

B.S.B.I. NEWS

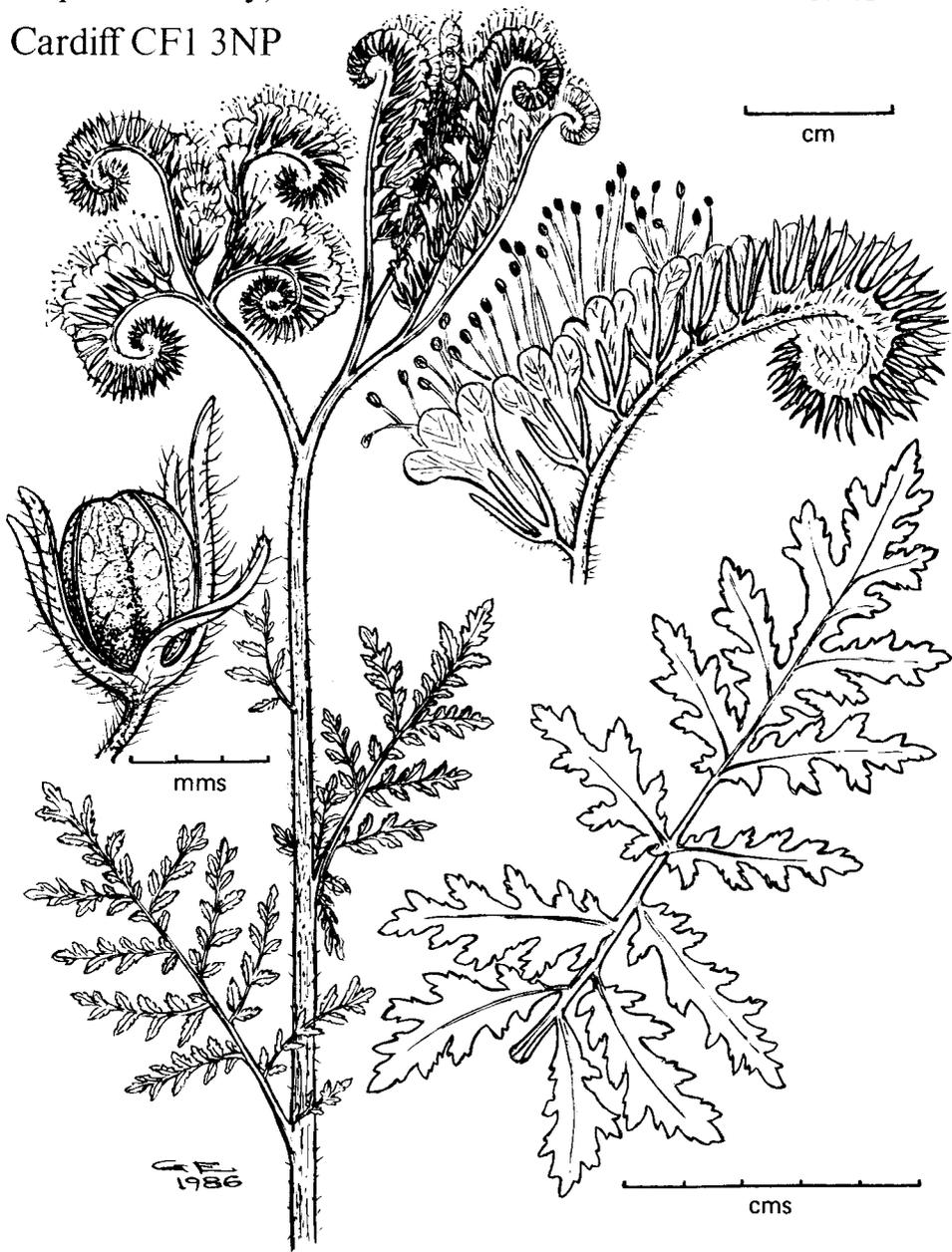
Edited by R. Gwynn Ellis

Dept. of Botany, National Museum of Wales

Cardiff CF1 3NP

Sept. 1986

No. 43



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COUNCIL MEMBERS 1986 - 1987

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REPRESENTATIVES ON COUNCIL, Rule 11:
Mr S. Beesley (Ireland); Mr H.J. Noltie (Scotland); Mrs J.A. Green (Wales).
Representing N.C.C. by invitation: to be appointed.
Minuting Secretary in attendance: Miss E.J. Rich.

CONTRIBUTIONS INTENDED FOR

BSBI NEWS 44

should reach the Editor before

28th October 1986

WILD FLOWER SOCIETY

The Wild Flower Society has great pleasure in congratulating the Botanical Society of the British Isles on being able to celebrate 150 years of existence under one name or another.

Its sesquicentenary coincides happily with the centenary of the Wild Flower Society, which has kept the same name ever since its inception.

No two Societies could have worked better together over all these years. They complement each other to their mutual benefit.

We have no doubt that the friendly regard and cooperation will endure, and are grateful for it.

Violet V. C. Schwedt

President

David McNeill

Chairman

Rowena Castle

Secretary

10 May 1986



Sesquicentenary Excursion on The Bluebell Railway, May 11th 1986.

Photo: E.G. Burt

IMPORTANT CORRECTIONS

In BSBI News 42: 24, the correct title for C.A.B.S. should read "The Conservation Association of Botanical **Societies**, and the correct telephone number is 01-674 8044.

In the 1986 Calendar and Field Meetings Programme, p.3, the date for the ANNUAL EXHIBITION, BRITISH MUSEUM (NAT. HISTORY), LONDON should read NOVEMBER 29.

EDITORIAL

It is with a considerable amount of apprehension that I offer this first issue of BSBI News to appear under my editorship.

Apprehension at taking over from a remarkable man, Mr Edgar Wiggins, who shaped News into a much loved publication that always seemed to have just the right blend of scholarship and humour and never failed to inform, amuse and stimulate.

Apprehension too, at presenting a "new-look" News, which for reasons of economy is now printed from camera-ready copy produced by computer. Increasing costs and the need to economise have forced the Society to take this necessary, but what some members may well call retrograde, step. I hope the appearance of this issue, while decidedly different, is not considered too unacceptable by the majority of members. Any comments would be appreciated.

For the technically minded, the camera-ready copy is produced on a BBC Micro-computer fitted with the Wordwise Plus word processor and printed on an Epson DX100 daisy-wheel printer using Anelia type-face. The next issue will hopefully be right-justified; some new software is being tested.

HON. GENERAL SECRETARY'S NOTES

As these notes go to print I have to report sadly that Ted Wallace died on July 23rd. Currently a Vice-President of the Society, Ted joined BSBI in 1932 and at the recent sesquicentenary celebration he was the longest-serving member present. His passing will be a very sad loss to his many friends in the BSBI and throughout the botanical world; an obituary will be published in Watsonia.

The Sesquicentenary

We were pleased to welcome representatives, including five Presidents, of kindred botanical societies at the *Conversazione* following the Annual General Meeting in May, when our sesquicentenary was celebrated. Arthur Wade, a BSBI member since 1915 wrote to let us know that he was with us in spirit although unable to make the long journey from New Zealand; Prof. Paul Richards who also sent a message of congratulations, was enrolled as a BSBI member in 1919 by G.C. Druce (whose bust featured as the centre-piece of the sesquicentenary Exhibition). John Dony was unfortunately unable to be present, and was missed - but we look forward to welcoming him at his 48th successive Autumn Exhibition Meeting in November.

We are very pleased to offer sincere congratulations to Mrs C.M.R. Schwerdt, President of the Wild Flower Society, on her award of the MBE in the Birthday Honours.

Many congratulations also to BSBI member Julia Berney, who is the winner of the first prize in the 1986 "Kenneth Allsop Memorial Essay Competition". Julia's essay described the marine life seen during extreme ebb tide under Mumbles Pier, which is not many miles from her home on the Gower Peninsula.

Olga Stewart tells us that, complying with instructions left by Mary McCallum Webster in her will, 20 of her friends were present when her ashes were scattered in Culbin Forest, in an area which Mary had herself selected before her death and shown to Ian Suttie as her chosen resting place. Olga reported that although she did not see **Moneses** there, it is just the right habitat, and now full of other Wintergreens and "I have never seen so many **Listera cordata**."

Past visitors to Rose Cottage will be interested to hear that the new owners, a young couple, although not botanists, are well aware of the interest of the plants in the garden, and do not plan many changes.

With her bequest to BSBI, Mary left the unsold copies of her Flora of Moray, Nairn and East Inverness, a few remaining copies of which are available from Margaret Perring, Oundle (see 1986 list) or from Mrs O.M. Stewart, 30/5 Colinton Road, EDINBURGH EH10 5DG.

We were sad to hear of the death of Geoffrey Grigson earlier this year. Although never a member of BSBI, his writing gave pleasure to many botanists. The Englishman's Flora is a treasury of information on English wild flowers, and very frequently provides answers to many requests in the Hon. Gen. Sec.'s postbag for the uses, local names and history of individual wild flowers.

Network Research

On behalf of Council the President wrote to Pierre Taschereau in Canada to thank him for his very competent and completed study of the Atriplex species of the British Isles, assisted by a BSBI Network Research Survey on Atriplex taxa in 1977, and reported in Watsonia 15: 183-209 (1985), "Taxonomy of Atriplex species indigenous to the British Isles". Pierre said in reply, "... I enjoyed working with the Vice-county Recorders. It is always fun and a great stimulus (as you would know with Rubus) to be able to share one's interests with others. I made many friends, and often stayed at the homes of BSBI members while collecting in different parts of the British Isles. This aspect of my Atriplex studies was by far the one that brought me the most satisfaction. I am happy to remain in touch as Atriplex Referee."

Another Network Research project with continuing repercussions is the Churchyard Survey. We were particularly pleased to hear from Roy Maycock that his interest in this led him to visit and record every Buckinghamshire churchyard, and that he has now been awarded a Durham M.Sc. Degree on his report and method of assessment of the sites. We send him our congratulations. {See also p.12. Ed.}

B.E.S. Small Grants Scheme

Botanical awards this year include: to Dr Nicholas Scott towards a survey of the flora of all subsidence ponds associated with Northumberland coal mines; to Susan Wilson towards a survey of the rhynes of conservation importance in the Gordano Valley, west of Bristol; to Anita Dunn to protect and study Stachys germanica in Oxfordshire in liaison with NCC; and to Richard Bailey to undertake a survey of the Charophyte flora of Surrey.

Body-builders

Research in eastern Europe in recent years has shown the presence of body building anabolic steroids in plants of the Chenopodiaceae. So the name Fat Hen for Chenopodium album may indeed have been correctly observed! On the other hand, Popeye's prowess has traditionally been ascribed to the iron in spinach, but this has been denounced as spurious, following the discovery that researchers, working on the iron content of spinach in the 1930's, had put the decimal point in the wrong place, so that its value had been over-estimated by 10%. T.J. Hamblin in the British Medical Journal 283: 1671, 1981, suggested that Popeye would have benefitted more from eating the tins than the spinach inside them!



Popeye...would have done better to eat the cans.

Reproduced by kind permission of the Editor, British Medical Journal.

Tailpiece

As I write these notes in the Dolomites, a solitary bee is 'grazing' the indumentum off the bracts of **Leontopodium alpinum**, and flying off with the long hairs rolled into a ball - for packing between the cells in the nest? - leaving the Edelweiss bracts glabrous green instead of the characteristic white felt.

MARY BRIGGS, M.B.E., White Cottage, Slinfold, HORSHAM, West Sussex RH13 7RG

{In addition to all the multifarious duties that Mary carries out on our behalf, she now has the added concern of her husband, Alan, who is still in hospital following a stroke earlier this year. Members will I am sure join with me in sending them both our very best wishes. Ed.}

RECORDERS AND RECORDING

Amendment No. 2 to Vice-county Recorders, December 1985

Address Amendment: v.c. 12 N. Hants Lady Anne Brewis, Benham's House, Benham's Lane, Greatham, LISS, Hampshire GU33 6BE

Vice-county Recorders - New appointments.

v.c. 92 S. Aberdeen Mrs U. Urquhart, 76 Abergeldie Road, ABERDEEN AB1 6EJ

Mrs Urquhart will be joint recorder with Peter Marren; Una Urquhart as the local resident and Peter Marren, although now living in the South, maintaining his interest in v.c. 92, collecting records for a Flora, and continuing to receive queries.

v.c. 94 Banff Mr John Edelsten, 12 Durn Avenue, PORTSOY, Banff AB4 2QJ

v.c. 95 Moray Dr N.M. Pritchard, Forester's Cottage, Durris, BANCHORY, Kincards. AB3 3BD

Referees and Specialists

A revised current list is circulated with this mailing.

Check-list for v.c. 72

Mary Martin, Recorder for Dumfriesshire, writes that she has completed a check-list for v.c. 72; this is the joint work of her late husband Stuart and herself up to 1984, with a few added Hawkweeds and Dandelions. As the records for the v.c. are not yet sufficiently complete for a Flora, this will be a simple check-list with no indication of frequency and no authorities. The Records Committee warmly commends the publication of a basic list such as this for a v.c. with no current list, as the first step towards a Flora. The list is to be published in the "Transactions of the Dumfries and Galloway Natural History and Antiquarian Society" and will be available as off-prints in paper covers, from Oundle Books or direct from Mrs Mary Martin, Rogate, Rankine Heights, Lochmaben, LOCKERBIE DG11 1LJ, for £2.50 (incl. p.& p.).

Please remember postage

Vera Gordon, v.c. 59 Recorder, wrote in the Spring: "I have had a plethora of botanical letters by every post this last fortnight. The sunshine and lengthening days must be affecting people despite the cold." We hope that all her enquirers **remembered to send s.a.e** - and all members writing to other Recorders and Referees as well.

May we also remind any member wishing to request information from a number of Recorders that it is **ESSENTIAL** that the Secretary of the Records Committee should first be contacted. Only in this way can Recorder's tasks be co-ordinated and as far as possible the overloading of hard-worked Recorders be prevented.

MARY BRIGGS, Hon. General Secretary

DAVID J. McCOSH, Hon. Secretary, Records Committee

THE NEW MAPPING SCHEME

Introduction

It is now 24 years since the publication of the Atlas of the British Flora in 1962; although new editions were published in 1976 and 1982 these only contained revisions of about 320 rare taxa.

The Records Committee of the Society set up a New Mapping Scheme Sub-committee which met for the first time on 20 December 1983. In the course of several meetings the sub-committee recognised that in relation to scientific information and conservation the most urgent need was to commence a study of increasing and decreasing taxa, and to do it in such a way that the Society could continue to monitor change regularly, independent of any longer term Atlas project.

The proposed scheme which follows has been accepted by Council and should be seen both as a step towards a new Atlas in the 1990's and the beginning of a close monitoring of possible changes in the British flora. It has also been accepted by the NCC who have agreed to finance it for a period of three years.

Aims of the Scheme

To survey the flora of a sample of the 10 km squares in Great Britain and Ireland (approximately 10% of the total). Firstly to provide an objective assessment of those species which have changed in frequency over the last 25 years; and secondly, to provide a network of 2 x 2 km squares (tetrads) from within the chosen 10 km squares, to be used in future to monitor changes in our flora.

Operation of the Scheme

Following statistical advice the 10 km squares for Great Britain have been chosen by taking as a starting point, square SV91 in the Isles of Scilly and taking every 3rd square North and East to cover the Country. The starting point for Ireland has been taken as the most south-westerly square of the Irish Grid and proceeding as for Great Britain. These squares are shown on the accompanying map.

Recording of the 10 km squares will be open to all interested botanists and full details and instructions will be provided later.

Within each 10 km square, the same three tetrads have been chosen, namely A, J & W, following standard BSBI nomenclature (see page 9). Recording of these tetrads will be confined to BSBI v.c. recorders or their appointed representatives and again full details will be provided later.

Organization of the Scheme

A Steering Committee, responsible to the Records Committee, will be in overall control of the Scheme. It will include as Chairman, D.A. Wells who will be responsible for general application and liaison with the NCC; C.D. Preston, for technical advice and liaison with BRC; and D. McCosh, for liaison with the Records Committee. It will also include National Co-ordinators for England, Ireland, Scotland and Wales.

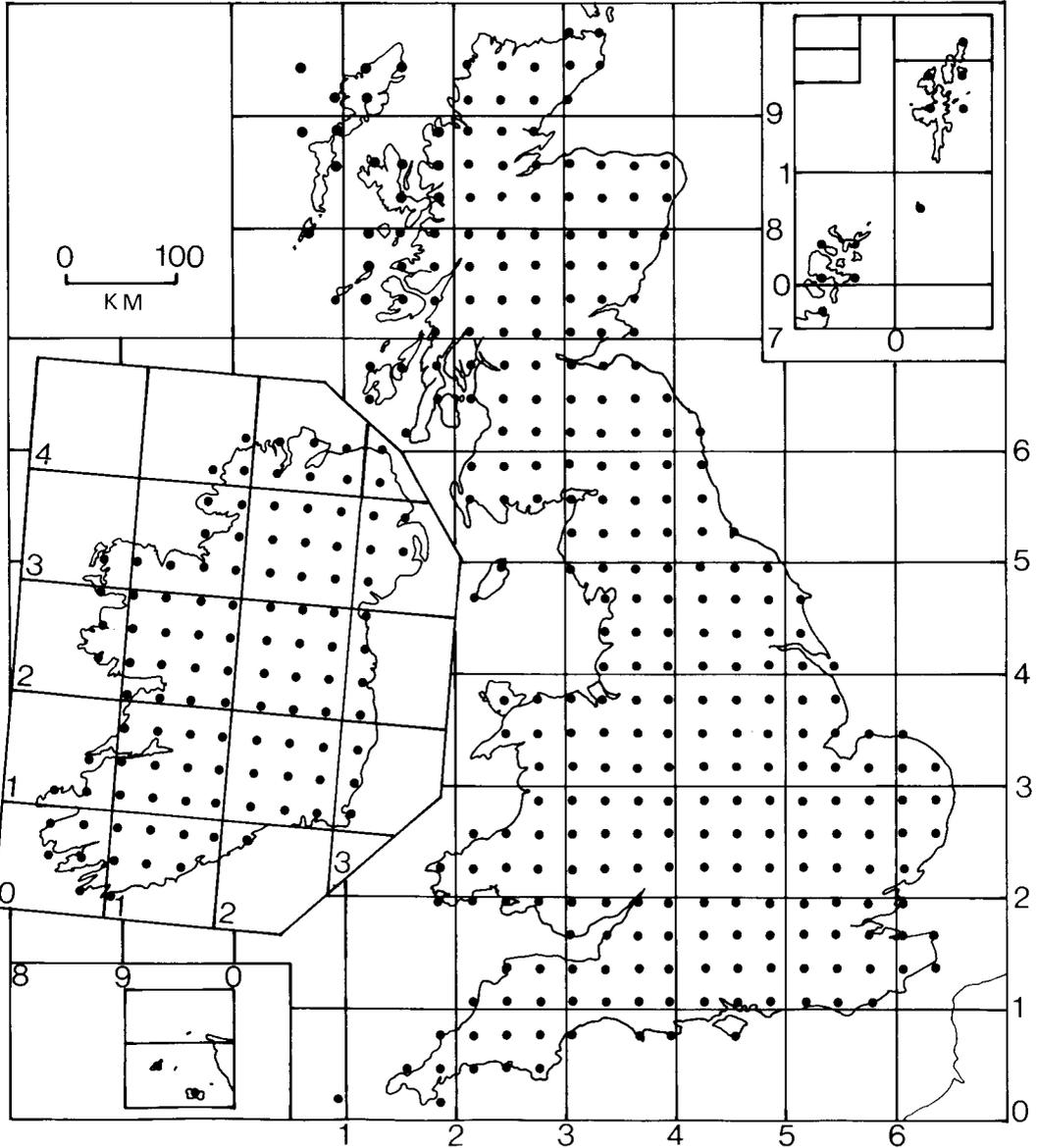
A full time Scheme Organizer will be employed for three years starting work 6 months before the start of field recording. His or her duties will include: preparation of detailed plans and instructions for the scheme; preparation of computer files; checking the non-taxonomic data on the incoming record cards; circulation of the interim results to recorders; and presentation of the results of the scheme.

Time Scale

The field recording will be carried out over two years, 1987 and 1988 and the results will be published as soon as possible after this.

It is anticipated, that once the results of this sample survey have been sorted out, work could start on a full-scale recording scheme, involving those species showing a marked increase or decrease, in all 10 km squares. It is also planned that the tetrads included in this Scheme should be resurveyed covering the same ground, at ten year intervals, thus providing a more sensitive estimate of change than would arise from a resurvey at the 10 km square level.

GWYNN ELLIS, Dept. of Botany, National Museum of Wales, CARDIFF CFI 3NP



Map showing 10 km squares selected for the New Mapping Scheme

STOP PRESS: Mr Tim Rich has just been appointed Scheme Organizer to the New Mapping Scheme.

TETRADS

Following the letters in BSBI News 36 and 37 on tetrad nomenclature, the Records Committee discussed the problem and agreed that the approved method of naming tetrads should be the one chosen by Dony as mentioned in News 37: 29. This is set out below.

E	J	P	U	Z
D	I	N	T	Y
C	H	M	S	X
B	G	L	R	W
A	F	K	Q	V

The BSBI strongly recommends that all members use this method. It will be followed in the new mapping scheme due to start in 1987.

OBSERVE, RECORD, THINK

What do you look for when botanizing? Have your powers of observation increased? Are you content to identify plants or have you other aims also? Do you keep records? Do you think about your observations?

1. Identification

Accurate identification is essential. Far better to become an expert on just a few plants, say one or two families, than be unreliable. Practise using keys, so that you can use one when needs be. The simplest keys I know are in the Concise Flora of Britain by F.A. Makins (1955). The keys in the Excursion Flora of the British Isles are not difficult. Matching specimens with illustrations, coloured or not, will work for the more distinctive species, but can be hazardous; one illustration cannot portray variation within a species.

2. Observation

Believe what you see; it is true! You are, however, not justified in assuming it is always true. Check further; use book information to give you ideas as to what to notice, but check for yourself - information in print is not always correct. In the main one observes what one is looking for; but the good observer spots anything unusual.

3. Records

It would be interesting to know how many botanists keep notes. I find the most useful record is a straightforward account of an excursion, describing the route and relating noteworthy observations to landmarks along the way. This means keeping notes 'in the field' and writing them up neatly very soon afterwards. Such notes continue to give food for thought and are a great aid to memory. It becomes possible to retrace one's steps years later and rekind particular plants if they still survive. This is the type of record I can least do without.

In addition a card index is useful, if one can cope with keeping it up to date. I kept one for all species, just for v.c. 61, for about ten years, recording the locality, habitat, date and whether in flower or fruit or neither. The sum of information on habitat requirements for each species is invaluable and may well differ for different parts of the country.

Crossing off names on a printed or cyclostyled list is the best way to collect a lot of information about the species occurring in an area, such as a 10 km square or a tetrad, but is likely to be of little use in remembering just what occurred where. Take care when compiling such lists; it is all too easy to strike through the name of the wrong species in error!

4. Herbarium specimens

There is no point in pressing easy-to-identify species nor in keeping any specimens for the sake of doing so. However, there is still a case for keeping herbarium specimens of some species, if conservation considerations allow. Taking one specimen and leaving one hundred should be a safe practice, but please check before picking. A reference collection is, I believe, indispensable in learning to identify some groups of plants e.g. Umbellifers, Sedges and Grasses. One voucher specimen of each rare or critical taxon should be kept in just one herbarium in a vice-county and there can surely be a general

understanding of where that should be. Specimens of critical taxa should be submitted to the appropriate referee for determination and the vice-county recorder will require confirmation of the identity of a local rarity.

5. Plant associations

It is valuable to know which species habitually grow together in your area. May I suggest the following exercise:

Select a habitat e.g. woodland, hedgerow, marsh, grassland, river bank or arable. In each habitat select a 'stand' of suitable size e.g. 3ft x 3ft, larger if few species are present or smaller if the number of species is great. Make certain that conditions are uniform within the area of each 'stand'. List the species present and their relative frequency: i.e. whether dominant, co-dominant, abundant, common, frequent, occasional, rare. For each 'stand' make notes concerning conditions i.e. type of soil, whether clay, sand or loam and whether the soil is dry, moist or wet; amount of light; aspect; if on a slope or by a hedge or wall.

One can train oneself to record species in a much larger uniform area, determined by natural boundaries e.g. a stretch of hillside.

You might wish to concentrate on becoming knowledgeable on one type of habitat. If there are marked differences of conditions within a habitat, carry out a plant association study at more than one 'stand' to discover the effect of such differences e.g. differences of lighting in a wood, by studying a plant association in deep shade, one in conditions of moderate lighting and one in conditions of maximum light.

Plant association studies provide a golden opportunity to learn to identify species in the vegetative state by using keys in The Wild Flower Key by F. Rose. Learn to identify a few species at a time in one type of habitat and so gradually build up a sound knowledge. A leaf collection for each type of habitat e.g. woods, hedges etc. would clearly be valuable. Being determined to identify all the species present may bring its own reward. Tom Dargie, a University research student, instructed to record all species in a foot square quadrat at Spurn, found Parapholis incurva (Curved Hard-grass), the first and only record for Yorkshire.

Habitat studies provide the information which is most in demand when potential Nature Reserves and Sites of Special Scientific Interest are under consideration.

May I wish you good botanizing. May you become a keen observer, and a careful recorder and may you have exciting thoughts which lead to yet more discoveries!

EVA CRACKLES, 143 Holmgarth Drive, Bellfield Avenue, HULL, N.Humberside HU8 9DX

Based on an article that first appeared in the Yorkshire Naturalists' Union Bulletin: 2, (1984), with the kind permission of the Editor.

PLANT RECORDS

This is a guest article in an annual series which is planned to be by different authors each time. Given a proof copy of the Plant records of the previous year to be published in Watsonia, one is instructed to produce some notes on the most newsworthy ones for the B.S.B.I.'s more rapid publication. I am delighted by the invitation, and not only because 1985 is one of the very rare years in which my own name appears as a contributor (of the second Welsh record of Lamium moluccellifolium, only a single casual plant though the published text omits to say so). I well remember in the mid sixties, when the Atlas of the British Flora was a new book, working my way through Plant records, which at that time were published in Proceedings, running them all down to a 10 km square with the help of a gazetteer and a set of Ordnance Survey maps and adding them in pencil to the printed maps in my copy.

There don't seem to be so many really remarkable records now but there are still some pretty good ones. Knowing Oenanthe silaifolia only as a plant of wet meadows in lowland south England, I am amazed to read of it on a slope in Derby. The similar O. pimpinelloides has its first correct Welsh record, and the amazing thing here is that it has not been found in Monmouth before, for it is quite plentiful in a part of Gloucs. not far away. The surprise element in the records of Orobanche alba in N. Somerset and Carex ericetorum in Northants is that both are from well botanized localities, Berrow dunes and Barnack Hills and Holes. I particularly like to see references to ancient sightings repeated; in this category are Vicia tetrasperma and Mertensia maritima in Kirkcudbright, in the same neighbourhoods as in 1843 and 1882 respectively, and Potamogeton coloratus in

Cheviot, where also seen in 1847. Some of the records to be published as new are themselves quite ancient and it would be interesting to know why *Anemone apennina*, *Petroselinum segetum* and *Calamintha nepeta*, found in Caernarfon in the 1930s, are only now finding their way into print. If these records are based on previously overlooked specimens, their location should be indicated. (See note below, Ed.)

A close examination of the published records gives a clear guidance how to proceed to any young botanist wanting to get his name into print: study difficult splits, or else develop an eye for hybrids. Either way, you can get to see plants which are not really all that rare in counties from which they have not been reported before, or maybe even get plants past the compilers of Plant records which they do not profess to understand themselves (some of the aliens allowed in seem to have used a similar back-door approach).

Valeriana officinalis subsp. *sambucifolia*, given as new to Caerns. (in 1929!) is in fact the common Valerian in Britain, as *Vicia segetalis*, given as new to Devon, is the common Common Vetch, usually appearing as a subspecies of *V. sativa*. *Alopecurus bulbosus* × *A. geniculatus*, found in S. Hants. in 1980, though published only now, is new to Britain, and I have heard of a later discovery of it in East Sussex. The same county has an unexpectedly first record of *Juncus acutiflorus* × *articulatus*, Druce's name for which, recently validated, shows that it can occur in S.E. England: *J. × surrejanus*. A second record appeared recently in Wild Flower Mag. 406: 7.

R. BURTON, Sparepenny Cottage, Sparepenny Lane, Eynsford, DARTFORD, Kent DA4 0JJ

(The old Welsh records referred to above were sent me by R.D. Tweed in 1984 after he had checked records in his old field notebooks against those in Flowering Plants of Wales and found several unpublished vice-county records. Ed.)

PROBLEMS WITH PUBLISHED SURVEYS

As a recorder for v.c 73 I was very disturbed to see a record for Kirkcudbrightshire in the *Poa angustifolia* paper in *Watsonia* 16: 31-36 (1986). This will have come from the "British Rail land survey" that was undertaken in 1977, instigated by the Nature Conservancy Council. When I received the list of plants that were supposed to have been seen on a 100m length of railway in v.c. 73, I wrote and asked that they should not be entered into the computer at Monk's Wood, as without voucher specimens, I did not consider it was a reliable list. First the grid reference 25/782.658., was nowhere near where there was, or ever had been, a railway; but by altering one figure of the 6 figure reference, it could refer to a stretch of disused railway east of Castle Douglas!

I queried *Poa angustifolia* at the time. *Poa annua* and *P. pratensis* s.s. were also recorded, but no *P. trivialis* or *P. subcaerulea*, both of which have been seen on the railway embankment. Among the other plants claimed to have been seen are *Crepis vesicaria*, (but no *C. capillaris*), *Senecio erucifolius*, *Pastinaca sativa*, *Bryonia dioica* and *Tamus communis*, none of which are Scottish plants. *Centaurea scabiosa* was also on the list, (but not *C. nemoralis*, a plant that is found on the railway) and *Ballota nigra*. Neither of these have been recorded in the south west of Scotland.

It is hard to believe that a short stretch of railway could produce so many county records, particularly as I and many other people have walked along the disused railway, and have not found any of the above.

OLGA STEWART, 30/5 Colinton Road, EDINBURGH EH10 5DG

Much consideration has been given to the procedures, principles and the problems implied by this letter, by both the Records and the Publications Committees. However the suggestion that, instead of altering the 6-figure grid reference to make it fit onto a railway, the 100 km reference should be checked, led us to reverse the 100 km numerals - it then reads 52/782.658. - on a railway line west of Bury St. Edmunds, where all the queried plants would be expected....

This could well be the solution to this problem, but we would make a plea for organizers of this type of survey to report such startling "new records" as the above to the appropriate v.c. recorder, so that the plants can be confirmed before publication, and considered for "Plant Records" in *Watsonia*. The practical use of recording by vice-counties as well as by grid references is also demonstrated here!

MARY BRIGGS, White Cottage, Slinfold, HORSHAM, West Sussex RH13 7RG

OENANTHE PIMPINELLOIDES L. IN S. HANTS.

Last year there were two recordings of *Oenanthe silaifolia* in v.c. 11 which would be exciting finds if they could be confirmed. This year one of the sites was revisited by Alison Bolton and the other by myself. We are in no doubt that the plants are the relatively common *O. pimpinelloides* except for one characteristic; the plants have a hollow stem. Coincidentally another botanist, David Pearman, whom I met had noticed the same thing in another area. All the Floras, including the BSBI's *Umbellifers* handbook, state that *O. pimpinelloides* has a solid stem. Is this an error which has been copied from one book to another, or do we not have this species locally? Could someone give an authoritative statement on this point?

The stem wall is much thicker than *O. fistulosa*, more like the stem of *O. lachenalii*, but without the pith. I do not know of a site for *O. silaifolia* locally, nor have I had a chance to look at herbarium specimens. R. Good in his *A Concise Flora of Dorset* (1984), reports that *O. silaifolia* is "recorded very uncommonly in marshy places ... but its detailed distribution is uncertain." I wonder if the uncertainty is in the identification.

ROBIN M. WALLS, 16 Leigham Vale Rd, Southbourne, BOURNEMOUTH, Dorset BH6 3LR

A COMPUTING PACKAGE FOR BBC MICRO-COMPUTERS

MICRO-MAP BBC is a complete distribution mapping package for use on the BBC micro-computer system (see *BSBI News* 42: 11 (1986) for an alternative package. Ed.). It is designed for use on a standard BBC-B micro-computer equipped with a disc-drive and a dot matrix printer. No enhancements to the BBC-B are required, although use of a model B+ gives slightly improved display characteristics.

The package is menu-driven and versatile in that the data files for species, base map, names etc. are entirely determined by the user, as is the maximum number of attributes to be used. Data are stored by grid unit, utilizing the National Grid system, in a standardized form allowing updating of the database *in situ*, such that presence/absence records for 2,520 species (enough for British vascular plants) occupy 320 bytes of disc space. This allows records, each of up to 2,520 species, for about 300 grid units to be stored on a 100kb disc, or 615 on a 200kb disc.

Maps of various types can be drawn on the screen and printed using any EPSON-compatible dot matrix printer. The package includes full instructions and sample files and further information can be obtained from the author.

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THE FLORA OF BUCKINGHAMSHIRE CHURCHYARDS

The objective of the recent BSBI Network Research project on Churchyards and other Burial Grounds was 'the identification of the botanically most valuable 10% churchyards or other burial sites in each county ...' (Mary Briggs in *BSBI News* 29: 23-24 (1981)). Without knowledge of all such sites in a county it is difficult to assess which 10% are better than the other 90%. Also, without an objective method for comparison, the task is more difficult. To my knowledge, there are 231 churchyards in Buckinghamshire together with an unknown (but large) number of other burial sites, which include cemeteries and burial areas around nonconformist churches for example. All of the churchyards have been visited at least twice, to include growth at different seasons, and the plants found listed. Some three years were spent collecting data whilst, prior to that, recording had been carried out by many workers who collected data on a tetrad basis. From these data the percentage of tetrads from which any species was recorded could be calculated and these I used to determine what I called the Index Value for each species. Hence, a scale of Values for all species found in churchyards was produced. In general terms this scale of Values is as follows:

- (a) Those species occurring in less than 1% of the tetrads in the county have an Index Value of more than 2.
- (b) Those species occurring in 1 - 10% of the tetrads in the county have an Index Value between 2 and 1.

(c) Those species occurring in more than 10% of the tetrads in the county have an Index Value of less than 1.

By totalling the Index Values for a particular site an Index Score was determined. For Buckinghamshire churchyards Index Scores ranged from 35.542 to 0.701, with 25 having a score of greater than 20.000. These were considered to be the 10% best sites. Unfortunately, many 'other burial grounds' in the county have not yet been located, nor yet visited; some have. This may well mean that the best churchyards do not necessarily all rank in the top 10% over all; it will be a daunting task to find out!

I hope to prepare a paper for *Watsonia* with more details of the survey, but if any one is interested in using the method for comparing sites - churchyards or otherwise - I would be pleased to hear from them.

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NOTES AND ARTICLES

MARSH STITCHWORT NEAR HYDE PARK

Old kitchen sinks and similar containers are frequently used to grow garden plants in Central London, and often stand on the pavement where there are basements instead of front gardens. In 1985 *Stellaria palustris* (conf. D.H. Kent) was an abundant weed in some of these sink gardens in Rutland Gate, S. Kensington, growing very robustly in spite of the dry conditions.

Stellaria palustris now appears to be extinct in some south-eastern counties, including W. Kent, E. Kent and Essex, although it still occurs rarely in Middlesex, and is holding its own in W. Sussex.

Weeds introduced with peat.

This occurrence of Marsh Stitchwort fits in with other sightings I have been collating for some time i.e. weeds introduced into shrubberies, flower beds etc., from peat or similar dressings. Such weeds often become established in quantity.

Introductions via peat are of considerable importance. They can result in the spread of calcifuge native plants into parts of Britain where they are rare or even unknown. This movement will, of course, tend to be of northern or western plants towards the south and east.

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BRISTLY OXTONGUE, PICRIS ECHIOIDES L., A HAZARD FOR INSECTS?

Bristly Oxtongue is well named, the whole plant feels coarse to the touch. Plants use hairs and bristles not only to help reduce transpiration but also as a defence against insects. The hairs on *Picris* are stiff, but instead of ending in a point, end in a group (3-4) of recurved spines, the whole hair resembling a mini grappling hook. They cover the whole of the plant, interspersed with a few simple hairs.

As an entomologist, apart from noticing the way the plant was spreading in south-east Essex, I took very little interest in it until in July 1985 I saw a dead Damselfly (Odonata, *Ischnura elegans* van der Linden) stuck to the stem. It was clear that the "grappling hook" hairs had pierced the wing membrane and hooked round a vein, trapping the unfortunate insect.

I started systematically searching other plants in the same area. There were a large number of the same species of Damselfly about and many other insects. First I watched a female Damselfly with a male in close attendance move too close to a *Picris* stem and get caught by one wing. As it flapped, a second wing got caught, completely trapping the insect. The male attempted to grasp the female, clearly not to release it but to take advantage of the female's predicament! However his plans went wrong when he strayed too near the plant stem and was caught fast by the wings. There they stayed, unable to get free. When I released them from the entangling plant hairs they flew off, apparently unaffected by the small tear in their wings.

With additional help, more trapped insects were found when the plants were searched. These included several small moths (Pyralidae, *Agriphilla stramineella* D & S.) as well as a number of Soldier beetles (Cantharidae, *Rhagonycha fulva* Scop.). The moths were held firmly by the wings with the "grappling" hairs piercing the wing membrane and hooked over

a wing vein. Several were dead but I found, and released, two live moths. The beetles were trapped in a rather different way. They were firmly held by one or more leg. The legs were caught in between two or more "grappling" hairs. Several dead beetles were found as well as some still struggling.

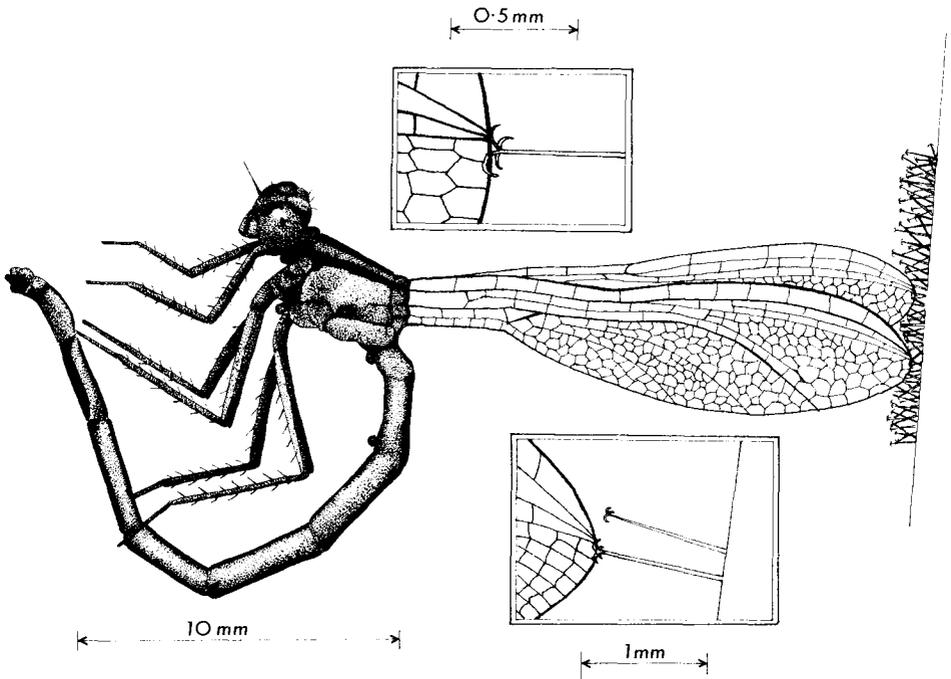
Damselflies have a particularly weak, fluttery, flight and with the slender wings seemed particularly at risk from *Picris*. They were even more vulnerable when there was a strong wind which could blow them against the plant. Subsequently when I searched the plants I did not find many more insects trapped and began to wonder if there was a point in the growth of the plant when it was more "dangerous" to insects. However the observations were too few to come to any real conclusions.

It is difficult to see any advantage for the plant in trapping insects although the hairs would perhaps deter insects from climbing up the stem towards the flowers or seeds; there is certainly no advantage for the insects! The *Picris* plants were growing on disturbed ground forming part of banks alongside a creek in a fairly exposed situation.

Observations are now needed to see if trapping insects by *Picris* is more widespread or peculiar to this Essex locality.

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[Have members observed this interesting phenomenon in other parts of the country? Ed.]



Isnura elegans trapped on *Picris* stem. del. H.J. Reynolds © 1986

OBSERVATIONS ON THE BEHAVIOUR OF DOWNLAND MAN

On May 27th 1986 we were surveying the ecology of Scottsquar Hill Down, Gloucestershire. It was a brilliant day, the sun shone and we were rewarded with sightings of most of the localized invertebrates associated with this habitat.

The day was somewhat marred however by the appearance of a number of large vertebrates

conforming to the character of *Homo sapiens* L. ssp. *kleptoprimum*. There appears to be more than one variety.

The juvenile form canters mindlessly, collecting armfuls of *Primula* flowers with hardly a change in pace, usually under the approving gaze of nearby mature adults, to whom they may be presented. The interest of the juvenile form however is seldom sustained, when the flowers are thrown away.

The mature adult often harvests flowers of *Primula* systematically, occasionally with the appearance of undertaking scientific study. This is a mobile form that usually retreats rapidly from the site with furtive sideways glances, and flowers bunched dorsally. The male is hardly known. When approached, many head for protection in wheeled mechanical contrivances bearing numbers eg. C413 FTG.

The subspecies is evidently localized, but does not appear to be threatened.

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WICKED WOODCUTTING?

Complaints of felling trees are entertaining to read (BSBI News 39: 4; 40: 3) and are an often overlooked part of the history of human nature. At least as far back as Herbert de Losinga, Bishop of Norwich, in c. 1100, the conservation of trees and woods has been a sentiment to which writers have appealed.

However readers should be warned of the tendency among scholars to confuse the history of the things that people have said about woodland with the history of woodland itself; and to seize upon complaints, such as those quoted, as being evidence of diminution of woodland. Whatever it was that generated the complaints about Glyn Cynon in the late sixteenth century, it was not the destruction of the woods. Two centuries later people were still complaining that the Cynon woods were being destroyed; but the woods in fact flourished all through the nineteenth century and were destroyed (without, as far as I know, any further complaint) in the twentieth. From the Maryland example, it can hardly have been possible, save in the mind of a rhetorician, to destroy an entire wood by making barrels; a very specialized craft for which only a small proportion of trees are suitable.

Tree-felling complaints, taken at face value, belong to the history of the human mind rather than the history of woodland. As modern experience shows, people are often outraged by minor routine woodcutting but may take no notice of real destruction. Bards, like the rest of us, forget that trees grow again; nearly every ancient wood in Britain has been felled many times in its history and it is a classic fallacy to mistake woodcutting for the destruction of woodland.

OLIVER RACKHAM, Corpus Christi College, CAMBRIDGE

{The original quotation and comments were noting early examples of a conservationist attitude, rather than being concerned with whether the felling to which the onlookers objected caused permanent destruction or was just part of normal management. Ed.}

ALIENS AND ADVENTIVES

ADVENTIVE NEWS 34

compiled by Adrian L. Grenfell

ALIEN RECORDS 2

In normal circumstances only 1st and 2nd vice-county records will be included in this annual list of records considered inappropriate for inclusion in Watsonia. Records of unusual interest may be dealt with more fully, in which case additional detail may be required. An asterisk (*) before the record indicates a new vice-county record. Records are arranged in the order given in the List of British Vascular Plants by J.E. Dandy (1958) and his subsequent revision (Watsonia 7: 157-158 (1960)). With the exception of collectors' initials, herbarium abbreviations are those used in British Herbaria by D.H. Kent and D.E. Allen (1984).

46/7 *Ranunculus sardous* Crantz 77. Lanarks.: Glasgow, GR 26/52.66. Waste ground, King George V Dock. P. Macpherson & E. Teesdale, July 1985. 77. Lanarks.: Kelvinhaugh, Glasgow, GR 26/55.66. Waste ground. A.McG. Stirling, October 1985. 1st records since 1923. (Frequent introduction in dockland areas and conspicuous because of its late flowering).

- 67/jun **Brassica juncea** (L.) Czern. *49. Caerns.: Portmadoc, GR 23/5-.3-. G.C. Druce, 1919. 1st record. *77. Lanarks.: GR 26/6-.5-. H.J. Noltie, 1985, GL. 1st record.
- 68/1 **Erucastrum gallicum** (Willd.) O.E. Schultz. 44. Carms.: Cross Hands, GR 22/56.11. Roadside waste ground. Mrs A.M. Pell, 1985, det. R.G. Ellis. 2nd record. *50. Denbs.: nr Ruthin, GR 33/16.57. Single plant on disturbed ground by Offa's Dyke path. J.A. Green, 1985, NMW, det. R.G. Ellis. 1st record. *77. Lanarks.: nr Garnkirk, GR 26/67.67. J.H. Dickson & H.J. Noltie, 1985, GL. 1st record.
- 83/umb **Iberis umbellata** L. *77. Lanarks.: nr Hamilton, GR 26/69.51. Refuse tip. P. Macpherson & E.L.S. Lindsay, August 1985, herb. P.M., det. E.J. Clement. 1st record. 77. Lanarks.: Wilderness, Glasgow, GR 26/59.71. Refuse tip. P. Macpherson, September 1985, herb. P.M., det. E.J. Clement. 2nd record. (A frequent casual, often persisting).
- 128/1 **Vaccaria hispanica** (Miller) Rauschert *52. Angl.: Menai Bridge, GR 23/5-.7-. Miss A.J. Armitstead, 1931. 1st record.
- 146/1 **Herniaria glabra** L. *76. Renfrew.: Paisley Cross, GR 26/48.64. Flower beds. A.J. Silverside, 1979. 1st record. Persisted into 1980 but now gone?
- 154/4 **Chenopodium album** subsp. **striatum** (Krasan.) J. Murr. (C. strictum Roth) 77. Lanarks.: Glasgow, GR 26/52.66. Roadside, King George V Dock. P. Macpherson & E. Teesdale, 1984, herb. P.M., det. J.P.M. Brenan. 1st record since 1924.
- 154/7 **Chenopodium opulifolium** Schrad. ex Koch & Ziz *77. Lanarks.: Meadowside, Glasgow, GR 26/55.66. Roadside. A.McG. Stirling & P. Macpherson, 1979, herb. P.M., det. J.P.M. Brenan. 1st record.
- 154/pro **Chenopodium probstii** Aellen *77. Lanarks.: Glasgow, GR 26/56.65. Waste ground, Queen's Dock. P. Macpherson, 1980, herb. P.M., det. J.P.M. Brenan. 1st record. 77. Lanarks.: Glasgow, GR 25/53.66. Waste ground, King George V Dock. P. Macpherson, 1984, herb. P.M., det. J.P.M. Brenan. 2nd record. (Still present in 1985).
- 156/6 **Atriplex hortensis** L. *47. Monts.: Berriew, GR 33/1-.0-. H.H. & Miss S. Haines & R.D. Tweed, 1938. 1st record.
- 191/4 **Melilotus indica** (L.) All. 77. Lanarks.: Cathkin, Glasgow, GR 26/62.58. Refuse tip. P. Macpherson, 1984, herb. P.M. 1st record since 1919 (6 plants).
- 192/ech **Trifolium echinatum** Bieb. 59 S. Lancs.: St. Helens, GR 33/51.95. Neglected flower beds on railway station. Miss V. Gordon, 1985, conf. E.J. Clement. 2nd record - last seen 1913.
- 321/1 **Fagopyrum esculentum** Moench *93. N. Aberdeen: Glass, GR 38/44.39. In kale crop. D. Welch, 1985. 1st record. Probably introduced with pheasant food as **Helianthus annuus** also present.
- 396/1 **Anchusa officinalis** L. *49. Caerns.: Lledr Valley, GR 23/7-.5-. R.D. Tweed, 1951. 1st record.
- 533/cor **Chrysanthemum coronarium** L. *43. Rads.: Llanyre, GR 32/04.62. Appeared on cultivated soil in garden with **Agrostemma githago**. R.G. Woods, 1985, det. R.G. Ellis. 1st record.
- 544/10 **Centaurea solstitialis** L. *52. Angl.: Gallows Point, GR 23/5-.7-. Miss A.J. Armitstead, 1926. 1st record.
- Carthamus tinctorius** L. *77. Lanarks.: Wilderness, Glasgow, GR 26/59.71. Refuse tip. P. Macpherson, 1980, herb. P.M., det. E.J. Clement. 1st record.

683/8 **Bromus rigidus** Roth *5. Somerset: Dunster Beach, GR 21/99.45. Fixed sand dunes on sea side of beach huts. R.G.B. Roe, 1984, det. P.J.O. Trist. 1st record.

703/1 **Polygonum monspeliensis** (L.) Desf. *49. Caerns.: Llanberis, GR 23/5-.5-. Miss Cobbe, 1919. 1st record.

MIXED BAG

Campanula rhomboidalis L.: Sunken lane 400m from Knock, Cumbria, 1981. F.J. Roberts' "very scrappy piece" was named cf. **rhomboidalis** by E.J. Clement in 1983 and the identification confirmed in 1985 on material grown on by Mr Roberts (**herb. F.J.R.**). The single plant at Knock grows near the base of the bank, so that its flowering shoots project into the lane and are vulnerable to damage by passing vehicles. According to the RHS Dictionary of Gardening, **C. rhomboidalis** has been grown in British gardens since 1775; it is illustrated in Anthony Huxley's Mountain Flowers (Blandford Press). The record appears to be only the second for Br.

Cardamine glanduligera O. Schwarz: Growing with a large number of naturalized aliens in the grounds of Warley Place, Essex, 1986, Dr S. O'Donnell, who writes "...recorded in the Flora of Essex as **Dentaria bulbifera** although I am certain that this is an error. The plant keys perfectly to **Cardamine glanduligera** in the Flora Europaea key and it fits the description there although a high magnification is needed to see the ciliate margins of the leaflets". Certainly the identity of the specimen sent to me is correct but the very considerable morphological differences between the two taxa lead me to wonder if a further search of the area might reveal that both are present.

Phacelia tanacetifolia Bentham: Waste ground nr Queen Elizabeth Hospital, Edgbaston, Birmingham, 1985. Professor J.H. Fremlin, det. ALG. Also ten plants on edge of disused railway line, Gunton, Lowestoft, Suffolk, June 1986, E. Beaumont, conf. ALG. G.M.S. Easy's drawing which appears on our cover, should help dispel the aura of mystery which seems to surround this plant!

Silene armeria L.: Single plant appeared spontaneously in an Aylsham, Norfolk garden 1985. Comm. P.G. Lawson, det. E.J. Clement. This freely-seeding annual from C., S. and parts of E. Europe with its dense corymbs of magenta flowers and large glaucous leaves is an attractive garden item which occasionally escapes.

Trifolium angustifolium L.: In field manured with wool shoddy at Newton Hill, Wakefield, W. Yorks., with **Xanthium** spp., **Sisymbrium irio** and other common wool aliens, 1985. J. Martin, det. ALG.

Veronica peregrina L.: Weed in rose beds, Danson Park, Bexley, W. Kent, 1985. J.R. Palmer.

Once again I thank you for your specimens and correspondence. 1986 has already brought in a spate of interesting records and I look forward to writing up more of these in due course. Meanwhile, good hunting!

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HEDGE VERONICA (HEBE × FRANCISCANA (Eastwood) Souster)

Hebe × franciscana appeared on the desk of the Editor of the Gardeners' Chronicle in 1859, a gardener signing himself 'Devonian' had sent a specimen of the cross he had made. This is the first known record of this cross between **Hebe elliptica** and **H. speciosa**, both from New Zealand. The Royal Horticultural Society in 1860 distributed 70 plants of this cross under the name of **Veronica decussata** Devonia: but who 'Devonian' was nobody knows.

Around this time Isaac Anderson-Henry of Maryfield near Edinburgh made the same cross and he named his plant **Veronica lobeloides**. The variety **Hebe × franciscana** 'Blue Gem' came later in 1868, as a result of a cross made by the Salisbury nurseryman H.W. Warren. Because **Hebe × franciscana** stands up well to the strong, salt laden winds, it was found ideal to use as protection for crops on the Isles of Scilly and it was here that it got its name, the Hedge Veronica. **Veronica elliptica** arrived in Britain in 1776, to be followed in 1835 by **Veronica speciosa**.

This, the largest genus of evergreen New Zealand shrubs, was separated from *Veronica* in New Zealand in 1926 and from then on has been called *Hebe*.

Hebe 'Lewisii' was discovered in 1881 by Mr J.B. Armstrong of the Botanic Gardens, Christchurch, growing wild near the sea at Timaru, South Island, New Zealand. It had been around for some time and the story is that Mr Lewis, a nurseryman in Timaru, made the cross and named it *Veronica* 'Lewisii'. By making the cross again at Christchurch it has been proved that the parents are *Hebe elliptica* and *H. salicifolia*, both native of South Island. It is known that there was trading in plants between Guernsey and New Zealand in the latter half of the 19th century and it is possible that this variety of *Hebe* could have come in this way, and was distributed from there. *Hebe* 'Lewisii' is still found growing wild near the sea in Guernsey today.

Hebe 'Autumn Glory' has yet to have its parentage proved by carrying out the same cross again. It was raised at Smith's Daisy Hill Nursery at Newry, Co. Down and is from a seedling found at White Abbey, Tobacoran. It seems that *Hebe pimeleoides* could be one parent, but suggestions as to the other parent have not been tied up as far as leaf size, stem and flower colour, and they have ranged from *Hebe albicans* to *H. elliptica*, but the most likely parent could have been *H. × franciscana*. It now remains for someone to make this cross.

(With acknowledgements to Messrs F.C. Richards, L.J. Metcalf, W.J. Bean and other sources, including personal research.)

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Mr Chalk is Chairman of the recently formed *Hebe Society* and further information about this Society can be obtained from: Mr V. Haywood, Hon. Treasurer, The Hebe Society, 1 Woodpecker Drive, HAILSHAM, E. Sussex BN27 3EZ.

OROBANCHE CRENATA Forskål

This attractive pernicious weed of the Mediterranean area, has been reported as a casual in this country very infrequently. The earliest records I have traced were from a field of beans near Charlton, Gloucs. in 1845, and subsequently on peas at Stroud in 1863. On both occasions it was recorded as *Orobanche caryophyllacea*, presumably on account of its scent. The same county was again host to this species in 1905, on vetches at St. Philip's Marsh, Bristol. More recent records include a specimen from Cholsey, Berks. on *Pelargonium* (H.J.M. Bowen, *A Flora of Berkshire* (1968)), and a specimen at Kew from a garden in Upminster, Essex (1951). In 1975 the plant was reported from another garden in this area and a small colony was located in a marshy field corner less than half a mile away by Dr. K.J. Adams (*Watsonia* 15: 161 (1984)). This colony steadily increased in size, the population in 1982 was of c. 200 plants. The following year the main area of the colony was ploughed and less than ten plants flowered. I have failed to refind the plant since. The hosts at this site were *Vicia tetrasperma* and *V. hirsuta*.

This species may appear elsewhere, the plant reported as *O. caryophyllacea* in *BSBI News* 40: 28 (1985) by S.L.M. Karley was of this species and a record of *O. rapum-genistae* on *Vicia faba* from a Herefordshire garden in 1968, probably was also.

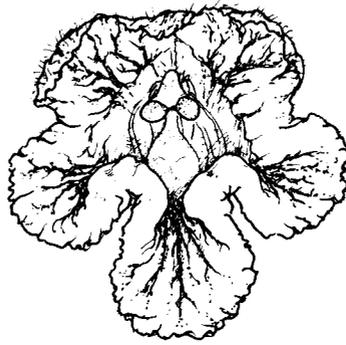
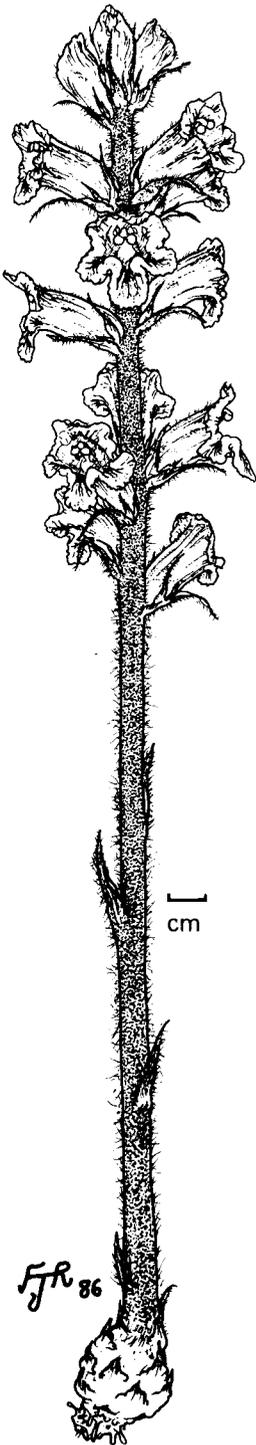
The plant can be distinguished from *O. minor* by its strong carnation scent, larger flowers (20-30 mm) with divergent lips and more villous stems and bracts. Further records and material suspected to be this species would be gratefully received (postage refunded).

F.J. RUMSEY, Dept. of Botany, University of Manchester, MANCHESTER M13 9PL

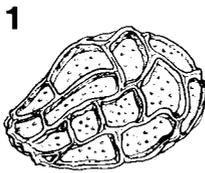
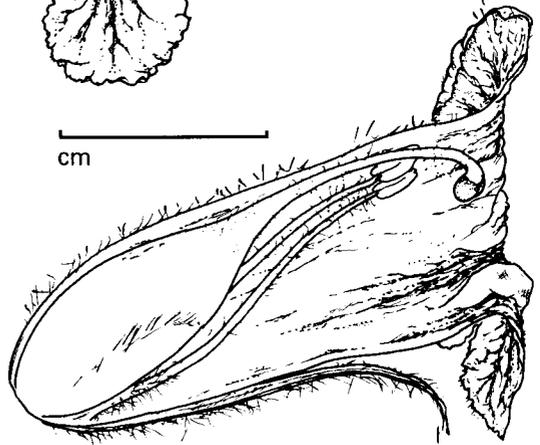
CROCUS VERNUS (L.) Hill

The notice of the appeal to save the Inkpen Crocus field in *BSBI News* 40: 25 (1985), re-aroused my interest in *Crocus vernus*. This species grew in two fields near Beverley, S.E. Yorks., in the nineteenth century, these fields being ploughed up during the 2nd World War. In 1892, J.J. Marshall who was both an amateur botanist and pharmaceutical chemist wrote to *The Naturalist* concerning these Crocus fields, saying that *C. vernus* was growing in profusion and that tradition had it that this Crocus had been cultivated there; the style and stigma of the plant, under the name of saffron having been in considerable demand in earlier times "when the physician's art was in its infancy" for various purposes, especially as domestic remedies in measles etc.

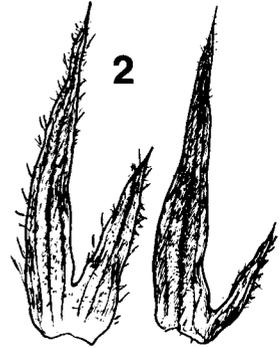
I have also found that there is a field-name 'Saffron Garth', near the church in the



cm



1



2

mm 5

1. Seed x 100

2. Calyx

Orobanche crenata Forsk. del. F.J. Rumsey © 1986

village of Winestead in Holderness, S.E. Yorks. Presumably the climate hereabouts was unsuitable for cultivation of *C. sativus* and some other species of *Crocus* was grown.

The garden historian John Harvey, researching a mid-fourteenth century gardening treatise, found instructions for cultivating saffron, the recommended time for setting the corms making it certain that a spring-flowering *Crocus* was being used and not an autumn-flowering one, as in *C. sativus* (pers. comm.).

Clapham, Tutin & Warburg (1962) gave the habitat for *C. vernus* as "meadows and pastures" where it is naturalized. Presumably it could not have arrived in such places by accident nor would it have been planted as an ornament. The Atlas of the British Flora (1962) gives eight 10 km squares in Britain where the species still occurred and had long been known. Has anyone discovered any information concerning the history of such fields?

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COTULA AUSTRALIS (Sieber ex Sprengel) Hooker fil.

In April 1985 I found, growing in a "dirty" field edge in St. Mary's, Isles of Scilly, a number of plants of the small composite *Cotula australis*. This was determined for me by Eric Clement from a specimen I brought back. This year, in April 1986, I was pleased to find it still in the same place, growing with *Erodium* spp., *Montia fontana*, *Stachys annua*, *Crassula decumbens* etc. Lousley's Flora does not mention this plant and I believe it is new to Scilly. It would be nice to think that it may become a regular feature of some of the field edges there.

More generally, I have to confirm reports that the bulb-fields are becoming sadly clean of the weeds that used to enrich them. Local botanists say that *Ranunculus marginatus*, previously common on St. Martin's, is now extinct there. The less attractive *R. muricatus* is, however, reasonably widespread on St. Mary's and indeed I saw much more of it this year than in 1985. In a few fields, *Ipheion uniflorum* is abundant.

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HELICHRYSUM PETIOLATUM (L.) DC.

BSBI News 41: 14 (1985), records the occurrence of *Helichrysum petiolatum* (L.) DC. in Worcestershire. This name was probably used in error. The plant commonly known by that name is correctly known as *H. petiolare* Hilliard & B.L. Burt. This plant is indigenous in the mountains of the southern and eastern Cape Province of South Africa (Hilliard 1893), but is often cultivated in Europe, usually as a summer "bedding" plant. In Flora Europaea 4: 131, the plant is said to be naturalized in W.C. Portugal; the horticultural synonym *Gnaphalium lanatum* is also cited. Curiously the plant appears to have been omitted from the R.H.S. Dictionary of Gardening Ed. 2. Hilliard and Burt (1973) have pointed out that *H. petiolatum* (L.) DC. which is based on *Gnaphalium petiolatum* L., is a species of *Stachelina* endemic to Crete. This plant is rarely (if ever) cultivated, and is unlikely to occur as an "escape" in Britain.

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Hilliard, O.M. and B.L. Burt (1973), Notes on some plants of southern Africa chiefly from Natal : III. Notes Roy. Bot. Gard. Edinb. 32: 357.

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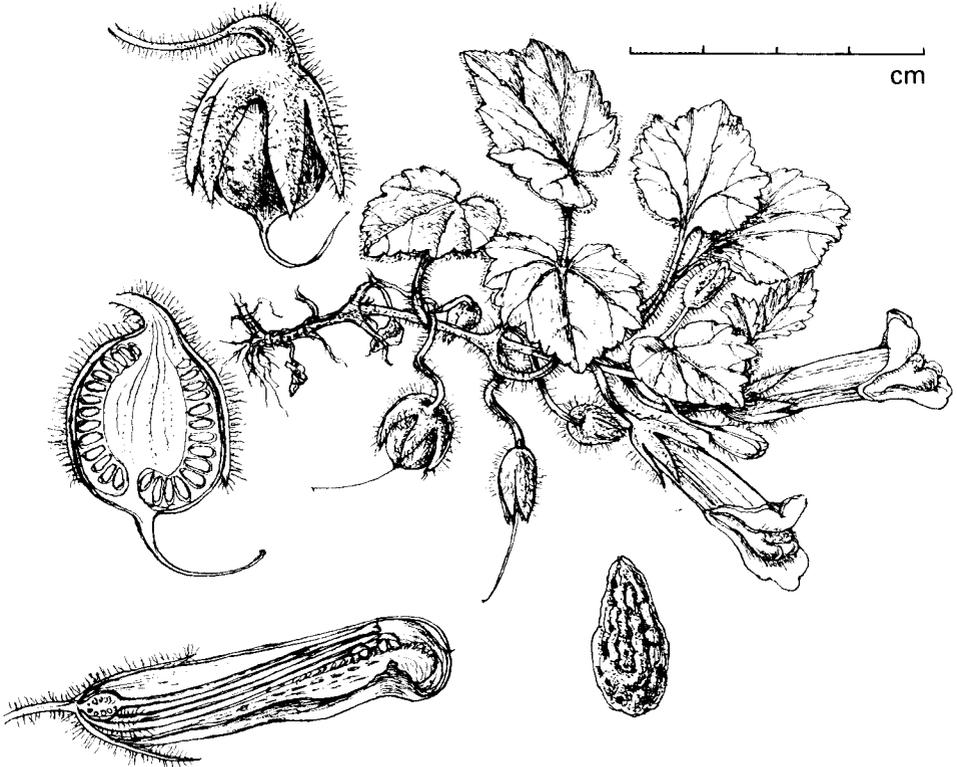
ASARINA PROCUMBENS Miller

I am grateful to Mrs E.M. Palmer for sending a cutting from the Halifax Evening Courier, November 1984, reporting the discovery of a new Calderdale site for this plant, and for reminding us that in 1969, BSBI supported the conservation of a similar site in Nottingham. Conservation action for a naturalized alien species is very unusual, but when that colony was threatened in 1969, David McClintock, then BSBI President, had known it as a most impressive colony since the mid-1960s; he described it as "spectacular" and wrote that the plant "burgeons and freely seeds itself on this inhospitable vertical sandstone

cliff in the middle of industrial Nottingham". This site is paralleled by similar flourishing colonies on vertical walls in Halifax and Hebden Bridge, where Frank Murgatroyd has found it well established on old retaining walls - in one case an old railway wall by a carpet mill.

Asarina procumbens, illustrated for us here by Pat Donovan, is a native of the southern Mediterranean, and is grown in gardens in Britain. It has been reported as an escape from Bristol and from Rye, Sussex; John Palmer recorded it on walls below Haulfre Gardens on the Great Orme in Gwynedd and at Hardwick Hall in Derbyshire - but Nottingham and Halifax are the significant and persistent British sites. David McClintock suggested that the Nottingham colony could well repay a detailed technical study as to "just what it is that this warmth-loving Mediterranean plant finds so much to its liking in the apparently inhospitable climate of central Nottingham", - and added "he will be a clever gardener or botanist who could get it to grow even half as well anywhere else" and "it just goes to show how little some of us know how best to cultivate plants."

MARY BRIGGS, White Cottage, Slinfold, HORSHAM, West Sussex RH13 7RG



Asarina procumbens Miller del. Mrs Pat Donovan © 1986

NOTICES (BSBI)

WELSH BULLETIN 43, SPRING 1986

The Spring 1986 issue of the Welsh Bulletin contains a varied selection of articles that should provide something of interest to most BSBI members. Major articles are 'The Flora of Ceredigion Churchyards' by Arthur Chater and a shorter note on 'Carmarthenshire Burial Grounds' by Mrs A.M. Pell.

The continuing progress made with the Carmarthenshire Flora Project is outlined by R.D. Pryce and an account of the memorable St Davids Head Excursion (of June 1984) is given by the field leader, S.B. Evans. Another maritime area - West Lley in Caernarfon - features in a paper by Miss Ann Conolly and there is a short note on *Arum maculatum* in Flintshire by P. Harmes. Various other short notes and announcements are also included in this issue.

BSBI visitors to Wales are reminded that any articles or short notes on the botany of the Principality would be welcomed by the Editor (I.K. Morgan, 107 Denham Ave, LLANELLI, Dyfed SA15 4DD).

Special Offers to Members

You are reminded that copies of "The Botanist", the recently published History of the Society by our President, are still available from the Treasurer, 68 Outwoods Road, Loughborough, Leics LE11 3LY, at the special price of £10.00 including post and packing.

The Treasurer also still has available a few copies of the "Flora of Breckland" which is available at £5.00 including post and packing.

Both of the above can be obtained on receipt of an order accompanied by the necessary remittance.

NOTICES (OTHERS)

THE KEW ORCHID FUND

The orchid collection at the Royal Botanic Gardens, Kew, continues to expand and the number of people involved with it, both horticulturists and botanists, is also increasing. In order to develop the work and publish more information about it, a new Kew Orchid Fund has recently been set up.

The function of this Fund, which has been set up under the auspices of the Bentham-Moxon Trust, will be to receive donations which will be used to finance projects at or on behalf of the Royal Botanic Gardens, Kew, as follows:

- to further the study of orchids and their cultivation;
- to make contributions towards the cost of the preparation and publication of books, articles, papers, leaflets or illustrations on any aspects of orchid cultivation, conservation and research;
- to make grants to enable Royal Botanic Gardens staff and associated researchers to visit orchid collections and botanical institutions, participate in expeditions, or attend meetings connected with orchid studies in Britain and overseas;
- and for any other purposes connected with orchids which further or communicate knowledge of these plants and their conservation.

For further information contact: Mrs JOYCE STEWART, Sainsbury Orchid Fellow, Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB

Donations to the Bentham-Moxon Trust (Kew Orchid Fund) may be sent to the Director, Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB

ORCHID SYMPOSIUM

A two-day Orchid Symposium on the "Physiology, Ecology and Management of Orchid Conservation" will be held in the Jodrell Lecture Theatre, Royal Botanic Gardens, Kew, Richmond, Surrey, on 12-13 November 1986.

Emphasis during the Symposium will be placed on the current "state of the art" of orchid conservation as performed by scientists in Britain, and on the needs of the conservationist as regards future areas of research and development within the disciplines

of physiology, ecology and management. Topics to be covered include: pollen and seed storage, asymbiotic and symbiotic germination, tissue culture, population dynamics, conservation policy, and the role of living orchid collections.

For further details please contact: Dr H.W. Pritchard, Royal Botanic Gardens, Kew, Wakehurst Place, ARDINGLY, Sussex RH17 6TN

BIBLICAL SITES

A short course on botanical studies of Biblical sites will be held at St. George's College, Jerusalem on 4-19th March, 1987. The botanical tutors will be Nigel Hepper, Royal Botanic Gardens, Kew, and Dr Avi Schmida, Hebrew University, Jerusalem - specialists in Biblical, Mediterranean and desert plants.

For further details please contact: Mr Nigel Hepper, The Herbarium, The Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB or send applications to: The Registrar, St. George's College, P.O. Box 1248, JERUSALEM, Israel.

14th INTERNATIONAL BOTANICAL CONGRESS, BERLIN, 24th JULY - 1st AUGUST 1987

Any member contemplating travelling to Berlin for this Congress is invited to contact Mr G. Fontanini, Conference Tours Marketing Manager, Express Boyd Limited, Standard House, 15-16 Bonhill Street, LONDON EC2A 4HQ, (Tel. 01-588 8461) for details of travel arrangements.

REQUESTS

CERASTIUM TOMENTOSUM GROUP

We have started a project to investigate the taxonomy and breeding relationships of the *Cerastium tomentosum* group (including *C. tomentosum*, *C. decalvans*, *C. biebersteinii*, *C. candidissimum*, *C. boissieri*, etc.), partly with a view to discovering which species occur as cultivated or naturalized plants in this country. We would greatly appreciate samples of living rooted plants from any British wild localities (having paid due regard to the requirements of the law!), to add to our collection of experimental plants. Distinctive or otherwise interesting garden plants would be useful too. Seeds would be useful, but take 2 years to flower. Postage will be refunded.

At present we cannot undertake to name herbarium material, but hope to be able to offer to do this in 2 or 3 years' time.

C.A. STACE, Dept. of Botany, University of Leicester, Adrian Building, LEICESTER LE1 7RH

BARTSIA ALPINA L.

I am at present studying the ecology of *Bartsia alpina* for a Ph.D. thesis. I would welcome information on sites both in Britain and abroad and would particularly welcome seeds from localized alpine populations (postage will be refunded).

All information will of course be treated in confidence.

FRED RUMSEY, Dept. of Botany, University of Manchester, MANCHESTER M13 9PL

GUNNERA IN IRELAND

I am presently conducting a survey of naturalized alien species of *Gunnera* in Ireland and would welcome any information from BSBI members. Despite being naturalized in western Ireland for several years, there seems to be little information regarding its present distribution. It would be useful if any information included a brief description of the site and its location, size and height of plants, the species associated with *Gunnera*, a

grid reference number, county and date. Cards for individual records are available on request.

B.A. OSBORNE, Department of Botany, University College, Belfield, DUBLIN,4, Ireland.

CHALK GRASSLAND IN KENT

I am at present undertaking a survey of unimproved chalk grassland in Kent for the Nature Conservancy Council, as part of an ongoing National survey of this habitat. I would be grateful for any information that members could give on such areas in Kent. I am mainly interested in those areas which may not be widely known about and may be overlooked in a county-wide search due to their size or situation.

If anyone knows of any such areas, please could they send me a brief description of the site, its grid reference, any notable species known to occur there and, if possible, the name, address and telephone number of the owner/occupier. All information received will naturally be treated in confidence and postage refunded.

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

LETTERS

Plant Photography

The letter from Lady Anne Brewis (BSBI News 42: 26 (1986)) raises a most pertinent point with regard to the recording of plants by camera users.

I use the expression "camera users" as my experience has shown there to be three categories of such being:

1. Recorders of Plants - probably dominantly botanists and/or naturalists with little understanding of the art of photography.
2. True Photographers - with little understanding of botany or natural history.
3. Hybrids of 1 and 2 - these are the rarest form!

Taking into consideration the main aims and interests of such persons, it becomes apparent that all three types can be guilty of the damage caused by both "gardening" and getting close to the subject.

I believe that most damage results through thoughtlessness and ignorance, and the fact that for really successful plant photography the most important and yet least used item of equipment is the tripod. This **must** be of the correct type to allow minimal contact with the ground and yet at the same time permit maximum support at a very low angle. Ground spikes are to be abhorred as they probably can do more damage in terms of "digging" than the pressures caused by a pair of feet or by kneeling, crawling or lying down. Once correctly positioned, the tripod allows the photographer to concentrate his/her efforts into avoiding careless placement of all but their feet and to be patient for the subject to become still in the knowledge that the camera is correctly focused and is framing the subject as desired.

Furthermore, I agree that the "adjustment" of the habitat for aesthetics only, should be minimal and reversible for the security and welfare of the subject. This consideration is after all more important in many respects than the photograph itself.

A useful leaflet is "The Nature Photographers Code of Practice" published by the RSPB, now unfortunately out of print and replaced by "Bird Photography and the Law". A small number of the former leaflet are available from the author on receipt of an s.a.e., copies of the latter are available from the RSPB.

DAVID M. MANNERS, 155 Sorrel Drive, EASTBOURNE, East Sussex BN23 8BH

The Hazards of a Photographer in Suffolk

Taking photographs of wild flowers, even of common species, can have a disastrous effect on the plants concerned. One must be very discreet and try to avoid being observed. This is not always possible when the plants are growing beside footpaths, on road verges and other habitats frequently used by the public. A tripod may have to be used and then

perhaps there is a long wait for a still moment or for the sun to emerge from behind tantalizing clouds; such delays may attract undesirable attention.

Once when photographing a colony of flowering *Petasites fragrans*, I was watched by some children, just out of Sunday School, when I left they picked all the flowers and threw them away. On another occasion, I needed a photograph of *Heracleum mantegazzianum* growing beside a footpath bordering allotments. Although I did not have to use a tripod, men working on their plots stopped and watched. When I returned to the site later in the day the plants had been cut down.

The specimen of *Nepeta cataria* photographed at Dalham and shown on page 477 in my *Flora of Suffolk* was picked by an observer, yet other almost identical specimens growing nearby remained untouched.

Sometimes I am able to take evasive action when I see people approaching, covering up the camera and specimens, and sitting down pretending to be only resting.

I have been stopped by two security men while photographing the flora of Orford Ness shingle beach, south of Aldeburgh, and my camera taken, but later returned with the processed film. I have also been reported by a member of the public as being a suspicious person and taken into custody, only being released after two hours of questioning.

So much for the hazards of a botanist!

FRANCIS W. SIMPSON, 40 Ruskin Road, IPSWICH, Suffolk IP4 1PT

Printers' Peccata

Huddersfield is famous for its woollen and worsteds; it is not famous for its botany. However, during the past seven years fresh habitats and species new to science have been discovered there. In the course of proof-reading "Flowers and Ferns around Huddersfield", (some sections as many as six times!), it has been observed that hills, streams and roads abound with that pernicious weed *Intrusive* ell L. giving a new look to hill slides, stream slides and road slides not to mention healthy, heathy ground with its micro-habitat of ailing *Ericas*. Roads also illustrate that peculiar botanical phenomenon known as succession. Here there is a change from road sides to road sites followed by road slides to reach a climax at road sides - again.

Bags (paper, plastic or Oxford is not specified) have a flora identical to that of bogs.

An upright hedge grows Parsley and a stretch of water called Lesser Pond is known for its sedge. The full stop and hyphen are in danger of extinction. Is there a list of endangered punctuation marks?

Species new to the British list include such rarities as Pigmut and my favourite Flour-ear (how can anyone get three out of five typed words wrong?), Pragmites, the popular Popular, Pappy but no Mammy and Papavars; my zoological knowledge is sadly lacking, I never knew there were Father vars.

It would be interesting to hear other people's printers errors.

JILL LUCAS, 8 Camborne Drive, Fixby, HUDDERSFIELD, West Yorkshire HD2 2NF

{Jill Lucas is one of the kind members who have typed pages of past numbers of *BSBI News* for us. In defence of our past printers, it could be said that our copy has not always been as correct as it might have been! Ed.}

BOOK NOTES

In the January 1987 part of *Watsonia*, 16(3), reviews of the following books will be included:

"The Oxford Dictionary of Natural History", edited by M. Allaby.

"No ordinary gardener, Thomas Knowlton", 1691-1781, by B. Henrey.

"Rubi Westfalici", by H.E. Weber.

"Concise Dictionary of Biology", edited by E. Martin.

"Unlucky Plants", compiled by R. Vickery.

"Flora of the Isle of Man", by D.E. Allen.

"A Guide to the Vegetation of Britain and Europe", by O. Polunin & M. Walters.

"Mountain Flora of Greece", Vol. 1, edited by A. Strid.

- "Habitat, Handbook No. 1 Hampstead Heath", by J. Bellamy et al.
 "Flowers and Ferns around Huddersfield", by M.J. Lucas & J. Middleton.
 "Guide to Mountain and Moorland", by B. Brookes.
 "The Flora and Vegetation of Britain. Origin and Changes - the Facts and their Interpretation", edited by J.L. Harley & D.H. Lewis.
 "Cladistic Biogeography", by C.J. Humphries & L.R. Parenti.
 "Supplement to the Flora of Gloucestershire", by S.C. Holland, H.M. Caddick & D.S. Dudley-Smith.
 "Infraspecific Classification of Wild and Cultivated Plants", edited by B.T. Styles.
 "Index of Collectors in the Welsh National Herbarium", by S.G. Harrison.
 "Olands och Gottlands växtvärld", by U. Ekstam & R. Jacobsen.
 "Studies on Plant Demography", edited by J. White.

Reviews of the following books may also be included.

- "The Background of Ecology", by J. McIntosh.
 "The Evolutionary Ecology of Ant-Plant Mutualisms", by A.J. Beattie.

The following books have been received recently. Those that will NOT be reviewed in Watsonia are marked with an asterisk.

- "The European Garden Flora", Vol. 1, edited by S.M. Walters et al.
 "Bracken. Ecology, land use and control technology", edited by R.J. Smith & J.A. Taylor.
 "Practical Ecology", by D. Slingsby & C. Cook.
 *"John Ray: Naturalist", by C.E. Raven. Pp. xxv + 506, with frontispiece, Cambridge University Press, Cambridge, 1986. Price £15.00 (ISBN 0-521-31083-0). This is a paperback reissue of the second edition of Canon Raven's well known book (published in 1950), with a new introduction by Max Walters setting Raven's fine achievement in the context of the tercentenary of the publication of Ray's great Historia Plantarum.
 "Plant Breeding Systems", by A.J. Richards.
 *"Supplement to the Flora of Lincolnshire", by E.J. Gibbons & J. Weston.
 "John Hope, 1725-1786, Scottish Botanist", by A.J. Morton.
 *"A Dictionary of the Flowering Plants & Ferns", ed.8, by J.C. Willis, revised by H.K. Airy Shaw, Student Edition. Pp. xxii + 1245 + lxvi. Cambridge University Press, Cambridge, 1985. Price £20.00 (ISBN 0-521-31395-3). This is a reissue (in hard waterproof cover but minus dust jacket) of the 1973 edition of Willis's invaluable work, which was expanded and transformed by Airy Shaw in the 7th edition (1966).
 *"The Companion to Roses", by J. Fisher. Pp. 224, with 26 colour plates and numerous b. & w. illustrations. Viking, Penguin Books Ltd., Harmondsworth, Middlesex, 1986. Price £14.95 (ISBN 0-670-80811-3). This encyclopedia of cultivated roses (for that is what it is) is beautifully produced and contains much of interest to the gardener or horticulturist but little or nothing that will concern the field botanist.
 "Biology of Plants", ed. 4., by P.H. Raven, R.F. Evert & S.E. Eichhorn. The second edition of this encyclopedic textbook was reviewed by Quentin Kay in Watsonia, 11: 411 (1977).
 *"Collins guide to the Insects of Britain and Western Europe", by M. Chinery. Pp. 320, with numerous colour illustrations. Collins, London, 1986. Price £6.95 (ISBN 0-00-219137-7). As an entomological tyro, I have found the illustrations and key a good guide to the identification of some of the more striking British insects. The author has chosen for illustration those that are most likely to be noticed. My entomological colleagues also think quite highly of it. It would be useful for field identification of pollinators and predators, for example.
 *"Soils and Quaternary Geology, A Handbook for Field Scientists", by J.A. Catt. Monographs on Soil and Resources Survey No. 11. Pp. x + 266, with numerous text-figures Clarendon Press, Oxford, 1986. Price £45.00 (ISBN 0-19-854568-1).
 *"The Heavy Metal-tolerant Flora of Southcentral Africa", by R.R. Brooks & F. Malaisse. Pp. x + 199, with 6 colour and b. & w. plates and numerous text-figures. A.A. Balkema, Rotterdam & Boston, 1985. Price £26.00 (ISBN 90-6191-543-0). Despite the title, this book is not about heavy plants but concerns the adaptation of certain plants to soils rich in heavy metals.
 "Corologia de la flora vascular dels Països Catalans", volum introductor, by O. de Bolòs.

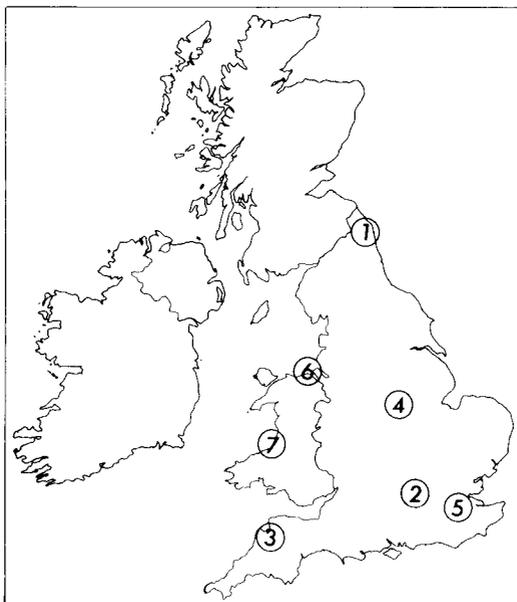
NORMAN K.B. ROBSON, Dept. of Botany, British Museum (Natural History), Cromwell Road, LONDON SW7 5BD

FIELD MEETINGS, 1985

A recent decision by the Publications Committee has resulted in the transfer of Reports of Field Meetings from *Watsonia* to *BSBI News*, but all such reports should still be sent to the Receiving Editor, Dr B.S. Rushton, Biology Dept., The University of Ulster, Coleraine, Co. Londonderry, N. Ireland BT52 1SA, and not to the Editor of *BSBI News*.

Reports of those 1985 Meetings in England, Wales and Scotland received before the deadline are included here; those for Ireland, Hungary and any late arrivals, will appear in the next issue, or as space allows.

The map showing the approximate location of the various meetings has been included for the benefit of those members who, like the Editor, have only a rudimentary knowledge of British geography. The numbers on the map correspond to the numbers preceding each report.



ENGLAND

1. NORTHUMBERLAND WHINSTONE. 17TH-19TH MAY

The Whinstone is a hard, blocky ultrabasic dolerite intrusion of late Carboniferous origin which is restricted to the Teesdale area and to Northumberland, where it is often associated with Carboniferous limestones. In Northumberland it follows a sinuous narrow, interrupted path for nearly 100 km from Walltown in the south-west to Holy Island in the north-east.

The purpose of this weekend was to visit six contrasting Whinstone sites, and 29 members attended, the majority from outside the region. The first site visited, eastwards from Steel Rigg, is a popular section of Hadrian's Wall which runs along the top of the Whin dyke in this area. Below the crags, on north-facing boulder scree twelve species of pteridophytes were recorded, including *Dryopteris oreades*, *Huperzia selago*, and Oak, Beech, and Parsley ferns (*Gymnocarpium dryopteris*, *Phegopteris connectilis*, and *Cryptogramma crispera*). The south-facing "plates" of Whinstone were visible from some distance as a result of the abundance of common annuals, notably *Erophila verna*. It transpired that the exceptionally cool and wet spring had resulted in quite unprecedented growths of annuals, so that splendid displays and several interesting new records were enjoyed by the party during the weekend. Perennials such as *Saxifraga granulata* and *Allium* spp. were also exceptionally vigorous and lush.

At the second site visited, the Scroggs, south of Simonburn, the "new" *Alchemilla*,

A. gracilis was demonstrated, and nearby areas with *Scleranthus annuus*, *Trifolium scabrum*, *Saxifraga tridactylites*, *Geranium columbinum* and *Stellaria pallida* were admired amongst a riot of other annuals. The night was spent in the vicinity of Hexham, and a convivial meeting enjoyed in the Hadrian Hotel, Wall.

The first site visited on the morning of May 18th was the Northumberland Wildlife Trust Reserve at Gunnerton Crag. Passing quantities of Primroses, Cowslips and their hybrid, and *Orchis mascula*, the party climbed to the top of the crag. A search for *Dianthus deltoides* was in vain, but was more than compensated for by the discovery of a small colony of *Saxifraga tridactylites*, and *Geranium pusillum* in several places, while *G. columbinum*, *G. lucidum* and *Saxifraga granulata* were in remarkable abundance.

At Great Bavington, the colonies of *Sedum villosum* and Chives (*Allium schoenoprasum*) had suffered very heavy grazing, and although *Geranium pusillum* and *Stellaria pallida* were discovered, rain helped to lend a depressing air to the site.

After driving to the north-east of the county, the party reassembled at Spindleston. Immediate discoveries within the caravan site included *Trifolium striatum*, *T. arvense* and a new colony of Chives, while the nearby well-known site for Chives was unusually well-budded (Northumberland colonies rarely flower). It grows here only 500m from the sea, with *Sedum villosum*, *Sagina subulata* and *Trifolium scabrum*. Elsewhere in the vicinity, visits were made to *Dianthus deltoides*, *Astragalus danicus*, and a mysterious *Potentilla*, intermediate between *P. crantzii* and *P. tabernaemontani*, both of which are otherwise unknown in the county. Another interesting rediscovery was of a thriving colony of *Moenchia erecta* previously recorded from this area.

After another convivial night based on Belford, the party assembled on Holy Island for the final morning. Here there are two Whinstone outcrops, one south of the Priory, and the other forming the plinth of the castle. *Trifolium scabrum*, *T. striatum*, *T. arvense*, *T. campestre*, *T. dubium*, and *T. micranthum* were all in great quantity at the former locality, growing with *Vicia lathyroides*, *V. hirsuta* and a plethora of other annuals. Wallflowers, Sea Campion and Thrift added to a tapestry of colour. On the castle rock, *Hyoscyamus niger* and *Dianthus caryophyllus* were visited in well-known localities. A colony of the partially radiate *Senecio vulgaris* subsp. *denticulatus* was discovered in the harbour.

Before the meeting ended, and the tide forced us to leave the island, we visited some of the well-known sites amongst the dune-slacks of the National Nature Reserve. Some members also paid flying visits to other nearby sites, seeing *Paris quadrifolia*, *Coralorrhiza trifida*, *Pyrola rotundifolia* and *Scilla verna* amongst other local celebrities.

A.J. RICHARDS

2. COOKHAM, BERKSHIRE. 15TH JUNE

This meeting was held on one of the late C.E. Hubbard's stamping grounds with the aim of helping members to determine grasses, and the 25 members attending were given sample keys to genera. The day was bright and sunny, and 35 grass species were found at Cook Marsh and on the chalk slope above it. This site is heavily grazed by cows and horses, which has prevented the scrubbing up seen at Winter Hill nearby. Good finds here were \times *Festulolium loliaceum*, *Lolium perenne* subsp. *perenne* \times *L. perenne* subsp. *multiflorum*, *Hottonia palustris* flowering well in the marsh and one plant of Bee Orchid (*Ophrys apifera*) on the slope.

In the afternoon we visited Littleworth Common, Bucks, to see some of the grasses of acid soils. Very little heather remains here under the cover of colonizing Birch and Oak (both species and their hybrid), but a mass of *Gaultheria shallon* has colonized in one spot. The little churchyard here had plenty of interest including *Briza media* growing amongst *Calluna vulgaris* and one plant of *Geranium sanguineum*.

The meeting continued with a stroll round the grounds of Cliveden House, Bucks, where we were lucky to see *Poa chaixii* and *Festuca heterophylla* in good condition, as well as several more or less naturalized aliens such as *Luzula luzuloides*, *Brunnera macrophylla* and *Scrophularia vernalis*. Altogether 49 grass species were seen and their distinguishing characters discussed.

H.J.M. BOWEN

3. NORTH DEVON. 27TH-28TH JULY

The first part of this meeting was spent walking some of the many footpaths on the National Trust's beautiful Watersmeet Estate. Distribution is perhaps the most interesting aspect of the species seen. *Euphorbia hyberna* occurs in four tetrads in this area and is quite plentiful in some places; elsewhere in the British Isles it occurs only in Cornwall (one site) and in its main stronghold of south-western Ireland. *Stellaria nemorum* and *Rubus saxatilis* are here both at their most southerly stations in Britain and the two Filmy Ferns (*Hymenophyllum tunbrigense* and *H. wilsonii*) do not seem to have been recorded elsewhere in these Exmoor valleys. One wonders whether these four species are really confined to the traditional spots where they are so often seen. Certainly there must be other places where the micro-climate, aspect, etc. would be the same.

In the mid-afternoon the party moved by car to Brendon Common, where *Listera cordata* has its only Devon station. A search failed to discover the plant but the finding of *Sibthorpia europaea* was some compensation for the failure. A stream and its boggy surroundings produced plenty of *Oreopteris limbosperma* and *Wahlenbergia hederacea*.

On the Sunday the 20-strong party met at Braunton Burrows. After an introductory talk by the N.C.C. Warden, Mr John Breeds, in which he outlined some of the problems of protecting the area and said something of his own experiments towards the conservation of the habitat, we began by studying the vegetation of a typical damp slack where a close sward of *Salix repens*, *Hydrocotyle vulgaris*, etc. offered a suitable niche for *Equisetum variegatum*, *Carex serotina* and many other low-growing plants. Mr Peter Robinson, one of our members who is also a voluntary warden at the Burrows, was able to give us some useful information about the management and changes at the various sites which we passed through.

He took us to see an unusual composite which had appeared at a site where experimental burning had recently taken place. The plant has since been identified by the British Museum (Natural History) as *Erigeron philadelphicus*, but its origin here is a mystery.

The Dactylorhizids are a puzzling group anywhere and nowhere more so than at Braunton Burrows. Fortunately we were again able to call upon the expertise of one of our members and when we came to some spikes of *Dactylorhiza incarnata* subsp. *coccinea*, Mr R.M. Bateman, who has made a special study of this group both here and elsewhere, gave us a valuable, though necessarily brief talk on the difficulties of classifying and naming the Dactylorhizids.

It must suffice here to simply name some of the species seen viz. *Pyrola rotundifolia* subsp. *maritima*, *Linaria arenaria*, *Rumex frutescens*, *Matthiola sinuata*, *Atriplex laciniata*, *Holoschoenus vulgaris*, *Teucrium scordium* and *Baldellia ranunculoides*.

In the late afternoon we moved by car to visit a stretch of coastline between Croyde and Baggy Point. Here the main interest centred on the many plants which had escaped from gardens or survived the abandonment of cultivation on this very warm, south-facing strip of coast e.g. *Erica vagans*, *Acanthus mollis* and *Hemerocallis fulva*. Our search for one native plant was handicapped by the presence of an R.A.F. helicopter which had chosen this precise point at which to practise cliff-rescues. The discovery of *Lotus subbiflorus* had to be communicated in sign-language as all speech had become quite inaudible.

By the conclusion of the week-end we had acquainted ourselves with a useful number of plants from a variety of habitats.

W.H. TUCKER

4. NOTTINGHAMSHIRE. 10TH AUGUST

The day was billed as being a look at Nottingham's genetic reservoirs. There was a gratifying response from members both near and from a distance. On the day, 19 people met together at the Wilwell Railway Cutting S.S.S.I./L.N.R., courtesy of the Nottinghamshire Trust for Nature Conservation.

Being late in the season, few plants remained in flower. Hoary Ragwort (*Senecio erucifolius*) obliged us and was new to some. Adder's-tongue (*Ophioglossum vulgatum*) was still plentiful in the diverse grassland that has developed on the cutting floor. Discussion, therefore, centred on questioning how the plants arrived at the site, given that it is set in an arable desert close to an urban area. The management of the different habitats was explained to show how it is hoped to perpetuate them.

In the afternoon we looked at the nearby Wilford Claypit S.S.S.I., which from raw clay

has developed calcareous grassland, marsh and open water habitats.

Yellow-wort (*Blackstonia perfoliata*) was still in flower and we were able to collect Horned Pondweed (*Zannichellia palustris*) and Mare's-tail (*Hippuris vulgaris*). Common Cottongrass (*Eriophorum angustifolium*) was looked for and *Sphagnum fimbriatum* was later confirmed.

There was considerable interchange of information within the group which benefitted all, the leader included. She wishes to thank the group for their individual contributions to the day and to the additions to the site lists.

K. JEFFERIES

5. N.W. KENT, COTONEASTER MEETING. 29TH SEPTEMBER

It is now evident that a large number of species of *Cotoneaster* are naturalized in the British Isles. The fact that many of these species have only been seen in W. Kent (v.c. 16), or were noticed there for the first time, is entirely due to the deliberate search for them made by the leader in recent years. Nearly all those at the meeting were from outside Kent and the material they brought with them for determination confirms that an increasing number of *Cotoneasters* are starting to be found in other vice-counties. The importance of fruit colour, flower colour, flower type (petals erect or patent), and growth habit were stressed in arriving at a correct determination, together with a knowledge of whether the species is evergreen or deciduous. It was sad to see that some of the material brought along had previously been determined incorrectly by one august society.

On the scarp slope of the North Downs at Kemsing, *C. bullatus*, *C. simonsii*, *C. × watereri* and *C. dielsianus* were naturalized in some quantity in the chalk scrub and a bank at Eynsford had *C. horizontalis* and *C. divaricatus* in profusion, the latter showing its characteristically elongated fruits. At Hextable the black fruited *C. affinis* var. *bacillararis* was naturalized along a wire fence and close by were *C. dammeri* and *C. franchetii* birdsown near ruined buildings. Another species at Hextable in long grass is thought to be *C. congestus* but it has so far not flowered and its leaves are larger than the form normally grown in gardens.

At Stone, the attractively-leaved and recently discovered *C. pannosus* was naturalized on waste ground but badly affected by drought or pollution; its small dull red fruits being almost completely withered. Further east, at Swanscombe, some specimens of *C. salicifolius* were convincingly "wild" in dense vegetation by a chalk pit and Clive Stace noticed a seedling var. *repens* of the same species nearby. Close to Northfleet two species were on view; *C. dammeri* "Skogholm" birdsown under railings on an industrial estate and the black fruited *C. lindleyi* which has been gradually colonizing the edges of two chalk pits since its discovery in 1970. Old walls at Gravesend sported numerous specimens of *C. zabelii*, perhaps the most unfamiliar species of the day as it seems to be uncommonly planted. Its large, pendant, dull red obovate fruits are distinctive.

On Dartford Heath a black-fruited species was visited which appeared in the spring to be true *C. affinis* but is not so convincing later in the year. It may be a wide-leaved form of *C. cooperi*. A smaller *Cotoneaster* specimen nearby was inspected which looks very interesting but cannot be determined until it becomes larger.

C. microphyllus, *C. lacteus* and *C. horizontalis* var. *robustus* were omitted because of lack of time and the day finished with a visit to *C. salicifolius* var. *rugosus* in a copse at North Cray.

Other species were too far away to see on a day meeting, or not so well naturalized, or not so certainly determined. It is hoped to run a complete week-end meeting for *Cotoneaster* in a few years time when more is known about them, possibly including other shrubby genera where similar problems of determination exist, e.g. *Crataegus* and *Hebe*.

J.R. PALMER

WALES

6. POINT OF AYR, CLWYD. 16TH JUNE

16 people met near to the lighthouse to explore a variety of habitats on the dunes. In the brackish pool were *Schoenoplectus tabernaemontani* and *Phragmites australis*, with *Carex extensa* and *Glaux maritima* on the bank. On drier salt areas were *Scirpus maritimus*, *Juncus maritimus* and *J. gerardi*.

In a fresh water marsh, *Equisetum fluviatile* and *Hydrocotyle vulgaris* dominated, with *Eriophorum angustifolium*, *Dactylorhiza praetermissa*, *D. incarnata* and hybrids. A number of garden aliens flourish on the remains of a post-war shanty town, and there are patches of Red-hot Pokers (*Kniphofia* spp.), *Convallaria majalis*, *Polygonatum multiflorum* × *odoratum*, *Cerastium tomentosum* and *Geranium sanguineum* (?native). The mobile dunes were colonized by *Salix fragilis*, *Ammophila arenaria* and *Leymus arenarius*, while in the dune slacks other *Salix* species including *S. repens* form thickets. There were large patches of *Ophioglossum vulgatum* with *Dactylorhiza purpurella*, *D. fuchsii*, *Ophrys apifera* and *Anacamptis pyramidalis*. *Eryngium maritimum* is common, with the casuals *Anchusa arvensis*, *Anthriscus caucalis* and *Sisymbrium orientale*. In the short turf were *Trifolium arvense* and *T. striatum*, *Vicia lathyroides*, *Erigeron acer*, *Erodium cicutarium* and *Blackstonia perfoliata*.

In the afternoon, we went to a narrow gorge near Gronant. Under a dense canopy of Ash and Sycamore, the vertical walls were richly covered with mosses and liverworts, with *Chrysosplenium oppositifolium* and *Mycelis muralis*. Luxurious *Dryopteris* spp., *Athyrium filix-femina*, *Phyllitis scolopendrium*, *Polystichum setiferum* with *Carex pendula* filled the valley floor, an interesting contrast to the dune flora we had seen earlier.

J.A.GREEN

7. CWM SODEN, CARDIGANSHIRE. 23RD JUNE

About 24 members and friends met at Byrlip, 2kms south-west of New Quay to explore and list the species in the recently acquired National Trust property in Cwm Soden. By the end of the day the total for the 21 ha site stood at 228. Habitats investigated included exposed sea cliffs with *Crithmum maritimum* and *Spergularia rupicola*, more sheltered cliffs with *Carex distans* and *C. otrubae*, extreme maritime heath with *Scilla verna* and *Anthyllis vulneraria*, and heathy grassland with two calcicole grasses rare in this acidic vice-county, *Avenula pubescens* and *Trisetum flavescens*. Inland, up the Soden valley, we saw *Orobanche rapum-genistae* growing amongst *Ulex europaeus*, and, in mixed woodland alongside the stream containing both *Quercus petraea* and *Q. petraea* × *robur*, found *Listera ovata* and *Orchis mascula*. Thanks are due to Mr Jones, Coybal, for parking space and to Elinor Gwynn who accompanied us in her capacity as National Trust warden.

A.O. CHATER

SCOTLAND

8. BEINN UDLAIDH, NEAR TYNDRUM, PERTSHIRE. 6TH JULY

A party of 17 people approached the north-east corrie of Beinn Udlaidh from Glen Orchy, by following the Allt Ghamhnain into Coire Ghamhnain.

The lower slopes yielded little of special interest other than a few mountain plants growing at lower altitudes, in the open habitat provided by streamsides. The rain which was threatening all morning started to fall as we ate our lunch; just below the high east-facing corrie rocks. The rain continued throughout the afternoon and made plant hunting and climbing rather difficult. One of the principle reasons for selecting this mountain as a venue was to ascertain the size of the *Woodsia alpina* population. We were successful in finding a total of 22 plants with an average number of nine fronds per plant.

Ferns and allies recorded included *Asplenium trichomanes*, *A. viride*, *Botrychium lunaria*, *Cryptogramma crispum*, some fine patches of *Dryopteris oreades*, *Equisetum pratense* and *Polystichum lonchitis*.

On the rock ledges and more open habitats some of the finer plants seen were *Galium boreale*, *Rubus saxatilis*, *Saussurea alpina*, *Saxifraga aizoides*, *S. hypnoides*, *S. nivalis* in association with *Woodsia*, *S. oppositifolia* and *Sedum rosea*. Rushes and sedges were not prominent with only a few plants of *Carex atrata*, *C. vaginata*, *Juncus trifidus* and *J. triglumis*.

Much of the north-facing rocks and ledges were very wet and dominated with such lush vegetation as *Angelica sylvestris*, *Geranium sylvaticum*, *Luzula sylvatica*, *Oxyria digyna*, *Salix lapponum*, *S. phyllifolia*, *Silene dioica* and *Trollius europaeus*.

R.J.D. McBEATH

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"BSBI NEWS" (ISSN 0309-930X) is published by the Botanical Society of the British Isles. Enquiries concerning the Society's activities and membership should be addressed to:- The Hon. Gen. Sec., c/o Botany Dept., British Museum (Nat. Hist.), Cromwell Road, LONDON SW7 5BD.

Printed by J & P Davison, Library Road, Pontypridd, Mid Glamorgan CF37 2BT