids will appear doubly ambiguous. As a result, the latter are enormously under-recorded in lowland Britain. In practice, this problem seldom arises. Evidence of hybrid sterility may sometimes be very obvious, even from a distance of 20 metres or more, rendering such a plant more conspicuous than either of its parents. It is thus possible, at a glance, to “home in” on that distinctive individual, and ignore hundreds of related ones surrounding it.

The most useful characteristics to look for are as follows:

Hybrid Willow-Herbs

Inflorescence often more branched above than in co-habiting species, with branch widely and irregularly spreading, rather graceful, sometimes weakly pendulous at the tips. Flowers tend to be caducous, with colour relatively deep. Stigmas of a four-lobed X club-shaped parentage resemble a stout club with irregularly “melted” lobes. Upper fruits well shaped when young, but *progressively shortening and shrivelling in the leaf axils below*, scarcely or not dehiscent, and containing little pappus or formed seed. Clapham, Tutin, and Warburg (1962) states that “hybrids between species with spreading and appressed hairs” produce hairs which “spread for part of their length and then turn upwards.” This image of each hair neatly inheriting two characteristics is misleading; what normally happens is that hybrid indumentum is an indiscriminate mixture of both types.

Hybrid Docks

Inflorescence branches and their fruit clusters generally intermediate in number, size, and angle of attachment, but notably thin, insubstantial, and anaemic-looking; they often resemble the recessive parent when young, and the dominant parent when mature. *Fruit formation strikingly untidy, and irregular, mostly abortive*, but a few convincing copies of each parent’s fruit shape usually manage to assert themselves on the same axis. Lower fruits on each axis withering rapidly, but falling tardily. Seeds absent, deformed, or sometimes mixed with apparently perfect ones. Leaves often purplish-violet with age, and numerous secondary growths may develop from the base of the plant in autumn. It is also important to check whether sterile or semi-sterile infructescence may instead have arisen as a consequence of drought, mildew infection, physical damage, and/or (concerning willow herbs out of season) the absence of pollinating insects.

Species and hybrids of both genera are perennials (some Willow-herbs adapt to a rapid annual or biennial cycle only in harsh, competitive conditions). They are most richly represented in secondary habitats of recent disturbance. Willow-herbs particularly favour dampish gravelly waste areas, shady ditches, neglected gardens and shrubberies, old rubbish tips and new woodland. Docks inhabit these, too but do better

still in open grassland; for example, eighteen different Docks (nine species, nine hybrids) were identified in only thirty acres of such habitat on Walthamstow Marshes (v.c.18) in July 1985. First and second-year recolonisations, however abundant, scarcely ever include hybrids, but from the third year onwards, these pioneers will have had time to cross pollinate *in situ*, and so, from that stage, the progeny should become more interesting, especially if the terrain is kept slightly open. In short, hybrid frequency may rise in proportion to the years in which a new colony of mixed parents is left *almost* untouched.

A few crosses are surprisingly common. One or two examples of *Epilobium adenocaulon* x *hirsutum* are likely to arise on any sizeable expanse of overgrown, stony, vacant land in S. E. England, while *E. adenocaulon* x *montanum* probably occurs (or has periodically occurred) in nearly every tetrad within Greater London, being characteristic of weedy shrubberies in urban parks, cemeteries, and gardens. *Rumex obtusifolius* x *crispus* is known to be the commonest Dock hybrid in old, dry meadows, but *R. obtusifolius* x *conglomeratus* and *R. crispus* x *conglomeratus* often grow with it on damper clay soils, and *R. obtusifolius* x *sanguineus* is equally frequent by woods and old hedgerows. The serious enthusiast may even be tempted to devote part of his own garden to the cultivation of related Willow-herbs and Docks, raking the soil between them each autumn, so that possible hybrid seed may germinate spontaneously there.

Indeed I have often wondered why some reputable institution hasn't yet undertaken a comprehensive British Hybrid Collection? Many of our hybrids are extremely rare and endangered, others new to science are continually being discovered, and the vast majority grow in scruffy, man-made habitats for which no-one could make a conservation case. Moreover, such exasperating disparagement towards hybrids often emanates from official conservation bodies that one would dearly like to see an independent sanctuary established for these very special wild plants, where they can be properly valued and cared for.

In the meantime, Willow-herbs and Docks above all continue to offer us a stimulating challenge in the field; they certainly have given me a lot of pleasure over the years.

Ref: Clapham, Tutin, & Warburg, (1962): *Flora of the British Isles* (Second Edition), Cambridge.

BRIAN WURZELL

47 Rostrevor Avenue, Tottenham, LONDON N15 6LA.



"Atop the Ladder"

When Irene Stilwell sent the query on her mystery plant in verse. (see *BSBI News* 40 p.22), she described the experts as "atop the ladder" - no doubt using the expression figuratively. However it also applies in the literal sense, especially since recent new herbarium cupboards in the Dept. of Botany, British Museum rise ever higher towards the ceiling to accommodate ever increasing numbers of specimens. A B.M. botanist atop the ladder in the Herbarium is a familiar sight, and here it has been graphically drawn for us by Len Ellis of the Cryptogrammic Botany Dept., B. M.

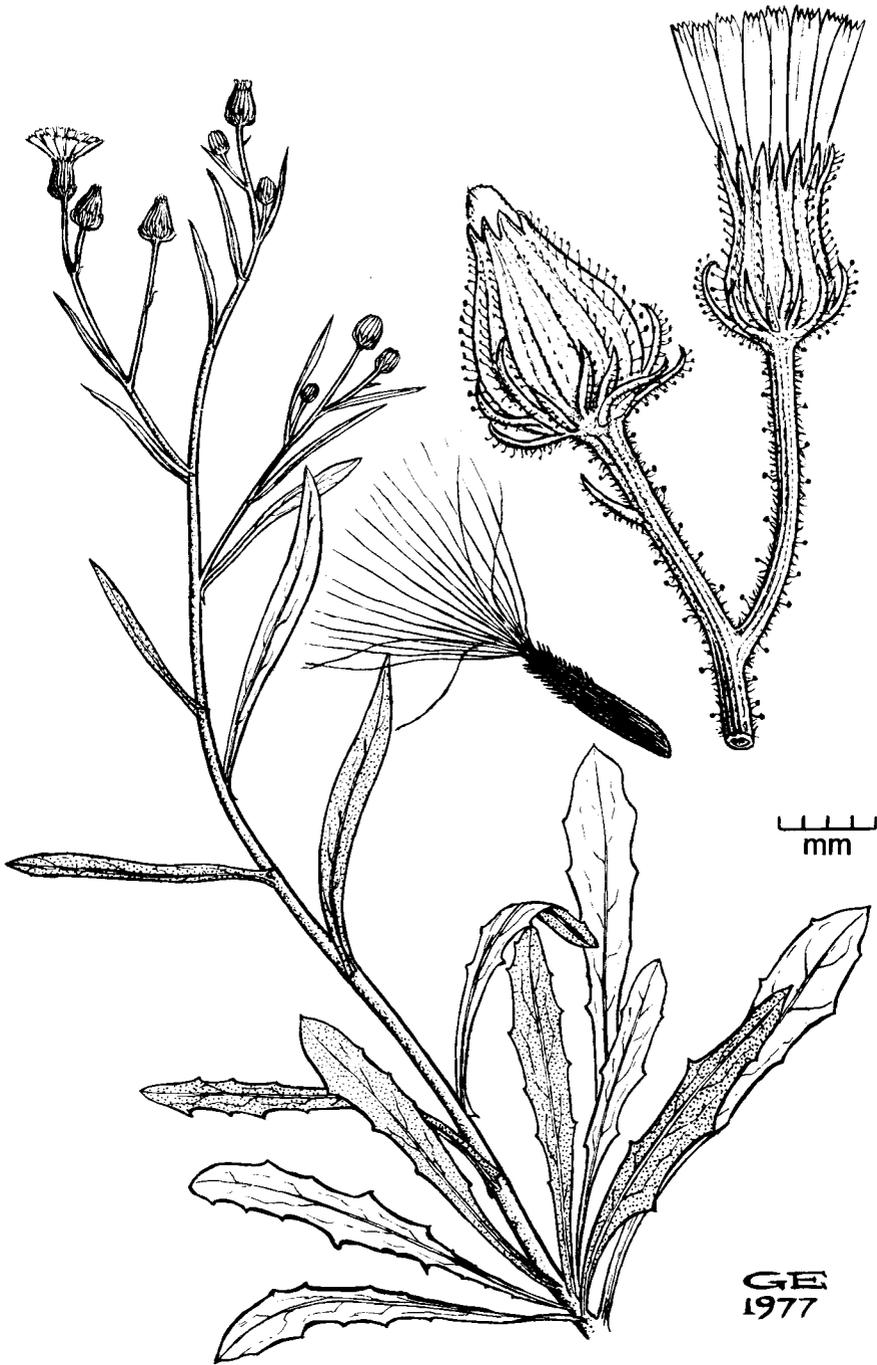
Avonmouth Docks

As long ago as 1969 the late J. E. Lousley was heard to bemoan the state of Avonmouth Docks (W. Gloucester), traditionally the "stomping ground" of the leading alien botanists of the day, as "no longer worth visiting". However, the lure of the unexpected still draws botanists to Avonmouth (and to similar areas elsewhere) and, while they do not manage the rich hauls of yesteryear when most of our grain imports came from the Mediterranean and the near East, some unusual plants are still found. In modern times the yield has been still further reduced by extensive use of herbicides but in marked contrast 1985 saw a reversal of this trend and the railtracks and waste areas at Avonmouth were green once again.

The crucifers *Descurainia sophia*, *Erucastrum gallicum*, *Erysimum cheiranthoides* and *Sisymbrium loeselii* were present in exceptional abundance throughout the docks with the rare grass *Beckmannia eruciformis* abundant on two railway tracks (see Adventive News 32). *Setaria faberi* Hermm. also abounded together with a considerable number of plants of *Crepis tectorum* L. The latter, although European in origin, is apparently introduced with N. American grain; it has also been recorded in Br in recent years as an impurity in N. American grass seed mixtures. G. M. S. Easy has kindly provided the illustration which is reproduced on page 17. Also noted was much *Ammi majus*, single plants of *Camelina sativa* and *Vaccaria hispanica* and a solitary seedling of *Caesalpinia spinosa* (Mol.) O. Kuntze, the pea "Tara" from the deserts of western S. America imported for its high tannin yields. In the late 1970's seedlings of Tara were commonplace on the railway tracks at Avonmouth. A plant from these earlier seedlings is still being grown on in Bexleyheath by Mrs M. C. Foster but although it is now probably sufficiently mature to flower, we fear that it will need much more light to induce it to do so: when young its "mimosa-like" leaves were pronouncedly nyctinastic and its stems armed with short, sharp tubercles which it retains in maturity as a tree or large shrub. The foregoing records were made by Messrs T. G. Evans, J. Scott and the writer.

SETARIA IN BRITAIN

At the time of writing, there has been a limited response to my request for records of *Setaria* spp. (Bristle-grasses) in Britain and so the note will have to be held over. To ensure completeness, I need help with records of *Setaria faberi* Hermm. for which British records appear to date from 1976. More recently there has been a spate of records, most, if not all, of which have been associated with N. American grain. The 1976 record involved a gathering at Rickmansworth (Herts) believed to originate from a soya bean factory active 25-30 years previously, indicating that *S. faberi* could have been with us for forty years. If so, it seems likely that this taxon has been overlooked by several generations of botanists. Furthermore, it might be expected to be found in our national herbaria probably incorrectly labelled *S. viridis* or even *S. italica*. Would any member willing to look at the *Setaria* collection in his or her local museum or university herbarium please contact me and I will gladly



Crepis tectorum L. del. G.M.S. Easy © 1977

GE
1977

supply named material for comparison.

MIXED BAG

Acaena caesiiglauca (Bitter) Bergmans: A native of New Zealand which has become a weed in shrubberies near the Serpentine, Hyde Park, Middx., 1985. J. R. Palmer, who writes "Impossible to ascertain whether originally planted or introduced with a top dressing".

Amaranthus spinosus L.: On field manure heap with *Amaranthus retroflexus*, *Chenopodium* & *Atriplex* spp., near Holt, Denbs., October 1985. Mrs J. A. Green, det. ALG. This rather rare Amaranth is introduced with N. American grain used in cattle feed.

Blumenbachia hieronymii Urb.: The most noteworthy of a large array of bird-seed and other aliens on dumped soil in Kew Gardens reported in 1985 firstly by Dr S. O'Donnell and later J. B. Latham, C. G. Hanson and others: in view of the locality, however, its status must, at best, be considered doubtful. *B. hieronymii* is a square-stemmed, viciously stinging herb of the S. American family Loasaceae with palmately lobed leaves and large (1 in) white flowers. Its petals are adorned with red basal scales.

Carduus pycnocephalus L.: Some twenty plants of this, one of the commonest Mediterranean thistles, which has long been naturalised on the Hoe at Plymouth, Devon, in market gardens near Flitwick, Beds., 1985. C. G. Hanson, Hb. CGH, conf. E. J. Clement. Introduced with wool waste.

Chrysanthemum coronarium L.: c. 30 large plants along approximately 1 mile of recently disturbed verge of the west-bound carriage of the M4 just inside the western Wiltshire boundary, autumn 1985. Lady Rosemary FitzGerald, det. & Hb. ALG. Associated only with typical colonists of disturbed ground.

Cotonester dammeri C. K. Schneid.: Dominant on 50m of railway embankment, St. Philips, Bristol, July 1984. Leg., det. & Hb. ALG.

C. lacteus W. M. Sm.: Abundant under wall alongside railway line, Cumberland Basin, Bristol, October 1985. Leg., det. & Hb. ALG.

C. pannosus Franch.: Naturalised, Stone, W. Kent, 1985. J. R. Palmer. First British record.

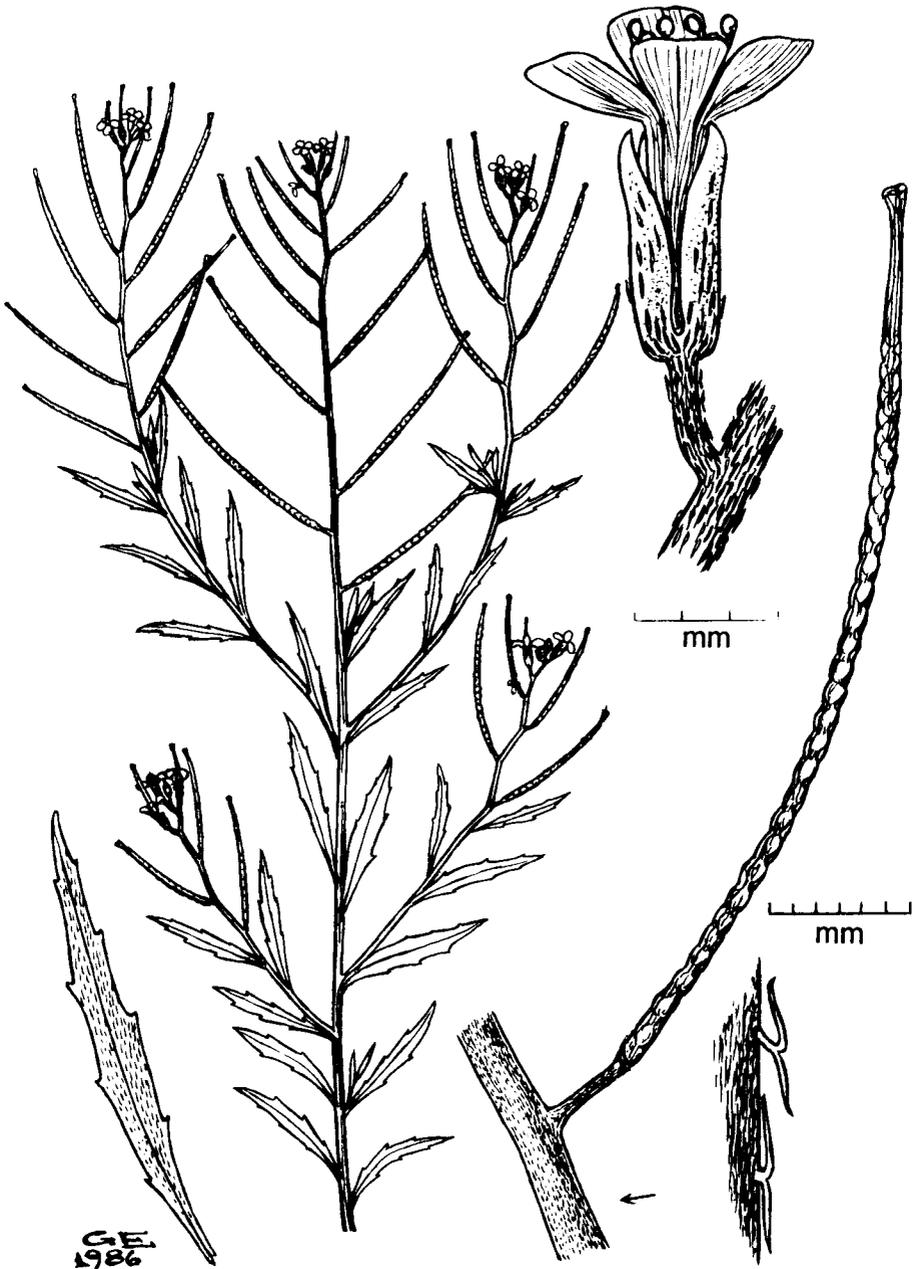
C. lindleyi Steud.: Twenty seedlings ranging from a few inches to over three feet in height on a traffic island where not planted, Marble Arch, Middx., 1985. J. R. Palmer.

Cynodon incompletus Nees: A large patch some 7-8 ft across in orchard ploughed in 1983 when the grass was first noticed, Wingham, near Canterbury, Kent, 1985. A. C. B. Henderson per Lady Rosemary FitzGerald, det. ALG, Hb. ALG, conf. E. J. Clement.

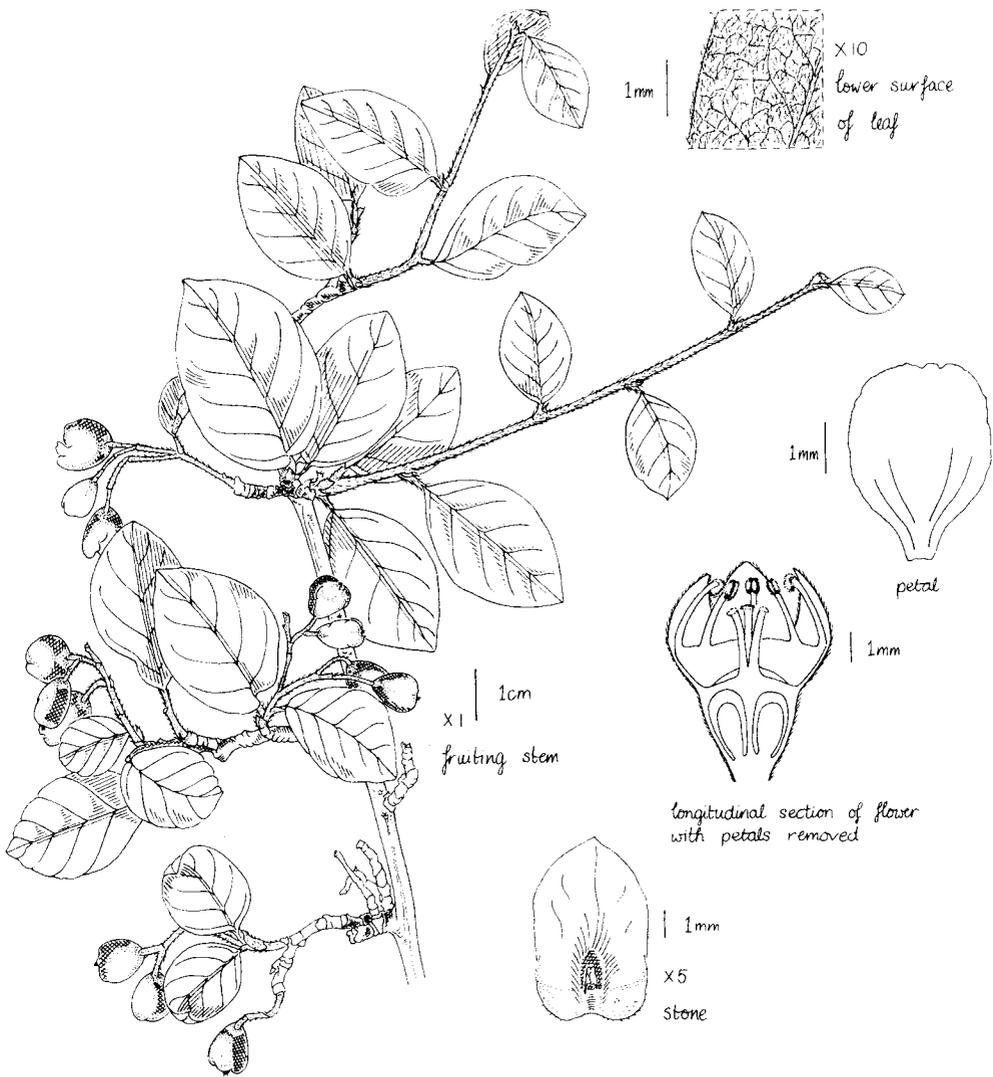
Erysimum repandum L.: Railhead site at Fulbourn Corn Silo, Cambridgeshire, May 1984. G. M. S. Easy, whose drawing of this now rare crucifer appears on page .

Ridolfia segetum Moris: With *Ammi visnaga* (L.) Lam. and *Bupleurum subovatum* Link ex Spreng. on disturbed soil of railway station car park, Amersham, Bucks., 1985. Mrs J. F. Foster, M. V. Southam *et al.* *R. segetum*, a yellow-flowered umbellifer from S. Europe is a rather uncommon constituent of bird seed. Strangely no other bird seed aliens accompanied this trio of umbels.

Lemna minuscula Herter: In old moat at Hatch, Sandy, Beds., 1985. Dr & Mrs J. G. Dony, conf. Dr A. C. Leslie.



Erysimum repandum L. del. G.M.S. Easy © 1986



Hilli 310.1983

Cotoneaster zabelii

COTONEASTER ZABELII Schneider

This is the next in our series of drawings by Hilli Thompson of naturalised Cotoneasters. As reported in BSBI News No. 29, it is still plentiful at Gravesend (V.C.16) as seen on the recent BSBI Cotoneaster meeting, though tidying up of the old walls has reduced it somewhat in size and quantity. I have since found a small specimen birdsown on a roadside bank at Hextable (V.C.16) but so far it has not been reported elsewhere. It is true that *C. zabelii* is not commonly planted; (in my own area I have only noticed it in a Greenwich churchyard and outside a farm at Park Gate, Lullingstone) but it may very well be overlooked or confused in the wild.

The other naturalised species which resemble it most are *C. franchetii* and *C. dielsianus*. From the former it can be distinguished by being deciduous, from the latter by its large, markedly obovoid, pendant fruits, and from both by its blunter leaves. (All three have flowers with erect pinkish petals in the Spring). See also key in BSBI News No. 41, P.26. (More recently I have noticed that this species may be naturalised in the St.James' area of Central London (V.C.21), but this is difficult to confirm in winter).

J. R. Palmer
19 Water Mill Way, South Darenth, DARTFORD, Kent DA4 9BB.
(0322 864589)

COTONEASTER SIMONSII - a correction

Please correct the following printing error in BSBI News No. 41 p.26. Two lines above the key, alter "bright pinkish petals" to "upright pinkish petals".
J. R. PALMER

AN EARLY RECORD FOR EUPHORBIA MACULATA L. IN S.HANTS

Euphorbia prostrata Ait. was recorded by W. Whitwell in *J. Bot.*, 36:32 (1898) and repeated in *Fl. Hants*, 2nd edn (1904), p. 369, as a weed in Purewell Nursery, Christchurch, S. Hants, (now Dorset) September 1897, collected by R. Charles. Back in December 1981, Dr B. A. Seddon very kindly searched out the voucher (in BIRA), and sent it to me, on short loan, in order to check its determination. As I had long suspected, the plant was, unequivocally, a typical example of *E. maculata* L., still just showing traces of black blotches on its leaves. Attached to the sheet was a letter that seems worthy of quotation:

Highcliffe-on-Sea, Christchurch, HANTS.

"William Whitwell, Esq.
Balham.

2 Sept. 1897

Dear Sir,

Mr Pritchard has made diligent search in the moor and waste land at the back of the nursery grounds at Christchurch for *Herniaria*

hirsuta but without success. He has *Herniaria* used for edgings growing in his garden. On Tuesday he gave me the enclosed which he found growing near. Mr P. says he does not know it - there are three more specimens in the plot - he took this one plant, and he feels sure he has never seen it before, as they are always on the lookout for *weeds*. Can you tell me what is the botanical name as Mr P. wishes to know.....

Yours very faithfully,
R. Charles, *Naturalist*."

The new identity as *E.maculata* fits in perfectly with the mosaic of records chronicled in *BSBI News* No. 13, p.21 (1976), No. 15, p.12 (1977) and No. 16, p.18 (1977), since when, incidentally, I have heard no more! Also, since no other record appears to exist, *E.prostrata* must now be removed from the list of British aliens.

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

POLYPOGON PUMILUS Clarke

Mature specimens of *P.pumilus* Clarke would be much appreciated. Grains ("seeds") will be used for introduction of this species in cultivation in connection with a study on its taxonomy and biology. It is an alien grass brought here with wool from Egypt occurring on wool refuse tips and "shoddy" fields. *P.pumilus* is closely related to *P.monspeliensis* (L) Desf. and resembles the latter in the glumes slightly notched at the tip and minutely ciliate on the margins, and in a shortly awned lemma, but has a dwarfed habit, a narrower and shorter panicle, shorter glumes and awns.

P.maritimus Willd, another alien, with which *P.pumilus* has been confused in the past, differs from *P.pumilus* in having larger panicles, longer and deeply notched glumes with long cilia on the margins and awnless lemma.

P.pumilus has been found in Britain in the following localities:

- v.c.30 Beds. Shefford railway sidings (J.G. Dony)
- v.c.30 Beds. Ailton (J.G. & C.M. Dony)
- v.c.59 S.Lancs. Darwen Crown Wallpaper tip (C.E. Shaw)
- v.c.63 S.W.Yorks. Bradford, Esholt Sewage Works (J.E. Lousley)
- ditto Bradford, City Road sidings, Wool wharf. (F. Houseman)
- ditto Heckmondwike (J.E. Lousley)
- ditto Linthwaite (D. McClintock)
- v.c.64 Mid-West Yorks. Baildon (F. Houseman)
- v.c.79 Selkirk. Galashiels (M.McCallum-Webster)

Postage will be refunded.

J. M. MULLIN & A. MELDERIS British Museum (Natural History) Botany Department, Cromwell Road, LONDON SW7 5BD.

INSECTS AND PLANTS - A LONG HISTORY (a perspective on 150 years?)

The special relationship of plants and insects and their co-evolution has been long recognised and has been the subject of many books and symposia. Most of the ideas on this relationship have been deduced from living species. Charles Darwin wrote, after study of the corolla length of the Madagascan orchid *Angraecum*, that there should be a moth with a long proboscis to pollinate it. The subsequent discovery of a Madagascan Hawk-moth, *Xanthopan morgani praedicta* Rothschild & Jordan, with a proboscis 20cms long amply fulfilled this prediction.

Recent studies of fossil insects have shown that they were abundant and diverse in the Upper Carboniferous (around 300 million years ago). There were species with sucking mouth-parts which they would have inserted into plants to feed (? transmitting diseases at the same time) apart from many insects which simply chewed up plants!

The struggle between plants and insects probably started almost as soon as the first plants appeared on land and has continued ever since. Many of the developments in plant chemistry probably arose to halt insect attack, some of these chemicals have been exploited by insects for their own defence, showing how intimately this co-evolution has taken place. The whole range of plant growth and floral structure is closely related to the insects associated with them.

On fossil evidence, as currently interpreted, the development of plants which are classified as Angiosperms occurred in the Lower Cretaceous (about 120 million years ago). Entomologists have generally considered that many of the insects whose behaviour and structure we associate with pollination evolved alongside the Angiosperms. Recent research on fossil insects is certainly pointing in that direction but there have been a few surprises. Butterflies have long been described as 'flying flowers' and it is difficult to think of butterflies and moths without thinking of flowering plants. There are so many important ways in which butterflies and flowering plants depend on one another that the idea of co-evolution is readily accepted from the study of the living species. Hence the surprise when fossil moths were found in deposits older than the earliest known flowering plants. First Russian workers discovered a moth, with scales preserved on the wing, in the Upper Jurassic (about 140 million years ago). Then, in the Lower Lias rocks of Dorset (c. 180 million years ago), we discovered a single, scale-covered, moth wing. When you consider how delicate are the wings of butterflies and moths and how easy it is to brush off the scales, the chance preservation of these structures, even down to microscopic detail of the scales, shows how much our knowledge of these early events depends not only on careful study but on lucky accidents as well! These early moths, as far as we can tell, were related to the modern group of moths which do not have a proboscis but have mandibles for feeding on pollen and spores.

There is much still to discover about insect/plant association from the fossil record. Is the data from fossil insects beginning to point to an earlier origin than the Lower Cretaceous for the flowering plants?

Next time you see a butterfly, fluttering around a flower, remember they may have a short life, but they have a very very long history.

PAUL WHALLEY

Dept. of Entomology, B.M. (N.H.) Cromwell Road LONDON SW7 5BD.

CONSERVATION

THE CONSERVATION ASSOCIATION OF BOTANICAL SCIENCES

Since C.A.B.S. is a new name, I would like to take the opportunity to explain what it means, how it came about, and what its purpose is.

The main strength of the BSBI is not primarily in the conservation field, but in the study of British and Irish plants and their distribution. However, the information that it gathers is very important for conservation, and, indeed, most of us would be concerned if a rare plant was threatened with destruction. So the Society has always been involved in conservation matters and this is embodied in its constitution, namely "to promote in every way possible the conservation of the British Flora". This it does by organising surveys, providing advice, and making representation on issues of botanical importance. In this, it is highly regarded as giving sound advice of a professional standard, and it is now regarded as *the* non-governmental organisation responsible for the conservation of British vascular plants.

However in recent years the demands on the society have increased as more and more conservation issues are gaining prominence, and this has left the choice that either BSBI would have to back out of some of its conservation commitments, or it would have to employ someone. This problem also affects most of the other societies concerned with studying both higher and lower plants, and they have therefore decided to club together to employ a Conservation Officer, and in order to do this, had to form an association - the Conservation Association of Botanical Societies. This has got round another problem which is that because BSBI was the most well known, it was tending to be asked about lower plant problems, as well.

The post is being funded fully for three years, by the Nature Conservancy Council and World Wildlife Fund, the latter through the generous donation of Heinz. The objectives will be, principally, to encourage greater cooperation between the botanical societies, and to coordinate their response to nature conservation issues, and to increase public awareness of plants and plant conservation. These objectives cannot be achieved alone, and I look to you for support in this venture.

NICK STEWART
C.A.B.S. Conservation Officer, 323 Norwood Road, LONDON SE24 9AQ.
(01-678-8044)

WILD FLOWER WEEK 17-26 MAY 1986

R.S.N.C. BRITISH WILDLIFE APPEAL

The Royal Society for Nature Conservation is organising a Wild Flower Week as part of its British Wildlife Appeal. The message will be "wild flowers are wonderful" and will centre on the beauty and fascination of British wild plants, and the need to protect them. In addition to the fund raising side, R.S.N.C. will be particularly highlighting road verges as part of a campaign to persuade the relevant authorities to adopt sympathetic management regimes for the benefit of wild flowers.

Various national events are proposed including several exhibitions at e.g. Chelsea Flower Show and Stoke Garden Festival, and the launch of several posters, as well as various articles and interviews in the press and radio etc., Individual Trusts are organising a large number of events including reserve open-days, guided walks, slide shows etc., Any members who would like to help or participate should contact the secretary of their local Trust.

NICK STEWART

C.A.B.S. Conservation Officer.

ORCHID CONSERVATION

The first ever British prosecution for the import & export of rare plants took place in January this year. Mr Walter Stagg who runs the nursery, "Avon Bulbs", was fined a total of £1800 for six charges of illegally bringing rare cyclamen and orchids into the country and for selling such plants overseas. A wide range of European orchids and rare bulbs have been offered by Avon Bulbs and few people may have realised that plants on sale were dug up from the wild.

In Britain, of course, all wild plants have a degree of legal protection from collection, under the Wildlife and Countryside Act 1981, and most other W. European countries have some plant conservation legislation. In addition the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), now ratified by 90 countries around the world, specifically controls trade in all orchids and cyclamen. In 1984 an EEC Regulation on CITES came into force which means that the international convention is implemented uniformly throughout the EEC.

The EEC CITES Regulation gives particularly strict protection against over exploitation to European orchids and cyclamen species. Under the Regulation commercial trade in wild orchids of over 100 European species is banned and wild-collected specimens cannot be sold throughout the EEC. Terrestrial orchids, unfortunately, remain virtually impossible to propagate on a commercial scale. Until recently species such as *Cypripedium calceolus*, *Himantoglossum hircinum* and *Cephalanthera rubra*, all strictly protected in Britain, were imported from countries with less stringent conservation measures.

Thousands of wild-collected plants of *Cypripedium calceolus* were exported by the US to Britain and the Netherlands until TRAFFIC (USA) a wildlife trade monitoring group drew attention to the problem several years ago. The plants were being shipped out labelled as "artificially propagated" to evade export controls. Similar mislabelling is known to have been used to bring other rare plants into Britain.

Although orchids native to EEC countries are now protected against overcollection, habitat destruction continues to cause the decline of wild populations throughout Europe. The EEC, along with 18 European countries (including Britain) signed the convention on the Conservation of European Wildlife and Natural Habitats in 1979. This treaty, known as the Berne convention, addresses the protection of wild species in their natural habitats.

As yet only one orchid species is covered by provisions of the Berne Convention, *Ophrys kotschyi*, which is confined to Cyprus. No doubt some of the orchids subject to strict trade controls under the EEC CITES Regulation would also benefit from listing under the Berne Convention. *Cephalanthera cucullata*, a Cretan endemic, for example, is unlikely to enter into commercial trade, but may become extinct through destruction of its habitat. Other Mediterranean orchids which are particularly threatened by collectors and the removal of natural vegetation, need to be fully protected by effective and enforceable European legislation.

SARA OLDFIELD

22 Mandene Gardens, Great Gransden, SANDY, Beds SG19 3AP.

PLANT PHOTOGRAPHY

A recent article on photography: "Be prepared to *garden* the surrounding area", rather pained me! I would just like to point out that the BSBI CoEnCo Code of Conduct says: "When you visit a rare plant, avoid doing anything which would expose it to unwelcome attention, such as making an obvious path to it or trampling on the vegetation round it. 'Gardening' before taking photographs may also give away the site. Bear in mind, too, how readily nearby plants can be crushed by the toes of kneeling photographers. Remember the photographs themselves can give clues to the localities of rare plants, quite apart from the information accompanying them".

I say that it is better to tie things back and release them afterwards, so that the site looks exactly as it was before you gave it your attention and one or two dead leaves make the picture look more natural. I always tell people, if they must kneel, to do so on a coat, or a cushion, or a mat, or something, so as not to compress the ground hard (preventing germination of seedlings); and if they have pressed down on the grass, to rough it up again; and to remember that if the plant is very rare, hundreds of other people will probably kneel in the same place after them. As for lying down, it should be forbidden.

Reproduced by kind permission of the Ed. of W.F.S. from
WFS Magazine Autumn 1985

ANNE BREWIS

Benhams House, Benhams Lane, Greatham, LISS, Hampshire GU33 6BF.

NOTICES
(BSBI (official) Notices)

IMPORTANT ADDRESS FOR FIELD MEETING

For the WESTER ROSS Meeting, 5th-11th July, leader Tim Clifford (page 6 in 1986 Field Meeting Programme) the address given is incomplete. This should be:

Mr T. Clifford, NCC, Ialtag, Anancaun Field Centre KINLOCHEWE Ross-shire.

(N.B. Had a POSTCODE been given to us, there would have been a good chance of those returned letters reaching their destination in spite of the quaint spelling and lack of town in the programme? M.B.).

**BSBI WALES, QUADRENNIAL MEETING
AND
24th ANNUAL MEETING 1986**

NOTICE IS HEREBY GIVEN that a meeting of members of the Society, normally resident in Wales, will be held at COLEG Y BALA, Gwynedd on *Saturday 12th July 1986* at 3.30pm.

AGENDA

- 1) Election of Chairman.
- 2) Election of Hon Sec. and members of Committee for Wales.
- 3) Election of a member to serve on BSBI Council as Representative for Wales.
- 4) Any other business.

Nominations of members for election as Representative to Council must be in writing, signed by two members normally resident in Wales and accompanied by written consent of the candidate to serve if elected. Such nominations should be sent to the Hon. Sec. of the Committee for Wales, Mr R. G. Ellis, Dept. of Botany, National Museum of Wales, CARDIFF CF1 3NP, to arrive not later than May 30th 1986.

Mary Briggs Hon. Gen. Sec.

Nominations for members and officers of the Committee for Wales should be sent, with the signature of the nominee to the Hon. Sec. for Wales at the above address before the end of May.

Gwynn Ellis, Hon. Sec. Committee for Wales.

Our sincere apologies to Arthur Wade in New Zealand for the most untimely reference in BSBI News 41 to an "Obituary" notice. This should of course have read 90th birthday congratulatory notice (and the 70th anniversary of his joining BSBI). We are very pleased to report that Arthur is alive, well and flourishing in his 91st year and we sincerely wish him many more - with again, our apologies.

PERSONAL

Mr Eric Clement has had the gross misfortune to need two retina-repair surgical operations on his right (botanical!) eye. He much regrets that he is currently unable to deal with any correspondence or determinations

BOTANICAL BOOKS FROM OUNDL

Two new additions to the Autumn 1985 Stock List:

vc 34 & 35 SUPPLEMENT TO THE FLORA OF GLOUCESTERSHIRE

S. C. Holland, H. M. Caddick & D. S. Dudley-Smith 1986 £13.00

vc 101 ADDITIONS TO THE FLORA OF KINTYRE

A. G. Kenneth 1986 10 pages

Supplement with 250 additional species and records (Also available
FLORA OF KINTYRE M.C.Cunningham & A. G. Kenneth, 1979. 128
pages. Reduced £7.50).

NOTICES - other (non BSBI)

BOTANICAL SOCIETY OF EDINBURGH

- also celebrating their sesquicentenary this year, is publishing
*Special Supplement of the Transactions of the Botanical Society of
Edinburgh.*

Contributions include:

- | | |
|-----------------|--|
| E. J. H. Corner | The tropical complex of <i>Mycena pura</i> (Fr.) Kummer. |
| J. Jenik | Pneumatophores in the bay willow <i>Salix pentandra</i> L. |
| I. Manton | The cytology of ferns of Madeira. A preliminary note |
| M. V. Mathew | The library of the Botanical Society of Edinburgh |
| J. G. Roger | The ecology and conservation of Scottish mountain plants |
| H. Sjörs | On the Gradient from near-natural to man-made |

£5.50 (incl. postage) from: Publications Secretary BSE Royal Botanic
Garden, Inverlieth Row, EDINBURGH EH3 5LR

NEW JOURNAL ON PLANT GALLS

From spring 1986 the British Plant Gall Society will publish a twice -
yearly Journal *CECIDOLOGY* ISSN 0268-22907. The current
subscription is £2.00 p.a.; or membership of the B.P.G.S. £5.00 p.a. to
receive *Cecidology* and other benefits, Enquires to:

Mr W. S. Plant, 5 Ferndown Drive, Clayton, NEWCASTLE, Staffs ST5 4BP.
(N.B. *Bulletin of Plant Galls* No4 was the last of that series).

BSBI members leading Botanical parties in

1986 (See *BSBI News* 41 : 28) Additional entries:

N. E. CHINA (Manchuria) 20th June - 6th July Dr Frank Perring
PRESTON MONTFORD FIELD CENTRE

Yellow Composites 15th-18th August Dr Frank Perring
Details from: Occidor Ltd., 10 Broomcroft Road, BOGNOR REGIS West
Sussex PO22 7NJ and Preston Montford Field Centre, Montford Bridge,
SHREWSBURY SY4 1DX

British Bryological Society Meetings 1986

University of Leeds, AGM and Papers 20th-21st September
University of Reading, Taxonomic Workshop 1st-2nd November
Further details from Dr M. E. Newton, Dept. of Botany, University of
Manchester, MANCHESTER M13 9PL, who reminds us that BSBI members
are "always welcome" at BBS meetings.

REQUESTS AND OFFERS

100 FAMILIES OF FLOWERING PLANTS

A second edition of *100 Families of Flowering Plants*, M. Hickey and C. J. King, Cambridge University Press 1981, is in preparation and an improved lay-out has already been planned. Users of the first edition, especially teachers and lecturers are invited to send comments or suggestions to either of the addresses stated below.

M HICKEY, Hamlyn Cottage, France Lynch, STROUD, Glos. GL6 8LT
C. J. KING, University Botanic Garden, CAMBRIDGE CB; 1JF

CERASTIUM ARCTICUM, *C. ALPINUM* AND POSSIBLE HYBRIDS

I am at present studying the above taxa in Britain for a Ph.D. thesis. I would welcome information on as many sites as possible for these; also sites for putative hybrids between *C.arcticum* and *C.alpinum*, and hybrids that are thought to contain *C.holosteoides*. I would be very grateful for any help, and information will be treated in confidence.

PHILIP LUSBY, Dept. of Plant Science, University of Aberdeen, St.Machar Drive ABERDEEN AB9 1FX.

URBAN SPACES SCHEME

Members will recall the article *Between the paving stones*, *BSBI News* 37:30. The further curtailment of educational facilities has hit this scheme very hard.

Will any members who have unwanted field or laboratory equipment please contact:

MONICA HALE, Urban Spaces Scheme.
Dept. of Food and Biological Sciences, Polytechnic of North London,
Holloway Road, LONDON N7 8DB. (01-607-2789 Ext. 2118).

SURPLUS SEEDS

If any members would like to try growing named British adventive plants in their gardens, or greenhouses, this year, I would be very pleased to forward copies of my seed list on receipt of an 18p stamp.

C. G. HANSON, 1 Coltsfoot Road, WARE, Herts SG12 7NW.

BSBI REGIONAL PUBLICATIONS

A reminder that our members in Scotland and Wales publish their own BSBI periodicals which are distributed to resident members.

Non-residents who would also like to receive copies should apply as follows:-

Scottish Newsletter - published annually (April).

To be included on the mailing list, open an account by sending £1 to Dr Peter Macpherson, 15, Lubnaig Road, GLASGOW G43 2RY.

Welsh Bulletin - Two issues per year. To obtain, send 50p plus two 8 1/2 x 6 s.a.e. to:

Gwynn Ellis, Dept. of Botany, National Museum of Wales, CARDIFF CF1 3NP.

MEMORIAL TO THE LATE T. A. WARREN DAVIS. (1899-1980)

Tommie Warren Davis - the former BSBI Recorder for V.C.45, Pembrokeshire - was one of the foremost Welsh naturalists. His death on 27th July, 1980, left an enormous void in natural history circles in his native Pembrokeshire and further afield - see *Watsonia*, 13 : 357-358 (1981).

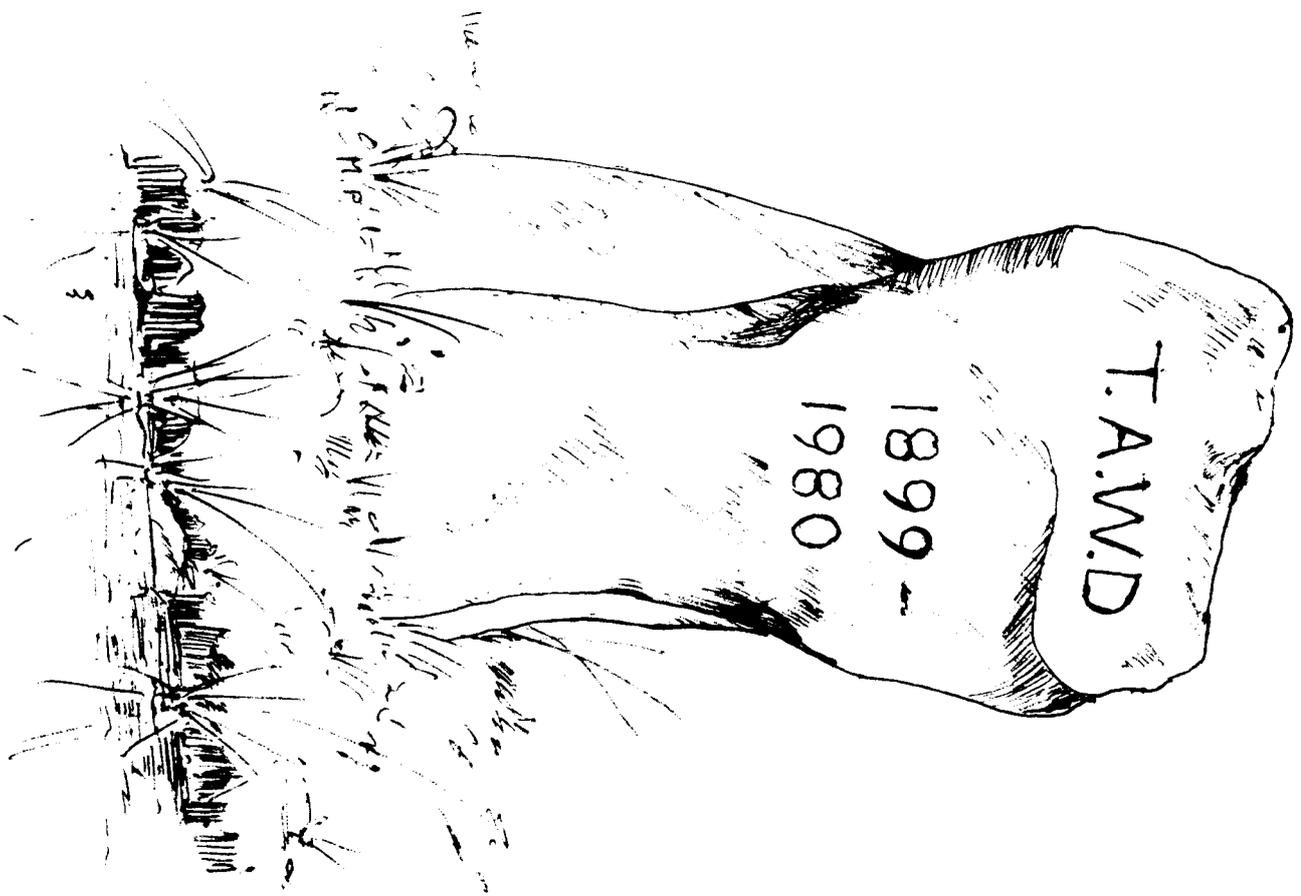
A favourite field excursion of Tommie's was to Dowrog Common, a reserve of the West Wales Trust for Nature Conservation, near St.David's. He served on the management committee for this nature reserve from its inception in 1976. At a meeting of this committee in St.David's City Hall on 9th December 1980, under the chairmanship of Mr Ewan Thomas, it was suggested that the reserve should incorporate some form of memorial to Tommie in view of his great affection for the site. Subsequently, a weathered upright stone (once used as a gate post on the adjacent farm of Hendre Eynon) was inscribed with T.A.W.D. 1899-1980, and erected overlooking a new and substantial pool which had been dug in September 1980.

This pool, known as Pwll Warren Davis or, more affectionally, Tommie's Pool, is fast becoming a mecca for naturalists. It has been allowed to colonise naturally and besides *Potamogeton natans* and *P. polygonifolius*, *Eleocharis palustris* and *E. multicaulis*, *Juncus bulbosus* and *J. acutiflorus* and *Alisma plantago-aquatica*, there is much *Baldellia ranunculoides* and *Littorella uniflora* and some *Nitella opaca*. Marsh fritillary and dark green fritillary butterflies glide around the lichen-clothed memorial, and emperor dragonflies hawk across the adjacent water. The occurrence of scarce oceanic plants, presumably derived from buried seed, that have colonised the clay spoil from the excavations is particularly appropriate. *Viola lactea*, *Hypericum undulatum* and *Cicendia filiformis* all flourish around the memorial stone, which appears to have a pronounced "botanist's stoop", as if straining to catch sight of the diminutive *C. filiformis* at its feet! Dowrog Common gained national recognition by the Nature Conservancy Council in 1982 as a core part of a new oceanic heathland grade I Nature Conservation Review site known as the St.David's Commons. Tommie's pioneering botanical work on the relatively unknown lowland heaths of Pembrokeshire was a major contributory factor to this accolade. Members are welcome to visit the Dowrog reserve provided they keep records of their observations and submit them to the WWTNC. A 25" scale survey map, sub-divided by compartments, is available - either from the WWTNC at 7 Market Street, Haverfordwest, Dyfed (telephone Haverfordwest (STD 0437) 5462) or from the reserve recorder Mrs M. Thomas, Trevigan, Croesgoch, Haverfordwest SA62 5JP. This detailed map was specially compiled to aid and stimulate more biological recording.

We are indebted to Miss Margaret Patterson for drawing the illustration.

S. B. EVANS

Glan-y-mor, Dinas Cross, NEWPORT, Dyfed SA42 0UQ.



T.A.W.D.

1899 -

1980

3

'A VEGETABLE COMET' *TOLYPELLA PROLIFERA*

(ZIZ & BRAUN) LEONH

appears again at Amberley Wild Brooks, West Sussex,
in August 1985.

The *Characeae* or stoneworts (Green Algae) are one of the most obscure orders of British plants. Other groups such as lichens and marine algae may be unfamiliar in detail to field botanists struggling with the critical aspects of flowering plants, but everyone is aware of their existence. Charophytes however have a 'fugitive nature' (Allen 1950) which makes them mysterious and little studied. During the history of British botany they have been variously classified as horsetails, algae, mosses, and even flowering plants, which shows what a nebulous place they have had in the discipline.

G. O. Allen, in his scholarly but endearingly simple introduction to the British stoneworts, makes some of the difficulties clear. One of these is their elusive behaviour; the plants cannot stand competition, and normally only flourish when the rather still waters which they favour are empty of other plant life. In newly cleaned or dug ditches, ponds and canals they can make spectacular, abundant appearances, which must of course often be missed, as botanists rush by a dull 'empty' ditch heading for more promising ground. Their life cycle is also adapted to take advantage of the temporary state of the habitat, sometimes being extremely rapid. Even the large *Tolypella* species can complete a cycle from germination to fruiting to disappearance in 3 months (J. Moore pers. comm). Their oospores, small nut-like fruits, seem to have excellent viability and can exist in wet or dry mud for long periods, though conditions for germination apparently need to be very precise and it is impossible to predict appearances of plants even in localities where records exist and the water looks fine. R. D. Wood makes an interesting comment on this elusive nature when he speaks of "The practical impossibility on the one hand of ensuring their permanent growth and on the other of effecting their extermination", and G. O. Allen also emphasises their unpredictability with the tale of *Tolypella intricata*, reported never to be in the same spot 2 years running, and likened to a 'vegetable comet'. Writing now, with Halley's comet visible in England, this provided me with an irresistible title for this note.

Another practical reason for the group's unfamiliarity is that much of the taxonomy can only be done with the aid of a microscope, though Allen makes it clear that to stonewort fanciers this is a positive attraction, as a characteristic of the group is their extremely large, beautiful, translucent cells. A sterile branchlet of a *Tolypella* can easily be more than 7cm long, but consist of only 3-5 cells.

Tolypella prolifera can be one of the largest of the British stoneworts, 20-35cm high with a long stout stem anchoring a tree-like structure of branches spreading from whorls in the upper part of the stem. The fertile branches of this genus are compacted into a characteristic dense "birds nests" surrounded by long sterile arms. The appearance is dramatic, a science fiction creature between spider and plant. The closely related

Nitella species usually have slightly looser fruiting parts, compared by Allen to 'magpies nests' or the 'witches brooms' which form on birch trees. Certainly the plants of *T. prolifera* found by the Amberley Wild Brooks recording team this summer were most spectacular, and the situation was perhaps regrettably typical, when seven experienced field botanists could stand around with open mouths and very few clues as to what 'it' was.

Amberley Wild Brooks in v.c. 13, West Sussex, where I went with the local monitoring survey group, is an ideal habitat for some charophytes. Situated in the Arun Valley, the Brooks comprise a wide area of deep ditches intersecting grazing marshes. All the vegetation is most interesting, as much of the area is on peat but catches the run-off from chalk downs, which provides the alkaline water beloved of stoneworts. One of the rarest Amberley plants is the Cut-Grass, *Leersia oryzoides* (L.) Sw., and it may throw light on the quality of habitat required by stoneworts to point out that *Leersia* and *Tolypella prolifera* share another habitat, the Bridgewater - Taunton canal in Somerset. As the ditches at Amberley are essential drainage to keep the grazing feasible, they are cleaned fairly regularly, and *T. prolifera* obviously appreciates this management, having been recorded from here for at least 85 years. Specimens in the BM are most interesting, coming from Amberley itself, from nearby North Stoke Marshes, and from Arundel, and show a great range of morphology, from extremely bushy bristly-looking specimens to the large simple 'spider' of our find. Recorders include G. O. Allen himself, A. Webster and H. & T. Groves among the great charophyte experts, and several famous botanists, some with Sussex associations; E. S. Marshall (1902) N. Y. Sandwith (1939) P. Hall & N. D. Simpson (1939) J. E. Lousley (1953) A. C. Jermy (1980). The earliest BM specimen is also from v.c. 13, collected by no less a figure than Borrer in 1827, at Henfield near Brighton.

There is often an element of chance and serendipity in field botany, and finding *Tolypella prolifera* when I thought I was looking for *Groenlandia densa* was one of those unexpected treats, and one which has quite converted me to trying to learn more about this extraordinary and under-recorded group. Generous and expert help has been available from Jenny Moore at the British Museum, and I hope that this note may possibly suggest some of the attractions of the British *Characeae*.

References:

- G. O. Allen *British Stoneworts*. Haslemere Nat. Hist. Soc., 1950.
Groves & Bullock-Webster *The British Charophyta*. Ray Soc., London, 1920.
R. D. Wood *Monograph of the Characeae*. Weinheim, 1965.

ROSEMARY FITZGERALD

c/o N.C.C., Church Street, Wye, ASHFORD, Kent TN25 5 BW.

REVISION OF THE FIRST VOLUME OF *FLORA EUROPAEA* AT READING

Flora Europaea should be familiar to most field botanists in Britain and Ireland. It is a bulky and rather expensive work, and is certainly not for the field, but its five volumes are an indispensable source of reference for the serious botanist. It catalogues the 12000 or so species of Flowering Plants and Ferns in Europe, providing a concise description of each, and any intraspecific categories, together with available data on chromosome numbers, ecology, geography and, as appropriate, genetic variation. It takes a broad, overall view of the continent's flora and, by comparison with some regional floras, is inclined to avoid splitting species into too many critical units, especially at local level. This adds to the practical value of the work in that it is not just a taxonomist's Flora and it also encourages the user to take a general, European view of plant species.

Bearing these principles in mind, we are currently preparing a new edition of *Flora Europaea* Volume 1 in the Botany Department at Reading University, on a grant from the Linnean Society *Flora Europaea* Trust Fund. I was appointed as Research Officer to the project from 1 October 1983, under the firm but kindly supervision of the *Flora Europaea* Editorial Committee (all BSBI members). This revision of Volume 1 will take five years.

Why do we need a new edition of Volume 1? Twenty years have passed since the original volume (1964) and much has happened since then. An increased level of taxonomic activity in Europe has uncovered many species and subspecies that are new to science in Europe, new but essential changes in plant names, species that are new to Europe although known previously elsewhere, and aliens that have become naturalized there in recent years. Research has elucidated the taxonomy of formerly misunderstood groups and we now have evidence to accept or reject unknown or doubtful taxa, many included only as notes in Volume 1 as it stands. A good deal of this new information is a direct consequence of the stimulus provoked by the publication of *Flora Europaea*, which always pointed out areas where there were unresolved problems. At the same time, the preparation of volumes 2-5 of *Flora Europaea* (published 1968-80) uncovered new sources of data and, of course, the revision is an opportunity to correct errors or inconsistencies that are more frequent in the text of the Volume 1, when the editors were 'learning their job'.

The table below presents some statistics relating to the amount of potential new material for the text of this revised volume.

Provisional new material (post-1964) for revised Volume 1 of Flora Europaea

155 species new to science from Europe

113 subspecies new to science from Europe

32 species or subspecies upgraded from notes in Volume 1

21 species 'new' to Europe (known elsewhere already)

21 alien species newly naturalized in Europe

Total = 342 potential new text entries in volume

In practice, about a third of the species and subspecies new to science are not accepted, which means roughly a 10% increase in the present text (2758 species). Some ten species have, so far, been removed from the existing accounts on the basis that they have been reported erroneously from Europe, or that they are the same (ie. synonymous with) as other species. In addition to these major changes, there is a large body of minor additions and alterations in the descriptions, chromosome numbers and geographical data.

I shall be very pleased to receive comments, queries or items of information (eg. mistakes noted, new records for particular countries). BSBI members are a 'users panel', to judge from remarks made to me at meetings about the Flora, and feedback from them is much appreciated. Exhibits of the revision work, with examples of the type of information that is being incorporated, were displayed at the 1984 and 1985 Annual Exhibition Meetings.

JOHN AKEROYD Botany Department, Plant Science Laboratories,
University of Reading, PO box 221, Whiteknights, READING RG6 2AS.

KINDRED SOCIETIES

From time to time we are asked for the addresses of other British botanical societies:-

BRITISH PTERIDOLOGICAL SOCIETY:

Hon. Sec. Mr A. R. Busby, 16 Kirby Corner Road, Cranley, COVENTRY CV4 8GD.

BRITISH LICHEN SOCIETY:

Hon. Sec. Miss F. J. Walker, Dept of Botany, British Museum (Nat. Hist.) LONDON SW7 5BD.

BRITISH BRYOLOGICAL SOCIETY:

Hon. Sec. Dr R. E. Longton, Dept of Botany, The University, READING RG6 2AS.

BRITISH PHYCOLOGICAL SOCIETY:

Hon. Sec. Dr M. J. Dring, Dept of Botany, Queens University, BELFAST, N. Ireland BT7 1NN. (tel: 0232 - 661111).

BRITISH MYCOLOGICAL SOCIETY:

General Sec. Commonwealth Mycological Institute, Ferry Lane, Kew, RICHMOND, Surrey TW9 3AF.

Dr A. J. S. Whalley, Dept of Biology, Liverpool Polytechnic, Byrom Street, LIVERPOOL L3 3AF.

CONTRIBUTIONS FOR

BSBI NEWS 43

**should be sent to: "BSBI News"
c/o Dept. of Botany, B.M. (N.H.),**

BEFORE JULY 18th.

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"BSBI NEWS" (ISSN 0309-930X) is published by the Botanical Society of the British Isles

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Typeset and Printed by: Springfield Press Ltd, Horsham. Tel: 0403 65246.