

B.S.B.I. NEWS

September 1982
No. 31

Edited by EDGAR D. WIGGINS

Cowpasture Farm, Felixstowe, Suffolk IP11 9RD



ADMINISTRATION

HON. GEN. SEC. (General Enquiries)

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

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

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

HON. FIELD SEC.

(Information on Rare Plants, Field Meetings etc.)

Miss L. Farrell, N.C.C. P.O. Box 6,
Godwin House, George Street,
HUNTINGDON PE18 6BU.

PAYMENT OF SUBSCRIPTIONS BY VARIABLE AMOUNT DIRECT DEBITS

This notice is addressed to all members who pay subscriptions by direct debit. In accordance with the variable amount direct debit mandate you have signed authorising payment of your membership subscription, I give notice on behalf of the Society that the following rates were approved at the Annual General Meeting held on 15th May 1982.

Ordinary members - £10; Subscriber members - £10; Junior members - £4; Senior members - £6.50; Family members - £1 (no change).

The new rates are effective from the 1st October next and your bank account will be debited on or about the 16th January 1983 in accordance with the new rates.

M. WALPOLE, Hon. Treasurer (address above).

COUNCIL MEMBERS 1982 - 1983

Prof. J.P.M. Brenan (President); Mr D.H. Kent, Mr P.C. Hall, Mr R.W. David, Dr S.M. Walters, (Vice-Presidents); Mrs M. Briggs, (Hon. Gen. Sec.); Mr M. Walpole, (Hon. Treasurer); Dr S.M. Eden, Dr N.K.B. Robson, Dr C.A. Stace, Dr D.L. Wigston, (Hon. Editors *Watsonia*); Miss J. Martin (Hon. Meetings Sec.); Miss L. Farrell (Hon. Field Sec.);

Elected Council in order of seniority, Rule 10:

Mr R.J. Pankhurst, Dr S.L. Jury, Dr G. Halliday, Dr H.A. McAllister, Mr A.O. Chater, Dr A.J. Richards, Dr R.M. Harley, Mrs A. Lee and Mr R.T. Mabey, Dr K.J. Adams, Mr A.L. Grenfell, Dr F.H. Perring.

Representatives on Council, Rule 11:

Mr T.F.G. Curtis (Ireland); Mr M. Porter (Wales); Mrs O.M. Stewart (Scotland).

Representing Nature Conservancy Council: Dr R.A.H. Smith.

HONORARY ASSISTANT SECRETARIES

Minuting: Mrs U.M.S. Preston

Historian: Mr D.E. Allen

Archivist: Mr E.C. Wallace

Exhibition Assistants: Miss P.M. Chorley, Mr J.M. Mullin.

BSBI NEWS 32

Contributions intended for publication in this issue must reach the Editor
BEFORE 23rd OCTOBER, 1982.

HON. GEN. SECRETARY'S NOTES

ANNUAL EXHIBITION MEETING – Saturday, November 27th 1982

The Annual Exhibition is the largest gathering of members regularly in the BSBI Calendar and since 1950 we have held this meeting at the British Museum (Natural History), in recent years in the Dept of Botany General Herbarium with kind permission of the Keeper of Botany. We very much appreciate the opportunity to hold this function at the Museum which is also a centre for much of the British botany relevant to the Society's activities.

During this year the General Herbarium has undergone some major structural alterations and it may be that the repositioning of the cabinets could mean that the department is now rather less suitable for the meeting. However, after discussion and studying the plans the Meetings Committee and Officers have decided to hold the Exhibition in the General Herbarium this year, hoping that the arrangements can, with some adaptations, still be satisfactory and enjoyable for members. The main change is that taller cabinets now stand down the length of the Dept, with central bench space for exhibits, leaving only a narrow space on both sides of the benches for those viewing the exhibits. There is a wider aisle along the outside of the cabinets and we shall be requesting those attending to view the exhibits along a one way route. Also we suggest that conversations *not* relating to the exhibits should be held in the *outer aisles* to avoid congestion of the inner aisles and maintain circulation.

Exhibitors too may find that there is less space this year with even less vertical display surface available. Through the years the Society grows and the available space in the Dept shrinks. We do not wish to set a fixed limit for exhibit size, as different subjects obviously vary greatly in space requirements. Michael Mullin year each achieves a task worthy of membership of the magic circle, in fitting all the varied exhibits into the assorted spaces available. However, this year we do particularly ask exhibitors not to request more space than actually required to make the point of their exhibit and to be prepared to reduce the size of them if this is found to be necessary (quality rather than quantity?) – often the exhibits of most value have been of a single plant of special interest, or of several sheets demonstrating a feature of particular significance?)

As the number of exhibits fluctuates from year to year, so too the number of slides offered varies greatly. It would be helpful to the selectors if a note on the subject of the slides could be added to the title – an extra line for this has been provided on the 1982 form; (last year 3 offers were entitled only "Orchids").

Finally our sincere thanks to the 1981 Exhibitors for the excellent response to our request last year in *BSBI News 28* for application forms to be sent in *early*. You will see that the closing date for exhibition space this year is again **OCTOBER 31st**.

Exhibit of Vascula

At the Exhibition Meeting this year David Allen, BSBI Historian, will exhibit some early records of the use of the vasculum for botanical field work. We plan also to display some of the notable vascula donated by members to the BSBI Vasculum Pool. If you also own one of special interest and would like to bring it to the meeting, we shall be pleased to include it in the exhibit.

Mary Briggs

LICHENS IN CHURCHYARDS

One aim of the current BSBI Network Research Survey of Churchyards and Burial Grounds is to demonstrate the value of these habitats for native flowering plants, bryophytes and lichens. We hope to discourage genealogists and churchyard-tidiers from scraping all mosses and lichens off tombstones and churchyard walls. It is therefore encouraging to learn that the Ministry of Agriculture, Fisheries and Food has issued an advisory leaflet (No. 753) *Lichen on farm roofs* (single copies obtainable free from: MAFF (Publications), Alnwick, NE66 2PF), which advocates the natural colonisation by, and growth of, lichens on new farm building is recommended; to assist with the integration of the buildings into the landscape.

HORSES AS CONSERVATIONISTS ?

For some plants grazing horses provide the ideal habitat; e.g. Tony Hare working on *Pulicaria vulgaris* told us that the bare trodden soil gives the necessary open ground and a hoof-print is ideal for the germinating seedlings. At many of the sites where decrease of this plant has been dramatic in recent years there are no longer grazing animals; on one Surrey common when horses were reinstated the "extinct" *Pulicaria* reappeared. Conversely the few plants of *Genista pilosa* re-found in the 1970's in Ashdown Forest, Sussex were destroyed by horses when a pony-jump was set up on the site. This plant is apparently near extinction in Sussex, possibly due to repeated fires as it apparently does not regenerate after burning.

Contrary effects of cattle trampling have been reported. In Ireland *Spiranthes roman-zoffiana* has been threatened by grazing cattle in *summer*. In Scotland the late John Raven noted that this orchid was frequently growing where the winter stack had been sited and the feeding cattle had there well-trampled this rectangular patch of the field during the previous *winter* — highlighting some of the problems of conservation and the importance of the habitat, with so many ways in which individual species are affected by a changing habitat.

Mary Briggs

CONGRATULATIONS to our members who have been elected Fellows of the Royal Society:

Professor T.G. Tutin (Leicester) "Distinguished for his work as a plant taxonomist, especially in his outstanding contribution to the production of *Flora Europaea*" and Professor A.D. Bradshaw (Liverpool) "Distinguished for his work on the population ecology of plants and its application in the revegetation of derelict and industrially contaminated land".

CONGRATULATIONS also to B.S. Brookes, awarded the MBE in the Queen's Birthday Honours. Brian is Warden of Kindrogan Field Centre and past Chairman of the BSBI Committee for Scotland.

Tail-piece

Professor G.E. Trease writing on Paracelsus (1493-1541) in the *British Journal of Pharmaceutical Practice*, 1980 notes that Paracelsus quarrelled with a printer over a book which was published without proof-reading. Nothing new?

PLANTING DISEASE-RESISTANT ELMS

The B.S.B.I. has received a number of enquiries about planting elm taxa reported to be resistant to Dutch Elm Disease, in particular the cultivar known as "Sapporo Autumn Gold". I offer this note as some guidance on such plantings in respect of the taxonomic and conservation interests of B.S.B.I. members.

The empathy for elms in the British landscape has stimulated a desire for a programme of planting disease-resistant elms. I think it is important to distinguish between:

- (a) the formal landscape (elms in plantations, arboreta, parks, urban streets and gardens);
- (b) the semi-formal landscape (mainly elms in hedgerows);
- (c) the semi-natural landscape (managed and unmanaged elm woodlands).

Also, with regard to the introduction of disease-resistant elms one should consider:

- (i) integration into the landscape — how much does the introduced cultivar resemble native elms (both in superficial appearance and taxonomically)?
- (ii) integration into the native ecology — what is the response of our native flora and fauna to the introduction?
- (iii) what is the regenerative capacity of the introduction, either from seed (problematical in elms) or by suckering (common in elms, and which means that we are normally dealing with clones)?
- (iv) is disease-resistance likely to be a short-term phenomenon in the cultivar?

Note that (a) — (c) should be considered with (i) — (iv). For example, introduced disease-resistant cultivars superficially resembling native elms (point (i) but not supporting a native flora and fauna (point (iii)) would be welcome in the formal landscape (point (a)) but quite unacceptable in (b) and (c).

It is important to appreciate that there are "aggressive" and "non-aggressive" strains of the Dutch Elm pathogen, *Ceratocystis ulmi* and it is therefore necessary to consider fungal variability in the breeding of resistant elms. It is, of course, the aggressive strain that has led to the elm-disaster in this country (and elsewhere). The selection and breeding of elms for resistance to Dutch Elm Disease was started in Holland in the 1930's and since then the Dutch have continued to be the major elm-breeders in Europe. This breeding was originally against the non-aggressive strains, that caused *economic* but not *cataclysmic* losses of elm wood and timber (rather than a wholesale loss of trees on the landscape). Recent breeding programmes in Europe and elsewhere have been directed towards resistance to the "aggressive" *C. ulmi* problem.

Sapporo Autumn Gold is a hybrid between *Ulmus pumila* (the Siberian elm) and *U. japonica* (the Japanese elm). *U. japonica* is closely related to the European smooth-leaved elm (*U. carpinifolia*, formerly common in England as a woodland and hedgerow tree), but *U. pumila* has no immediate relative in Europe. This hybrid was first produced in the United States in order to find a disease-resistant replacement for the American elm, *U. americana*; this is a very attractive tree in American towns and cities, but very noticeably different from elms native to England (in leaf-form, crown-shape and trunk habit). Indeed, Siberian and Japanese elms were used quite deliberately as a source of aggressive disease-resistance in the American breeding programmes, to produce very carefully selected cultivars which are similar in growth and shape to the existing American elm. Thus "Sapporo Autumn Gold" was (for good reasons) bred and selected to resemble an elm native to the *formal* landscape of a quite distant and different geographical area to that of the British Isles.

In conclusion I would argue against widespread planting of cultivars such as "Sapporo Autumn Gold" as:-

- (1) the geographical origin and taxonomic status is not close to our native elms;
- (2) they are phenotypically and physiognomically different from our native elms. I predict that most elm-lovers would be disappointed with their appearance in our semi-formal and semi-natural landscape;
- (3) in the semi-formal and semi-natural landscape it is very important to consider the response of our native flora and fauna to introduced species. To my knowledge we have no investigations for evidence of such response in respect of various recommended elm-cultivars.
- (4) we have no evidence of the regenerative capacity of introduced elm cultivars in the landscape; a good regenerative capacity could be beneficial in agriculturally functional hedgerows, but disastrous in hedgerows of conservation value, and similarly for woodlands.

I should, however, finally like to be positive. I think that in our *formal* landscape, (well away from any rural or urban conservation woodlands), planting of disease-resistant elms may be welcomed. Fortunately experimental evidence suggests that resistance to "aggressive" and "non-aggressive" strains of *C. ulmi* is 'horizontal',* and therefore likely to be long-term. However, considering the difficulty of managing suckering, I urge anyone to consider carefully *where* they plant any individual elm specimen. The Englishman's castle is fraught with ill-chosen tree plantings!

DR. D.L. WIGSTON, Woodlands Research Group, The Polytechnic, PLYMOUTH, PL4 8AA.

* "horizontal resistance is under the control of many genes and hence less susceptible to change by single mutations, whereas "vertical" resistance is controlled by a single gene and thus highly susceptible to change.

see also:

The Arboricultural Journal Vol. 5, no. 4, 1981 featuring articles on "Hope for the Elm".

Forestry Commission Research Information Note 37/78/PATHS on "Breeding Elms resistant to Dutch Elm Disease".

Chapter 16 "The Elmwoods", from *Ancient Woodland*, by Oliver Rackham, Arnold, 1980.

REQUESTS

WANTED – seeds of *AMBROSIA* spp.

Seeds required of *Ambrosia* species (Compositae) for research purposes at Kew. *Ambrosia* is a New World genus that occurs as an alien in the United Kingdom and elsewhere. Certain species have molluscicidal properties that could be used for the control of schistosomiasis and other diseases for which the snail is a vector.

DR G.E. WICKENS, Royal Botanic Gardens, Kew RICHMOND, Surrey TW9 3AB.

LATHYRUS PALUSTRIS L

I am currently working on this taxon and should be particularly interested to hear if anyone has ever, and positively identified, a seedling plant of this species in the field. Please send any information (postage will be refunded) to:

T. CLIFFORD, N.C.C., Sandbanks, Sea View, Saltfleetby St. Clements, LOUTH, Lincs.

PROFILE

Professor J.P.M. Brenan

In our President, the Society can be proud of an outstanding botanist with a sterling reputation both in Britain and throughout the world. With an ability to comprehend the wide view while grasping the significance of small characters he has made notable contributions to the study of large, diverse, wide-ranging genera like *Acacia* in the tropics and at the same time difficult groups like chenopods and amaranths in Britain. His greatest work has been in the study of three particular families, the *Leguminosae*, *Chenopodiaceae* and *Commelinaceae*, but in contrast, and as a hobby, he has also made worthwhile contributions to bryology.

Pat Brenan's love of plants goes back to childhood, and while still a teenager he joined the Botanical Exchange Club, as our Society was then called, when he developed a keen and critical interest in the flora of the British Isles. He graduated from Oxford in 1940 and joined the staff of the Imperial Forestry Institute at that same University, and there began the study of African plants. In 1948 he moved to Kew to work on the newly started "Flora of Tropical East Africa" under a previous President of our Society, Edgar Milne-Redhead. When "M-R" became Deputy Keeper of the Kew Herbarium in 1959, Pat took charge of the Tropical African Section and then in 1965, with the retirement of Dr C.E. Hubbard, he succeeded to the Keepership of the Herbarium and Library and the Deputy Directorship of the Gardens. In 1976 he reached the peak of his career when he took on the even greater responsibilities of Director, a position he filled with distinction until he retired in October last. Throughout his career Pat Brenan has never ceased, whenever the opportunity could be grasped, to study living plants "in the field". Holidays, often under canvas, in Britain and in Europe, together with expeditions and official visits to many countries abroad have enabled him to understand and know a wider range of plants than most of his contemporaries. His many published works are therefore characterized by a penetrating appraisal of the plants he includes, an original and sound account of their taxonomy, and careful practical and informative keys and descriptions.

As many members of the Society will attest, Pat Brenan is a kind and friendly man — courteous to a fault. As is so often the case with large men, gentleness is one of his characteristics, a gentleness which often conceals a hidden but firm and determined resolution. However, as an essentially private person he often keeps his opinion and thoughts to himself, and rarely reveals his feelings outside his family and close associates. He is a devoted family man and although his two daughters and one son are now grown up it is worth recalling that in 1952 he accomplished a rare trick in generating two families in the same year — his eldest daughter was born and he described the West African family *Medusandraceae*!

He has received many honours. In 1977 he was made Visiting Professor to the University of Reading, in 1978 an Honorary Member of the Sociedade Broteriana and was awarded the Victorian Medal of Honour by the Royal Horticultural Society. In 1979 he received one of the Willdenow Medals struck by the Berlin Botanic Garden to mark its tercentenary. In February of this year, during the meetings of that association of African taxonomists known as A.E.T.F.A.T. (no reference to its conference dinners but an acronym of L'Association pour l'Etude Taxonomique de la Flore d'Afrique Tropical) in Pretoria he was one of three honoured by the award of a medal by the South African Association of Botanists.

The Society is honoured by its distinguished President and we wish him many years of enjoyable investigation and research in his retirement, free from the cares of administration.

CONSERVATION

THE BSBI'S POLICY TOWARDS PLANT CONSERVATION TODAY

Recognising the changes that have occurred in the field of conservation since the early 1950's, when the Conservation Committee was first set up by Council, and prompted by a discussion paper "The Role of the BSBI in Plant Conservation today" submitted to it by Mr Jermy, the BSBI Conservation Committee set up a sub-committee in January 1981 to consider anew its own terms of reference and the wider role of the Society in plant conservation. The following recommendations arise from the discussions that followed the presentation of that sub-committee's report to the full Conservation Committee and its subsequent submission to Council, which approved this policy statement on 15th May 1982.

It is recommended that:

1. the terms of reference of the Committee shall be re-affirmed, viz. "To take any action which may be desirable to conserve the British flora, either alone or in collaboration with the Nature Conservancy Council or other bodies".
2. the Society and its Conservation Committee shall continue to be concerned with the following areas of interest or involvement:

a) The protection of sites of major botanical importance

The Society is competent to judge the value of a site for conservation only in regard to its botanical aspects. While it is sympathetic to the conservation of all sites of botanical interest and wishes to encourage its members to be active on their behalf, nevertheless, because of limited resources, it must concentrate its conservation efforts towards the protection of sites of major botanical importance. Its members, as private individuals, are encouraged to use their botanical expertise to support the defence of other sites which they consider to be worthy.

Sites of "major botanical importance" shall be deemed to include: i) sites listed in the 'Nature Conservation Review'; ii) appropriate sites of special scientific interest - as notified to land-owners by the Nature Conservancy Council, and sites proposed by the NCC for notification as SSSI's; and iii) sites containing taxa listed in the 'British Red Data Book: Vascular Plants'. For sites other than these to be defended by the Conservation Committee, acting on behalf of the Society, it will be necessary for it to receive convincing evidence of their major botanical importance - owing to the presence either of unusually rich or important plant communities or of nationally rare plant taxa.

b) The promotion of plant protection legislation and its enforcement

i) The BSBI should continue to give advice on, and to promote, plant protection legislation, and to help prepare literature promoting such legislation (though it needs to be recognised that funding the publication of such literature is likely to be beyond the Society's means).

ii) BSBI members should be encouraged to continue to report any breaches of the legislation to the Secretary of the Conservation Committee, but the Society should endeavour to assist the official enforcing agencies in bringing prosecutions rather than attempt to initiate prosecutions itself.

c) The protection of rare taxa

i) BSBI members can play a very important role in monitoring the whereabouts and status of rare taxa: the collection of such information is primarily the responsibility of the Records Committee. A continued and increasing liaison between Vice-County Recorders, local Nature Conservancy Council staff ("Assistant Regional Officers"), and local Trust for Nature Conservation officers should be warmly encouraged.

ii) The BSBI should continue to participate in schemes run by Botanic Gardens or others to maintain reserve stocks of rare taxa in cultivation, either as living plants or in seed-banks.

iii) The Conservation Committee should provide a forum for the consideration of proposals for the re-stocking or re-introduction of threatened rare plants, and should seek to consult with the Nature Conservancy Council and the Royal Society for Nature Conservation about any such proposals which it endorses.

d) Liaison with other national bodies and specialist Societies involved with aspects of British plant conservation

i) The BSBI should continue to maintain and foster liaison with other specialist Societies; should continue to invite the British Bryological Society, British Ecological Society, British Lichen Society, British Phycological Society, British Pteridological Society and Royal Horticultural Society to send observer members to the Conservation Committee; and should continue, or seek to gain, reciprocal attendance at their Conservation Committees where in existence (British Bryological/Lichen/Phycological Societies).

ii) The BSBI should continue to foster relations with the Wildlife Link Committee, to which the Honorary General Secretary and the Chairman of the Conservation Committee shall be the BSBI representatives.

iii) The BSBI should continue to be represented on the Conservation Liaison Committee of the Royal Society for the Conservation of Nature. The General Secretary of the RSNL or his representative shall be invited to be an observer on the BSBI Conservation Committee.

iv) On joining the Conservation Liaison Committee, the BSBI retained the right to liaise directly with the Nature Conservancy Council: it is recommended that on matters of policy the Conservation Committee should work through BSBI Council to the Nature Conservancy Council representative.

v) As stated above, close liaison between Vice-County Recorders and ARO's at a local level – either directly or in collaboration with the local Trust for Nature Conservation – should be warmly encouraged. It is appreciated that Recorders are directly responsible to the Records Committee for the purpose of keeping records and that they may not be keen to be involved in conservation: some priority should be given to identifying Vice-Counties in which that is so.

e) Communications and Education

The BSBI should continue to publish – where funds can be found – leaflets, wall-charts and the like, to promote conservation. Communications to/from members on matters relating to conservation should be encouraged.

f) International involvement

The BSBI has a role to play in liaising with foreign botanists visiting the British Isles who are interested in our native flora; in supporting, where practicable, international plant conservation conferences; and in trying to initiate a 'Code of Conduct' for British travellers abroad. However, it is considered rarely desirable for the BSBI, as a National Society, to comment officially on particular threats to sites of botanical importance in other countries.

g) Consideration of other issues of importance for plant conservation in the British Isles

The Conservation Committee should continue to act as a forum for discussion of general issues affecting plant conservation in the British Isles.

Phoebe Yule

Many older members of the society will be sorry to learn of the death in a nursing home of Mrs Yule at the advanced age of 87. She became known to us when, following the early death of Alec Westrup in 1964, she made a valiant effort to finish the work he had begun eight years previously of mapping the distribution of the plants of Hampshire and the Isle of Wight on a tetrad basis. This is a large area, less well worked by Westrup than she had probably expected, but her main hope was that Westrup's pioneer work should not have been in vain. Her formidable task was eased to some extent when in 1968 the Isle of Wight Natural History and Archaeological Society decided to break away and ultimately published its own excellent Flora in 1978. The large mainland area proved to be too much for Phoebe Yule to finish, but until her health failed she was grateful for any help and encouragement that was given to her.

J.G. Dony

RECOMMENDED PROCEDURE FOR BSBI MEMBERS concerned with the Protection of a Site of Natural History Interest

As described above, in acting on the Society's behalf, the Conservation Committee can seek to defend only sites of "major botanical importance". However, the Society is also very conscious of the important support that botanical evidence can provide for the defence of other worthy sites – either those of more 'local' botanical importance or those in which some other aspect of the natural history interest predominates over its botanical interest. Vice-County Recorders, as detailed below, and other BSBI members, as private individuals, are therefore strongly encouraged to lend their botanical expertise for the defence of such sites.

Should a threat arise to any site of natural history interest, BSBI members are asked to make contact initially with their local NCC Assistant Regional Officer (the address of any local NCC office can be obtained from the appropriate Telephone Directory), and with the officers of the local Trust for Nature Conservation in areas where this is possible (the address of any local Trust for Nature Conservation can be obtained from The Royal Society for Nature Conservation, The Green, Nettleham, Lincoln LN2 2NR): these are the people who are most likely to be able to respond quickly, with a good knowledge of the local situation.

In the case of a threat to a site of botanical interest, the local Vice-County Recorder should also be informed, as the person most likely to be able to advise the conservation bodies on the botanical importance of the site. In the case of that threat being to a site of major botanical importance as defined above, the Secretary of the BSBI Conservation Committee should also be informed: in which case it is essential that sufficient details of the case (species involved/species' lists, maps of the area, etc.) be provided to enable the Conservation Committee, its Secretary, or the Officers to act appropriately, quickly and objectively.

The Secretary of the Conservation Committee may, on the authority of the Conservation Committee or of the Officers, write in defence of a site or give evidence at a Public Inquiry.

Vice-County Recorders may, on their own initiative and in their capacity as Recorders, write in defence of a site or give evidence at a Public Inquiry: they should forward to the Secretary of the Conservation Committee a copy of any evidence submitted.

A member of a BSBI Regional Committee may, on the authority of that Committee, write in defence of a site or give evidence at a Public Inquiry: a copy of any evidence submitted should be forwarded to the Secretary of the Conservation Committee.

Any member of the Society may, of course, as an individual, write in defence of a site or give evidence at a Public Inquiry. However, to do so *on behalf of the Society*, they must have received the permission of the Officers or have been authorised by a motion passed by the Conservation Committee in favour of such a move: in which case a copy of any evidence submitted should be forwarded to the Secretary of the Conservation Committee.

The present Secretary of the Conservation Committee is **MR. DUNCAN DONALD**, who may be contacted c/o RHS, Garden, Wisley, WOKING, Surrey GU23 6QB.

Duncan Donald adds:

The adoption of the above Policy and Procedure again highlights the importance of the designation of valuable sites – by the NCC – as sites of special scientific interest: BSBI members are warmly encouraged to bring to the attention of their Vice-County Recorder sites which they feel, on botanical grounds, merit designation as SSSI's, so that a case may be put forward to the NCC on behalf of such sites, if appropriate.

NOTICES

BSBI (official) Notices

WATSONIA and BSBI ABSTRACTS

It is regretted that the next issues of both the above are unavoidably delayed and will probably not appear before late October or early November. PLEASE DO NOT WRITE IN to Secretary, Treasurer or Editors with enquiries.

SEDGES OF THE BRITISH ISLES: a correction

A couplet was inadvertently dropped from the key to fruiting specimens on page 37. a *corrigendum* slip has been printed with the following correction:

CORRIGENDUM

Replace dichotomy 24 on page 37 by:

24a (14)	Body of utricle distinctly winged for at least part of its length	24A
24b	Utricle unwinged, except sometimes narrowly so on the beak	25
24Aa (24)	Middle spikes entirely ♂; terminal or upper spikes entirely ♀	10 disticha
24Ab	Middle spikes ♂ at top, ♀ below; terminal spike entirely ♂	9 arenaria

Copies of this slip may be obtained from A.C. JERMY, British Museum (Natural History), Cromwell Road, London SW7 5BD and from F.H. PERRING, Oundle Lodge, Oundle, Peterborough PE8 5TN. If those requesting these slips enclose an addressed envelope (the Society will bear the postage), it would ensure a prompt reply.

HERBARIUM RELOCATION

The Herb. U.K. Duncan (vascular plants) has been transferred to Dundee Museums and Art Galleries, (DEE.) The bryophytes and lichens are already at E."

URSULA K. DUNCAN, Parkhill, ARBROATH, Angus DD11 5RG.

CHANGES OF ADDRESS:

Amendment to list of BSBI County Recorders, March 1982: VC No. 110 Outer Hebrides MISS M. S. CAMPBELL,

new address: Residence St. Martin,

~~43 Avenue Paul Doumer,~~

~~06190 Roquebrune - Cap Martin,~~

~~FRANCE~~

Deceased 11/8/82

MR. A.R. BUSBY, receiver of Fern records additional to those published in *An Atlas of Ferns of the British Isles* Jermy, Arnold, Farrell and Perring, 1978, (see *BSBI News* 23 - 7) has a new address:

Mr. A.R. Busby, Gen. Secretary British Pteridological Society, 42 Lewisham Road, Smethwick, WARLEY, West Midlands B66 2BS.

Other (non-BSBI) notices

DANDY'S LIST OF BRITISH VASCULAR PLANTS

In response to numerous requests, the British Museum (Natural History) has reprinted the checklist of British flowering plants and ferns that was prepared by the late Mr J.E. Dandy for the BM (NH) and the BSBI, and was originally published in 1958. The reprint has been specially requested by the Wildflower Society for use in connection with its annual diaries. Members of the BSBI should note that this is a facsimile reprint and is not a new edition. Consideration was given to the possibility of producing a new edition, but to have done this to a standard worthy of the exceptional quality of the original would have involved much work and a long delay. It also seemed best to defer the compilation of a new British checklist until the current critical work under the leadership of Messrs Valentine, Sell and Stace towards the new *Flora of the British Isles* has been completed, so that due account can be taken of all the new data that will be accumulated in the course of this important project.

Those who wish to have their own copy of Dandy's classic list may obtain one, price £5 plus 75p postage from Publications (Sales), British Museum (Natural History), Cromwell Road, London SW7 5BD.

J.F.M. Cannon

WINSTON CHURCHILL FELLOWSHIPS

'Natural history and conservation of local environment' and 'Gardeners and garden historians' are two of the categories for which Winston Churchill Travelling Fellowships will be awarded in 1983. For further information send a postcard to:
The Winston Churchill Memorial Trust, 15 Queen's Gate Terrace, LONDON SW7 5PR.

Closing date for completed application forms: 27th October 1982.

BIRKBECK COLLEGE UNIVERSITY OF LONDON

"The Structure and Evolution of the British Flora". A short course with this title will run for eleven evenings, one a week, commencing in January 1983. Topics covered will include the history and development of the British flora, present day vegetation types and evolution in the British flora. Fee for the course, which will be of interest to amateur botanists, is £40. Enquiries should be sent to:
MARTIN INGROUILLE, Botany Dept, Birbeck College, Malet Street, LONDON WC1.

BSBI NEWS

Contributions intended for publication in this issue must reach the Editor
BEFORE 23rd OCTOBER, 1982.

ALIENS and ADVENTIVES

SHODDY ALIENS (Part 1)

Described and illustrated by Mrs O.M. Stewart

Wool (or "shoddy") aliens are often mentioned in *BSBI News* and elsewhere, but descriptions of the species involved are difficult to find, and illustrations almost impossible. The present article, the first of an occasional series, aims at assisting members to identify some of the more typical plants they may come across.

Shoddy plants have been recorded from shingle banks on the River Tweed for over sixty years. Unfortunately the best place is now so overgrown, that it will take a terrific flood to scour the area and clear the gravel and thus allow the seeds to find a place to grow. The accompanying drawings are of plants that were frequently found up to five years ago. *Erodium botrys* (Fig. A) comes from the Mediterranean, but it is probable that the shoddy plants are Argentinian descendants of European plants. It is a pretty, glandular pubescent plant, usually erect, with fairly large purple-lilac flowers, a very long fruit beak, and corkscrew awns. Another *Erodium* is *E. crinitum* (Fig. B), an annual from Australia, with stem bearing spreading to reflexed hairs, blue flowers, pointed sepals and also a fairly long fruit beak.

Daucus glochidiatus (Fig. C) is another Australian plant having ovoid fruit covered with bristles. The umbel is of 3-5 unequal rays and 2 or 3 involucre bracts divided into 2 or 3 linear subulate segments. One of the rays sometimes grows out into a continuance of the stem and bears another compound umbel. *Cenia turbinata* (Fig. D) is a native of South Africa, but is an adventive in New Zealand. It is a much branched pubescent annual with pale yellow outer rays.

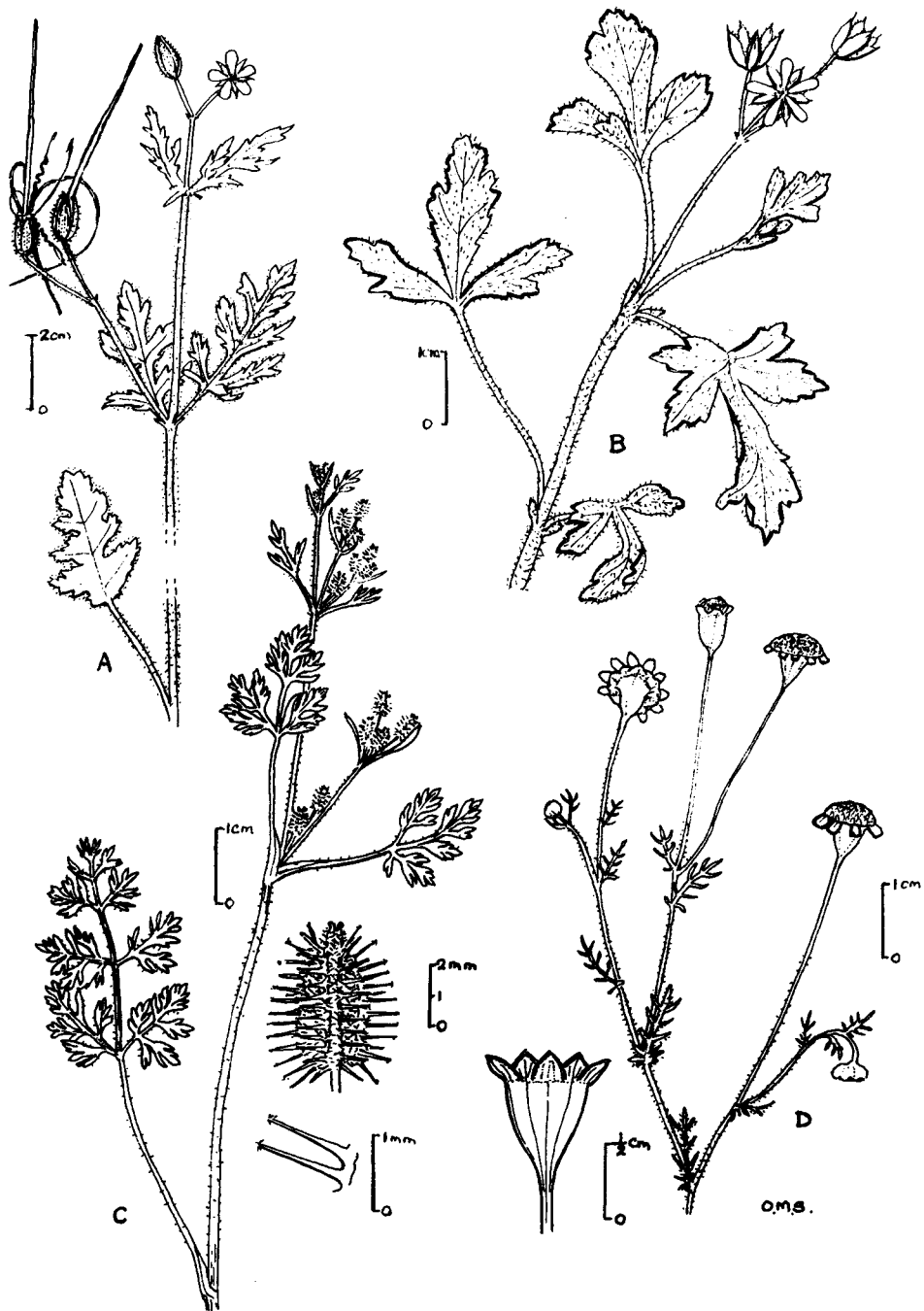
Senecio inaequidens (Fig. E), from S. Africa, can look like an annual or biennial, but behaves like a perennial by the River Tweed, and is found in the same place year after year. It is a tall subglabrous plant with yellow rays and pubescent achenes. The two *Bidens* species have heads with few or no outer rays and a pappus of rigid, barbed bristles. *Bidens pilosa* (Fig. F) has yellow disc florets and sparse white rays; *B. bipinnata* (Fig. G) is an erect annual with 3-4 yellow rays or none at all.

The last to be depicted, *Calotis cuneifolia* (Fig. H), also from Australia, is a low branched perennial having long narrow pale lilac ray florets and obovate achenes with 2 or 3 rigid barbed bristles, and 2 or 3 broad membranous truncate scales.

All these shoddy plants have fruits with means of getting tangled in the sheep's wool, and are thus common where shoddy can be found. The *Cenia* is much the scarcest of this selection of typical wool aliens. Figs. A - H are all based on specimens seen, *in situ*, by myself at Galashiels (V.C. 80) over the years 1969 - 1972. Few of them flower or fruit in Britain before the late summer or early autumn.

In writing this, I am indebted to Mr E. Clement for advice and encouragement.

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A. *Erodium botrys* B. *Erodium crinitum* C. *Daucus glochidiatus* D. *Cenia turbinata*

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oms.

E. *Senecio inaequidens* F. *Bidens pilosa* G. *B. bipinnata* H. *Calotis cuneifolia*

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SMYRNIUM PERFOLIATUM

It may be of interest to record the appearance in my garden this year of *Smyrniium perfoliatum* (Perennial Alexanders). The plant was kindly identified by R.J. Pankhurst of the British Museum (Natural History) from a photograph; in its younger stages it is very handsome with its yellow amplexicaul (not perfoliate) leaves beneath the umbels. How it arrived is unknown, but discarded bird seed or hamster food may have been the source.

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PS. Eric Clement adds: Though featured in Prof. Tutin's *Umbellifers of the British Isles* (p. 64) *S. perfoliatum* has extremely few localities in Br, and I feel sure it is totally new to Bucks and probably all Upper Thames V.C.'s too.

CONSERVATION 36 YEARS AGO

Through the courtesy of Richard Fitter, Vice-Chairman of the Fauna & Flora Preservation Society (FFPS) we publish a letter from Cynthia Longfield – the famous authority on dragon flies – in response to an article by Brian S. Brookes in the FFPS periodical *Oryx* (Q.V.)

I was very interested in your "Story of a Sedge" (*Oryx*, XVI, No. 3 February 1982) when I read that it was on the bog-rush *Schoenus ferrugineus*, that we tried so hard to transplant at Loch Tummel in 1946.

Our B.S.B.I. teams searched every inch of the then still pristine L. Tummel's foreshores and we never missed a plant capable of being lifted.

One team of Scots under Miss Campbell and one team of English under Dr Wilmott, had no less than 5 famous botanists of that year, plus 3 to 4 amateurs on each team. I was one of the latter, in those days very active and always a willing member of the B.S.B.I. surveys.

The teams took different sides of the Loch, and each day we started where we had left off the previous day. We never stopped to look anywhere else for the Sedge, it was the precious plants at Tummel alone that were to be inundated.

During the whole fortnight we suffered the worst weather the Highlands had ever had, yet we stuck to it and even Mr Brookes would have acknowledged how thorough we were. The tough navvies – out of work miners and dockers – were amazed at our staying powers. Though thinking us daft, they helped us no end to get on with our job and out their way. They were building the dam all that year, and stopped to cut brushwood to spread under our cars and heave us out daily, the roads being non-existent.

Of course it was unfortunate that we had no time to do anything better than we did. It was also unfortunate that the best Scots Hydro-Electric engineers had so little knowledge of what the water level would rise to. It was never the policy to carry the precious Sedge from its only known wild habitat.

Cynthia Longfield

A CODE OF CONDUCT AND LIST OF RARE SPECIES

A CODE OF CONDUCT AND LIST OF RARE SPECIES

In 1972 the Society issued A Code of Conduct for the Conservation of Flowering Plants and Ferns, and this included a list of rare species that should not be picked or collected. Since that date there has been legislation both in the Republic of Ireland (the Flora (Protection) Order, 1980) and in Great Britain (the Wildlife and Countryside Act, 1981) which substantially alters the position. Accordingly, the Council has authorised the issue of a revised code and list, to be prepared under the supervision of the Conservation Committee.

For the list of rare species the Committee is indebted to Dr Perring. It includes all the species in F.H. Perring & L. Farrell, *Red Data Book: Vascular Plants*, ed. 2 (1982), with the addition of others selected in accordance with the following criteria, modified from those first drawn up by the sub-committee that devised the original Code of Conduct and which were published in *Watsonia*, 9: 67-72 (1972):

1. The species should occur in very few localities in the region (usually 5 or fewer, but less in the case of large populations and more in the case of small populations).
2. The species should not be common or abundant anywhere in the region.
3. Species known to be especially vulnerable reproductively (e.g. some annuals with poor regeneration) or those occurring in a vulnerable habitat (limestone pavement, shingle beaches, wetlands and other habitats liable to excessive influence by man) have been given special consideration.
4. The species should be native or very well established introductions.
5. 'Agamospecies', 'microspecies', subspecies and other critical species-segregates should be excluded. It is hoped that these would be included in more locally based lists.

CODE OF CONDUCT

COLLECTING

1. Members are reminded that in Great Britain it is now illegal, under the Wildlife and Countryside Act, 1981, to uproot *any* wild plant without the permission of the owner or occupier of the land on which it grows; and that 62 species of very rare plants in danger of extinction are totally protected by the law, and picking, uprooting, or destruction of any of these plants is a criminal offence. The Flora (Protection) Order, 1981, extends similar protection to 50 plants in the Republic of Ireland.

2. Members will not collect specimens from any Nature Reserve, Nature Trail, or National Trust property without official permission.

3. Members will not collect specimens of any species in a locality in which it is scarce or in a region where the following list indicates that it is rare.

4. Members are reminded that it is possible to demonstrate material in the field without removing or seriously damaging the plant.

5. Equally, it is usually possible to collect voucher material to support new records without seriously damaging the plant.

6. The collection of duplicate sets of herbarium material should be made only from very large populations. If material is insufficient, cultivation may be useful.

7. Members should attempt to collect living material from seeds or cuttings, rather than through uprooting.

8. Members are reminded that some species (annuals, orchids, broomrapes) are known to be especially vulnerable to picking or disturbance owing to their reproductive characteristics. Also species occurring in vulnerable or ephemeral habitats (see criterion 4 above) should be treated with particular consideration.

VISITING

1. Members must ensure that they have permission for access to private land, including Nature Reserves.

2. Members should take care not to damage the site of any species by 'gardening' before taking photographs or by trampling or pressing on the ground near the plants in the process of photographing. Photographs which are published or exhibited should not disclose the locality of rare species, nor should any published material do so without the approval of the officers of the B.S.B.I.

3. It is to be noted that over-visiting, and visiting by large parties, can damage the habitat of a plant and prevent seedling establishment. They may also draw attention to sites of rare species. Requests from conservation organisations not to visit certain sites should always be respected.

INTRODUCTIONS

Members should not introduce plants into the countryside without the knowledge of the local Naturalists' Trust, the appropriate Regional Office of the Nature Conservancy Council and the B.S.B.I. Conservation Committee. There are many questions regarding both policy and methods, that need to be taken into account before plants are introduced or re-introduced into the wild. Arrangements are in hand whereby the organisations mentioned above may keep in touch and provide useful advice in these issues.

A LIST OF RARE SPECIES

Many of these are in danger of extinction either locally or generally. They should not be picked or collected by members in the regions shown against each name (E = England, W = Wales, S = Scotland, I = Ireland). Where the indicator letter is in bold type, the plant is legally protected in that country (see Collecting 1 above). Sites of all listed species known to members should be visited with caution and any threats to the sites or to the species should be immediately reported to the local Naturalists' Trust, to the Nature Conservancy Council, or to the B.S.B.I. Conservation Committee.

The nomenclature of this list follows that of A.R. Clapham, T.G. Tutin and E.F. Warburg, *Excursion Flora of the British Isles*, ed. 3 (1981), as being the most readily available standard.

In accordance with criterion 5 above, species in the genera *Euphrasia*, *Hieracium*, *Rubus* and *Taraxacum* are not included.

<i>Acinos arvensis</i>	S	<i>Astragalus alpinus</i>	S
<i>Adiantum capillus-veneris</i>	W	" <i>danicus</i>	I
<i>Adoxa moschatellina</i>	I	<i>Athyrium flexile</i>	S
<i>Agrostemma githago</i>	E/S	<i>Atriplex longipes</i>	E/S
<i>Ajuga pyramidalis</i>	E/I		
<i>Alchemilla alpina</i>	I	<i>Bartsia alpina</i>	E/S
" <i>acutiloba</i>	E	<i>Betula nana</i>	E
" <i>glaucescens</i>	E	<i>Blackstonia perfoliata</i>	S
" <i>gracilis</i>	E	<i>Brachypodium pinnatum</i>	W/S
" <i>minima</i>	E	<i>Brassica nigra</i>	S
" <i>monticola</i>	E	<i>Bromus benekenii</i>	S
" <i>subcrenata</i>	E	" <i>commutatus</i>	S
<i>Alisma gramineum</i>	E	" <i>hordeaceus</i> subsp. <i>feronii</i>	S
" <i>lanceolatum</i>	S	" <i>madritensis</i>	E/W
<i>Allium ampeloprasum</i>	E/W/I	" <i>racemosus</i>	S
(inc. var. <i>babingtonii</i>)		" <i>tectorum</i>	E
" <i>oleraceum</i>	W/S	<i>Bunium bulbocastanum</i>	E
" <i>schoenoprasum</i>	E/W/S	<i>Bupleurum baldense</i>	E
" <i>sphaerocephalon</i>	E	" <i>falcatum</i>	E
<i>Alopecurus aequalis</i>	W/S	<i>Butomus umbellatus</i>	S
" <i>alpinus</i>	E	<i>Buxus sempervirens</i>	E
<i>Althaea hirsuta</i>	E		
<i>Alyssum alyssoides</i>	E	<i>Calamagrostis canescens</i>	W/S
<i>Anthoxanthum aristatum</i>	E	" <i>scotica</i>	S
<i>Apium graveolens</i>	S	<i>Calamintha sylvatica</i>	E
" <i>repens</i>	E	<i>Callitriche obtusangula</i>	S
<i>Aquilegia vulgaris</i>	S	" <i>truncata</i>	I
<i>Arabis alpina</i>	S	<i>Campanula glomerata</i>	W
" <i>stricta</i>	E	" <i>rapunculus</i>	E
<i>Arenaria ciliata</i>	I	<i>Cardamine amara</i>	W
" <i>norvegica</i>	E/S	" <i>impatiens</i>	S
<i>Armeria maritima</i> subsp. <i>elongata</i>	E	<i>Cardaminopsis petraea</i>	W/I
<i>Arnoseria minima</i>	E	<i>Carex appropinquata</i>	W/S
<i>Artemisia campestris</i>	E	" <i>atrata</i>	E/W
" <i>maritima</i>	S	" <i>atrofusca</i>	S
" <i>norvegica</i>	S	" <i>bigelowii</i>	W
<i>Asparagus officinalis</i> subsp. <i>prostratus</i>	W	" <i>buxbaumii</i>	S
<i>Asplenium billotii</i>	S/I	" <i>capillaris</i>	W
" <i>cunifolium</i>	I	" <i>chordorrhiza</i>	S
" <i>onopteris</i>	I	" <i>depauperata</i>	E/W/I
" <i>septentrionale</i>	S/I	" <i>digitata</i>	W
<i>Aster linosyris</i>	E/W	" <i>divisa</i>	W

" <i>elongata</i>	E/W/S/I	<i>Dianthus armeria</i>	W
" <i>flava</i>	E	" <i>gratianopolitanus</i>	E
" <i>lachenalii</i>	S	<i>Diapensia lapponica</i>	S
" <i>microglochin</i>	S	<i>Diploxis muralis</i>	S
" <i>muricata</i> subsp. <i>muricata</i>	E/W	" <i>tenuifolia</i>	S
" <i>norvegica</i>	S	<i>Draba aizoides</i>	W
" <i>ornithopoda</i>	E	" <i>incana</i>	W
" <i>pauciflora</i>	W	<i>Drosera anglica</i>	W
" <i>pseudocyperus</i>	S	<i>Dryas octopetala</i>	E/W
" <i>punctata</i>	S	<i>Dryopteris cristata</i>	E/S
" <i>rariflora</i>	S	" <i>oreades</i>	I
" <i>recta</i>	S	" <i>villarii</i>	W
" <i>spicata</i>	S		
" <i>strigosa</i>	S	<i>Echium plantagineum</i>	E
" <i>tomentosa</i>	E	<i>Elatine hydropiper</i>	E/W/S
<i>Caucalis platycarpus</i>	E	<i>Eleocharis austriaca</i>	E/S
<i>Centaurea calcitrapa</i>	E	" <i>parvula</i>	E/W/I
<i>Centaureum pulehellum</i>	S	<i>Elymus pycnanthus</i>	S
" <i>scilloides</i>	E/W	<i>Empetrum nigrum</i> subsp.	W
" <i>tenuiflorum</i>	E	<i>hermaphroditicum</i>	
<i>Cephalanthera longifolia</i>	W/S	<i>Epilobium alsinifolium</i>	W/I
" <i>rubra</i>	E	" <i>tetragonum</i> subsp. <i>lamyi</i>	S
<i>Cerastium alpinum</i>	W	<i>Epipactis atrorubens</i>	W
" <i>arcticum</i> subsp. <i>arcticum</i>	W	" <i>dunensis</i>	E/W
" " " <i>edmondstonii</i>	S	" <i>palustris</i>	S
" <i>arvense</i>	W	" <i>phyllanthes</i>	W/I
" <i>brachypetalum</i>	E	<i>Epipogium aphyllum</i>	E
<i>Ceratophyllum submersum</i>	W	<i>Equisetum pratense</i>	E/I
<i>Chenopodium murale</i>	S	" <i>ramosissimum</i>	E
" <i>polyspermum</i>	S	<i>Erica ciliaris</i>	E/I
" <i>vulvaria</i>	E/W	" <i>vagans</i>	E/I
<i>Cicendia filiformis</i>	W	<i>Erigeron acer</i>	S
<i>Cicerbita alpina</i>	S	" <i>borealis</i>	S
<i>Cicuta virosa</i>	W	<i>Eriocaulon aquaticum</i>	S
<i>Cirsium dissectum</i>	S	<i>Eriophorum gracile</i>	E/W/I
" <i>tuberosum</i>	E/W	<i>Erodium maritimum</i>	S
<i>Cochlearia micacea</i>	S	<i>Eryngium campestre</i>	E
<i>Colchicum autumnale</i>	I	<i>Euphorbia exigua</i>	S
<i>Corallorhiza trifida</i>	E	" <i>hyberna</i>	E
<i>Corrigiola litoralis</i>	E	" <i>paralias</i>	S
<i>Corynephorus canescens</i>	S	" <i>peplis</i>	E
<i>Cotoneaster integerrimus</i>	W	" <i>portlandica</i>	S
<i>Crambe maritima</i>	I	" <i>serrulata</i>	E/W
<i>Crassula aquatica</i>	S		
<i>Crepis foetida</i>	E	<i>Festuca altissima</i>	W
" <i>mollis</i>	S	" <i>juncifolia</i>	W/S
<i>Crocus vernus</i> subsp. <i>vernus</i>	E/I	" <i>longifolia</i>	E
<i>Cyclamen hederifolium</i>	E	<i>Filago gallica</i>	E
<i>Cynodon dactylon</i>	E	" <i>lutescens</i>	E
<i>Cynoglossum germanicum</i>	E/S	" <i>pyramidata</i>	E
<i>Cyperus fuscus</i>	E	<i>Filipendula vulgaris</i>	S
<i>Cypripedium calceolus</i>	E	<i>Frangula alnus</i>	S
<i>Cystopteris dickiana</i>	S	<i>Fritillaria meleagris</i>	E
		<i>Fumaria martinii</i>	E
<i>Dactylorhiza majalis</i>	S	" <i>occidentalis</i>	E
" <i>traunsteineri</i>	W/S	" <i>parviflora</i>	S
<i>Damasonium alisma</i>	E	" <i>purpurea</i>	S
<i>Deschampsia alpina</i>	W		
" <i>setacea</i>	W/I		

<i>Gagea bohemica</i>	W	" <i>filiformis</i>	S
" <i>lutea</i>	W/S	" <i>pygmaeus</i>	E
<i>Galeopsis angustifolia</i>	S	" <i>subulatus</i>	E
" <i>segetum</i>	W	" <i>triglumis</i>	W
<i>Galium boreale</i>	W		
" <i>debile</i>	E	<i>Kobresia simpliciuscula</i>	E
" <i>fleuratii</i>	E	<i>Koeleria vallesiana</i>	E
" <i>spurium</i>	E	<i>Koenigia islandica</i>	S
<i>Gastridium ventricosum</i>	E/W		
<i>Genista pilosa</i>	E	<i>Lactuca saligna</i>	E
<i>Gentiana nivalis</i>	S	" <i>virosa</i>	S
" <i>pneumonanthe</i>	W	<i>Lamium galeobdolon</i>	S
" <i>verna</i>	E	<i>Lathyrus japonicus</i>	E/W/S/I
<i>Gentianella uliginosa</i>	W	" <i>palustris</i>	W/S/I
<i>Geranium purpureum</i>	E/W/I	" <i>sylvestris</i>	S
<i>Gladiolus illyricus</i>	E	<i>Lavatera arborea</i>	S
<i>Gnaphalium luteo-album</i>	E	" <i>cretica</i>	E
" <i>norvegicum</i>	S	<i>Ledum groenlandicum</i>	E/S
<i>Goodyera repens</i>	E	<i>Leersia oryzoides</i>	E
<i>Groenlandia densa</i>	W/S/I	<i>Lemna gibba</i>	W/S
<i>Gymnocarpium dryopteris</i>	I	" <i>polyrhiza</i>	S
" <i>robertianum</i>	S/I	<i>Lepidium latifolium</i>	W/S
		<i>Leucosium aestivum</i>	E/I
<i>Halimione portulacoides</i>	S	" <i>vernum</i>	E
<i>Hammarbya paludosa</i>	E/I	<i>Limonium bellidifolium</i>	E
<i>Helianthemum apenninum</i>	E	" <i>binervosum</i>	S
" <i>canum</i>	E/W/I	" <i>companyonis</i>	E
" <i>nummularium</i>	I	" <i>paradoxum</i>	W/I
<i>Herminium monorchis</i>	W	" <i>recurvum</i>	E
<i>Herniaria ciliolata</i>	E	" <i>transwallianum</i>	W/I
" <i>glabra</i>	E	" <i>vulgare</i>	S
<i>Hierochloa odorata</i>	S/I	<i>Limosella aquatica</i>	W/S/I
<i>Himantoglossum hircinum</i>	E	" <i>australis</i>	W
<i>Hippophaë rhamnoides</i>	S	<i>Linaria supina</i>	E/W
<i>Holoschoenus vulgaris</i>	E	<i>Linnaea borealis</i>	E
<i>Homogyne alpina</i>	S	<i>Linum perenne</i> subsp. <i>anglicum</i>	S
<i>Hordelymus europaeus</i>	W	<i>Liparis loeselii</i>	E/W
<i>Hordeum marinum</i>	W	<i>Lithospermum officinale</i>	S
<i>Hottonia palustris</i>	W/S	" <i>purpureo-caeruleum</i>	E/W
<i>Hydrilla verticillata</i>	I	<i>Lloydia serotina</i>	W
<i>Hydrocharis morsus-ranae</i>	W	<i>Lobelia urens</i>	E
<i>Hypericum canadense</i>	I	<i>Lonicera xylosteum</i>	E
" <i>hirsutum</i>	I	<i>Lotus angustissimus</i>	E
" <i>linarifolium</i>	E/W	" <i>subbiflorus</i>	W/I
<i>Hypochaeris glabra</i>	S	" <i>tenuis</i>	W
" <i>maculata</i>	E/W	<i>Ludwigia palustris</i>	E
		<i>Luzula pallescens</i>	E
<i>Inula crithmoides</i>	S	<i>Lychnis alpina</i>	E/S
" <i>salicina</i>	I	" <i>viscaria</i>	E/W/S
<i>Iris spuria</i>	E	<i>Lycopodium annotinum</i>	E
" <i>versicolor</i>	E/S	<i>Lythrum hyssopifolia</i>	E
<i>Isatis tinctoria</i>	E		
<i>Isotetes hystrix</i>	E	<i>Maianthemum bifolium</i>	E
		<i>Matthiola incana</i>	E/W
<i>Juncus alpinus</i>	E	" <i>sinuata</i>	E/W
" <i>alpinus</i> subsp. <i>nodulosus</i>	S	<i>Melampyrum arvense</i>	E
" <i>balticus</i>	E	" <i>sylvaticum</i>	E
" <i>capitatus</i>	E/W	<i>Melittis melissophyllum</i>	W
" <i>compressus</i>	S	<i>Mentha pulegium</i>	E/W/I
" <i>dudleyi</i>	S	<i>Mercurialis annua</i>	S

<i>Mertensia maritima</i>	E/I	<i>Pinguicula lusitanica</i>	W
<i>Meum athamanticum</i>	E/W	<i>Poa alpina</i>	E/W/I
<i>Mibora minima</i>	W	" <i>angustifolia</i>	S
<i>Minuartia recurva</i>	I	" <i>bulbosa</i>	W/S
" <i>rubella</i>	S	" <i>flexuosa</i>	S
" <i>stricta</i>	E	" <i>glauca</i>	E/W
" <i>verna</i>	S	" <i>infrma</i>	E
<i>Moneses uniflora</i>	S	" <i>palustris</i>	S
<i>Monotropa hypopitys</i>	S/I	<i>Polemonium caeruleum</i>	E
<i>Muscari neglectum</i>	E	<i>Polycarpon tetraphyllum</i>	E
<i>Myosotis alpestris</i>	E/S	<i>Polygala amara</i>	E
" <i>stolonifera</i>	S	" <i>amarella</i>	E
<i>Myosurus minimus</i>	W	<i>Polygonatum verticillatum</i>	S
		<i>Polygonum maritimum</i>	E/I
<i>Najas flexilis</i>	E/I	" <i>minus</i>	W/S
" <i>marina</i>	E	" <i>mite</i>	W
<i>Narcissus obvallaris</i>	W	" <i>nodosum</i>	S
<i>Neotinea maculata</i>	E	" <i>rurivagum</i>	W/S
		" <i>viviparum</i>	W/I
<i>Oenanthe aquatica</i>	W/S	<i>Polystichum lonchitis</i>	W
" <i>fluviatilis</i>	W	<i>Potamogeton compressus</i>	W/S
" <i>pimpinelloides</i>	I	" <i>epiphydrus</i>	S
<i>Oenothera biennis</i>	W	" <i>filiformis</i>	W
" <i>stricta</i>	E/W	" <i>friesii</i>	W
<i>Ononis reclinata</i>	E/W/S	" <i>nodosus</i>	E
" <i>spinosa</i>	S	" <i>praelongus</i>	W
<i>Ophioglossum lusitanicum</i>	E	" <i>rutilus</i>	S
<i>Ophrys fuciflora</i>	E	" <i>trichoides</i>	W/S
" <i>insectifera</i>	W	<i>Potentilla argentea</i>	W/S
" <i>sphegodes</i>	E	" <i>crantzii</i>	W
<i>Orchis militaris</i>	E	" <i>fruticosa</i>	E
" <i>morio</i>	S	" <i>rupestris</i>	W/S
" <i>simia</i>	E	<i>Puccinellia fasciculata</i>	W
<i>Ornithopus pinnatus</i>	E	<i>Pulicaria vulgaris</i>	E
<i>Orbanche caryophyllacea</i>	E	<i>Pyrola media</i>	E
" <i>elatior</i>	W	" <i>minor</i>	W
" <i>hederae</i>	S	" <i>rotundifolia</i>	I
" <i>loricata</i>	E	<i>Pyrus cordata</i>	E
" <i>maritima</i>	E/W		
" <i>purpurea</i>	E/W	<i>Ranunculus circinatus</i>	S
" <i>rapum-genistae</i>	S/I	" <i>fluitans</i>	W
" <i>reticulata</i>	E	" <i>ophioglossifolius</i>	E
<i>Orthilia secunda</i>	E/W/S/I	" <i>reptans</i>	E/S
<i>Otanthus maritimus</i>	I	" <i>sardous</i>	S
<i>Oxytropis campestris</i>	S	" <i>tripartitus</i>	I
" <i>halleri</i>	S	<i>Rhinanthus angustifolius</i>	E/S
		<i>Rhynchosinapis monensis</i>	W/S
<i>Paeonia mascula</i>	E	" <i>wrightii</i>	E
<i>Papaver lecoqii</i>	S	<i>Rhynchospora fusca</i>	W/S
<i>Parapholis incurva</i>	W	<i>Romulea columnae</i>	E
<i>Parentucellia viscosa</i>	S	<i>Rorippa austriaca</i>	E/W
<i>Petrorhagia nanteuilii</i>	E	" <i>islandica</i>	S/I
<i>Peucedanum officinale</i>	E	<i>Rosa arvensis</i>	S
<i>Phleum alpinum</i>	E	<i>Rubus chamaemorus</i>	W
" <i>phleoides</i>	E	<i>Rumex aquaticus</i>	S
<i>Phyllodoce caerulea</i>	S	" <i>maritimus</i>	W/S/I
<i>Physospermum cornubiense</i>	E	" <i>rupestris</i>	E/W
<i>Phyteuma spicatum</i>	E	<i>Ruppia spiralis</i>	W/S
<i>Pilularia globulifera</i>	E/I		
<i>Pimpinella major</i>	W/S		

<i>Sagina intermedia</i>	S	<i>Stellaria pallida</i>	S
" x <i>normaniana</i>	S	<i>Stratiotes aloides</i>	W
<i>Sagittaria rigida</i>	E		
" <i>sagittifolia</i>	W	<i>Taxus baccata</i>	S
<i>Salicornia perennis</i>	W/I	<i>Tetragonolobus maritimus</i>	E
<i>Salix herbacea</i>	W	<i>Teucrium botrys</i>	E
" <i>lanata</i>	S	" <i>chamaedrys</i>	E/W
" <i>phlylicifolia</i>	I	" <i>scordium</i>	E
<i>Salvia verbenaca</i>	S/I	<i>Thalictrum alpinum</i>	W/I
" <i>pratensis</i>	E/W	" <i>flavum</i>	S
<i>Saussurea alpina</i>	W/I	<i>Thelypteris thelypteroides</i>	S
<i>Saxifraga cernua</i>	S	<i>Thlaspi alpestre</i>	W/S
" <i>cespitosa</i>	W/S	" <i>perfoliatum</i>	E
" <i>hartii</i>	I	<i>Thymus pulegioides</i>	W/S
" <i>hirculus</i>	E/S/I	" <i>serpyllum</i>	E
" <i>nivalis</i>	W/I	<i>Tofieldia pusilla</i>	E
" <i>rivularis</i>	S	<i>Torilis arvensis</i>	W/S
<i>Scabiosa columbaria</i>	S	" <i>nodosa</i>	S
<i>Scandix pecten-veneris</i>	S	<i>Trichomanes speciosum</i>	E/W/S/I
<i>Scheuchzeria palustris</i>	S	<i>Trifolium bocconeii</i>	E
<i>Schoenoplectus triquetar</i>	E/I	" <i>fragiferum</i>	S
<i>Schoenus ferrugineus</i>	S	" <i>glomeratum</i>	I
<i>Scleranthus perennis</i>	E/W	" <i>incarnatum</i> subsp. <i>molinerii</i>	E
<i>Scorzonera humilis</i>	E	" <i>micranthum</i>	E
<i>Scrophularia scorodonia</i>	E/W	" <i>occidentale</i>	E/I
" <i>umbrosa</i>	W/I	" <i>scabrum</i>	S
<i>Sedum dasyphyllum</i>	I	" <i>stellatum</i>	E
<i>Selinum carvifolia</i>	E	" <i>strictum</i>	E/W
<i>Senecio cambrensis</i>	E/W	" <i>squamosum</i>	W
" <i>paludosus</i>	E	" <i>subterraneum</i>	I
<i>Serratula tinctoria</i>	S/I	<i>Trinia glauca</i>	E
<i>Seseli libanotis</i>	E	<i>Trollius europaeus</i>	I
<i>Sibthorpia europaea</i>	S	<i>Tuberaria guttata</i> subsp. <i>breweri</i>	W/I
<i>Silaum silaus</i>	S		
<i>Silene acaulis</i>	W	<i>Utricularia intermedia</i>	W
" <i>conica</i>	S		
" <i>italica</i>	E	<i>Valerianella dentata</i>	S
" <i>noctiflora</i>	S	" <i>eriocarpa</i>	E/S
" <i>nutans</i>	S	" <i>rimosa</i>	E/I
" <i>otites</i>	E	<i>Verbascum pulverulentum</i>	E
<i>Simethis planifolia</i>	I	<i>Veronica fruticans</i>	S
<i>Sisymbrium irio</i>	E	" <i>praecox</i>	E
<i>Sorbus anglica</i>	E/W	" <i>spicata</i>	E/W
" <i>arranensis</i>	S	" <i>triphyllos</i>	E
" <i>bristoliensis</i>	E	" <i>verna</i>	E
" <i>eminens</i>	E/W	<i>Vicia bithynica</i>	W/S
" <i>lancastriensis</i>	E	" <i>lutea</i>	S
" <i>leptophylla</i>	W	" <i>orobus</i>	I
" <i>leyana</i>	W	" <i>tetrasperma</i>	S
" <i>minima</i>	W	<i>Viola kitaibeliana</i>	E
" <i>pseudofennica</i>	S	" <i>persicifolia</i>	E
" <i>subcuneata</i>	E	" <i>reichenbachiana</i>	S
" <i>vexans</i>	E	" <i>rupestris</i>	E
" <i>wilmottiana</i>	E	<i>Vulpia fasciculata</i>	S
<i>Spartina alterniflora</i>	E		
" x <i>townsendii</i>	W/S	<i>Wahlenbergia hederacea</i>	S
<i>Spergularia bocconii</i>	E	<i>Woodsia alpina</i>	W/S
<i>Spiranthes romanzoffiana</i>	E/S/I	" <i>ilvensis</i>	E/W/S
<i>Stachys alpina</i>	E/W		
" <i>germanica</i>	E	<i>Zostera noltii</i>	W

WILDLIFE AND COUNTRYSIDE ACT ENFORCEMENT

It is possible that the Police may need assistance with plant identification for the enforcement of the 1981 Act, and BSBI members are asked to co-operate with their local police in this if required.

PROCEDURE ON FINDING A VERY RARE PLANT

A recommended policy for the guidance of members who may have the good luck, the persistence and/or the skill to find a new locality for a rare plant, is in preparation and will be published in a future number of *BSBI News*.



Never forget! Look where you tread, mind where you sit.

SALVIA REFLEXA Hornem. in Britain

Salvia reflexa Hornem., variously known as Rocky Mountain Sage, Lanceleaf or Mint-weed, was first recorded in Britain in 1928 at Fritton in Norfolk, and has since been reported from various localities in England and Scotland. Available records suggest it has occurred more frequently in the south of Essex than in any other country except Middlesex, having been reported there six times, from four different localities, since 1949. A further South Essex collection from Rayleigh, September 1981, is reported here.

S. reflexa is a native of the Central U.S.A., North Dakota and Wyoming, south to Texas, Mexico and Arizona, and is regarded there as a common weed. It is considered to have useful medicinal properties, and has been used in infusions for malarial and rheumatic fevers, and as an astringent and general tonic. (see Moldenke, 1949). Nevertheless, the species has never been grown in Britain as a garden plant, nor used as a herb. It appears to be wholly casual here, and has shown no sign of becoming naturalised. Until recently, it has not been treated in identification guides to the British flora, and may, therefore, be difficult to name when first encountered.

The revised edition of the Excursion Flora of the British Isles (Clapham, Tutin & Warburg, 1981) has, for the first time, included *S. reflexa* and refers to it as a not infrequent casual. There is little descriptive text. I therefore, supply a fuller description here, supplemented by an excellent illustration by Graham Easy. I hope this may facilitate recognition of the species, which is probably more frequent and widespread than available records suggest. (See front cover).

S. reflexa is most frequently reported in Britain from rubbish tips, but also occurs in arable fields and private gardens. Its presence here can be attributed to the usual sources. It is an occasional constituent of bird-seed and contaminant of grass-seed and grain, but also occurs frequently in wool waste from Australia. It is, in fact, now common in Australia, where it is usually referred to as Mint-weed. According to Orchard (1948) it is a serious annual weed there, poisonous to livestock because of its high nitrate content. A similar situation exists in parts of Argentina (see Hunziker, 1961). According to Wilmott (1950) it also occurs frequently in Central Europe in grass-seed mixtures and grain.

S. reflexa is an attractive species with pale blue flowers and a distinctive but slightly unpleasant smell, reminiscent of mint but with a disagreeable, rather metallic element which is difficult to define. An accurate coloured plate was published by Jacquin (1811 - 1816, pl. 13), though British specimens tend to have somewhat paler flowers. The following description is based on the Rayleigh collection.

Salvia reflexa Hornem. (= *S. lanceolata* Brouss.)

Erect, much branched annual herb, 12" - 20" high, stem leafy, glabrous or usually minutely pubescent with fine recurved hairs. Leaves linear-lanceolate or oblong-lanceolate, 3 - 8 cms long, 4 - 12 mm wide, entire or crenulate to remotely serrate with a few low teeth, finely pubescent or glabrescent, narrowed towards the base, petiolate, petiole 5 - 15 mm long. Bracteal leaves narrow, lanceolate, persistent, 1 - 3 mm long. Inflorescence a terminal spike-like raceme, erect, 5 - 12 cms long. Flowers 2 - 4 at each node, pedicels shorter than calyx. Calyx campanulate, 6 - 8 mm long, minutely puberulent on the nerves, 3-lobed, upper lip entire, half as long as tube, 5-nerved, lower lip 2-cleft, teeth mucronate. Corolla pale blue, 7 - 11 mm long, tube not longer than the calyx, lower lip narrow, twice as long as upper. Flowers Aug - Oct.

The single plant at Rayleigh must, presumably, have originated from wild bird-seed. It set seed freely, some of which was collected and sown in March 1982. This all germinated successfully, but failed at the cotyledon stage. It does seem likely that seed may not remain viable after overwintering in Britain, and that the species will, therefore, remain a casual. It has shown no sign of becoming naturalised, though is now being reported more frequently.

I am indebted to Mr Eric Clement and Mr Ron Payne who have generously supplied many records. Others have been extracted from the county floras, and many others probably exist. A list of these is given below. I would also like to thank Graham Easy for use of the accompanying illustration, and Dr Ray Harley for determining the Rayleigh material.

B.M. SPOONER, Royal Botanic Gardens, Kew, RICHMOND, Surrey TW9 3AB.

ENGLAND

- Hertfordshire. Pye Corner, 1964 & elsewhere on rubbish dumps (Dony, Fl. Herts., 1967)
- Kent. Stone refuse tip, 18.10.75; 24.10.76 (comm. R. Payne); bird-seed alien on rubbish tips in N.W. Kent (Philp, Atlas Kent Fl., 1982)
- Lancashire. Atherton, corporation tip, 1959 (Travis, Fl. S. Lancs., 1963)
- Middlesex. Near Harmondsworth, 1962-67; Mill Hill; Hanworth 1954; Hyde Park, 1962; Hyde Park Corner, 1962; Yiewsley, 1966. (Kent, Hist. Fl. Mddx., 1975); Hanwell, rubbish tip, 1951 (Kent & Lousley, H'list Pl. London Area, 1951)
- Norfolk. Fritton, 1928; Harford tip, 1961 (Petch & Swan, Fl. Norfolk, 1968) Sheringham (Suppl. Fl Norfolk)
- Northants. Sibbertoft, 1938 (Wilmott, 1950)
- Nottinghamshire. Nottingham dumps, 1958 (Howitt & Howitt, Fl. Notts., 1963)
- Somerset. Bedminster, near Bristol, on a tip, 1978; Bath, on a building site, 1979 (Roe, Fl. Somerset, 1981). Brislington Tip, 14.10.78, leg. A.L. Grenfell & T.G. Evans. Bird-seed alien, producing good seed. (comm. E. Clement)
- Surrey. Earlswood, on a tip, 1958, (Miss B.M.C. Morgan, comm. E. Clement); Redhill, private garden, 30.8.76. Bird-seed casual. (Miss B.M.C. Morgan, comm. E. Clement); Mitcham Common, rubbish tip, 1956, J.E. Lousley (Kent & Lousley, Handlist Pl. London Area, 1951)
- Worcestershire. Pershore, in beet field, 22.9.56. Wool alien. (Mrs J.G. Dony, comm. E. Clement)

SCOTLAND

- Borders. Galashiels, 30.8.63, (Miss M. McCallum Webster, comm. E. Clement)
- Grampian. Elgin, rubbish tip, 1958. From bird-seed or foreign grain. (Webster, Fl. Moray, Nairn & E. Inverness)

VIOLA RIVINIANA Rchb. and **V. REICHENBACHIANA** Jord. ex Bor.

It is sometimes said that it is difficult or, indeed, impossible to differentiate between *V. riviniana* and *V. reichenbachiana* by vegetative characters alone.

Some fifty years acquaintance with these two species in south-west Devon suggests to me that the difficulty has been exaggerated, and that they can be separated on the basis of differences between their respective leaves. These differences, although subtle, definitely do exist and depend upon:-

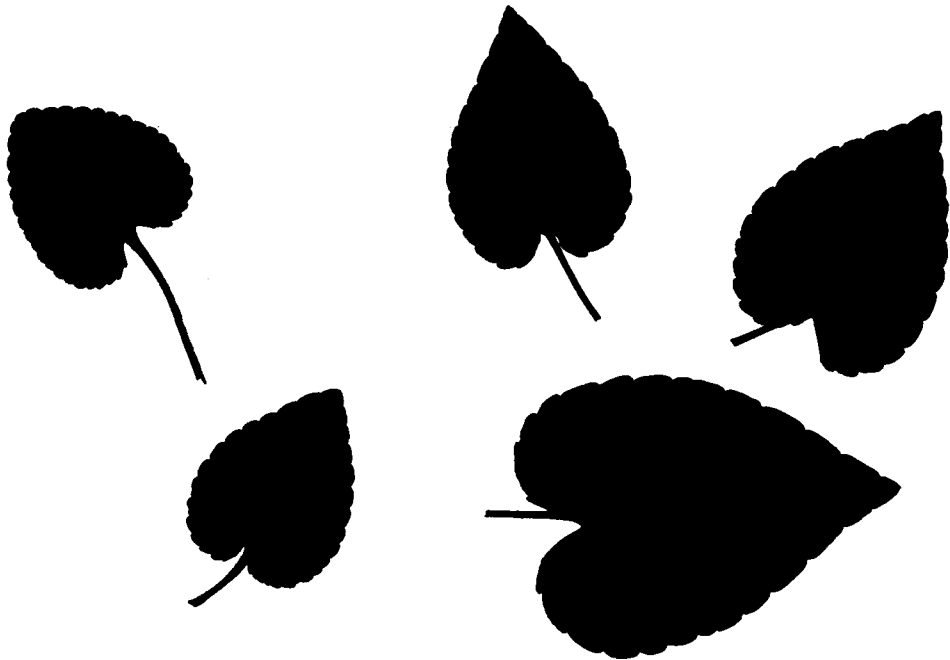
- (1) Shape and proportions. (Note more pointed apex in *V. reichenbachiana*, as seen in the accompanying illustration which is a photocopy of actual pressed leaves (see *BSBI News* 30 p. 15).
- (2) Texture. Thinner and less opaque in *V. reichenbachiana*.
- (3) Glabrous upper surface in *V. reichenbachiana*. Slight pubescence (X10 lens) in *V. riviniana*.

Although somewhat difficult to define, the differences become apparent when careful comparisons are made, and as the season progresses the very large leaves of *V. reichenbachiana* show the differences even more clearly.

E.N. MASSON PHILLIPS, Chestnut Cottage, Maudlin Road, TOTNES, Devon TQ9 5EX.

V. riviana

V. reichenbachiana



Silhouettes of leaves

_____ cms

LETTERS

ON LEAF RETENTION BY OAKS

It is by no means certain whether the use of names such as Wintereiche (German), Wintereik (Dutch), Vintereg (Danish), Vinterek (Swedish) etc. reflect the "special tendency" of *Quercus petraea* to retain some of its leaves far into the winter, as suggested by Mary Briggs *BSBI News* 30 p.27. According to Heinrich Marzell (*Worterbuch der Deutschen Pflanzennamen*, 3(8):1215 (1977) the preposition "winter" refers to the slightly later flowering time of *Q. petraea* as compared with *Q. robur*. Thus *Q. robur* and *Q. petraea* are occasionally referred to as the Fruh- and Späteiche.

However, whatever the etymological derivation it is clear that individuals of *Q. robur* show a similar tendency for leaf retention. During the past three years I have been taking note of this phenomenon in specimens of *Q. robur* growing in the Province of Antwerp (N. Belgium). It is apparent that:

- 1) This is most pronounced in young specimens and younger branches of mature trees, as James Cross *BSBI News* 28 p. 20 has already pointed out.
- 2) Only a small percentage of mature trees retain their leaves in any quantity.
- 3) Those individual trees displaying a tendency for retention do so year after year.

Since trees growing in close proximity to one another can display different degrees of leaf retention, it would seem unlikely that environmental factors are involved.

In order to gain a better insight into the amount of leaf retention, two hundred leaves within easy reach were numbered prior to leaf-fall. In the course of the autumn and winter the numbers were repeatedly recorded (Fig. 1). It is clear from the graph that even those oak trees with a high degree of leaf retention lose most of their leaves in the autumn. The leaves which are not abscised are subject to high winds which cause a gradual reduction in leaf number and a tattering of those retained (Fig. 2). With bud expansion in April those left are abscised in a matter of days. Withered leaves are rarely retained after the expansion of the new leaves, although in young beech trees (*Fagus sylvatica*) grown in a nursery, I have observed two sets of autumn leaves.

I wish to express my thanks to Prof. Ir. J.E. de Langhe for drawing my attention to Heinrich Marzell's work.

DR. D.K. FERGUSON, Rijksuniversitair Centrum, Groenenborgerlaan 171, B 2020 ANTWERP, Belgium.

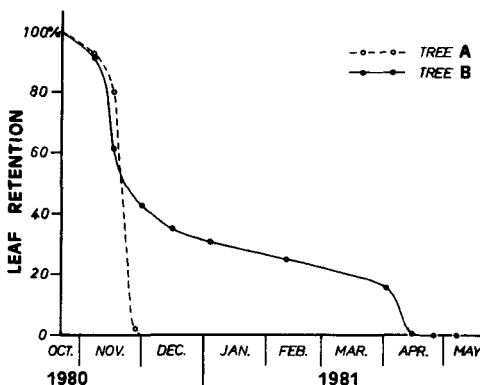


Fig. 1



Fig. 2

Fig. 1. Different degrees of leaf retention in two oak trees (*Quercus robur*) of similar age (30 + years old) growing only 6 m apart. Tree 'A' is 13.5 m high with a trunk 43 cm in diameter. Tree 'B' is 15 m high with a trunk 44 cm in diameter. While all the numbered leaves on 'B' had disappeared by the 26th April 1981, a few leaves were still present on other branches on the 7th May 1981 when the tree was coming into leaf. Since 'A' was already in leaf by the 15th April 1981, the two trees differ in this respect as well.

Fig. 2. Tattered leaves still attached to Tree 'B' on the 2nd April 1981. Scale = 2 cm.

***ELATINE HEXANDRA* x *HYDROPIPER* OR AN ABNORMAL FORM OF *E. HEXANDRA* ?**

This poser was put to members attending the Society's exhibition meetings at Edinburgh and London in 1981. The single pressed specimen on display was certainly unusual, combining both a small 3-merous head of *Elatine hexandra* and a larger 4-merous head characteristic of *E. hydro Piper* on the same stem. Some leaves had longish petiole suggestive of *hydro Piper*, but the pedicels to the flower heads and the development of only slightly curved seeds were typical of *hexandra*. After the London exhibition meeting the specimen was sent for examination to Dr Pertti Uotila (Botanical Museum of the University of Helsinki), an authority on the Northern European *Elatinaceae*.

The plant, picked-up by chance in August 1981, was amongst a mixed colony of *E. hexandra* and *E. hydro Piper* growing on exposed mud around the south-west fringe of Kilmannan Reservoir in Dunbartonshire V-c 99 (*Glasgow Naturalist* 20:185-186). Although both of these *Elatine* species are self-fertilising, cleistogamic when submerged, the presence of nectaries in their flowers shows that they are ancestrally terrestrial. Due to reconstruction work on the reservoir dam the water level was drawn throughout the summers of 1980 and 1981, so that cross-pollination by insects in this particular case was a real possibility. The consensus of opinion however, based on the total physical characters of the specimen, dismissed a hybrid parentage.

E. hexandra plants bearing capsules with four loculi has previously been reported by Sir Edward Salisbury (*Kew Bulletin* 2:140), and quite recently a few 4-merous flowers on laboratory cultivated *E. hexandra* were noted by Miss Kay Fiona Hawkins of Lancaster University.

J. MITCHELL, NCC, S.W. Regional HQ, The Castle, Loch Lomond Park, BALLOCH, G83 8LX.

WHAT DO YOU MEAN BY "CHILDLING" ?

BSBI News 29 listed plant species fully protected under the Wildlife and Countryside Act 1981, including "Childing Pink, *Petrorhagia nanteuilii*. *BSBI News* 30 apologised "for the omission of the second 'l' from the English name of one of the pinks, which should be 'childling'." With the recent trend to use English names for wild plants this word has been appearing in print. It occurs in the *BSBI English Names of Wild Plants* (1974) and is now apparently part of the Law of England. Should it, however, be applied to this plant? And who first used it? Above all, what do those who use it suppose it to mean?

The Latin synonymy gives a useful hint: *Dianthus prolifer* L.; *Tunica prolifera* (L.) Scop.; *Kohlruschia prolifera* (L.) Kunth. In Latin *proles* (offspring) and *ferre* (to bear) give our English "proliferous".

Now, the O.E.D. acknowledges "childling" as a rare and archaic diminutive for "a little child", giving only two references dated 1648 and 1855. "Childing" on the other hand, has a long and respectable history, both as noun and as adjective (used by Shakespeare). O.E.D. explains clearly how the botanical application is derived from the primary meaning of "proliferous" or "producing children": "applied to some plants which produce younger or smaller florets round an older (regarded as parent) blossom". Some relevant early quotations are: (Gerard (1636) ". . . . another pretty double daisy which puts forth many footstalks carrying also little double flowers, whence they have fitly termed it the childing daisy"; R. Holme (1688)". "The Childing Pink groweth on upright stalks"; Withering (1776) "*Dianthus prolifer*, the Childing or Proliferous Pink; and Prior, in 1879, calls *Gnaphalium germanicum* the Childing cudweed.

Webster, the standard U.S.A. dictionary, does not include "childling", but does have "Childing Pink: an annual Pink (*Dianthus prolifer*) naturalised from Europe". The dozen or so Floras in my library dating from the 12th, 18th and 19th centuries use neither word.

"Childing" is used by Townsend in *Flora of Hampshire* (1882) and was revived by Druce for work of his later years *Flora of Buckinghamshire* (1926).

McClintock and Fitter in their *Pocket Guide to Wild Flowers* (1956), give a good description of the childing habit of the plant". close cluster of small pale pink flowers which usually emerge one or two at a time" but nevertheless name it "childling" (for which they were duly rebuked by the reviewer in *BSBI Proceedings Part 2*). I am not aware that the usage "childling" appeared in print previously, and should be grateful to anyone who can provide a reference. My present belief is that it was an error which is by now likely to become established and accepted. However, I note with pleasure that Fitter (*filius*) in *An Atlas of Wild Flowers of Britain and Northern Europe* (1978) sticks to "proliferous" - "it's wise childling. ?"

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CONFUSION BETWEEN *LYSIMACHIA CILIATA* AND *L. PUNCTATA*

These two dissimilar species are, strangely, much confused by some Br field botanists. They are both well defined in CTW2, and accurately depicted by Sybil Roles in the CTW *Illustrations* 2:107. But, beware of the ghastly painting in Keble Martin (1965, pl. 57) which is captioned as "*L. ciliata*"; it more resembles *L. punctata*, but is too inaccurate and scrappy for determination! *L. punctata* is by far the commoner sp throughout Br; *L. ciliata* is distinctly rare and virtually confined to N. England and Scotland. K.E. Bull tells me of his 50–100 Br localities for the former, and just 1 for the latter sp. This is my experience, too. *L. punctata* is very common in gardens: not so *L. ciliata*. Dr A.C. Leslie, of RHS Wisley, has never seen it in cultivation – nor is it amongst the 8000 spp grown at Cambridge Univ. Bot. Gdn, according to Yeo & King's valuable *Catalogue* – see *BSBI News* 28, p. 31. Yet, e.g., D.H. Kent's *Hist. Fl. Mddx* (p.377) gives 12 claimed sightings of *L. ciliata*, and just one, casual, record of *L. punctata* (p. 619). In adjacent Surrey, *L. ciliata* has never been found (the ref. on p. 296 of JEL's *Fl Surrey* is an error), but *L. punctata* has at least 6 localities (e.g. it prospers at Chessington, 1966 - 81, EJC).

There are plentiful specimens in BM, and I was able to *confirm* records from the following areas, several of which are missing from the BSBI *Atlas*:

L. ciliata: v.c.'s 34, 70, 72, 87, 91, 92

L. punctata: v.c.'s 6, 10, 13, 16, 18, 21, 24, 28, 33, 56, 64, 65, 67, 72, 78, 83, 87, 90, 96, 97, 98, 103, H24.

Two noteworthy errors also came to light, as follows:

(*L. ciliata*): By the Leader nr Earlston and plentiful by the Tweedside (Berwicks), Oct 1924. I.M. Hayward *BEC Rep.* for 1924. The vouchers in BM and NMW are all *L. vulgaris* !

L. punctata: Clapham (mid-W Yorks), July 1895, ex Hb. H.J. Riddelsdell. BM. Collected as native *L. vulgaris*, so it was presumably well naturalised at this early date!

I believe *L. ciliata* is decreasing (it is scarceley garden worthy – and I have never received a correctly named specimen), but *L. punctata* is greatly increasing – I have seen very many recent collections. And, yet every one is always totally sterile (a triploid, perhaps, as is sterile *L. nummularia*): it has spread in Br solely by rhizome fragmentation.

The ovary never swells into a fruit, hence the style never projects beyond the calyx teeth (a useful separation clue on 'fruiting' specimens). Hence, no fruit is shown on the drawing by Sybil Roles! Butcher (1961) does not even mention *L. punctata*, whilst Bentham & Hooker (1924, p. 302) considered it a variant of *L. vulgaris* with "none" of its characters constant. How very untrue! Please send to me all *L. ciliata* specimens for verifying, but not too many of *L. punctata*!

E.J. Clement

A NOTE ON COPYRIGHT

Several members have recently had trouble over copyright; so, as misunderstandings on this subject are frequent, a note on the basic principles may be useful.

Copyright — literally “the right to copy” — is a property, but it is quite distinct from ownership of the object copied. If someone writes me a letter, the physical object becomes my property: I may sell it, give it to a museum or bequeath it. But the right to *copy* it, or at least to publish a copy of it, remains the property of the writer.

Originally, the copyright in a piece of writing or of music, in a painting or a photograph, belongs, with very few exceptions (see NOTE at end) to the writer, composer, artist or photographer who created it. The copyright can be transferred only by a written document signed by the original owner. The transfer may be for a particular, temporary purpose (licence) or permanent (assignment); it may be specific (limited to a poem, a magazine article or a book) or general (copyrights would be included, without specific mention, in “property” or “goods” left by Will to an individual or a trust).

In Britain copyright in written material continues as an exclusive property for fifty years after the death of the author if the work has been “published” before his death; if it has not, the work remains in copyright until it is published and for fifty years after that first publication. Copyright in photographs follows this second rule.

Members may well ask, what constitutes being “published”? The difficulty with the Copyright Act, passed by Parliament in 1956, is that it does not give precise definitions; but it is generally assumed that a work or a photograph is “published” only when a number of copies have been made available to the public.

Under the Universal Copyright Convention (UCC) to which most countries of the world now adhere (China and Iran are the main exceptions) the work of an author published in one of the adhering countries is accorded in the others whatever copyright protection is locally allowed — for the most part more or less the same as in Britain. To obtain such protection the published work must carry the official copyright notice — the symbol *c* followed by the date of publication and the name of the copyright owner.

What constitutes an infringement of copyright is a question some members will want answered. Infringement occurs if a “substantial” piece is copied, but here again “substantial” is nowhere defined in the Act. It could be construed as the *amount* copied, the *importance* of what has been copied either in the original or in the work that has copied it, or its relation to the context in which it is used (in the original, or when quoted) or to a combination of all or several of these factors. Only a legal judgement handed down in an action, brought by someone who felt aggrieved and sought redress in the courts, would definitely settle whether an infringement had or had not been committed in any particular instance.

Of course the greatest scope for unauthorised copying is the universal availability of photocopying machines. There is one circumstance in which copying does not constitute an infringement: under the “Fair Copying Declaration” a “*bona fide* student” (not exactly defined) may take, for purposes of his own personal study or research, a **single copy** of copyright material. He may not use it in any book or article he is writing, without obtaining further permission. Teachers may not make multiple copies for a class of students. Some still do so, and for years the Society of Authors, the Publishers’ Association and even the Government, have tried — without much success — to devise a system to check this abuse.

You will have observed the somewhat sternly worded cautionary note on the back page of *BSBI News*. This not only safeguards the contents of the journal, but protects authors against misrepresentation. Many of our contributors send in the results of preliminary observations or ongoing research. This benefits our members by keeping them abreast of latest developments, but further work could result in the earlier publication needing extensive revision and no author would care to see his now out of date views copied in another publication. Thus our Editor's practice is to refer all requests for reproduction to the author, who may wish to make alterations or even withhold his permission altogether.

Thus copyrights may be valuable and should be taken seriously. To treat them as unimportant is to damage the whole community of authors.

NOTE. The main exceptions referred to above are: (1) Anyone employed by a firm or institution specifically to write (letters, reports, etc.) automatically, by his contract of employment (explicit or implicit) transfers the copyright in those writings to his employer. (2) The copyright in any *commissioned* photograph belongs to the person commissioning it and not to the photographer.

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CERASTIUM BRACHYPETALUM PERS. looks native in W. Kent (VC 16)

The discovery in W. Kent in 1978 of this *Cerastium* (hitherto known only in Bedfordshire) was reported in Bulletin of the Kent Field Club No. 24 p. 38. By the spring of 1982 a further eight sites had been discovered in the Longfield area.

At first the supposition was that the species had been introduced some time ago in connection with railways as it was seen only in long established trackside vegetation growing happily with native species. It was noticed over some years that the *Cerastium* was confined almost to the inch to precisely the same limited areas. It made no attempt to spread into adjacent areas of bare soil or on to the track, or to colonise neighbouring fields. Even in this habitat therefore the plant did not behave like an adventive.

In May 1982 a different complexion was placed on the affair, since several of the new locations which I found were in natural chalk grassland. Here the species grows in profusion in clumps of *Bromus erectus*. Some of this grassland has been undisturbed for at least 120 years. Moreover since much of the grassland is at a higher level than the sites adjacent to railways, it seems likely that the plant has spread from the former to the latter. In areas like Longfield, only 20 miles from London, virtually all the old grassland left is adjacent to railways.

Kent is close to Europe where *Cerastium brachypetalum* is native. It is not unreasonable to conjecture that we have in the Longfield area a relict population of a species once more prevalent when the natural grassland was more widespread. Existing sites cover a distance of about one mile, and further exploration on foot in the Longfield and adjacent areas may provide a fuller picture.

There has been some difficulty in the field in determination below the specific level in line with the subspecies set out in Flora Europaea. The plants in the Kent colony are however all eglandular and probably identical with those in Bedfordshire.

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PLANT RECORDS

This article summarises the Plant Records published in Watsonia 14 (2). If welcomed by members such an article, contributed by different authors, could become a regular feature in BSBI News.

As usual, the plant records give an insight into the changes occurring in the British Flora, and in our knowledge of it. Perhaps pride of place ought to go to records of 'Red Data Book' species, of which there are two: the waterwort, *Elatine hydropiper*, found by a reservoir in Dunbarton, and goldilocks, *Aster linosyris*, discovered on a limestone sea-cliff in Pembroke.

Wide rangers

The goldilocks record is one of several interesting finds in Pembrokeshire, including some of species well to the west of their predominantly English distribution in Britain. The wayfaring tree, *Viburnum lantana*, was seen in scrub on limestone sea-cliffs; grass vetchling, *Lathyrus nissolia*, by a disused railway where it is presumably a recent arrival; and three sedges, *Cladium mariscus*, *Carex appropinquata* and *C. elata*, all species found in fairly base-rich fens. By contrast there is a first English record of the predominantly Welsh marsh orchid *Dactylorhiza maculata* subsp. *cambrensis*, found in 1963 by Miss Crackles in a marsh in S.E. Yorkshire.

Other extensions of range include the first two records of the woodrush *Luzula forsteri* in Brecon, and from Merioneth *Parapholis incurva*: these are also extensions westwards. Plants found towards the northern edge of their British range include *Betonica officinalis* in Selkirk, about 30 miles north of the very sharp boundary to the main distribution of this plant; bristly ox-tongue, *Picris echioides*, in S. Northumberland, where it has not been seen for over 100 years; red-veined dock *Rumex sanguineus* and the other goldilocks, *Ranunculus auricomus*, in woodland in N. Aberdeen; and from the far north the most northerly British records of the bird's-nest orchid *Neottia* in birch woodland and under beech trees in E. Sutherland. There are also new records of two species near the southern edge of their range: dwarf cornel, *Chamaepericlymenum suecicum*, in S. Northumberland and *Alopecurus alpinus*, a species with an arctic distribution, on The Cheviot, over 50 miles from its stations in the Moffat hills.

Water species

Several of the more interesting records are of aquatics: these include the first recent Cornish record of the hornwort *Ceratophyllum demersum*, a rare plant in S.W. England, in a reservoir in v.c. 1; the star-wort *Callitriche obtusangula*, exceedingly rare in Scotland, new to Dunbarton where it was found in a burn in the Loch Lomond NNR; *Ruppia spiralis* in S.E. Yorkshire and at its northernmost locality on the east coast; and *Potamogeton coloratus*, rare in Wales and now found in Pembrokeshire for the second time. There are further records of the introduced aquatics *Elodea nuttallii*, both from Suffolk and Brecon, *Lemna minuscula* from Surrey and Sussex and *Nuphar advena*, also naturalised in Surrey. The native water-lily *N. pumila* was found in 1978 at a second site in E. Sutherland. Two local marsh and waterside plants were also found at new sites: galingale, *Cyperus longus*, in Merioneth and orange foxtail *Alopecurus aequalis*, a grass which is often erratic in its appearance, at the Talybont Reservoir in Brecon.

Finds among the cones

Few botanists would relish the prospect of botanising in coniferous plantations, but two new records from Wales suggest that they may deserve more attention. Yellow bird's-nest, *Monotropa hypopitys*, was found in 1980 in a duneland pine plantation in Merioneth and *Cephalanthera longifolia* in one of the Newborough Forest plantations in Anglesey. It has been suggested that another orchid, *Epipactis purpurata*, is spreading so it is interesting to see a new county record from N. Somerset. The wintergreen *Pyrola rotundifolia* subsp. *maritima* continues to be found in new areas along the Welsh coast: the latest record is from a dune slack in Merioneth. Two coastal species which are now turning up in inland habitats are sand sedge, *Carex arenaria*, and sea poa, *Puccinellia distans*: the former is reported from a railway line in Radnor and the latter from a roadside verge in Surrey.

Long time – no see

The rediscovery of plants after long intervals is always fascinating. The longest period between the last record and the present rediscovery is almost 200 years: Mr Medd's record of chaffweed, *Anagallis minima*, at Allerthorpe Common is the first from S.E. Yorkshire since the mid-1790's. *Fumaria capreolata* on waste ground at Castle Park, Warwick is the first county record since 1831, although this, like the first twentieth century record for *Anthriscus caucalis* in Merioneth, is presumably a recent introduction. *Veronica anagallis-aquatica*, water speedwell, is reported from Easternness for the first time since 1839 and the record of limestone polypody, *Gymnocarpium robertianum*, presumably a colonist on a mortared wall in S. Lancashire, is the first since 1870. An undoubted native, *Pseudorchis albida*, was detected in Brecon for the first time since 1907 and *Trifolium glomeratum* was found at Camber Castle 84 years after the last East Sussex record was made there.

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WILD SERVICE AND OTHER TREES FROM SEED

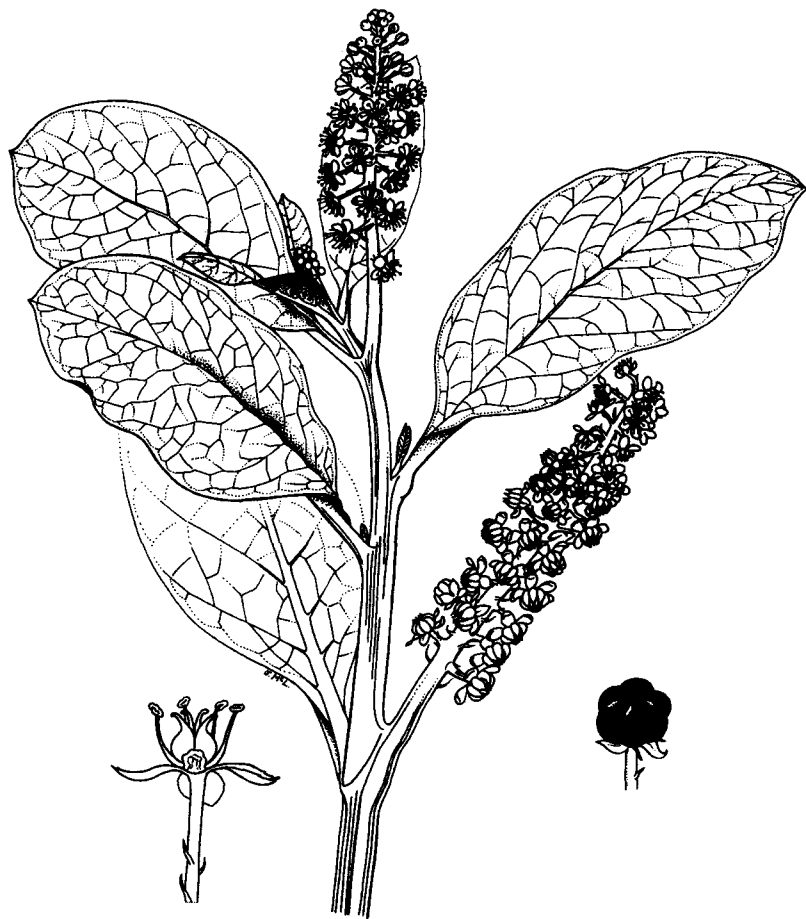
In the last two *B.S.B.I. News* (Nos. 29 and 30) notes have appeared on raising Wild Service Trees from seed and it seems that an interesting anomaly has been discovered. Much more information must still be obtained, but it seems broadly that if seed of *Sorbus torminalis* and many other trees is stratified with one cold period in a refrigerator and then sown in the normal way a good percentage will germinate quite quickly, i.e. during the first warm period. If, on the other hand, seed of the same species is sown in pots that are left out of doors they normally need a cold-warm-cold-warm sequence before germinating, i.e. two winters in the soil.

If this can be shown to be a consistent phenomenon, the explanation would seem to lie in a number of possible causes. Seed in soil could, for example, be inhibited from germinating for a longer period, but I think it more likely that the governing factor is the precise nature of the cold and warm spells. In Sussex, where I live, winters are not very cold and pots are subjected to only occasional and irregular freezing and one could hypothesize that seed needs a certain period below a critical temperature before the necessary chemical changes that allow germination take place. This cold period could take place in one stretch as in refrigerated stratification, or in a number of shorter cold spells leading to germination after two winters. If this is a correct interpretation of the situation it has an interesting bearing on the capability that different tree, and other

plant, species have of regenerating in our climate. The Wild Service could, for example, germinate well after a long cold winter more typical of a Continental climate while in Britain, under its present climatic regime, two winters would normally be required, leaving seed much more susceptible to predation or damage. This could clearly be an important factor in the current very low level of natural regeneration from seed of the Wild Service in this country.

As mentioned above much more information and carefully controlled experiment is needed before we can be certain of the position. Any relevant information from readers would be valuable, meanwhile anyone sowing tree seeds in pots outdoors should continue to remember to leave them exposed to all weathers for at least two winters before giving up – I have had several plants germinate after three winters.

PATRICK ROPER, South View, Sedlescombe, BATTLE, Sussex.



A. Phytolacca sp

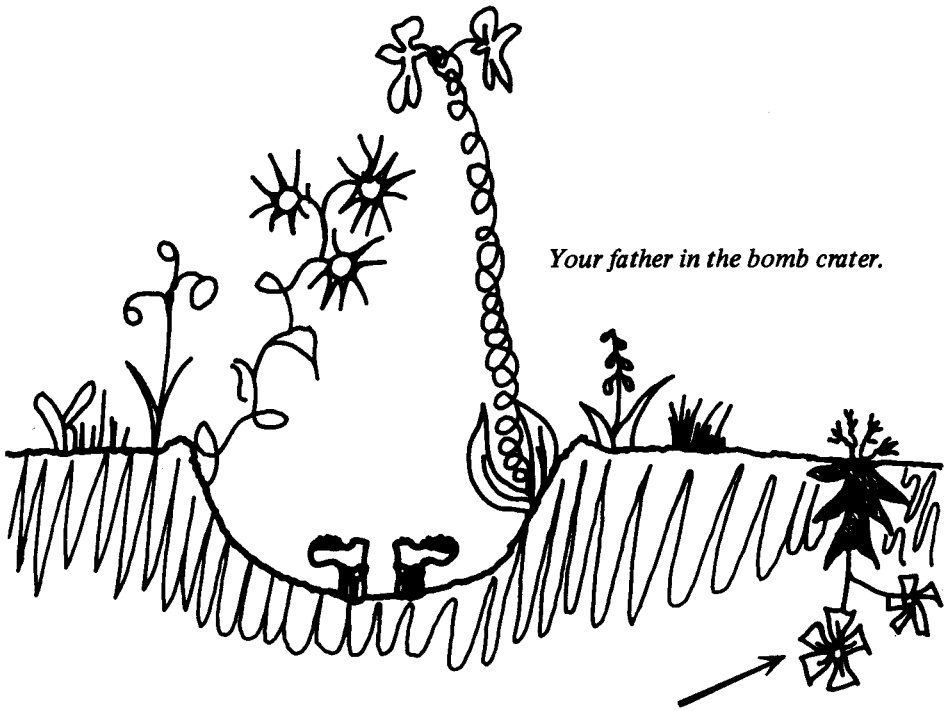
© J. Mc Lean 1976

"THE BOMB CRATER"

We could not compile an issue of *BSBI News* featuring Plant Conservation without remembering **TED LOUSLEY** who was unstinting in the energy he devoted to this cause.

This rough drawing, by the late Rex Graham on a page from a note pad, commemorates the day when Ted and Rex, after lunching at the Cock Inn, Headley discovered the famous Box Hill Crater. On viewing the peculiar collection of plants in it they wondered if the beer had been extra good.

Rex sent the sketch to the Lousley's daughter, Margaret, hence the caption mentioning "your father".



Your father in the bomb crater.

Drawn by Rex Graham.

very rare — it grows downwards

BOOK NOTES

In the January part of *Watsonia*, Vol. 14 (3), it is hoped to include reviews of the following books:

The Flora of Angus (Forfar, V.C. 90), by Ruth Ingram and Henry Noltie.

The Hamlyn Guide to Edible and Medicinal Plants of Britain and Northern Europe, by E. Launert.

On the re-examination of a hybrid Digitalis, by J.S. Henslow (1831), facsimile edition. *Revolutionary Botany. 'Thalassiphyta' and other Essays of A.H. Church*, edited by D.J. Mabberley.

A Seventeenth Century Flora of Cumbria, William Nicolson's Catalogue of Plants 1690. Edited by E. Jean Whittaker.

A Review of the Cornish Flora 1980, by L.J. Margetts and R.W. David.

The Garden of Eden, by John Prest.

The Flora of Foula, by J.P. Barkham, S. Gear, D.L. Hawksworth and K.G. Messenger. *Lords and Ladies*, by C.T. Prime (reprint).

Revision der Sektion Corylifolii (Gattung Rubus, Rosaceae) in Skandinavien und im nordlichen Mitteleuropa, by H.E. Weber.

The Trees of Britain and Northern Europe, by A. Mitchell.

Pollen Identification for Beekeepers, by R. Sawyer.

Rheophytes of the World, by C.G.G.J. van Steenis.

The Plant Cuticle, edited by D.F. Cutler, K.L. Alvin and C.E. Price.

Woodland Conservation and Management, by G. Peterken.

The Monocotyledons, by R.M.T. Dahlgren and H.T. Clifford.

Popular Encyclopedia of Plants, edited by V.H. Heywood and S.R. Chant.

Introduction to Ecological Biochemistry (ed. 2), by J.B. Harborne.

Identification of Modern and Tertiary Woods, by A.C. Barefoot and F.W. Hankins.

Garden Plants valuable to Beekeepers, by the International Bee Research Association.

The Rochdale Flora, by A. Marshall.

Atlas of the Kent Flora, by E.G. Philp.

The following books have been received recently. It is hoped to review all of them in *Watsonia*:

Discovering the Countryside with David Bellamy – Coastal Walks, and Woodland Walks (2 vols.) edited by D. Bellamy.

The Flowering Plants and Ferns of Anglesey, by R.H. Roberts.

The Book of Nature Photography, by Heather Angel.

Flora Europaea Checklist and Chromosome Index, by D.M. Moore.

Anatomy of the Monocotyledons, VII Helobiae (Alismatidae), by P.B. Tomlinson.

The increasing number of members who travel each year in the Himalaya will find *Himalayan Flowers and Trees*, by Dorothy Mierow and T.B. Shrestha, of considerable interest. Its 210 pages of informative notes and 400 coloured plates (mostly of plants and vegetation), provide a very useful sketch of the flora of Nepal. It is published by Sahayogi Press, Nepal (1978), and is easy to obtain in Kathmandu and India, price Rs 100.00 or U.S. \$10.00; but, unfortunately, it does not seem to be on sale in the U.K.

Finally, those many B.S.B.I. members whose interests extend to bryophytes will be glad to learn that the British Bryological Society have recently published *Distribution of bryophytes in the British Isles: a Census Catalogue of their occurrence in vice-counties*, edited by M.F.V. Corley and M.O. Hill. It contains a list of all species, subspecies and varieties occurring in the area, together with an index of B.B.S. distribution maps and citations of recent taxonomic revisions and species additional to those in the standard Floras, and is available (price £6.00 post free) from:

British Bryological Society, c/o Department of Botany, National Museum of Wales, Cardiff CF1 3NP, Wales.

N.K.B. ROBSON, Botany Dep't, British Museum (Nat. Hist.), LONDON SW7 5BD.

APPEALS

THE NORTH WALES NATURALISTS TRUST

SESSILE OAK WOODLAND and FENLANDS APPEAL

Coed Crafnant is a sessile oakwood near Harlech of which the Nature Conservation Review says "The principal interest of this wood is the rich and varied Atlantic bryophyte (130 species) and lichen flora. It provides one of the finest examples of the range of woodland bryophyte habitats in a western oakwood, and is of international importance.

The Rich-Fen systems of Anglesey and the Lleyn Peninsula. The sites involved are a series of low-lying calcareous valley fens in which a wide range of rich-fen vegetation communities occur. Of the seven main fen systems in the area, none is yet fully protected with sympathetic hydrological management. The main primary threat comes from land drainage, resulting in drying out and acidification of the peat surface with consequent undesirable changes in the structure of the vegetation.

The trust, which is appealing for £25,000, has issued a most informative illustrated leaflet giving details of the geology, vegetation and names of species. This is obtainable on receipt of S.A.E. from:

THE APPEAL SECRETARY, N. WALES NATS. TRUST, 134 High Street, BANGOR, Gwynedd.

CHARLES DARWIN CENTENARY – KENT T.N.C. APPEAL

Twenty years ago the Kent Trust for Nature Conservation bought the 17 acre Downe Bank Reserve (Darwin's "Orchis Bank"). To mark the centenary of the death of this great man who, for forty years, made his home in Kent and completed most of his major work there, the Trust is glad to announce the purchase of the adjoining Bluebell Wood for £5,000.

Charles Darwin died 100 years ago, on 19th April, 1882, and botanists need no reminding of the importance of his work and writings. The site is of national and international historical and scientific significance and the Trust is appealing for funds to help in its purchase.

Cheques should be made out to "Darwin Appeal – Bluebell Wood", and sent to:- Kent Trust for Nature Conservation, 125 High Street, RAINHAM, Kent.

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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:-

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