BSBI NEWS

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Edited by
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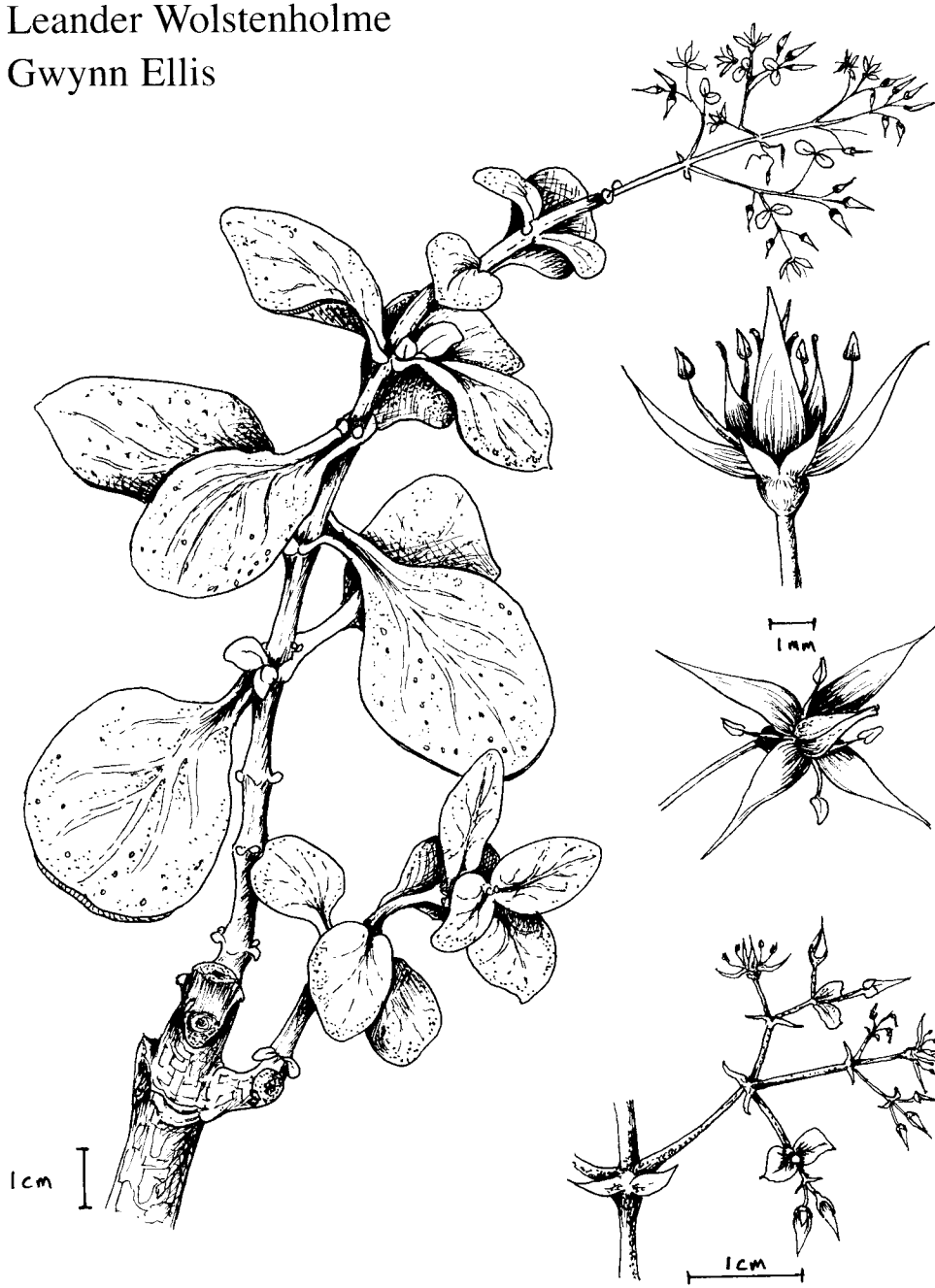
Gwynn Ellis



Crassula multicava del. Ruth Freeman © 2002 (see page 46)

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CONTRIBUTIONS INTENDED FOR *BSBI NEWS* 93 should reach the Receiving Editor before MARCH 1st 2003

IMPORTANT NOTICES

FROM THE PRESIDENT

Despite a few delays in its final production, the *New Atlas of the British and Irish Flora* was finally launched on September 17th at Kew when Mrs Margaret Beckett, Secretary of State for Environment, Food and Rural Affairs, gave the keynote address. This was followed by the three authors, Chris Preston, David Pearman and Trevor Dines presenting some of the findings and analyses resulting from the five years of data collection carried out by the voluntary work of the Vice-County Recorders and members of the BSBI. The authors, the whole of the 'back-room' production team (including the CD ROM producers) and, of course, the army of BSBI volunteers deserve a tremendous amount of gratitude and were, in fact, warmly thanked at the launch. To finish the event I presented the authors, on behalf of the BSBI, with special leather-bound copies of the book, in recognition of the enormous amount of work that had fallen to them in the production of the book — a complete surprise to them and, I think, much appreciated! (See Colour Section, plates 1 & 3)

It was, however, disappointing that most press coverage did not do justice to the role the BSBI volunteers played in the production of the *Atlas*, with DEFRA taking most of the credit, not surprising as they provided the vast majority of the funding, for which the BSBI is very grateful.

In November, the Atlas publication was also celebrated at the Scottish AGM and at the Annual Exhibition Meeting in Cardiff and, on December 7th, at a special Irish Launch in Dublin.

I hope you have all, by now, received your copies of the Atlas. There appears to have been some confusion between the publishers and couriers over dispatch in some areas, so if you have not yet received your order, please get in touch with Mike Walpole or Gwynn Ellis without delay.

I was asked to carry out another particularly pleasurable task at the Cardiff meeting when I presented, on behalf of the BSBI, a certificate and prize of £200 to Sarah Priest who was the top achieving student in the botanical identification modules of the *University Certificate in Biological Recording and Species Identification* course where a student has studied all botanical modules and has achieved over 70% in all assignments. The course is run by the School of Biosciences, University of Birmingham and jointly supported by the BSBI and the Field Studies Council. I don't think I have ever met a more appreciative prize-recipient than Sarah, who intends to continue to increase her botanical knowledge and tells me she will use the prize to put towards the purchase of a botanical microscope. The BSBI is seeking to further support the promotion of plant identification skills and botanical education appropriate to today's needs in the future.

Another prize, the Presidents' Award, is given annually, in alternate years by the Presidents of the Wild Flower Society and BSBI, for the best botanical book published during the previous year. This year it was the turn of the WFS President, Richard Fitter, to choose the work and make the presentation. WFS members will already, no doubt, be aware that the Award was recently made, at the WFS AGM, to *Plants of Snowdonia*, edited by Peter Rhind. Congratulations to Peter and the various authors of the book which is certainly successful in promoting the botanical attractions of the area.

David McClintock was known by many members for his *Pocket Guide to British Wild Flowers* which he wrote with Richard Fitter and which was published by Collins in 1956, the pioneer field guide to Britain's plants. But, of course, he was an authority on many aspects of botany, not least of which was his expertise on heathers, for which he was BSBI Referee, and his work on the Flora of Guernsey. His achievements were noted in *Watsonia* **24(2)**: 257–266. His death last year was a sad loss not only to his family and friends, who recall many fond memories, but also to the botanical world as a whole. David left a sum of money to the BSBI in his will and we very gratefully acknowledge its receipt.

Just as you thought you might take a well-earned rest from intensive field-recording now that the Atlas is complete, with this issue of *BSBI News*, you will have received instructions for the two year BSBI *Local Change* monitoring project which sets out to repeat the recording carried out during the first Monitoring Scheme in 1986-87. The project is funded by the Heritage Lottery Fund which, jointly with

Plantlife, has enabled the appointment of two officers to co-ordinate the Plantlife *Common Plants Survey* and BSBI *Local Change*. You will all be aware by now that Pete Selby has been appointed by BSBI to co-ordinate *Local Change* and has already been in touch with Vice-County Recorders to find out what additional resources may be needed in each vice-county. It is intended that the same tetrads (A, J & W) in the same sample of 10 km squares as the 1986-87 Monitoring Scheme will be revisited over the next two field seasons. The aim then is to supply the field data in electronic form using the MapMate recording software, input at the county or regional source, and export it to a central 'hub', where it can be easily processed and analysed. This will enable rapid results to be achieved without the need for masses of central data-processing for which the resources are simply not available. The theory is good but it relies upon a good-deal of co-operation and goodwill on the part of the volunteers at county level both in data collection and handling. We have achieved amazing results at seemingly impossible odds in the past and I know that we are capable of pulling this one off too. I look forward to seeing the results at the end of the scheme when we will be able to make a much better and reasoned judgement on the changes and trends which our flora has undergone in the last fifteen years. I know we can count on your assistance.

Another aspect of *Local Change* is to raise the level of expertise amongst members, so if you have not felt confident enough in the past to participate in field-recording, here is an excellent opportunity for you to become involved, whilst, at the same time, increasing your botanical knowledge. Pete and I look forward to seeing you at one or more of the many meetings which have been arranged to promote and undertake the scheme during the forthcoming field-season.

RICHARD PRYCE, President

EXECUTIVE SECRETARY POST

Both Ailsa Burns, Hon. Gen. Sec. and Mike Walpole, Hon. Membership Treasurer have decided to stand-down from office at the next AGM in May. The ever increasing work demanded of these officers and of David Pearman, whose invaluable dedication effectively carries out the full-time tasks of an Executive Director at no cost to the Society, has brought about the decision of BSBI Executive, endorsed by BSBI Council, to appoint an Executive Secretary during 2003 to spread the workload.

The successful candidate will need to be self motivated and also able to work as part of the small team of volunteers and paid officers in running the Society. The post may be full or part time and will initially be supported from BSBI funds but ultimately it is hoped that the appointee will be successful in seeking funding for the continuation of the post.

We are still drawing together a job specification, but aspects of the work will include taking forward our recently agreed Strategy and better contact with the national conservation bodies, and with all other potential users of the data and expertise that we encompass. We are also thinking about a permanent office.

If any BSBI member is interested in being considered for this role, please write to the Hon. General Secretary, Miss Ailsa Burns at 3 Rosliston Road, Stapenhill, Burton-upon-Trent, Staffordshire DE15 9RJ (e-mail: BSBIHonGenSec@aol.com) to express your initial interest.

RICHARD PRYCE, President

EDITORS OF *BSBI NEWS*

Observant members will have noted from the front cover that a new name has been added to the Editors of *BSBI News*. There have been a few mutterings from some quarters about the content, size and layout of recent issues of *News* and I am delighted to announce that Leander Wolstenholme has agreed to field some of the flak by becoming the Receiving Editor. In future all contributions should be sent to him at the address given on the inside of the front cover. After reading them he will forward them to me and we will both decide what to include. Fortunately, we both seem to be of a like mind — that *BSBI News* should be written by members for members and the last thing we want is for it to become a 'staid' journal with no room for humour or the odd eccentric item. What do YOU think?

I will stay on as General Editor and the producer of Camera Ready Copy.

There is also the possibility of changing the format of *News* in the not too distant future. This could involve changes in typography, page size, column numbers, etc. It is important that we don't stick to a particular format just because we have grown accustomed to it and dislike change, but at the same time — 'if it ain't bust why fix it'. Again your views would be invaluable in helping to formulate our ideas.

GWYNN ELLIS, General Editor *BSBI News*

THE IRISH LAUNCH OF THE *NEW ATLAS OF THE BRITISH AND IRISH FLORA*

The Committee for Ireland, that represents both those members of the BSBI who reside in Northern Ireland and the Republic of Ireland, hosted the Atlas's Irish Launch at the National Botanic Gardens in Dublin on Saturday 7th December. More than 70 people attended this prestigious event including the three editors and the Taoiseach (the Republic of Ireland's Prime Minister), Mr Bertie Ahern.

The day started with morning coffee and chat, followed by a short welcome by Donal Synnott, Director of the National Botanic Gardens. He thanked Mr Ahern for attending the event and lending the proceedings 'an air of dignity'.

Richard Pryce, President of the BSBI, gave a short address and officially launched the Atlas. After a short break for photographs (see colour section plate 2), Mr Ahern left and the event continued with a brilliant double act by David Pearman and Trevor Dines. Declan Doogue then talked about the 'Costs, Benefits and the Future' of the Atlas project and botanical recording in the Republic of Ireland. Paul Hackney outlined the Atlas Project in Northern Ireland. This was followed by short talks by John Faulkner, Director, Environment and Heritage Service (NI) and Alan Craig, Director, Dúchas, National Parks and Wildlife (RoI) about the use of the Atlas within their respective organisations.

The event highlighted the hard work that has been done by the BSBI volunteers in Northern Ireland and the Republic of Ireland and the BSBI membership in general. The point was made that without the determination and goodwill of the recorders, there would not have been an Atlas to publish.

Environment and Heritage Service (NI) and Dúchas, National Parks and Wildlife (RoI) generously sponsored a delicious lunch in the Function Room of the Visitor Centre in the Botanic Gardens. Many people found that lunch provided a great opportunity to talk to old friends and meet new people.

The whole event took place with a relaxed atmosphere, and it was wonderful to see so many field botanists in the one place at the one time!

FIONA MAITLAND, Chairman, BSBI Committee for Ireland, Botany Department, Ulster Museum, Botanic Gardens, Belfast, BT9 5AB; Tel.: 028 9038 3118; E-mail: fiona.maitland.um@nics.gov.uk

NOTICE OF IRISH RECORDERS CONFERENCE

The BSBI Committee for Ireland is organising a Recorders Conference for all botanical recorders in Northern Ireland and the Republic of Ireland. It is anticipated that the conference would start on a Friday evening and run to Sunday lunchtime. The format would cover talks, workshops on plant identification, field recording standards of practice, writing a Flora, and there may be time to actually get out into the field! However, this conference will only take place if enough people register their interest in attending.

If you would like to register your interest in attending, or you have any suggestions for the venue, topics for talks, or would like to get involved in organising the conference, please contact Fiona Maitland as soon as possible.

FIONA MAITLAND, Chairman, BSBI Committee for Ireland, Botany Department, Ulster Museum, Botanic Gardens, Belfast, BT9 5AB; Tel.: 028 9038 3118; E-mail: fiona.maitland.um@nics.gov.uk

CURRENT TAXONOMIC RESEARCH WORK ON THE EUROPEAN FLORA

Conference, Leicester, September 13 2003

Exciting progress on the taxonomy of the European flora is currently being achieved by a combination of traditional and modern (mostly molecular) techniques.

A conference on this theme is being organised for September 13th 2003 at Leicester University, and is being held to mark the retirement of Clive Stace after 44 years of University work.

More details will be available in the next *BSBI News*, but in the meantime make a note in your diary to keep this date free.

GENERAL EDITOR

DIARY

N.B. These dates are supplementary to those in the 2003 Calendar in *BSBI Year Book 2003* and include dates of the BSBI's Permanent Working Committees.

	2003
January 29	Records Committee (London)
January 30	Science & Research Committee (London)
February 5	Meetings Committee (London)
February 6	Database (Leicester)
February 20	Publications Committee (London)
February 26	Executive (London)
March 19	Council (Linnean Society, London)
	2003
May 16 (to July 26)	*The Flowers of Dorset* Exhibit at Dorset County Museum (details next issue)
September 13-14	International Oak Society Conference, Winchester (insert sent April 2002)

EDITOR

EDITORIAL

Congratulations to John Edmondson on his new position as Head of Science at Liverpool Museum, National Museums and Galleries on Merseyside and to Leander Wolstenholme its new Head of Botany.

Apologies Pete Selby tells me that the photo of *Cardamine pratensis* at the bottom of page 1 of the Colour Section in the last *News* should have been credited to John Norton not himself; my apologies to John for this mix up. **Also** to those members whose last *News* did not arrive safely; some envelopes had duff seals, allowing the contents to fall out! If you have not yet received *News* **91**; do get in touch.

Colour section (centre pages): Plate 1: Atlas Launch, Kew (p. 3); Plate 2: Atlas Launch, Dublin (p. 5); Plate 3: Margaret Beckett & David Pearman (p. 3); Plate 4: *Parnassia palustris* (p. 34); Plate 5: *Verbascum thapsus* (p. 34); Plate 6: *Herniaria glabra* (p. 26); Plate 7: *Umbilicus rupestris* (p. 36); Plate 8: *Atriplex pedunculata* (p. 19); Plate 9: *Gentianella ciliata* (p. 14); Plate 10: *Atriplex* × *gustafssoniana* (p. 32); Plate 11: *Atriplex* × *taschereaui* (p. 32); Plates 12 & 13: Cluster Oak (p. 23); Plates 14 & 15: *Fallopia japonica* (p. 46).

General Editor's e-mail address: I have now switched to a Broadband Internet connection and as from April 2003 my only e-mail address will be — rgellis@ntlworld.com

And finally the correction to the name of the Kiwi plant in the last issue (p. 44) was wrongly attributed to a Dr E.C. Preston, it should have read 'Dr E.C. Nelson'.

GENERAL EDITOR

HONORARY GENERAL SECRETARY'S NOTES

Quite a large number of members have joined the Society as a result of the New Atlas, we bid them welcome and hope that they will enjoy belonging to the BSBI and be able to come to as many of the meetings planned for 2003 as they can; BSBI Meetings are fun and are for all members!

In these short winter days it is a comfort to look forward to next season's BSBI Calendar with its full set of enticing Field Meetings and the Anglo-Hiberno-French Meeting in West Cornwall, of which the AGM is a part, which promises to be a very interesting few days. On September 13th, at Leicester, there is a day meeting entitled 'Current taxonomic research work on the European flora'. The meeting is being held to mark the retirement of Clive Stace after 44 years of University work, details will be announced later.

The Annual Exhibition Meeting in Cardiff was much enjoyed by all who attended and our thanks to the National Museum of Wales for hosting us and to Tim Rich and his assistants for the arrangements; neither Tim nor the Meetings Committee was responsible for the fact that, well after the AEM date had been fixed and publicised, it was decided by the 'Powers That Be' of the Rugby World to hold an international match in Cardiff on the same day. The match caused much disruption with unbookable and diverted trains and closed streets in the city centre and indeed, the AEM finished early so that members could escape before the end of the match but despite everything, the meeting was a great success. I am only sorry that so many people were, with justification, put off from coming.

Ted Lousley's slide collection is held at the South London Botanical Institute, 323 Norwood Road, SE24 9AQ but the *Rumex* box is missing and Miss Rosa Davis of the Institute wonders if any one in the BSBI might know of its whereabouts. She would be grateful for any information.

I am very pleased to report that Dr Oliver Rackham has been appointed a member of the British Academy, the Society's congratulations to him; we think he is the first member of the BSBI to have achieved this distinction.

Ailsa Burns, Honorary General Secretary and Meetings Secretary

CO-ORDINATOR'S CORNER

A clash of cultures

Since the government began to take an official interest in natural history in the early 1990s there has been an increasingly polarised clash of cultures. The variety and quirkiness of the voluntary societies has come up against the uniformity of the civil service without much understanding on either side. When you think about it, it makes sense that the government people don't want to depend on temperamental geniuses to run an industry for them. It is part of their culture to divide any task into small, simple jobs that can be undertaken by — well, anyone. To run a bureaucracy, it doesn't do to rely too much on individuals or write job specifications that only a few people can fill. The theory is that three or four average people, or three or four hundred if need be, should be equivalent to any genius, no matter how inspired and dedicated. That is how governments work.

They may be right. If every unemployed young person in Britain could be taught to identify just one species, and then paid to spend the rest of their life recording it, you could in theory have a fantastically huge recording scheme based on very low skill levels, and — an essential point — very low salaries. It must seem a very attractive future for anyone in government who has been humiliated by protest groups 'discovering' a Desmoulin's Whorl Snail in the route of their proposed motorway.

On the opposing side are the traditional naturalists' societies, with their allegedly elitist view. The amount of time and effort it takes to become a competent botanist is quite staggering. I find that friends who are expert in their own field of science simply cannot believe the years of study a botanist needs to put in before they can even start collecting raw data. It really is quite a remarkable subject for the amount of background knowledge you need. Knowing this, the naturalists have generally sat tight over the last decade or so, waiting to see when the government's onslaught would run out of steam.

At the moment events seem to be favouring the naturalists. Eventually, I suspect, there will come a time when botany can be downgraded to an unskilled job. Someone might come up with a handheld spectrometer that can identify any species from the light frequencies that pass through its leaves. If that contained a GPS and a small computer, then fieldwork could be reduced to walking around aimlessly pointing a ray gun at everything you see. It might even be done from space. Anyone who believes that day will never come has presumably forgotten that there used to be coal miners and bank clerks. The question is not if, but when; and when it happens all the fun will go out of traditional field botany. It will become just another chore.

For the moment, however, the Societies are holding their own. I think what tends to happen is that ambitious people get their hands on a 1970s Flora and think, 'With modern technology, I could do much better than this.' But they have no idea how difficult a task it really is, and ten years later a million pounds of Lottery money has been spent, and all you end up with is a glossy leaflet and a mission statement. Meanwhile, the good old amateurs have steamed ahead with a shiny New Atlas and a web-based recording network that leaves the official projects standing. It is, unfortunately, a scenario that will repeat again and again until eventually one of the official project succeeds. Groundhog Day for the NBN.

There will always be scope for skilled work — it's part of human nature to look for something interesting and rewarding to do. People who are interested and imaginative will always find new avenues for research; they will do everything they can to avoid being trapped in unskilled jobs. But in other sciences the role of amateurs has diminished as the cost of valid research has increased. That has not happened to botany yet, and we still have a wonderful mix of individuals, professionals and volunteers who can all make a valid contribution. Enjoy it while it lasts.

Science & Research

The Science & Research Committee (SRC) at its last meeting agreed to take on responsibility for the Threatened Plants Database (TPDB) project, so I thought it might be an idea to elaborate on some of the subjects and issues being tackled. The project has a unique perspective in being able to examine the data from a variety of different aspects. For example, we sort the records by recorder to study a person's life's work; or we gather all the data for a site and attempt to understand its ecology; and of course we can look at the distribution and ecology of a species throughout the whole of Britain and Ireland, which sometimes brings new insights.

One problem you often come across with rare plant recording is a lack of ecological information. If you open Grime's *Comparative Plant Ecology*, the chances are that the rarities aren't covered; if you want to know the NVC communities you soon realise that there was only one quadrat with your particular plant in; even the Ellenberg values have sometimes been estimated from rather limited experience. The aversion of ecologists to rare plants is easily understood, though, because of the sheer effort of collecting data. However, it is particularly important, because plants often behave differently where they are rare compared with the centre of their range.

This year the SRC helped fund a project by Dan Wrench, who was studying for an MSc at the University of Birmingham. We found that there was no likely candidate for an NVC community typical for Pennyroyal (*Mentha pulegium*), and despite many rare plant surveys over the years there were no quadrats that we could analyse. So we proposed that it would make a good study, and Dan took up the idea. In the end he managed to collect just 27 quadrats after travelling the length and breadth of the country — not a large sample, but all that could be obtained. In some places a single quadrat encompassed the entire population. The results were interesting, in that no obvious community stood out, adding evidence to my view that it is something of a ruderal. It was also noticeable that some of the published Ellenberg values were wide of the mark. It seems to me that if a species like this is to be on the BAP list, and SSSIs are going to be scheduled to conserve it, we desperately need some understanding of its ecology in order to be successful. At the moment, it looks like soil disturbance is important but, of course, this is one of the things that SSSI designation usually puts an end to.

Two rare plants, Rannoch-rush (*Scheuchzeria palustris*) and Welsh Ragwort (*Senecio cambrensis*) highlight the need for accurate data. Our European colleagues apparently view the conservation sector in Britain as somewhat sentimental in our approach, and this is a perfect illustration of that. Rannoch-rush is classy glacial relic, a sort of Arthurian (or perhaps Braveheartian would be more

appropriate) hero of a plant, whereas the Ragwort is, well, a ragwort. It tends to grow on roadside verges in industrial towns in north Wales. Nothing Owain Glyndwr would be particularly proud of. Our official statuses for these plants unfortunately reflect the romantic view rather than the scientific one. The data available to the TPDB project (and therefore also available to the government agencies responsible) show that there are fewer than 2,000 plants of Welsh Ragwort in the world, and it is entirely restricted to two small areas in north Wales, but it is only listed as 'lower risk — near threatened' in the Red Data Book. On the other hand a survey by SNH in the mid-1990s showed that there are many hundreds of thousands of plants of Rannoch-rush in Scotland and we know that it is the dominant species over many thousands of square miles of the subarctic region. In other words, it is one of the world's most common plants. But the Red Data Book lists it as 'vulnerable'.

In a strange way I tend to sympathise with the authors for their special pleading for Rannoch-rush to be protected, but the truth is that it is important as a glacial relic, a remnant of the postglacial period when Britain was much warmer. It might be very vulnerable to climate change. But all that does not make it rare. It is an indicator species for an endangered habitat. Perhaps the intentions are good, but perhaps it would make more sense if what we printed in our books was true rather than convenient. It might also help us to clarify our thinking and spend our resources better.

Another example is Spiked Rampion (*Phyteuma spicatum*). This was discovered in the wild in Sussex as late as 1825, despite having been known as a cultivated plant for centuries. At the time no-one believed that it was native but, again, special pleading by local botanists eventually had the status changed. I can admire them for this political achievement, and hope it has helped conservation, but I cannot see the evidence for this. It behaved precisely the way any invading alien does, at first spreading rapidly and vigorously along roadsides, into woods, and even into arable fields. Then, suddenly, it stopped and went into retreat. At least that is the way it is documented, in this very well-recorded part of the country. The hypothesis behind the official view is, I suppose, that the recording effort was rubbish, which really doesn't square with my impression of that county, past or present. The alternative is that the plant really was just a garden escape, and that eventually some predator or parasite followed it across the channel and brought it under control. I haven't any evidence one way or the other, but wouldn't it be a good idea to start looking?

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BSBI PROJECTS

BSBI LOCAL CHANGE

This is the name of the project to do a second survey, during 2003 and 2004, of the A, J and W tetrads surveyed during the 1987-88 Monitoring Scheme. I ask you all to read the separate booklet *Instructions for Field Recorders* enclosed with this mailing and consider how you can take part. More than 60 Vice-county Recorders (or data assistants) have a copy of 'MapMate' with the 1987-88 tetrad data. All are awaiting your response and most are ready to take part in this survey. As I mentioned in the last *BSBI News*, please contact your v.c. recorder and enquire how the survey is being organised locally. If you wish to do field recording in the area that would be a help. If you have a suitable computer to help with data entry that would be even better. You do not have to be experienced in either field recording or the handling of databases, as training will be provided, although the software training will be in the form of manuals or 'on-line'.

GLOBAL POSITIONING SYSTEMS (GPS)

A small point to do with Garmin Etrex GPS machines. They can give an inaccurate Grid Reference if not correctly set up. If you have one of these popular GPS units please check the 'Setup' screen and check your 'Units' setting. The 'POSITION FRMT' should be set to 'British Grid' and the 'MAP

DATUM' to 'ord srvy GB'. An alternative choice is 'POSITION FRMT' to 'Irish Grid' and 'MAP DATUM' to 'Ireland 1965'.

It is also worth checking 'SYSTEM' and setting this to 'BATTERY SAVE', which will increase battery life by only updating your position every 5 seconds, instead of continuously. Similarly 'DISPLAY' is best set to 'LIGHT TIMEOUT' of '15 SECONDS'.

Do keep in touch and remember that it is my job to help you.

PETE SELBY, BSBI Volunteers Officer, 12 Sedgwick Road, Bishopstoke, Eastleigh, Hampshire SO50 6FH; Tel.: 02380 644368; e-mail: VolunteersOfficer@bsbi.org.uk

RECORDERS AND RECORDING

PANEL OF REFEREES AND SPECIALISTS

There have been some changes to the Panel this year — please check the new *Year Book 2003* for details. There are two new referees:

Ulmus: Max Coleman

Juncus articulatus / *J. alpinoarticulatus*: Jeremy Roberts

Interpretation of Botanical Code of Nomenclature: Dick Brummitt

We were sorry to hear of the death of Mr H. Corley (*Dryopteris filix-mas*), but fortunately we have a second referee in Clive Jermy. Mr J.C. Bowra has resigned as referee for *Oenothera*, and we should like to find someone to do this genus, also *Allium*. If anyone would like to undertake either of these genera please contact:

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PANEL OF VICE-COUNTY RECORDERS

Members will receive a full listing with the new *Year Book 2003*, but it might be useful to highlight recent changes.

V.c. 2	E. Cornwall	Mr I Bennallick to become joint recorder — all correspondence to him.
V.c. 17	Surrey	Mrs P.A. Sankey to become joint recorder — all correspondence to her.
V.c. 38	Warwicks	Mrs P. Copson to retire. We have no successor at present and volunteers prepared to put themselves forward are welcomed. Pam Copson has been recorder since 1978 and we are extremely grateful to her for all her work and efforts.
V.c. 53	S. Lincs.	Mr M. Pool to become joint recorder, but correspondence, as before, to Mrs Weston.
V.c. 61	S.E. Yorks.	Mr P.J. Cook to become sole recorder. Dr Eva Crackles has been recorder or joint recorder since 1969, has published a good County Flora, and was made an honorary member in 2000. We thank her very much for all her work.
V.c. 67 & v.c. 68	S. Northumb. Cheviot	Dr Q.J. Groom to become joint recorder. All correspondence, as before, to Prof. Swan.
V.c. H28	Co. Sligo	Vacant
V.c. H35	W. Donegal	Mr R. Shepherd and Mr D. McNeill to be joint recorders. All correspondence to Mr Shepherd.

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NOTES AND ARTICLES

BSBI LOCAL CHANGE PILOT STUDY 2002

Fans, NT64A, v.c. 81 (Berwickshire)

Summary

As a trial of the BSBI Local Change procedures I volunteered to resurvey a tetrad I had surveyed for the Monitoring Scheme in 1987. I found the exercise more rewarding than I had expected. There had been some very specific changes that I could not have predicted in 1987 and it was illuminating to review the local rarities. I was astonished at the number of widespread species that seem to have only one or two colonies in the tetrad. I enjoyed trying to refind them and then trying to assess which of those that I had not refound might really have been lost and why. Of course there were new finds too, and these were equally illuminating. Indeed I was humbled by what I had overlooked.

The Tetrad

The tetrad is in gently rolling agricultural land with crops of wheat, barley, oil-seed rape, potatoes and grass with occasional fodder roots and set-aside. Livestock are cattle and sheep and an intensive indoor chicken unit. A yard is occupied by hauliers. The houses are grouped round the two farms, Fans and West Morriston.

There is a tiny canalised burn which drains a fragment of the formerly very extensive Gordon Moss wetlands. A remnant of a raised moss survives, now colonised by birch, with small areas of tall fen and wet meadow with much meadowsweet. The road verges, field headlands and the track of an old railway provide some areas of mildly species-rich grassland. There are a few small planted shelter belts.

Since 1987 there have been significant changes. An ambitious pond complex has been created for trout and duck, two small quarries have continued to be used as dumps for agricultural and garden waste and a new small gravel quarry has been opened for farm use. The main ditches, rather freshly cleaned in 1987, have become overgrown. Birches have consolidated their colonisation of the raised moss fragment. The main road verge has been colonised by salt-tolerant species and there has been a little fly-tipping on the bankings.

The effects of eutrophication are very evident but the related changes seem mainly to relate to periods before 1987.

Recording

1987 — 4 visits — 8 cards completed — total recording time 7.25 hours
2002 — 3 visits — 9 cards completed — total recording time 8 hours

The number of taxa recorded were roughly level after the second 2002 visit with 4.75 hours on the clock. The knowledge gained in the first survey had made recording more efficient on the repeat, but taxa numbers were boosted by planted taxa excluded from the first survey. The third visit in 2002 was very productive with about 70% of the 1987 taxa remaining 'lost' after the second visit being refound. This visit also covered the new pond complex, which had been spotted from a hill on the second visit, where many extra species were added — some introduced but others natural, including *Catabrosa aquatica* (Whorl-grass) which had presumably colonised the pond from the ditch where it had been recorded in 1987 but where it was not refound in 2002. I did not find the 'purple orchids' which the owner tells me he successfully introduced from the west coast!

Analysis

In this analysis the discrepancies caused by a taxon being recorded as an aggregate in one survey and as a segregate in the other have been edited out.

An attempt has been made to assess which taxa have only one or two colonies in the tetrad, because these are the ones I felt I should have 6 or 8 fig grid references for. I find that they number 90

taxa, about one third of the total of 288 taxa. Many of these local rarities are quite easily found as they lie in habitats which a botanist would seek out. Others are scattered in unlikely places and have been found largely by chance. Even in likely habitats some species are extremely elusive. This relates to a considerable degree to the modified nature of the more natural habitats — the more stress tolerant species exist in small fragments in a mosaic where much of the vegetation is a 'jungle' dominated by competitive species.

The gains considered to be real seem to be due to:-

New pond and associated plantings	11 (6 introductions and 5 colonised)
Garden outcasts	5
Colonisation	5
Casuals	2
Total	**23**

These results are illuminating, with their emphasis on deliberate introductions of native as well as alien species. However, even with the owner's help, it was not possible to tell with confidence which of the aquatic species established at the new pond had been introduced and which had colonised. These were allocated between the two categories on a best guess basis.

51 other taxa were found that were not recorded in 1987. This number is inflated somewhat by 14 planted taxa, which were excluded from the 1987 survey, whether trees, shrubs or crops. 14 is quite a low figure that reflects the agricultural nature of the tetrad. Most of the other finds are of species thought to be rare in the tetrad, but there are a handful which it is curious to think of as having been overlooked in 1987.

The losses considered as real seem to be due to;-

Habitat losses	2
Garden outcast not persisting	1
Casuals	2
Arable weeds to seed bank	1
Total	**6**

14 further taxa not refound were probably overlooked in 2002. Amongst those that I could not be sure about were *Trifolium medium* (Zigzag Clover) and *Vicia sativa* subsp. *nigra* (Narrow-leaved Vetch). These could well be amongst those being lost from road verges and headlands due to eutrophication. 4 species were not refound because there was no springtime visit in 2002.

Conclusion

The 'real' gains amount to 8% of the flora over 15 years
The 'real' losses amount to 2 % of the flora over 15 years

At this rate the number of taxa in the flora would increase by half in a century, with introductions perhaps turning the hedgerows and plantations of rural Berwickshire into something more akin to what we now experience in the leafier parts of suburbia. Meanwhile taxa, including familiar native species, are being lost at the rate of about one every two years. This, coincidentally, is similar to the rate of loss of native species from the Vice-county as a whole.

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MRS JEAN CAMERON'S BOTANICAL COLLECTION

The Royal Botanic Garden Edinburgh is delighted to acknowledge the donation of a collection of books, journals, slides and collecting books by Mrs Jean R. Cameron. Mrs Cameron, formerly of Laighfield, New Galloway, by Castle Douglas and Napier House, 8 Colinton Road Edinburgh, is now residing at Colinton Nursing Home, 69 Spylaw Road, Edinburgh.

JANE HUTCHEON, Head Librarian, Royal Botanic Garden Edinburgh, EH3 5LR.

Fans, NT64A, v.c. 81 (Berwickshire)

R = Locally Rare	Reason	Comment
Changes locally assessed as Real Gains - 23 taxa (14 still rare)		
R *Alchemilla mollis*	Intro	New Pond
R *Betula pendula*	Intro	Planted recently
R *Carex acutiformis*	Intro	New Pond
R *Cicerbita macrophylla*	Intro	Garden outcast
R *Echinops exaltatus*	Intro	Garden outcast
Epilobium ciliatum		Colonised
R *Iris pseudacorus*	Intro	New Pond
R *Lamium maculatum*	Intro	Garden outcast
R *Lychnis chalcedonica*	Intro	Garden outcast
Myriophyllum spicatum		New Pond
R *Pentaglottis sempervirens*	Intro	Garden outcast
R *Populus tremula*	Intro	Planted recently
Potamogeton berchtoldii		New Pond
Potamogeton natans		New Pond
Potamogeton pectinatus		New Pond
Puccinellia distans		Colonised
R *Rhododendron ponticum*	Intro	Planted recently
Rumex longifolius		Colonised
R *Rumex* × *hybridus*		New following colonisation by one parent
Sparganium erectum		New Pond
Spergularia marina		Colonised
R *Verbascum thapsus*		Casual
R *Vicia sativa* ssp. *sativa*		Casual
Losses - 6 taxa (6 previously rare)		
R *Lamium amplexicaule*		Arable changes - to seed bank
R *Lolium multiflorum*		Casual - Agricultural
R *Meconopsis cambrica*		Casual - Garden outcast
R *Ranunculus hederaceus*		Searched for, habitat partially lost
R *Senecio sylvaticus*		Searched for, habitat partially lost
R *Trifolium hybridum* ssp. *hybridum*		Casual - Agricultural
Changes locally assessed as Not Real Gains - 51 (28 rare) - a sample is listed below		
R *Aesculus hippocastanum*		Planted
Brassica napus		Planted/Casual
R *Bromus hordeaceus* ssp. *hordeaceus*		Missed
R *Carduus crispus*		Missed
R *Cerastium semidecandrum*		Missed
Chamaecyparis lawsoniana		Planted
Losses - 14 (6 rare) - a sample is listed below		
R *Alchemilla glabra*		Missed
R *Briza media*		Missed
Chaerophyllum temulum		Probable error for *Torilis japonica*
Galanthus nivalis		Missed - no spring recording
R *Trifolium medium*		Missed
R *Vicia sativa* ssp. *nigra*		Missed

THE FIRST BRITISH RECORD FOR FRINGED GENTIAN (*GENTIANELLA CILIATA*)

It is currently accepted that the first British record of Fringed Gentian (*Gentianella ciliata*) was made in 1875, by a Miss Williams 'on a hill not far from Wendover' in Buckinghamshire (Knipe 1988). Remarkably, at the time it was misidentified as Marsh Gentian (*Gentiana pneumonanthe*)! The specimen was lodged in the British Museum Herbarium and subsequently determined as *Gentianella ciliata* in 1879 by James Britten. When Druce examined the material, he chose to disregard this determination and decided that the specimen was merely Clustered Bellflower (*Campanula glomerata*).

Recently, I have had the good fortune to come across a delightfully annotated copy of Bentham's *Handbook of the British Flora* (1858) which belonged to a Mrs Elizabeth Grovenor Hood in the late 19th century. The book is still in the possession of the family. It is embellished with exquisite water-colours in the margins, painted from life and depicting a large proportion of the British flora. Elizabeth Hood collected many plants herself to paint and the book has proved a valuable source of information of Isle of Wight material. However, she did collect more widely and, in addition, she was sent material of rarities from across the country. Within the book there is an interleaved page with a fine painting of a specimen named as *Gentianella ciliata*. The annotation, in pencil, reads 'Calyx 4 lobes Corolla 4. Coombe Downs - Bucks. Oct 8/73'. The painting clearly shows narrow fringes along the sides of the corolla lobes.

This record is two years before Miss Williams reported her find and it tempting to speculate that they both visited the colony together. However, Miss Williams considered her plant to be Marsh Gentian whilst Elizabeth Hood suspected it to be Fringed Gentian. It is interesting that her annotation is in pencil whilst all the other annotations elsewhere in the book are in ink, suggesting that she may have felt some uncertainty in her identification.

Unfortunately, the book provides no further clues as to whether the specimen was collected by the artist or sent to her. However, it is clear that the existence of Fringed Gentian in its Buckinghamshire site was known about before Miss Williams historic specimen was collected.

Acknowledgements

I am most grateful to Mr A. Brent-Good at Norlands, Isle of Wight for permission to examine the family copy of Bentham owned by Elizabeth Grovenor Hood. I also wish to thank Peter Knipe for details of *Gentianella ciliata* in Bucks.

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A CRUCIFER WITH 'NO FLOWERS TO SPEAK OF' — CLEISTOGAMY AND PROLIFERY IN *CARDAMINE CORYMBOSA* (NEW ZEALAND BITTER-CRESS)

Ron McBeath of Lamberton Nursery in Berwickshire confided in me that his undesirable weeds, 'caught' through the nurseryman's trade, included not only *Cardamine corymbosa* but also another alien *Cardamine* which might be worth my attention. He explained that *C. corymbosa* produces early in the season quite a showy display of white flowers, mostly one per stem, while the other species, which grew with it, produced fruit in small corymbs later in the season but 'had no flowers to speak of'.

I visited Lamberton and collected fruiting plants of the problem *Cardamine* on 4th June 2002 noting 'not seen in flower at this date and not certainly determined as distinct from *C. corymbosa*'. I planned to revisit at an earlier date in 2003 to look for flowers.

Now we also have *C. corymbosa* as a weed in our garden at Clarilaw, Roxburghshire. It flowers and sets seed in the spring but the patches enlarge in the summer and further profuse fruiting is

evident. If weedkiller is applied, a second generation germinates and fruits in the summer. It occurred to me belatedly that I had not seen flowers to justify this second fruiting, so on 8th September 2002 I examined some plants carefully. I found to my surprise that there were flowers but that they were all tiny apetalous almost cleistogamous flowers, the sepals 1.5–1.8 mm long at anthesis with 2 or 4 stamens, rather than the usual 6, just pushing the sepals open at anthesis while at the same time being forced into contact with the stigma to give self-fertilisation in a flower with an overall length of 1.7–2.0 mm. Moreover, the flowers were usually in pairs or in corymbs of 3 to 7 flowers on each ultimate stem with singletons unusual, unlike the spring flowers.

Re-examination of the Lamberton material showed similar flowers, though I have not succeeded in dissecting them to check their stamens. The Lamberton plants have sparsely hairy stems while the Clarilaw plants are almost glabrous, but, as variation in hairiness is a feature of *Cardamine*, this is not very significant. I thus consider the Lamberton problem plants to be *C. corymbosa*.

I therefore suggest that I have demonstrated an interesting instance of near-cleistogamy in *Cardamine corymbosa* with the apetalous and almost cleistogamous flowers only appearing in the summer after the normal spring flowers have set seed or on summer generations of the plant, a similar situation to that in *Viola* and some other genera, where cleistogamy has been demonstrated to be regulated by day length.

T.C.G. Rich now advises me that he had independently noted plants with apetalous flowers only grown in Cardiff from Cornish material of *C. corymbosa* and has been similarly puzzled about their identity. He will be studying the spring flowers with renewed interest.

As apetalous flowers are reported also for *C. hirsuta* (Hairy Bitter-cress), I examined a sample of autumn flowering plants of that species in search of a similar seasonal difference. I did find plants with apetalous flowers, but they were a minority only.

Meanwhile my wife and I found proliferous plants of *Cardamine pratensis* (Cuckooflower) in a garden in Tarbert, Kintyre, with plantlets complete with tiny roots forming in the stem leaf axils as described by Salisbury (1965) — see Rich (1991). This find reawakened my interest in my own assertions that *C. corymbosa* is proliferous in a similar way. Further examination of material from our garden has been instructive. Branching in *C. corymbosa* is very variable. As in *C. hirsuta* multiple branching occurs near the basal rosette, but, unlike that species, further multiple branching may occur in the axils of any stem leaves. At such branching points either extra leaves or extra stems, or both, may originate, giving an untidy appearance. In a garden border habitat some of the stems grow horizontally along the soil surface and tufts of leaves may arise on the stems at the leaf axils. These tufts of leaves root readily somewhat like the runners on a strawberry, *Fragaria* spp. — see illustration in Braithwaite (1991). When both extra leaves and extra stems arise at a leaf axil up an inclined stem I have demonstrated experimentally that the tufts of leaves can break off easily, leaving the stems intact. These stem plantlets may offer an effective means of vegetative reproduction where a body of vegetation is physically broken off a colony and transported to open ground, as might happen in a stream system in the wild.

It seems clear that there is more to be learned about *Cardamine corymbosa* and I would be glad to receive notes of any further observations that those of you who meet the plant may make. In particular I suspect, but have not proved, that it can perennate even if cut down by frost and would welcome details of any records outside gardens.

Ron McBeath tells me that he has seen *Cardamine corymbosa* growing wild in New Zealand, where it is an uncommon plant of mountain rock ledges and screes and where there are at least two other similar species. It is however now a widespread garden weed in New Zealand and he believes it to be much commoner in Britain and Ireland than the twenty 10 km square records in the *New Atlas* would indicate. He also understands it to have become widely established on the Continent through the nursery trade

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ERIOPHORUM GRACILE FORMERLY PRESENT IN NORTHAMPTONSHIRE (V.C. 32)

One of George Claridge Druce's most intriguing Northamptonshire (v.c. 32) records was the apparent discovery of *Eriophorum gracile* in a marsh near 'Hornstock' in June 1878. Despite its obvious significance Druce never confirmed this record stating that it required 'further work before we can accept it for the county' (Druce 1930, p.251). As a consequence the most recent flora of the county records it as 'extinct if ever present' (Gent & Wilson 1995, p. 268) although it was mapped as formerly present in both national atlases (Perring & Walters 1962; Preston *et al.* 2002) as well as in the most recent *Red Data Book* (Wigginton 1999). It seems remarkable that Druce never satisfactorily determined his 'Hornstock' specimens. At the time of the discovery *E. gracile* was only known from one site in Yorkshire (v.c. 65; Baker 1863; **CGE**)[1], and one site in Surrey, which was lost to drainage in the late 1840s (v.c. 17; Lousley 1976). Furthermore, he was certainly familiar with *E. gracile* by 1930, having collected specimens from two sites in Hampshire in 1882 (Holmsley Bog and Whitemoor; **OXF**).

I recently examined Druce's specimens from 'Hornstock' in **OXF** whilst tracing dates for a number of early Northamptonshire records. These included two sheets, the first of which had three specimens labelled 'Hornstock Wood, marsh, June 1878, G.C. Druce' with a typescript label '*E. gracile* Roth. Hornstock, Northants, 1878, Druce. I think correctly named.' The second sheet included a single specimen from Hornstocks and five from Holmsley Bog (v.c. 11) collected by E.S. Marshall in 1893. All appeared to be good *E. gracile* and so were sent to David Simpson at Kew for verification. These were all subsequently determined as *E. gracile* (David Pearman and David Simpson, pers. comm., April 2001), thereby confirming its former presence in Northamptonshire.

Eriophorum gracile is a very rare sedge of transitional mire communities, often growing in liquid peat in the wettest parts of *Sphagnum* bogs (Lousley 1976; Wigginton 1999) and more rarely in poor-fen bordering alder-carr (Brewis *et al.* 1996). This suggests that, in the UK at least, it has very exacting ecological requirements. For example, it is absent from the most acid bogs, favouring only mildly acid, neutral or calcareous fens (Winship 1994). At Cors Geirch in Wales for example, the pH of surface water samples were in the range 6.3-7.2 (Roberts & Stirling 1974). Furthermore, it does not appear to tolerate dense shade and requires very high water levels, often where the surface of the peat lies at or just below the normal summer water level (Roberts & Stirling 1974). Similarly in Ireland, where it appears to be more common, it shows a clear ecological preference for very wet floating rafts of vegetation (scraw), usually close to, or adjoining open water (Conanghan 1995; Webb, Parnell & Doogue 1996). In addition, a number of small populations have been found in flushes and quaking ground within bogs, and less occasionally calcareous fen, cut-away bogs and bog lagg (Conaghan 1995). With the exception of one site, the surface waters are intermediate in base-status and mildly acidic (pH 5.0-6.3; Conaghan 1995).

The original Northamptonshire site is presumably Eastern Hornstocks wood (TF015.005), 7 km to the south of Stamford (Winship 1994; S. Karley, pers. comm., 2001). Much of the surrounding land has been drained for agriculture and forestry and consequently on only a very small area of potentially suitable habitat (*Sphagnum* bog) remains in an adjacent wood (Collyweston Great Wood). This area

[1] Although Winship (1994) states that this record was never confirmed there are two specimens in **CGE**, both collected from Halnaby Carr by Joseph Woods in 1838 (first seen in 1825), and a full description in *English Botany* (Borrer 1849).

has been searched repeatedly in recent decades but no evidence of *E. gracile* has ever been found (S. Karley, pers. comm., 2001). However, early plant records suggest that this area may well have been suitable for *E. gracile* in the past. For example, H.N. Dixon (1896) recorded *Sphagnum palustre* and *Camplylium stellatum* from 'Hornstocks Wood', both of which occur with *E. gracile* at a number sites, whereas Druce (1930) records a number of potential higher plant associates (e.g. *Carex hostiana, Eleocharis palustris, Eriophorum latifolium, Triglochin palustris*).

These findings suggest that the Northamptonshire population suffered the same fate as many other English colonies (Table 1, p. 18). For example, the Somerset (v.c. 5) population in the Neroche Forest disappeared following drainage and afforestation (Roe 1981). The plant has also been lost as a result of drainage (and associated successional changes) at one site in Yorkshire (v.c. 65), two sites in both Norfolk (v.c. 27 & 28) and Surrey (v.c. 17), three sites in both Dorset (v.c. 9) and North Hampshire (v.c. 12), and at least four sites in South Hampshire (v.c. 11). As a consequence it is now confined to two sites in Hampshire and one in Surrey. Both Hampshire populations are small and apparently declining, whereas the Surrey population, by far the largest English colony, has fared much better as a result of conservation management (Cox 1995). Fortunately, substantial colonies still survive in Ireland and Wales, including one colony of over 100,000 plants which was recently discovered at Crymlyn Bog near Swansea (v.c. 41).

Acknowledgements

I am grateful to David Pearman and David Simpson for the determination of Druce's specimens, Serena Marner for access to specimens in **OXF** and to Seán Karley and Chris Preston for information on the Hornstock site.

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TABLE 1

The status of Eriophorum *gracile* in England (adapted from Winsip (1994) & Cox (1995)). Extant sites are given in bold.

Site	v.c.	First record	Last record	Reason for loss/decline
Britty Common	5	1902	1924	Drainage and afforestation
Godlingston Heath	9	1893	1909	Succession
Little Sea	9	1893	1955	Succession
Stoborough Heath	9	1930	1940	Drainage?
Denny Bog	11	1882	1965	Drainage
Fort Bog	**11**	**1882**	**Extant**	**Declining? (< 1500 plants)**
Holmsley Bog	11	1885	1968	Succession
Millersford Bottom	11	1968	?	Suspected error
Shappen Bottom	11	1885	1899	Unknown
Stony Moors	11	1963	?	Suspected error
Thorney Hill	11	1967	1967	Unknown
Week Bottom	11	1900	1956	Drainage and succession
Whitemoor Swamp	11	1882	1882	Unknown
Widden Bottom	**11**	**1987**	**Extant**	**Declining due to drainage (< 40 plants)**
Wilverley Bog	11	1969	1969	Succession?
Shamba Farm	11	1965	1965	Unconfirmed record
Greywell Fen	12	?	1967	Drainage
Holmesdale	12	1886	1886	Unknown
North Wanborough	12	1899	1899	Unknown
Ash Vale	17	1885	1950	Infilling and drainage
Peatmoor Pond	**17**	**1961**	**Extant**	**Increasing (> 15000 plants)**
Whitemoor Common	17	1842	1848	Drainage
Acle Decoy Carr	27	1955	1959	Drainage and succession
Stow Bedon	28	1916	?	Unconfirmed record
Eastern Hornstocks	32	1878	1878	Drainage and afforestation
Halnaby Carr	65	1838	?	Unknown

PROPOSED INTRODUCTION OF *ATRIPLEX PEDUNCULATA* (ANNUAL SEA-PURSLANE) TO A TIDALLY-INFLUENCED SITE ON THE ESSEX COAST

Background

Atriplex pedunculata (Annual Sea-purslane) (formerly *Halimione pedunculata*, and also known as Stalked Orache) is a Red Data Book plant with only one known location in the UK, where it is protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

Atriplex pedunculata has been a very rare plant in England since it was first recorded in Skirbeck, Lincolnshire in 1691, where it remained until 1932. It was formerly recorded from about 13 locations between Croft in Lincolnshire and Sandwich Bay in Kent, its last recorded UK occurrence being at Walberswick in Suffolk in 1938.

However, after having apparently been extinct in the UK for almost 50 years, the species was rediscovered beside a brackish ditch near the Essex coast in 1987. The discovery was accidental and at a previously unknown site for the species. The number of plants present suggested that the species had probably been present at this location for a few years before its discovery. Extensive searches at all its historical locations in the UK were undertaken but no plants were found.

Conservation efforts to date

The site at which the plant was rediscovered in the UK is within a Site of Special Scientific Interest (SSSI). It is being sympathetically managed and has been monitored annually since its discovery in 1987. Since 1993, the site owner and English Nature staff have undertaken a programme of work to: reduce abundance of competing species by hand-weeding; create adjacent patches of bare ground; and manually spread seeds into these areas. Without this management the plant would almost certainly have become extinct in the UK by 1995, when it disappeared from the patch of saltmarsh where it was discovered as a result of natural succession.

The population of the plant at the site has continued to respond fairly well to this management, although the current population level is significantly less than present at the time of its rediscovery. However, these works can only really be described as 'gardening' and do **not** fulfil the primary conservation objective, which must be to achieve a self-sustaining population of *Atriplex pedunculata* in the UK.

In the early 1990s a number of seeds were introduced to an area of similar wet brackish habitat behind the seawall at a site on MoD land at Foulness, Essex. This introduction was moderately successful but, as with the rediscovery site, was only maintained by frequent 'gardening' operations. However, no formal monitoring of this site or 'gardening' works were possible in 2000 or 2001, due to a combination of factors which included: flooding; foot and mouth disease; heightened security measures resulting from the 11 September 2001 terrorist attacks in the USA; and MoD operational requirements. Monitoring carried out in October 2002 revealed that, whilst the species was still present, three quarters of this site had become unsuitable due to the development of a carpet of blue-green algae which effectively blanketed the bare ground required for seedling establishment.

Following the success of the Foulness introduction, further introductions were attempted to similar habitats behind the seawall at Walberswick in Suffolk and to Old Hall Marshes and Horsey Island, both in Essex. These attempts all failed to achieve any successful establishment of the species.

Since 1987 seeds have been collected or bulked up at Cambridge Botanic Gardens and sent to Kew Gardens to be kept in cold store. The species is also currently maintained in cultivation.

Much valuable data on the habitat requirements and ecology of *Atriplex pedunculata* has been obtained from a range of European sources, including data on its distribution and population trends in seven other European countries. Work has also been carried out by a student on the autecology of the plant, with particular emphasis upon its germination requirements. The information thus gained has helped to shape this current introduction proposal.

Discussion and European overview

Atriplex pedunculata is an annual plant found only in habitats influenced by saline water. It is associated with saltmarshes and is typically found in the *Puccinellietum maritimae* phytosociological

association (NVC = SM13). It appears to be particularly closely associated with the *Parapholis strigosa* sub-community. However, like many other salt marsh plants, *Atriplex pedunculata* is not an obligate halophyte but can grow perfectly well in fresh water conditions. It appears to be able to grow in a range of substrates from predominantly sandy soils in dune slacks to mud on lower salt marshes, although it appears to prefer a mixture of sand and mud. It is generally agreed that it requires open ground to germinate and seed, whilst its disappearance is usually associated with the loss of bare ground and with shading.

Information from researchers in continental Europe suggests that, elsewhere in Europe, *Atriplex pedunculata* is found primarily on upper saltmarsh or at the interface between saltmarsh and sand dune habitats. In these locations, periodic tidal inundation and the dynamic nature of the habitats would ensure a continuous supply of areas of bare ground for germination and would prevent the establishment of coarse grasses such as *Elytrigia atherica* (Sea Couch) (formerly *Agropyron pungens*).

Furthermore, the seeds of *Atriplex pedunculata* are relatively large but light in weight and are known to float. It is considered probable that, in the wild, the normal seed dispersal mechanism is by tidal action at high spring tides.

There have been three centres of distribution described for *Atriplex pedunculata* in Europe:

I. Inland in West Asia, where it ranges from the Aral-Caspian region to south Siberia, including Rumania and Bulgaria;
II. Littoral Northwest Europe, ranging from the northwest of France to Estonia and Southern Sweden, and including Southern England;
III. Inland Germany, where it occurs in a saline area.

This species appears to have declined across most of its European range, and has apparently been extinct in Poland for many years. In Germany, it has disappeared from West Friesland, although it is still present on the East Friesland Islands. The building of dykes on the Zuiderzee in the Netherlands caused its complete disappearance from that area, although it is believed that it may still occur at De Petten on Texel and at De verdronken Zwarte Polder on Zeeuwsch-Vlaanderen. In Belgium it is reported as 'very rare', although it is apparently still 'well represented' on the northwest coast of France, with Mont St Michel being the most important site.

The centre of the European maritime distribution appears to be in Denmark, with southern Sweden being the furthest north that the plant has been recorded. Its relative success in Denmark is believed to be linked to the lack of fixed sea defences around some of the islands.

The continuing need for annual 'gardening' works at both of the established sites and the failure of the species to become established at the other attempted introduction sites suggest that the habitats in which we are currently attempting to grow *Atriplex pedunculata* are not fully appropriate to its requirements. In particular, there is a constant need to remove competing species (especially *Elytrigia atherica*), to create areas of bare ground for seed germination, and to manually assist with seed dispersal.

The inescapable conclusion is that previous attempts at re/introduction have failed largely because the wrong habitat was chosen. It appears that the chance that the rediscovery of this species in the UK happened to be at a site behind the seawall has resulted in the erroneous assumption that this must be the most appropriate habitat: whereas in reality it probably represents one extreme of the species' habitat range.

It was, therefore, concluded that the conservation of *Atriplex pedunculata* in the UK in the medium to long term is only likely to be achieved by carrying out one or more introductions into dynamic coastal habitats (i.e. locations not constrained by the presence of fixed sea defence structures), in which the necessary open ground conditions are created and maintained by natural coastal processes and seed can be dispersed by tidal action.

The proposed introduction

Accordingly, the decision has been taken to carry out an experimental introduction to a coastal nature reserve managed by the Essex Wildlife Trust, using seed from the population grown in cultivation.

In view of the apparent decline of *Atriplex pedunculata* across most of its range, and the loss of much of the required habitat as a result of the construction of fixed sea defences, it is considered that

there is no credible risk of the species becoming a pest or nuisance. If it had the potential to cause problems, then this would almost certainly already have become evident before the species entered its current decline.

Whilst introduction of the plant into a dynamic coastal environment will be likely to result in the unrecorded release of at least some seed which may reach other coastal sites, this has been minimised by careful choice of the introduction site. Furthermore, the total absence of any recent records for this species from anywhere in the UK (other than the rediscovery site and the existing Foulness introduction site) would seem to indicate that there is probably no native population with which any such plants could be confused.

Introduction will be carried out by dropping the seed into small cracks in the surface of the mud, along one or more rough transects running up the upper marsh towards the dunes or other terrestrial habitat (so as to ensure that at least some seed ends up at the optimum elevation). This took place on 11 November 2002, just after a period of spring tides so as to allow the maximum period of time for the seed to become 'bedded in' to the mud before the area is again inundated by the next set of spring tides. The seed should then over-winter under natural conditions, just as if it had been shed from an existing plant nearby and washed into the crack by the spring tide.

It is proposed that a portion of the available seed will be retained and stratified over-winter in dry compost outdoors before sowing along an adjacent transect in spring 2003. This should provide a useful comparison of germination rates. More importantly, it will also provide an insurance against total loss in the event of unforeseen circumstances such as exceptional winter storms washing away the introduction site.

It is intended that the results of this introduction will be reported in a brief follow-up to this item in a future *BSBI News*.

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Atriplex pedunculata (Annual Sea-purslane) del. Richard Hill © 2002

CLUSTER OAKS ORIGINATING FROM SAVERNAKE FOREST

The ancestral Savernake Cluster Oak was first noted by Arthur Yates in November 1916, near Column Ride, Savernake Forest, Marlborough, Wilts., as an odd tree in the open. It then was described and designated as *Quercus pedunculata* Erhart var. *cristata* A.Henry vel. *Q. robur* L. var. *cristata* (Henry 1917). It is quite different from other cristate and curled-leaf forms of *Q. robur* found on the continent (see Colour Section, plates 12 & 13).

The essential description of the main features is as follows: 'Leaves densely clustered, small, contorted, oblique, the midrib dividing the blade into two unequal halves' (Bean 1992). The original description by Henry also emphasises the extremely slow growth rate both in the ancestral tree and in one nurtured seedling: also the one acorn per peduncle, which is dimpled at the apex where the style had grown (see also Table, p. 24).

Progeny of this tree are to be found in Savernake Arboretum (Wilts.), Burbage (Wilts.), Hilliers (Hants.), Clifton (near Bristol), Dulford Nurseries (Devon), Northants, Holland and, reportedly, New Zealand. One of these descendents has provided pollen for the cross with *Quercus frainetto* Ten. (Hungarian Oak): 'Some seedlings from this cross have very crested leaves, others less . . .' (Coombes 2001). The associated picture shows a strongly cristate form of the Hungarian Oak hybrid.

The Burbage Cluster Oak differs in 5 main ways from its parent (see Table, p. 24). The most important are its own normal growth rate, and that of its progeny in the 3rd generation. However, shoots, leaves, acorns and seedlings differ too, militating against the notion that the differences from the ancestral tree can be fully explained by disease in the latter. If the Savernake Cluster Oak is ill, it has, like Charles II, been an unconscionably long time dying — over 200 years!

Progeny of the Savernake Cluster Oak in the Savernake Arboretum look superficially much more like the Burbage tree than their parent, and much like each other. They have the normal oak growth rates, and have overtaken their parent in height. The girths of the two largest in 2000 were 97 & 96 cm (at 5ft). A surprise finding on one was hairiness within the sub-laminar leaf angles, not obvious to the naked eye. The hairs were simple (vertical and appressed), bi- and tri-furcate (vertical), brush hairs (vertical); with widespread sublaminar small, closely appressed stellate hairs (mostly 4-rayed) typical of *Q.* × *rosacea* (*Q. petraea* × *Q. robur*) (hybrid native oak)(see Oliver 2000). The leaf outlines, although moderately crsitate were somewhat closer to *Q. petraea* (Sessile Oak), than the Burbage tree. This all suggests *Q.* × *rosacea* as the pollen parent, probably the most common of the naturally occurring (non-plantation) Savernake Forest oak taxon (Oliver & Davies 2001; see also Cousens 1975).

More puzzling is the replacement for the ancient Savernake King Oak, which died during the 2nd World War, bits having been given to US servicemen as souvenirs. The replacement derived from an acorn from the ancestral Cluster Oak. Growth is normal, and canopy leaves are like those of *Q. robur*. All leaves are completely glabrous, with petioles 1–3 mm long. There is minimal or no clustering. The only characteristic feature is shortening of the midrib and oblique twisting of some of the leaves on trunk shoots, with unequal halves of the laminas.

The Clifton Cluster Oak has distinctive clustering, stacking and oblique twisting of the leaf laminas, with shortened midribs: but the growth rate seems normal. Its girth in 2002 was 135 cm and its height between 10 & 15 m, but (from photos), a spread 30% greater than the height.

The suggestion was made by Henry (1917) that the ancestral Savernake Cluster Oak was a mutant which then perhaps reproduced parthenogenically, similarly to dandelions. This idea may have been based on the observation of the apparently identically-foliaged slow-growing seedlings. However, these extreme forms seldom survive (see Table, bottom left), and the trees described above must have been derived from normal or near-normal growth-rate seedlings (see Table, bottom right, for instance). The progeny and descendants are too varied to support the notion of parthenogenesis. A mutant Mendelian dominant (or partially dominant) gene seems much more likely. Possibly the ancestral tree was homozygous for this gene, but with some progeny influenced by separate genes provided by crossing; or alternatively heterozygous with some self-fertilized slow growth seedlings, but some crossed with normal oaks to provide the vigour. The dominant gene causes the cristate leaves and clustering but is much influenced by multifactorial (polygene) inheritance.

In some respects, the ancestral Savernake Cluster Oak, as considered from many of the features given on the left of the Table, is like an extreme form of *Q. robur*.

Acknowledgement Appreciation is given to John Wildash for his work in protecting and nurturing the Cluster Oak seedlings, and starting the Savernake Forest Arboretum.

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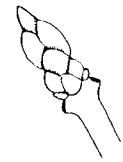
TABLE OF CLUSTER OAK COMPARISONS

Features	Savernake Cluster Oak	Burbage Cluster Oak
Trunk & Growth	Estimated as from the 1790s. Very hard wood, very slow growth. Despite growing in the open, in 1917 9 m high & girth (at 5 ft) 155 cm. By 2002, still under 15 m, below canopy of young surrounding and encroaching Oaks & Beeches; girth only 186 cm.	An acorn from the Savernake Cluster Oak was grown into a young treelet, which was planted out in about 1950. Growth rate comparable with other oaks. By 2002, height over 15 m, girth 191 cm.
Shoots	Very short, causing close clustering and overlapping of leaves, which are stacked above each other.	Short shoots causing distinct clustering, but no marked sandwiching.
Leaves	No petioles. Wholly glabrous. Average length 2-5 cm, mostly twisted and obliquely lopsided. Top-stack end-shoot leaves often seem unlobed, small, 2 cm long, 1 cm wide. Some are, but more usually they are irregularly bi- or tri-lobed with an abbreviated midrib. The auricles have become unfurled, developing at the expense of the main laminas; these leaves 2-3 cm long but 3-4 cm wide (see lower photo).	No petioles. Wholly glabrous. Average length 4-6 cm, many obliquely twisted and lopsided. End-shoot leaves with shortened crinkled midribs. Auricles unfurled, occasionally stalked, 1-3 cm long, but not bigger than the laminas. Leaves seldom wider than long.
Acorns	Peduncles variable, only bearing one formed acorn. Acorns infrequent, often defective, weakly dimpled at the apex, 1.5-2 cm long (see lower photo).	Peduncles variable, usually only one acorn, strongly dimpled at apex, 2-3 (3.5) cm in length. Acorns common.
Seedlings	Most seedlings with leaves like the parent tree. Development so slow after germination that seedlings succumb to trampling and herbivory. A small proportion of less abnormal seedlings; but none completely normal?	Seedlings with leaves like ordinary *Q. robur* (but no petioles and fully glabrous). However, three quarters or more of these seedlings show distinct clustering of the leaves at the nodes. Growth vigorous.

OLIVER, J.E., High View, Rhyls Lane, Lockeridge, nr Marlborough, Wilts. SN8 4ED
DAVIES, J.M., 'Ballard's Piece', Forest Hill, London Road, Marlborough, Wilts. SN8 3HN
TITCHEN, A., 3 Portishead House, 29 Nore Road, Portishead, Bristol BS20 7HN

MORE PLANTS AT VARIANCE WITH FLORAS

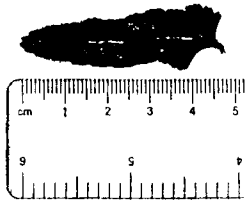
Ligustrum vulgare



Towards the end of the winter the pubescence of the young twigs wears off and many of the leaves have fallen making the distinction from *L. ovalifolium* difficult. However most of the bud scales retain a fringe of hairs which are easily visible with a lens.

In the accompanying drawing the hairs are drawn slightly larger in proportion than they are, so as to be more clearly visible.

Asplenium marinum



Some Floras do not give the maximum size of a pinna, but those in my possession that do, give it as 40 mm. As the accompanying silhouette shows this needs extending to 48 mm. The specimen came from a cliff quarry on the Dorset coast (v.c. 9) SZ07.

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FUNGI THAT HAVE NOT READ THE GUIDES

Ted Pratt's interesting article in *BSBI News* **91** (*Flowers that have not read the Floras*) shows the inconsistencies that occur between Floras and which could, in some cases, lead to misidentification. His observations could equally be applied to other areas of Natural History.

I recently looked up False Chanterelle in my four fungi guides. One described it as 'not poisonous, but has little flesh and no flavour.' A second referred to it as 'inedible', while a third stated it to be 'edible', though a friend of the author apparently had alarming hallucinations after eating it! The fourth guide described it as 'known to cause gastro-intestinal problems'. Who is to be believed?

Incidentally, all four guides agreed that the False Chanterelle is associated with conifers and three mentioned heathy places. I found it growing in open grassland over clayey soil in a cemetery!

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IRISH LADY'S-TRESSES (*SPIRANTHES ROMANZOFFIANA*) DISCOVERED ON THE ISLE OF TIREE, ARGYLL

Irish Lady's-tresses *Spiranthes romanzoffiana* is a UK BAP species, with a limited distribution in the United Kingdom centred on the islands of the northwest seaboard of Scotland. The species also occurs in northern and western Ireland, but the bulk of its world range lies in Greenland and North America.

Since 1970, the species has been recorded in Britain from just 20 10 km squares and 53 1 km squares (Pearman and Preston 2000). Within the Hebrides, the species is known from Barra, Vatersay, Benbecula, South Uist, Colonsay, Islay, Coll and Mull. Although the island of Coll holds some of the largest populations of *S. romanzoffiana* in Britain, there have never been any records of the species from the Isle of Tiree, which lies just 3 km to the southwest of Coll, and which would appear to support considerable areas of suitable habitat. Tiree is relatively well known botanically (see Pearman & Preston 2000) and all previous fieldwork on the island has failed to locate the species.

On 8th August 2002, whilst conducting routine monitoring work on the RSPB Reef Reserve, Tiree (Grid square NM00.40), I came across two developing flower spikes of *S. romanzoffiana*. The spikes lay next to each other on a slight rise in a base-rich mire, which receives variable amounts of flooding

in the winter months. Lynne Farrell, BSBI Vice-county recorder for Mull, Coll and Tiree, confirmed the identification during a site-visit on 20th August, by which time the 20 cm tall flower spikes were fully out. Close examination of the spikes revealed that they had probably both emerged from a single rhizome, and that a third developing bud was also present, immediately behind the two spikes. A second plant bearing only leaves was present within 10 cm of the flower spikes. Further searches of the immediate vicinity of the site in August failed to locate any additional flower-spikes, although plants lacking flowers could easily have been missed.

Some 30 species of plant were found growing within a two-metre radius of the orchids, indicating the richness of this particular mire system (L. Farrell pers. comm.). The Reef reserve receives traditional winter cattle grazing between November and May, but additional autumn cattle grazing (August-October) has been instigated within electric-fenced paddocks in the wetter mire areas since 1996 in order to remove the dense thatch of summer growth that might otherwise receive little grazing, particularly during wet winters. The area where the orchids were found received autumn grazing in 1996, 1997, 1998, 1999 (heavy) and 2001, but not in 2000 or 2002. The new autumn grazing regime was designed to open up the vegetation for the benefit of breeding wetland birds, but it is also likely to benefit a broad range of wetland species including orchids. Some 30 spikes of *Platanthera bifolia* (Lesser Butterfly Orchid) were recorded for the first time on The Reef in July 2002, within the autumn grazing paddock and close to where the specimens of *S. romanzoffiana* were found. It is unclear as to whether *S. romanzoffiana* is only a recent arrival on Tiree or whether it has been lurking unseen for many years. Certainly, plants would have been harder to locate in The Reef wetlands prior to the instigation of the autumn grazing regime, whilst the current intermittent autumn grazing regime may also suit the species.

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RUPTURE ON THE CARPET: ORNAMENTAL USES OF *HERNIARIA GLABRA*

Herniaria glabra (Smooth Rupturewort), a rare Breckland native (Gaffney 1999), is one of the smallest plants in the British flora. It is a winter-green, short-lived, tap-rooted, mat-forming perennial but its tiny green leaves and even smaller green flowers do not provide much to recommend it for use in gardens. However, in the summer months at the Royal Horticultural Society's Garden at Wisley thousands of visitors appreciate its green tapestry in our carpet bedding display (see Plate 6 on page 2 of Colour Section). This practice of creating designs with low-growing, carpeting plants started in the late 1860s (Elliott 1986) and became widespread in late Victorian and Edwardian times when public parks and private estates could afford the intensive labour required to propagate, plant and maintain such annual displays.

By the 1870s there was plenty of advice available on suitable plants for carpet bedding (Elliott 1986) and *Herniaria glabra* would have been a component because Nicholson (1885) states that it is 'sometimes used for carpet bedding'. Other late 19th century references recommend it as an alpine (Leonard 1894) or rock garden plant (Leonard 1896) for its trailing or carpeting habit, the former also mentioning its yellow-leaved cultivar 'Aurea'. Even the influential Gertrude Jekyll recommended it (1897) as underplanting to enhance Asiatic primulas in a border.

It has been regularly used at RHS Garden Wisley since 1980 when Ray Waite (Superintendent of Glass until his retirement in 1996) started to apply his skills to our carpet bedding. His knowledge of the subject was obtained from experience in Bournemouth parks in the early 1950s, where *H. glabra* was used, and texts such as Evison (1958). The latter cites its retention of green colour throughout the year and its rare need of clipping as reason for its use as panelling in carpet bedding. Ray confirms

that it rarely needs height reduction clipping but its sideways spread does need control. For future practitioners of the craft, he adds that it should not be used at the edge of a design because it provides poor visual definition against grass, but provides a perfect foil for more colourful foliage near the centre of a design. He also says that *H. glabra* and *Sagina subulata* are the lowest-growing subjects available for such schemes. *H. glabra* is grown at Wisley from seed each year and is currently offered by Chiltern Seeds (2002), but propagation by cuttings is possible. Seed was also offered by Thompson & Morgan from about 1960 until 1989 (Thompson & Morgan 1989). Evison (1958) also mentions *H. glabra* 'Aurea', but this does not appear to be offered now, perhaps it is extinct, but I would like to hear otherwise.

This is all very interesting, but what is the relevance to our wild flora? Well, as with any garden plant there is the potential for escape! Any records outside its limited, local native range should be treated with suspicion and potential sources such as municipal carpet bedding, floral clocks and container plantings should be scrutinised. Kent (1950) raised similar concerns over 50 years ago. Barry Phillips has found it naturalised in RHS Garden Wisley. Gaffney (1999) mentions continuous records since 1946 at Ellenborough Park, Weston-super-Mare, Avon (v.c. 6) where it is thought to have been introduced from Breckland by the army. Eric Clement has kindly passed on non-native records known to him (but Kent (1950) lists more). These include St Helens near Liverpool (v.c. 59) in 1850; Masonic Centre, Northwick Circle, Kenton, Middx (v.c. 21) in 1943 and 1949 (Kent 1950) and 1966; Ainsdale, S. Lancs (v.c. 59) in 1980; St Helens Green, Isle of Wight (v.c. 10) in 1980 and 1983 and Patrick Street, Cork (v.c H4) in 1993 where Reynolds (1994) established that the species had been cultivated by Cork Corporation Nurseries as an edging plant in tubs. Some of these records make reference to 'the hairy form' and 'the long-fruited form', but I am not sure how relevant these characters are in relation to our native populations. The plants at RHS Garden Wisley have very short hairs all round the stem and capsules about 1 mm long exceeding the sepals. *The New Atlas* reveals further records outside its native range.

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A BRIEF DISCOURSE ON TWO TREE SPECIES DAMAGED BY WIND

On 27 October 2002 an Atlantic storm with its eye centred on the Carlisle area of England swept across southern Britain. Gusts in excess of 90 m.p.h. were recorded along the Bristol Channel coast, from where winds charged with saline water left a surface veneer of salt at least as far up its headwaters as the Vale of Evesham.

The storms felled two 27 year old trees in my somewhat exposed garden at Little Comberton, the circumstances of which would seem to warrant discussion. One of the trees was a North American Hop Tree *Ptelea trifoliata* L., 6 m in height with a bole diameter of 19 cm, the other a False Olive *Phillyrea latifolia* L., 6 m in height with a bole diameter of 20 cm. The *Ptelea* was extirpated around half of its circumference, a metre-long primary root being left vertical.

It is somewhat regrettable that the time and energy invested in developing such trees should be wasted, but closer examination of the details may cause such sentiments to be modified. Both of these trees had been managed for amenity; they had been rigorously confined to clear stems on which symmetrical crowns had been developed. The crown of the *Phillyrea*, more than 4 m across, had been thinned periodically to ease wind diffusion. These efforts had seemed sound both in intent and practice, but the growth forms, whilst pleasing, may not have proved useful for the trees and their situation. It had been apparent for some time that the crown of the *Ptelea* had been losing vigour; at the same time the stem base was buttressing itself circumferentially and producing annual shoots, some vigorous, and one attaining a height of 1.5 m in two years.

Phillyrea latifolia has a long history of cultivation in Britain, although it is not often seen in treelike form. I recall seeing in 1970 a group which had been planted in 1877, and which, to my scorn, had later been heavily dehorned. The windblown specimen referred to here had failed at the contact between the bole and the root bases. The root bases had enlarged and in doing so had created large discrete contact surfaces around the periphery of the bole which were apparently unable to secure the aboveground parts of the tree, which was healthy. The winds had not visibly moved its roots at all. Looking closely at the root bases it was possible to perceive a few small shoots and shoot initials, which have been left in an attempt to create further regrowth.

The experience with these trees suggests that wind shear and partial extirpation may, at such critical moments in their lives, prove beneficial for them, by enabling them to ultimately attain their preferred, as opposed to my preferred, growth form. Basal shoots of an annual nature, so frequently seen on the Narrow-leaved False Olive, *Phillyrea angustifolia* L., should perhaps be regarded as 'failsafes', as they frequently are in their natural macquis habitats. An additional, now well-recognised benefit of tree fall, is that tree biodiversity is then frequently enriched, often for some time.

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LAWN AND FLOWER BED WEEDS

I always find it fascinating to read about the different weeds that occur on people's lawns and in flower beds.

In common with other contributors, I have both *Trifolium micranthum* (Slender Trefoil) and *T. dubium* (Lesser Trefoil) on one of my lawns, together with *Medicago lupulina* (Black Medick) and their close proximity makes a useful comparison. *Ranunculus parviflorus* (Small-flowered Buttercup) is extensive on one lawn and in a number of flower beds, so I have to keep it in check. *Spiranthes spiralis* (Autumn Lady's-tresses) appears on both lawns in varying numbers (sometimes in excess of 100 spikes) and can last into early October.. This species is fairly frequent on lawns in the Swanage area. *Torilis nodosa* (Knotted Hedge-parsley) and *Galium verum* (Lady's Bedstraw) are also firmly established.

Euphorbia exigua (Dwarf Spurge) and *Hypericum tetrapterum* (Square-stalked St John's-wort) arrived in the flower beds some years ago – the latter, in particular, seeds everywhere. *Stachys arvensis* (Field Woundwort) was introduced a few years ago and is allowed a small area to grow amongst five species of Speedwell including *Veronica polita* (Grey Field-speedwell). *Setaria viridis* (Green Bristle-grass) and *Echinochloa crus-galli* (Cockspur) have appeared annually in the last few years (from bird seed) and this year I was pleased to note *Phalaris canariensis* (Canary-grass).

Cotoneaster rehderi (Bullate Cotoneaster) and *C. dielsianus* (Diels' Cotoneaster) have both established themselves, presumably being bird sown. Similarly, *Rubia peregrina* (Wild Madder) and *Solidago gigantea* (Early Goldenrod) appear to have arrived in the same manner.

I planted a cutting of *Senecio inaequidens* (Narrow-leaved Ragwort) 2½ years ago, which was taken from its only site in Dorset, and this year it produced its first seedling. It has also spread on the original site, but could be threatened by spraying.

Finally, both *Lemna minor* (Common Duckweed) and *L. minuta* (Least Duckweed) now infest my pond!

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EVEN MORE LAWN WEEDS

My lawn is in central London: I don't throw out bird seed, but I did put down some grass seed five or six years ago.

For the last three years there have been two patches of *Galium parisiense* (Wall Bedstraw) in my lawn and a third has appeared this autumn, Sept. 2002. This is still a rare plant and the BSBI referee pronounces that mine here is 'unlikely but true'. I fully expect to see it next season and visitors are welcome.

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NEW NAMES, GENERA, FAMILIES AND THEIR 'NATURAL ORDERS' — A PLEA

I read the article *New Atlas Genera in their Natural Orders* (*BSBI News* **91**: 18–23, Sept. 2002) with immense interest. The proposals raise some peripheral questions, but in the main seem deeply convincing. They also touch by implication on some wider issues of classification that might be thought worth examination at this juncture.

The new arrangement suggested does not seem so very shocking! There are puzzles, notably the terminal position of the Commelinales (are they are really thought to be more advanced than the Grass/Rush line as this would suggest?). But the separation of what are called the basal Angiosperms, rather than being irritating, could be seen if anything as slightly consoling — it suggests that the Angiosperms as a whole (like some of us as teenagers!) might have been a little confused in the early days as to which direction to take, and this seems from an evolutionary point of view a perfectly comprehensible, indeed probable situation. Also the separation draws attention away from the awkward (perhaps insoluble, or rather, as it would now appear, irrelevant) question whether the Monocots or the Dicots are 'the higher'. I for one would not feel disturbed by a Flora with the Monocots in the middle, as presented here, provided the reasons were clearly explained.

It does seem a pity though to rate the macroscopic/microscopic morphological kinds of character that in principle all competent botanists can confirm for themselves as 'sand'. One cannot help being cautious about a new classificatory scheme based solely (if this really is the case) on the one kind of character, especially when, as Dr Preston says, we can only view it from the sidelines; and these are the very characters that might alert us to cases where there is a possible need for reassessment. Inevitably the raw data for such a revision will have come from sampling, and samples **could** miss possibly contentious evidence. The recent impressive synthesis *Origin & Early Diversification of Land Plants* by Kenrick & Crane wisely bases treatment on an equal appeal to **all** available characters. Perhaps in fact at the higher ranks treated in the present article this hazard is not serious. From what I can gather as an onlooker to a comparable exercise in a much more restricted field (Cactaceae) the genetic 'signatures' of the larger groups are emphatic and leave little room for doubt. It is when genetic techniques are brought down to generic and specific levels and finer details are invoked that I have seen the vision of the New Jerusalem fade to that of the crock of gold at the rainbow's end: proposals are put forward that disagree with other results using the same techniques, and are sometimes frankly quite impossible to credit on other grounds, and an attitude — if not of disillusion, at least of wariness — sets in. It is here too there is most danger of circular argument. And it is

precisely at these basic levels that there is some room for disquiet about future prospects in other directions and on quite other grounds. May I beg the courtesy of a little space to consider this question further?

We are assured that the genera adopted in the *New Atlas* will remain broadly unchanged. As regards Families however a sizeable balance of new names over referrals seems to be indicated, and my concern — remembering the distantly comparable case of decimalisation when the similar loss of our moorings gave the opportunity for prices (as it was generally reputed) to be rounded upwards — is that the introduction of new Families may create a fluid climate of opinion leading to further repercussions down the line and sooner or later a fresh multiplication of genera. The familiar problem of new names that new genera entail, traditionally received with more or less good-humoured resignation, could be seen, I think, as having another dimension. It seems to me that botanical expertise has reached a delicate point. On the one hand, after BSE, the foot-and-mouth debacle, and the unresolved GM debate the present public perception of scientific expertise generally is clearly extremely equivocal. On the other hand, equally clearly there has arisen a widespread vaguely felt and imperfectly expressed but I believe very powerful mood of sympathy for conservation generally. The attendant danger is that if any participant in this mood discovers a wish to proceed further, to take a more active part and be able to follow and employ an approved form of expression, they may well find themselves perplexed. The *New Flora of the British Isles* — and I mention this solely because so far as I know it is at present the only up-to-date source — adopts a different order from that of the generality of pocket Floras based on CTW, and to a significant extent an expanded generic and hence binomial list; and both these differences coincide with a maze of new aliens. For a complete newcomer perhaps the discrepancies would not register, but it is with the pocket Flora that the newcomer is likely to have started, and they could then be disorientating, especially when the first, in particular, is only explained, very briefly, in terms likely to be beyond the novice's experience. And now we have here mention of a new familial list — with the ultimate possibility (as I fear) of fresh changes to the binomial list — yet again. The picture could well seem to be one of a nomenclature that really is based 'on the sand' — a shifting sand: a discovery that in the circumstances could provoke disillusion, ridicule, even hostility. With the continuing threat to our flora only too obvious, we can do with all the support we can get. The BSBI in its present ebullient but PR-conscious mood might well give thought to this question.

Perhaps the most forbidding factor in the circumstances might be the sheer number of new names. If a fresh enthusiast were to progress from, say, the Collins *Pocket Guide* or *The Wild Flower Key* to the *New Flora*, this might seem the most striking feature, and more, I feel, might have been said to set it in its true proportion: the novice might not appreciate the extent of the contribution from the massive expansion in the number of recently established aliens unless this was brought specifically to notice. Another question likely to be puzzling to the novice is the absolute necessity to ensure that every name is unimpeachable from the point of view of the ICBN. We owe an immense debt to Prof. Stace for his meticulous, painstaking work on this aspect of the list (*vide* his account in *BSBI News* **89**: 15-19), responsible for some name changes but calculated to ensure, so far as is humanly possible, that such changes will be unlikely to trouble us in the future. Without explanation *in situ* the need for this revision, and the extent of our debt, might not be understood; for the new reader might well not be a BSBI member able to get advice on this question from a fellow member or from its literature.

There is also a residue of new names, found in the *New Flora* and elsewhere, resulting from the acceptance of new or not recently recognised genera. Many of the latter of course attach to newly established aliens. Some (e.g. in the Polygonaceae) evidently represent a fundamental revision. A few however, prescient of possible future trends and my core concern, are less easy to understand; indeed there are cases where, if I was required to play devil's advocate and justify them before a persistent acute innocent — to try to explain, for example, why perennation, or habit should appear to tip the balance in one instance and not in another – I might be hard put to it. And my innocent might be further puzzled to learn in this context that the characteristic segregate can be unequivocally distinguished by the adoption of an infrageneric taxon **without any alteration of binomials**. Prof. Stace seems to have chosen not to publish any such alternatives himself, and on more than one

occasion he has referred the one that is available to synonymy. I could imagine my innocent might see these as cases where we have incurred a double liability: new names to become accustomed to; and an increased impediment to our ability to visualise the wider coherence of the pattern of relationships as a whole. Taking a more general view, my overall impression is one of a progressive interest in small differences — in itself of course entirely legitimate and valuable — which, especially by focussing attention on the description of fresh infraspecific taxa, is pulling the whole nomenclatural structure downwards to the occlusion of the equally important larger, wider relationships.

If we are to give serious consideration to the new Natural Orders outlined in the present article, might not this offer the opportunity for a rethink of the wider nomenclatural scene and a considered attempt to secure the stabilisation at least of the nomenclature we now have? No classificatory scheme is the preserve of a professional elite. It is an article for use by all. Quite apart from the amateur, I think of teachers at all levels, in schools and in higher institutions of all kinds, their pupils, ecological advisers, agricultural advisers, librarians and curators, harassed customs officials required to operate CITES regulations – almost all with their supporting tiers of Civil Service. All these need a generally agreed, stable list of binomials. Neither aspect is yet in sight; the new standard British list, for example, occasionally deviates from the slightly simpler nomenclature of *British Plant Communities*. The question of stability still remains with us. I would enter a plea for a truce to the creation or acceptance of new genera (other than for hitherto undetected overriding nomenclatural reasons) for — I hesitate to name a term, but at least for the foreseeable future. At the very least, an earnest request to consider the rationale for any such step very carefully could be registered.

In conclusion I would make a plea, perhaps idiosyncratic, perhaps indeed quixotic, for another truce of more modest scope that might nevertheless be thought relevant: a truce to the apparent ostracism of the eight validly published (*International Code of Botanical Nomenclature. 2000*: Art. 18.5) alternative Family names. Their use is authorised (Art. 18.6), they have long historical associations, they are so familiar that in many cases the name has passed into the English language, and several of them are actually diagnostic. In these circumstances, to opt on almost every occasion for the adoption of the 'regulation' alternative form indicating typification seems to me to indicate a regard for uniformity more overriding than might be appealing in the present wider context.

Every suggestion put forward here is debatable. But that we hope, as an organisation, for a greater degree of notice (vide *BSBI News* **91**: 43!); that the chances of securing this are bound up with the public perception of our discipline; and that the gaining of public goodwill and support is an object worth careful thought whatever the means that we may consider, can hardly, I think, be disputed.

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BASTARDS OR NOT?

I am not one for being politically correct, but I would love to find nicer names for our two beautiful flowers Bastard-toadflax (*Thesium humifusum*) and Bastard Balm (*Melittis melissophyllum*). I have not succeeded in finding any old English alternative names. Does anyone know of any? Would anyone like to suggest new names that are worthy of these species? (Not False Toadflax or Pseudo Balm!). The former might include . . . Star. . . and the latter Balm-leaved- . . .. Please answer to me at the address below (e.g. by postcard) and I will submit a summary of replies to the next *News*. Thank you.

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ATRIPLEX LONGIPES HYBRIDS IN SUSSEX

At the BSBI exhibition meeting in 1997 it was reported that *Atriplex longipes* (Long-stalked Orache) had been discovered in Hampshire, significantly further W than reported in Stewart, Pearman & Preston (1994) and it seemed possible to one of us (AGK) that it might also be present in Sussex. Given the preferred habitat of 'tall estuarine saltmarsh vegetation' an obvious place to search was Chichester Harbour and, as a result, a meeting of the Sussex Botanical Recording Society (SBRS) was arranged for August 31st 2002 to record saltmarshes near Fishbourne and search for *A. longipes* as there is plenty of suitable habitat in that area. An excellent turnout for the meeting, including visitors from Hampshire and Dorset, provided many eyes for the search. After about 30 minutes, a candidate plant was found which had the characteristic foliose stalked bracteoles of *A. longipes*. However, on more detailed examination, the plant was tentatively identified as *Atriplex* × *gustafssoniana* (*Atriplex longipes* × *A. prostrata*) (Kattegat Orache). A specimen sent to Dr J. Akeroyd later confirmed this. Further searching through the day provided two other specimens. In all cases the plants were growing among tall vegetation at the back of the saltmarsh. In two locations the main associates were *Bolboschoenus maritimus* (Sea Club-rush), *Aster tripolium* (Sea Aster), *Elytrigia atherica* (Sea Couch) and *Atriplex prostrata* (Spear-leaved Orache)) and in the third the main associate was *Phragmites australis* (Common Reed) with a little *Bolboschoenus maritimus*. In all cases the plants had a weak appearance, flopping down amongst the associated tall vegetation. Most, but not all, plants of *Atriplex prostrata* in the same area were upright and self-supporting, so the prostrate habit provided a useful first indication of which plants were worthy of more detailed examination. These are the first recent records for this hybrid in Sussex although in the introduction of his article on hybrid *Atriplex*, Taschereau (1989) refers to an 1837 record of *Atriplex rosea* from 'Little Hampton, Sussex' which is derived from *A.* × *gustafssoniana*.

It was clear that the habitat where we found the plants is by no means unique in Sussex. As a result, over the next 3 weeks, AS visited a number of potentially suitable sites and found plants of *Atriplex* × *gustafssoniana* in one other site in v.c. 13 (W. Sussex), and in three sites in v.c. 14 (E. Sussex). The new v.c. 13 site was at Widewater Lagoon, Shoreham-by-Sea which is a brackish open water site with a saltmarsh community. Here *A.* × *gustafssoniana* was growing in tall *Elytrigia atherica*. In East Sussex the sites were by tidal stretches of the rivers Ouse and Cuckmere. By the Ouse it was found among tall *Phragmites australis* (Common Reed) in a reedbed at the margins of a freshwater ditch. On the Cuckmere, the plants were found in three habitats at two sites. The first was a saltmarsh site near Cuckmere Haven, where *A.* × *gustafssoniana* was growing in short vegetation with *Salicornia* sp. (Glasswort). The other two sites were at Charlston reed beds. One was bare mud at the edge of the river and the other was a saline cattle track alongside the river, where it was growing with *Puccinellia distans* (Reflexed Saltmarsh-grass) in short vegetation.

On September 20th AGK returned to Chichester Harbour and found a few plants of *A.* × *gustafssoniana* at another site at the back of a saltmarsh near Itchenor. The following day AS and AGK, together with P.A. Harmes, visited Rye Harbour Nature Reserve at the request of the warden, Barry Yates, who had invited us to examine some populations of *Chenopodium chenopodioides* (Saltmarsh Goosefoot). During our visit we found *A.* × *gustafssoniana* in three places on the Reserve, growing in tall vegetation at the edge of wet areas among the shingle ridges which characterise the area. A close up picture of one of these plants showing the characteristic foliose stalked bracteole is included in the Colour Section (plate 10).

In the following weeks AS discovered plants of *A.* × *gustafssoniana* (conf. J. Akeroyd) in a more unusual situation, in two ruderal habitats at the edge of a cricket pitch in a park in Brighton and in Hove Recreation Ground growing in a hedge of *Euonymus japonicus* (Evergreen Spindle), at the edge of a sports field. Both sites are within 2½ km of the sea, and might still be considered coastal but the habitat is not specifically mentioned in the literature we have read. It is, however, one of the habitats of *Atriplex prostrata* and Taschereau (1989) states that hybrids of *Atriplex longipes* may occur in the habitat of either parent. More recently AS found 3 plants of *A.* × *gustafssoniana* in a set-aside arable field above Hogtrough Bottom, Bevendean, Brighton, growing with *Senecio jacobaea* (Common

Ragwort), *Anagallis arvensis* (Scarlet Pimpernel), *Conyza sumatrensis* (Guernsey Fleabane) & *Cirsium vulgare* (Spear Thistle).

In early October, while looking at *Atriplex* plants near the sea AS found several plants of *Atriplex* × *taschereaui* (*A. glabriuscula* × *A. longipes*) (Taschereau's Orache) (conf. J. Akeroyd) growing with *Atriplex glabriuscula* (Babington's Orache) on a shingle beach immediately to the W of Brighton Marina (see Colour Section, plate 11). This is the first record for East Sussex and is far from the other currently known sites for this hybrid, although Hall (1980) gives an undated West Sussex record for *Atriplex* × *taschereaui* from West Wittering which is at the southern end in Chichester Harbour.

As a result of searching suitable habitats and looking carefully at *Atriplex* plants in sites near the sea, the status of *Atriplex longipes* hybrids in Sussex has changed dramatically in a period of two months. *A.* × *gustafssoniana* has gone from being unknown in Sussex in this century to present in eleven sites spread across eight hectads (SU80, TQ10, TQ20, TQ30, TQ40, TQ50, TV59 and TQ91) and *A.* × *taschereaui* has changed from a single old record to a confirmed site. As no distribution map of these hybrids is included in the *New Atlas of the British and Irish Flora*, the latest distribution information known to the authors is the pre-1989 data given in Taschereau (1989). This shows only four sites for *A.* × *gustafssoniana* from the S coast of England with none in Sussex and the nearest site for *A.* × *taschereaui* is in the Lake district. We would like to hear from recorders in any other areas who have recent new records for these hybrids and would suggest that, even if these species are apparently unknown in your area, a search for them in suitable habitats would be worthwhile. Meanwhile one task remains for us in Sussex — to try to fulfil our original aim of finding a Sussex locality for *Atriplex longipes*.

Acknowledgements: We would like to thank Dr. J. Akeroyd for his help and the SBRS members and visitors on the Fishbourne field meeting for helping us to find the first plants which initiated this search.

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GERANIUM PRATENSE (MEADOW CRANE'S-BILL)

David Pearman makes reference to the recent spread of Meadow Crane's-bill along main roads in Dorset. On the Isle of Wight, there is no evidence to suggest that this plant is native but it is becoming established along 800 m of roadside verge of a busy road running along the top of the downland ridge on Mersley Down. A short stretch of this verge was seeded with a wildflower mix in the mid 1980s but no *Geranium pratense* was apparent at that time. In 1993, a thin scatter of plants was recorded here but by 2002, the plant had become well established right along this stretch of verge. The verge is managed by one early and one late cut.

Although this is a busy road, the gradual establishment and spread of this plant has gone largely unnoticed. The site is some distance from habitation and yet I wonder whether its spread might have been assisted by human agencies for in 2002, I came across a flowering clump of Purple Crane's-bill (*Geranium* × *magnificum*) in the grassy verge on the opposite side of the road.

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STELLA ROSS-CRAIG, *PARNASSIA PALUSTRIS* AND *VERBASCUM THAPSUS*

In the *BSBI Scottish Newsletter* No. **24**, J. Muscott (2002) takes Stella Ross-Craig (1957) to task for her portrayal of the stamens of *Parnassia palustris* (Grass-of-Parnassus). The drawing in her book is from the side, which allows different interpretations of the precise orientation of the stamens, but it does appear to show five stamens with intact anthers in positions varying from bent over the stigma to lying perhaps halfway out towards the side of the flower. Muscott claims that Ross-Craig's drawing is incorrect. Instead, it is claimed, the filaments are initially all short and the anthers appressed to the base of the ovary. Each filament then lengthens in turn until the anther lies over the stigma and then bends back out of the way, the anther shrivelling and falling off. At the stage shown in Ross-Craig's drawing, therefore, only one anther should be intact. I thought it might be of interest to show two photographs from my collection which illustrate this process. They are in the centre page colour section. Plate 4a shows two anthers at the sides of the ovary, one bent right over the ovary on its now elongated filament, one bent about halfway out to the side of the flower with a deteriorating anther, and one almost completely out to the side with its anther almost gone. Plate 4b shows a later stage, in which the final stamen is curled over the stigma with a deteriorating anther, and the other four are lying out sideways, only one with perhaps the vestige of an anther.

Checking on my knowledge of *Verbascum* species, I found that Ross-Craig had also drawn the stamens of *Verbascum thapsus* (Great Mullein) wrongly. My own photograph, also shown in the colour section (plate 5), shows that, as described by Stace (1999), the anthers of the three upper stamens are kidney-shaped and placed transversely on the top of the filaments, whereas the two lower stamens have anthers placed obliquely or more or less longitudinally on the filaments and often more or less decurrent on them. They are also more cylindrical than kidney-shaped. The rough drawings below illustrate the two forms. Ross-Craig (1966) shows all five stamens kidney-shaped and transverse. What makes this particularly puzzling is that she illustrates the upper three and the lower two separately. How could she do that and not notice that they were different? I considered the possibility that she had actually drawn a different species, but I could not identify a candidate and the rest of the drawings seem correct for *V. thapsus*.

Upper stamen Lower stamen

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VACCINIUM × *INTERMEDIUM* IN V.C. 40 (SOME JIZZ CHARACTERS)

On a BSBI trip to Tregaron Bog this July Arthur Chater showed us a patch of *Vaccinium* × *intermedium*. Seeing it there without flowers, although there was something quite distinctive about it, one wondered how anyone had spotted it in the first place. However I was to find out soon. The main purpose of this article is to highlight some of the characteristics that make it stand out in the crowd (its parents); I think there is more to be found.

This year was a very good year for bilberries (wimberries) on the Stiperstones in Shropshire. With the good weather of July and August there were many opportunities to go wimberry picking and it was only natural to be keeping an eye open for the hybrid amidst the profusion of cowberry and bilberry; it simply felt right for it to be there and I had not actually realised that three pieces of the hybrid had been found on this site in 1968. On about the fourth trip there it was — a small stand, in flower with the occasional fruit — on the edge of a circle of loose bare rocks (a typical feature of the Stiperstones). Walking back then along the well-trodden ridge, where cowberry abounds without much competition, another much larger stand was found near Cranberry Rock.

Although I ultimately noted many little differences between the hybrid and its parents, the characters that made it stand out that day in the field (the jizz) were the **bilberry-type leaves and terminal inflorescences** (like the cowberry). At that time I did not realise the significance of the way in which the terminal inflorescence on both the cowberry and the hybrid arch over. In October I found a further stand 800 m to the south, again close to the ridge, — no flowers this time but some fresh leading shoots arching over at the tips and 'towering' above the cowberry plants alongside very upright bilberry plants.

This then appears to be the jizz at non-flowering times — **arching leading shoots and bilberry-type leaves**.

Only a few differences are outlined in the Floras but more may have been documented elsewhere. The following are ones noted in the Stiperstones specimens.

Leaves — The leaf of the hybrid has serrated edges (like the bilberry) with a gland at the tip (like the cowberry)*. The quality and reticulate venation resemble the bilberry more than the cowberry which has leathery dark green leaves, rolled over margins, faint venation and paler undersides with 'spots' (darker areas each surrounding a short hair).

The inflorescence — Whilst the bilberry only has axillary flowers (often single) and the cowberry terminal racemes, the hybrid usually has both; it is the presence of the terminal inflorescence that attracts attention in the field.

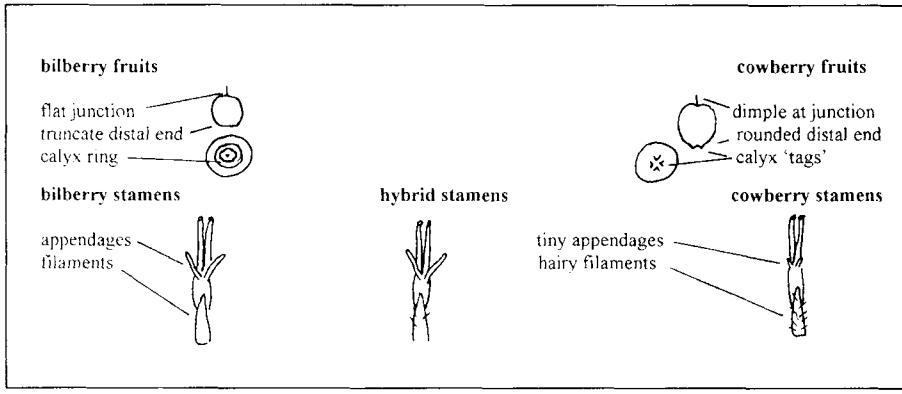
The corolla — The petals of all three are fused for the most part, with the corolla tube widest proximally in the bilberry and hybrid (not always) with five free tips. The corolla tube of the cowberry is of a more uniform width with four longer free tips curling back. The flower colour of the hybrid frequently appears to be salmon-pink ,i.e. is a deeper colour than the pale pink cowberry.

The calyx and fruit — The bilberry has a somewhat indistinct calyx while the cowberry's and the hybrid's are clearly lobed. This may not seem to be a particularly useful observation but on a fruit, where the calyx persists at the distal end, this difference is very evident; the bilberry has a ring where the calyx was while the cowberry and the hybrid have four or five projecting 'tags'. The fruit has further differences. The obvious one is that fruits are infrequent on the hybrids but those I did find looked more like small cowberries (each one more rounded at both ends than a bilberry with calyx tags, as mentioned, and a dimple at the pedicel/fruit junction) except that they were black. Black, maybe, but there was no bloom as on bilberries and one fruit had a red blemish.

Stems — Stems too offer useful differences — the bilberry's is glabrous and angled, the cowberry's terete and pubescent. The hybrids on this site are closer to the cowberry, with some degree of pubescence and the occasional angled stretch.

Stamens — The bilberry and hybrid have quite long appendages on the anthers, arising near the base. All the cowberry flowers examined had tiny appendages and the filaments were hairy. The hybrid filaments also had some hairs; the bilberries' were glabrous.

Flowering times — The flowering time of the hybrid in two of the sites anyway appears to coincide with the cowberry, commencing in **August, and this is perhaps the best time to be looking for it**. The larger of these stands was still flowering with the cowberry in November but all flowers were poorly developed. However, the third stand was not flowering when first found in October — perhaps this stand is more bilberry-like, due to more or less back-crossing, and flowering earlier.



* An observation pointed out to me by K.V. Cavalot, who confirmed all the specimens.

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UMBILICUS RUPESTRIS AS AN EPIPHYTE ON TREES

Further to recent comments in *BSBI News* **90** and **91** on *Umbilicus rupestris* (Navelwort), when I moved to Cornwall in 1999, I found it was an abundant weed. I gave little thought to the Navelwort growing on the moss-covered boughs of the large *Prunus laurocerasus* (Cherry Laurel) in the garden, as I had on several occasions seen it growing on the base of tree trunks in Somerset. Since then it has struck me that visiting botanists always comment, 'Look at the Navelwort on the Cherry Laurel'. It was not until reading the *New Atlas* that says, 'in Cornwall it has even been seen growing as an epiphyte on the boughs of large trees', that I realised how uncommon a habitat this must be for Navelwort. The plants on the Cherry Laurel in the garden (see Colour Section, plate 7) seem to reach flowering most years, even though they do suffer during long dry spells. The larger plants usually pull through by sending up new growth once the rain starts again; the young plants normally don't make it. They stay evergreen all year round unless the drought gets them. Flowering can start as early as late February and continue well into autumn. Today (November) I counted forty-seven plants.

I have also seen Navelwort as an epiphyte on trees in Co. Waterford. There it grows on various trees ranging in size from *Crataegus monogyna* (Hawthorn) to a large conifer.

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BOTANISTS IN LITERATURE — 30

The twin vocation of poet and botanist in the eighteenth and nineteenth centuries was not uncommon. Not only was there Goethe (1749-1832), but as this piece about the poet Heinrich Heine (famous for his *Die Lorellei* (The Lorelei), and also *Die Lotosblume* (The Lotus Flower) and *Du bist wie eine blume* (You Are Like a Flower) among many other poems, several subsequently set to music and performed as Lieder) reveals, there was also the author of the name of the California Poppy. It is taken from George Eliot's 'German Wit: Heinrich Heine' (*Westminster Review*, January 1856), republished in her *Selected Essays, Poems and other Writings* by Penguin Classics in 1990 (p. 81).

> 'In 1820 Heine left Bonn for Göttingen. He there pursued his omission of law studies; . . . It was not until a year after, that he found a Berlin publisher for his first volume of poems, subsequently transformed, with additions, into [*Das*] *Buch der Lieder*. He remained between two and three years at Berlin, and the society he found there seems to have made his years an important epoch in his culture. He was one of the youngest members of a circle which assembled at the house of the poetess Elise von Hohenhausen, the translator of Byron — a circle which included Chamisso,[1] Varnhagen,[2] and Rahel (Varnhagen's wife).'[3]

Notes

1. Ludolf Karl Adelbert (Adalbert) von Chamisso (1781-1838). As a poet he wrote the oft-sung eight stanzas of Schumann's song cycle *Frauenliebe und -leben* (*Woman's Love and Life*) (op. 42, nos. 1–8, 1840), as well as *Tragische Geschichte* (*Tragic Tale*) transformed into a Lied by Hans Pfitzner (op. 22, no. 2, 1907). He also translated Hans Christian Andersen's *Der Soldat* (*The Soldier*) (Schumann: op. 40, no. 3, 1840).

   As a botanist he was the author (Cham.) along with Diederich Franz Leonhard von Schlechtendal (1794-1866) (Schltdl.) of several dicotyledonous genera, including *Achetaria* and *Geochorda* (both Scrophulariaceae), *Discocapnos* (Papaveraceae), and *Deianira* and *Curtia* (both Gentianaceae), and on his own of *Eschscholzia californica* (California Poppy).

   A contemporary of Darwin (1809–1882)*, Humboldt (1769–1859), and Bonpland (1773–1858) (see *BSBI News* **91**: 40–41 (2002)), he travelled with Otto von Kotzebue on a Russian expedition to explore the Pacific (1815–18). He was director of the botanic gardens in Berlin from 1833.
2. Karl August Varnhagen von Ense (1785–1858), German writer and diplomat.
3. Rahel Varnhagen (1771–1833), a remarkable Jewess and the subject of a book by Hannah Arendt.

*'It was therefore with great interest that I found Chamisso, the justly distinguished naturalist who accompanied Kotzebue, stating that the inhabitants of the Radack Archipelago, a group of lagoon islands in the midst of the Pacific, obtained stones for sharpening their instruments by searching the roots of trees which are cast up on the beach.' (Charles Darwin, April 1836, *Voyage of the Beagle*, p. 340 (1989)).

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PLANT TERATOLOGIST WELCOMES GLOBAL WARMING

'Species at risk as experts predict demise of winter' runs a headline in *The Independent* (4.9.2002). 'A frightening prospect', 'a very grim picture for the future', are other comments by the experts as climate change is seen to produce a muddling of the seasons.

Yet it is precisely such change which offers opportunities for many species to attempt to flower and leaf out of season. Confusing environmental messages promote confused response in plants which may result in new structures — a kind of new art form. Britain may be the most important place for registering these unimportant phenomena, since Britain is so well-gardened and so many species have been brought here from countries whose climate is more clear-cut. Our environmental triggers were already more confusing for many of these plants, and with 'climate change' or 'global warming' who knows what might happen?

'Relationships which have evolved over thousands of years are being thrown out of kilter and are beginning to fall apart,' reports the phenology project manager. It is as if there was a golden age which plants had evolved into and were not supposed to evolve beyond. Yet part of the delight of plants is seeing how they continue to evolve (probably a separate but allied subject to teratology).

Welcoming reports of new aberrations and teratisms,

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DENTITION OF DAISY LEAVES

I am a secondary school teacher in a school in Herefordshire and use the number of teeth on a daisy leaf as an example of variation with classes ranging from Y8 to Y11 higher GCSE. It is a nice little exercise which produces simple catagoric data. On some leaves the teeth are very clear, on others not so. Variation runs from 1 tooth to 16. I have never seen one over 16 but have occasionally seen a leaf that I judge to be entire with zero teeth. The distribution is reasonably normal with the mode at 10 or 11. There is no evidence that even numbers of teeth are more usual than odd.

I have only carried out the exercise within my school grounds and suspect that this may be a genetic effect because you get small leaves with many teeth and large leaves with few teeth just as much as *vice versa*. I have never exposed this to a full statistical analysis backed up by proper sampling techniques as it would not be demanding enough for an A level coursework task.

Has anyone ever heard of or looked at this effect or something similar?

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FURTHER ADDITIONS TO THE 'PENNINE SALTMARSH FLORA'

In *BSBI News* **77** I described the occurrence of saltmarsh plants accidentally introduced to the Hartside café area in the Northern Pennines at the highest point of the road between Penrith and Alston in Cumbria at 575 m. Landscaping had been carried out in the car park area with turf taken from the Solway Firth almost 20 years ago now. A visit to the site in July 2002 showed the presence of two other saltmarsh species which had been previously overlooked. Flowering *Triglochin maritima* (Sea Arrowgrass) occurred very locally as did *Carex distans* (Distant Sedge) with one tuft and a single inflorescence. *Juncus gerardii* (Saltmarsh Rush), *Glaux maritima* (Sea-milkwort) and *Plantago maritima* (Sea Plantain) have persisted although *J. gerardii* appears to have been grazed and is less conspicuous now. I believe it is the relative lack of competition which has allowed these species to persist at this unusual site. I would like to thank Geoffrey Halliday for checking the *Carex*.

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Plate 1: The three editors of the New Atlas with the two editors of the old at the launch of the *New Atlas of the British & Irish Flora* at the Royal Botanic Gardens, Kew on Tuesday 17th September (from l–r: Max Walters, Trevor Dines, Chris Preston, David Pearman & Franklyn Perring), photo Crown Copyright 2002

Plate 2: The Taoiseach, Mr Bertie Ahern, attending the launch of the *New Atlas of the British & Irish Flora* at the National Botanic Gardens, Dublin on Saturday 7th December (from l–r: Richard Pryce, Chris Preston, Trevor Dines, Fiona Maitland, Bertie Ahern & David Pearman, photo © Mrs Pat McKee 2002

Plate 3: Margaret Beckett, Secretary of State for Environment, Food and Rural Affairs peruses the *New Atlas* with David Pearman. photo Crown Copyright 2002

Plate 4a Plate 4b

Parnassia palustris flowers showing stamen arrangement and development (see text for details), photos © J. Presland 2002

Plate 5: *Verbascum thapsus* flower showing stamen type (see text for details), photos © J. Presland 2002

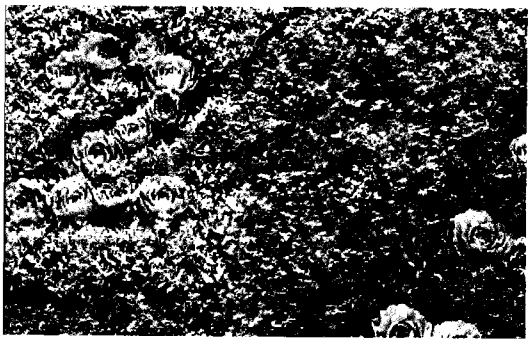

Plate 6: *Herniaria glabra* in carpet bedding, RHS Garden, Wisley, photo © M. Grant 2002

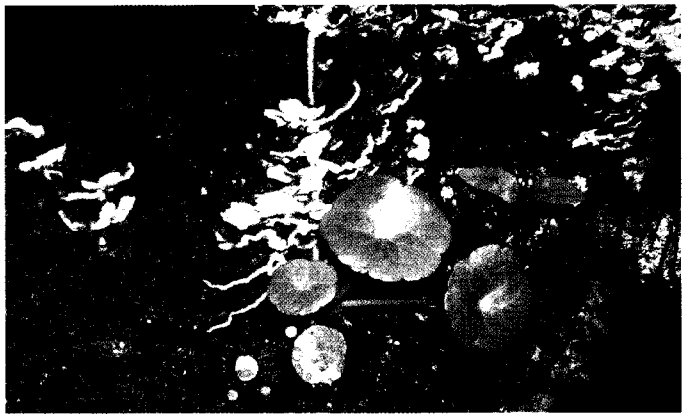

Plate 7: *Umbilicus rupestris* as an epiphyte on Cherry Laurel in Cornwall, photo © P.R Green 2002

Plate 8: *Atriplex pedunculata* in Essex, photo © C. Gibson 2002

Plate 9: Watercolour of *Gentianella ciliata* by Mrs E. Grovenor Hood 1873, photo © A. Butler 2002

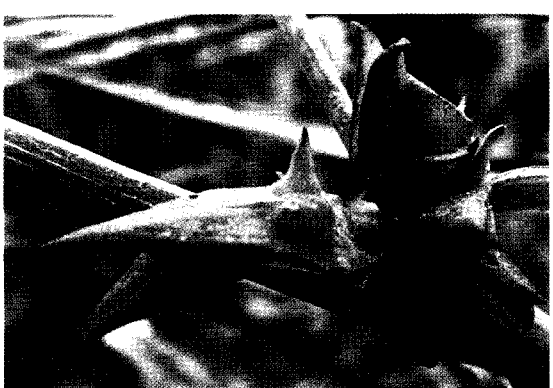

Plate 10: Close up view of *Atriplex* × *gustafssoniana* at Rye Harbour Nature Reserve, photo © B.J. Yates 2002

Plate 11: *Atriplex* × *taschereaui* on shingle beach near Brighton Marina, photo © A.G. Knapp 2002

Plates 12 & 13: Cluster Oak, Column Ride, Savernake Forest (Wilts.), photos © J. Davies 2001

Plate 14: *Fallopia japonica* on Brodick Beach, September 1992

Plate 15: *Fallopia japonica* on Brodick Beach showing signs of mechanical control, August 2002 (CMH)
Both photos © C.M. Hayward

SCROPHULARIA UMBROSA: GIANT PLANTS

I came across a group of about 20 plants of *Scrophularia umbrosa* (Green Figwort) plants in a wet shallow depression in the wide ride of a Scots Pine plantation in the Eden Valley, Cumberland (v.c. 70) of astonishing proportions on October 23rd this year. The tallest plant was 300 cm tall with several stems only a few cm shorter than this. The upper limit of height is given as 100 cm in Stace. Although not standing quite upright all the stems remained intact and unbroken. Presumably the sheltered and well lit conditions just within the plantation gave the plants shelter and the wide wings on the stems gave them added mechanical strength. It is the first time I have seen plants away from river banks both in Cumbria and the South of Scotland. The River Eden is about 2.5 km from the forest and presence of these plants at this locality shows that this species is probably spreading as suggested in the *New Atlas*.

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CONSERVATION NEWS & VIEWS

RAGWORT ERADICATION — IS LEGISLATION NECESSARY AND ENFORCEABLE?

The British Horse Society is continuing its crusade to 'Root Out Ragwort' by calling for people to ask their MP to sign an Early Day Motion (EDM)[1] on this subject. EDM 1583 states:

> 'That this House is concerned that 500 horses died from liver damage due to ragwort poisoning in 2001 and that 1000 deaths are predicted in 2002; is also concerned that the toxin is poisonous to cattle and sheep as well as humans, so humans may, unwittingly ingest the toxin; notes that under the Environmental Protection Act 1990 and the Town and Country Planning act 1990, landlords are legally obliged to remove ragwort from their land; and calls on the Government to become proactive in preventing the irresponsible spread of ragwort.'

To people owning horses, ponies and donkeys ragwort poisoning is a serious issue. The principal toxins are pyrrolizidine alkaloids jacobine, jacodine and jaconine, which accumulate in the liver until a lethal dose is achieved. Horses find the fresh green plant unpalatable and avoid it if there is plenty of more palatable feed available. The main risk factor is that the less unpalatable wilted plants and dried plants mixed in hay may be consumed and deliver their toxic load. However, an animal needs to consume between 5% and 10% of its bodyweight of dry ragwort in order to accumulate the lethal dose[2].

The Weeds Act (1959) and the Town and Country Planning Act (1990) refer only to Common Ragwort, not the less common members of the genus *Senecio*. Examination of this Act shows that there is widespread ignorance of its finer points and that ragwort, of all kinds, is surprisingly very well protected by it. The Act applies to Great Britain and empowers Agriculture Ministers to take action against occupiers of any land to *prevent the spread* (my emphasis) of five species of plant, i.e. Creeping Thistle, Spear Thistle, Curled Dock, Broad-leaved Dock and Common Ragwort. Section 1 of the Act *empowers, but does not require*, the Minister of Agriculture to serve notice on the occupier of any land on which injurious weeds are growing, requiring the occupier, in the time specified in the notice, to take such action as may be necessary *to prevent the weeds from spreading*. It is therefore not illegal to have ragwort growing on any land. Section 2 of the Act says that where notice has been served and the person concerned unreasonably fails to comply with the requirements of the notice, he or she shall then be guilty of an offence. Section 3 of the Act empowers the Ministry of Agriculture (etc.), now the Department of Environment, Farming and Rural Affairs, to deal with the weeds themselves.

As a matter of legal interpretation, the powers under this Act were designed for use in respect of agriculture, on land defined as agricultural land as set out in the Agriculture Act 1947. The Minister therefore has no responsibility for animals kept for non-agricultural businesses or for recreation. Most horse, pony and donkey ownership falls into the category of 'recreation'. There is no legal basis for the Minister to serve notice in respect of weeds supposedly threatening animals kept for recreational purposes.

The Town and Country Planning Act 1990 provides *discretionary* powers for local authorities to serve notice on the owner or occupier of land which is harming the *amenity* (my emphasis) of the area, requiring action to be taken within a specified period to put matters right. Again, there appears to be no justification in this law for people to go about uprooting plants with yellow flowers and land that is not their own or forcing other people to do so.

It may seem irresponsible of me to defend ragworts in the light of the horrible death that their toxins inflict upon livestock. The British Horse Society is involved in anti-ragwort campaigns and publishes leaflets informing country folk on how to identify and destroy ragwort[3]. I find it interesting that the campaign is being led vociferously by the equestrian lobby and not by the sheep and cattle rearing sectors of agriculture. Could it be because ragwort and other poisonous plants rarely present a problem on land managed properly for grazing by cattle and sheep farmers and that these farmers are more experienced in animal husbandry? From my observations ragwort, and the other weeds listed in the 1959 Act, seem to occur more abundantly on land that is overgrazed and poached by horses.

Prevention of ragwort poisoning is an example of simple risk assessment and risk management. If hay contains ragwort, don't buy it. If hay contains ragwort, don't feed it to animals. If ragwort is a problem on horse pasture, uplift it and look at the grazing regime. It is difficult to believe how someone could continue feeding contaminated hay to at least 5% of a horse's body weight in dry ragwort before noticing the contamination. That 500 horses died from this cause in 2001 is a staggering admission of irresponsibility! Apparently, 500,000 households own 900,000 horses in Britain[5]. This means that at least 99.84% of horse owners got their risk management right and the remaining 0.16% needed education.

Willy-nilly elimination of perceived hazards under threat of law to serve 0.16% of a special interest group is not the first available option nor is it worth more political jaw time. In Parliament, the Minister, Mr Elliot Morley, stated[4,5]:

> '. . . *responsibility for all matters of horse, pony and donkey welfare rests first with those who own them. As well as ensuring normal shelter, feed and water, owners need to be aware of the danger of ragwort and other poisonous plants*'.

This was in relation to a discussion on whether commercial equine activities can be regarded as agricultural business and whether such business constitutes a legitimate form of agricultural diversification. To me, it would seem right to regard properly managed equestrian centres and stud farms as agribusiness, but not one-horse paddocks. The responsible landowner does have a duty of care and respect for their neighbours. It is clearly irresponsible to sell hay that is contaminated with ragwort. It is irresponsible to allow the seeds of injurious weeds to blow over hay meadows and grass leys cultivated and managed for hay and haylage for livestock. There is a duty of good neighbourliness to remove and immediately bag the flowers and seed heads of designated weeds. This sort of responsible neighbourliness goes on quietly in the countryside without need for silly, knee-jerk, unenforceable legislation.

This may not seem a particularly important plant conservation issue given that Common Ragwort (*Senecio jacobaea*) is still common. However, as botanists we should be concerned about misidentification and the misapplication of control, for this issue represents yet another pressure on our native flora, a sector of biota that appears always to be expendable! If one refers to the *New Atlas of the British & Irish Flora* (2002)[6] it can be seen that Hoary Ragwort (*S. erucifolius*) has declined, (insignificantly) in the English Midlands and at the northern edge of its range. Although *S. erucifolius* occurs in most of the 10 × 10 km squares in v.c. 61, it cannot be regarded a common plant, for it is recorded in as few as a single location within most hectads. With law-enforced eradication by untrained ragwort crusaders, this species could soon disappear from this, and possibly many other,

vice-counties. I have found both *S. erucifolius* and Tansy (*Tanacetum vulgare*) uprooted on the road verge and have wondered whether the Wildlife and Countryside Act could be brought to bear against the perpetrators!

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3. http://www.bhs.org.uk/Welfare_leaflets/Welfare4.htm
4. http://www.parliament.the-stationery-office.co.uk/pa/cm
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THE CHANGING FLORA OF THE UK :DEFRA REPORT — A COMMENT

Gradually working my way through the bumper mailing which came with *BSBI News* **91** I cannot be the first to have come across the peculiar assertion — in the DEFRA report *The Changing Flora of the UK* — that: 'streamsides, roadside verges and hedges have also become more overgrown in recent decades'!

Where I come from, the latter two of these, at least, have generally been mown to clouds of dust — and often simultaneously poisoned with herbicide — so that all one sees bordering the lanes, for most of the year, is a brown line of weedkilled mown grass: a largely brown and fruitless/flowerless line of shattered twigs and stumps that used to be a hedgerow; and then the uniform brown, lurid green or sickening yellow of intensive agriculture.

There is no room for wild flowers or fruits in this crazy world, and the mowers are completely oblivious to the bluebells and cowslips they send flying in the spring, the geraniums they trash in the summer and then the vital hedgerow fruits they thrash away in the autumn. One need surely look no further for reasons behind the decline of birds in the countryside and the flowers from our verges.

Verges increasingly look the same in all seasons and make 'countryside' drives an increasingly depressing experience, so it is very odd to read the assertion from Preston *et al.*, above, that there is not enough mowing or cropping! Have they not been associating with Derek Ratcliffe, whose letter in *Plantlife* magazine Summer 2002, alerted us to the increasing practice of farmers 'reclaiming' our roadside vestigial grassland communities by dumping topsoil on them and reseeding with ryegrass? Ratcliffe observes that it makes no difference if the verges are the responsibility of the county council or the landowner: 'Either way, there seems to be only a determination to destroy even these small remnants of our severely depleted botanical heritage.'

As my experience is wholly in agreement with that being decried by Ratcliffe, perhaps the authors of the '*Changing Flora*' could advise me where I should move to find the overgrown and interesting hedgerows and verges that I used to find so colourful and that used to tell me what time of the year it was?

Incidentally, does David Pearman — another contributor to the above report — consider Ratcliffe among the 'doom-preaching eco-warriors' he tilts at elsewhere in *BSBI News* **91**?

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ALIENS

TENUOUS RECORDS OF *STIPA TENUISSIMA* (POACEAE)

Surprisingly, the grass *Stipa tenuissima* Trin. (Mexican Feather-grass) is much better known to gardeners than to British botanists. In recent years it has been widely grown ('more than 30 suppliers', quoting the *RHS Plant Finder 2000–2001*). Its fountain of hairlike leaves and many slender stems ending in silvery inflorescences make it an attractive addition to any arid spot. It is a perennial, but self-seeds readily and can become a minor nuisance in dry gardens — for example, at the Royal Botanic Gardens, Kew, it has spread from the grass beds onto the edge of the rock garden (*comm.* T.B. Ryves, Oct. 2001).

Records of (genuinely) escaping plants are surprisingly few. John Martin tells me (Aug. 2001) that it occurs regularly in pavement cracks, etc. in the W. Ardsley and other areas of SW Yorkshire, but I can quote from no other correspondent. Personally, I have watched it increase over parts of the Heather Garden at the Sir Harold Hillier Gardens and Arboretum (Ampfield, S. Hants) since its introduction there in 1996. It has been allowed to spread naturally and plentifully, almost reaching weed status. Additionally, in autumn 2001, after clearance of the long-loved western half of Whitegate Border (sited some 500 m away) to make way for a new Visitors' Centre, up sprung many weeds including such surprises as *Stachys arvensis* (Field Woodwort). A solitary, densely tufted grass defeated me, but when flowers finally appeared, its *Stipa* identity was obvious. Probably it had been spread accidentally by the now Head Gardener, Franziska Zaenglein, who had worked so hard in **both** areas of the garden. It deserves to be recorded, and a voucher is now preserved in the Hillier Herbarium.

Some 30 species of *Stipa* (including this one) are duly keyed out in T.B. Ryves *et al.* (1996), *Alien Grasses of the British Isles*, pp. 110–112, wherein also appears a sketch of the fruiting lemma (Fig. 28E). Other line drawings are not easilly accessible, hence the appearance herewith of a magnificent plate by Delf Smith (DPJS) showing, at large magnification, all the important botanical details. It is drawn from material very kindly offered by the Curator at Hillier's, Mike Buffin. It shows:

A Rootstock and basal leaves	H Lemma
B Inflorescence	h Detail of surface of lemma
C Ligule	I Seed (grain)
D Spikelet	J Flower
E Upper glume	j Enlargement of flower, showing reduction in two stamens
F Lower glume	
G Palea	K Lodicules

A ?novel observation by DPJS is the rudimentary nature of two of the three stamens, indeed they are staminodes (several flowers were carefully checked). This is not a real surprise, as members of this genus normally inbreed, and hence one stamen is sufficient! The generic description of *Stipa* in Stace's *New Flora of the British Isles*, ed. 2 (1997), p. 840, needs considerable amendment to include this species, for example, the ligule is without a fringe of hairs; the lemma is without a long-pointed basal callus; etc.

S. tenuissima, a native of N. & S. America, has, alas, widely been wrongly distributed by gardeners as *S. tenuifolia* (an Australian plant), and occasionally even as *S. tenacissima* (from the W. Mediterranean area). It is also sometimes referred to (in recent literature) as *Nassella tenuissima* (Trin.) M.E.Barkworth -- see *Taxon* **39(4)**: 612 (1990) — but this new combination which involved a **great** expansion of the concept of *Nassella* has not (yet) been universally accepted.

It seems very probable that this species will soon become a noxious weed in various warm parts of the world, but in Britain it is unlikely that a suitable niche exists, but more casual records are certainly to be expected.

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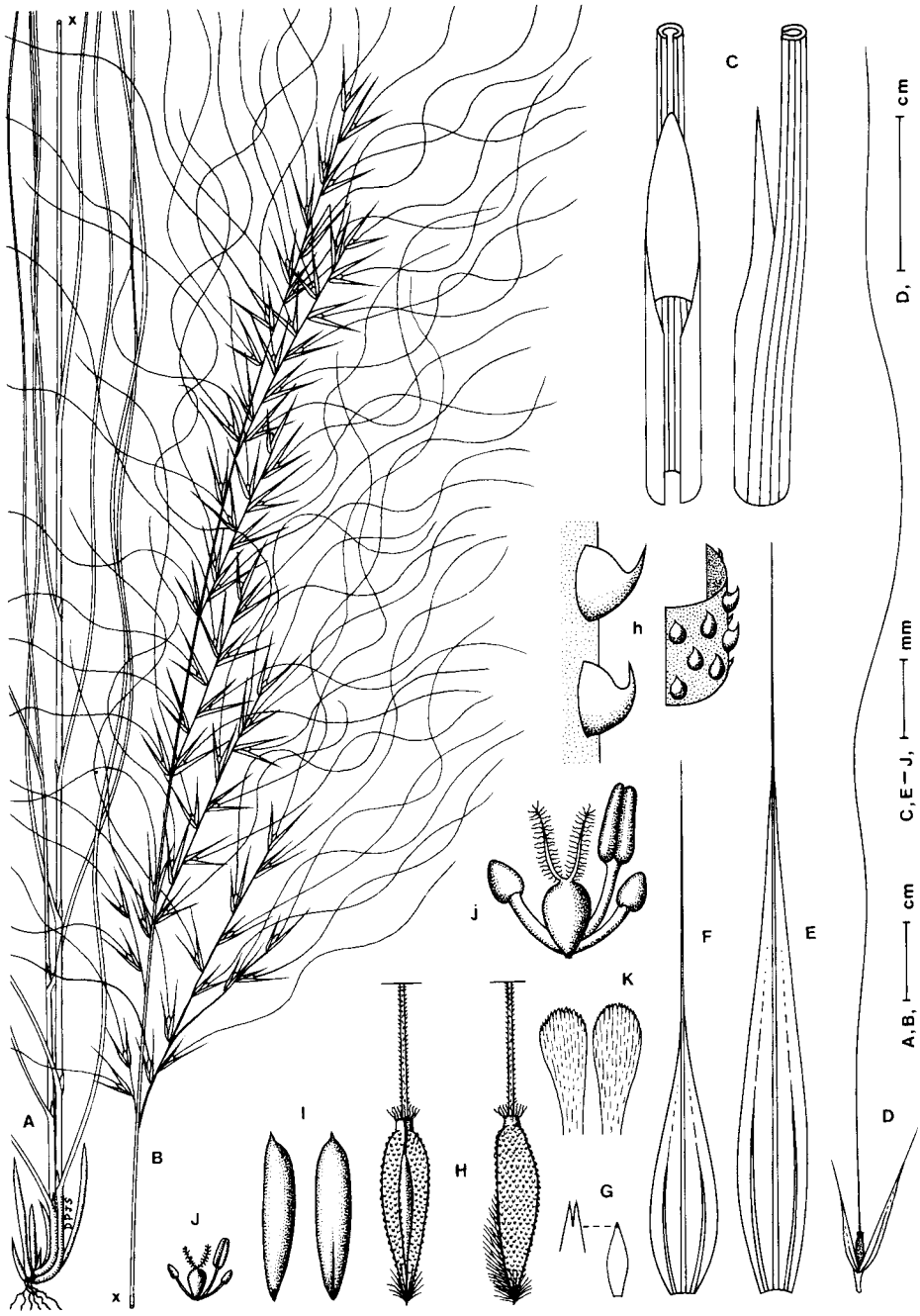

Stipa tenuissima del D.P.J. Smith © 2001

PERSICARIA RUNCINATA IN THE CLYDE VALLEY (V.C. 77)

An unusual *Persicaria* was seen (PM) in September 2001 and subsequently determined (EJC) as *P. runcinata* — apparently new to Britain, and possibly new to Europe also. The site is the bank of the River Clyde at Hazelbank, Clyde Valley, Lanarkshire (v.c. 77), in an area which is under water when the river is in spate (GR. NS83 45). It is presumably the result of either fly-tipping or deposition from upstream.

When checked in December there was no evidence of the plant, but by April 2002 many new shoots had grown to a height of 15 cm thereby confirming that it was a herbaceous perennial.

As seen in August 2002 there were three clumps with a few satellites. The largest was a rough oval approximately 2 × 0.6 m and the smallest a rough circle of approximately 0.5 m diameter. Associated and intermingled plants were Creeping Buttercup (*Ranunculus repens*), Cleavers (*Galium aparine*), Common Knapweed (*Centaurea nigra*), Common Nettle (*Urtica dioica*), Spear Thistle (*Cirsium vulgare*), Tall Fescue (*Festuca arundinacea*) and Rough Meadow-grass (*Poa trivialis*). Specimens in **herb. PM** and **EJC**.

Persicaria runcinata (Buch.-Ham. ex D. Don) H. Gross (*Polygonum runcinatum* Buch.-Ham. ex D. Don) is a little-known garden plant although *The RHS Plant Finder 2002-03* lists 13 stockists from whom it may be obtained. It has small, pink, capitate inflorescences, and much resembles *Persicaria capitata* (Pink-headed Knotweed) (see Clement 1983, for a good illustration). It differs in its normally upright growth (not prostrate) and has lanceolate leaves (not ovate), with a characteristic 'waisting' near the base of the leaf blade. It is rather weedy in appearance and can be rampant in suitable damp ground.

It has been recorded (det. EJC) in untamed cultivation by K.E. Bull in the bog garden at Borde Hill, Haywards Heath, (E. Sussex) in 1989, and by A.J. Underhill as spreading around a bog garden in Forde Abbey gardens (Dorset) in August 1996. However, these are not 'in the wild' records. This plant was also rampageous in the peat garden at Sir Harold Hillier Gardens and Arboretum, Ampfield (S Hants) some 10 years ago, but since then has virtually disappeared (comm. Allen J. Coombes); but in the adjacent new Gurkha Memorial Garden, featuring Nepalese plants, currently there grows another accession (No. 97-0485A) that is dramatically different in leaf shape and has a dwarfer habit. Further, the rhombic-ovate terminal leaf lobe is only *c.*0.8 × 1 cm (not 3-7 × 2-4 cm), and it has (2) 3-4 pairs of basal lobes (not 1 (-2) pairs).

Persicaria runcinata is a very variable species. As a native it stretches across Asia, occurring in India, Himalaya (incl. Nepal, Sikkim and Bhutan), China and Taiwan, with outliers in Malesia (incl. Java and New Guinea). At least three distinct subspecies have been separated by some botanists. Descriptions and illustrations in the horticultural literature are remarkably difficult to find, probably the most easily accessible one being Grierson & Long (1983), but their Fig. 16f shows only the terminal head of flowers. Parker (1992) provides coloured photographs of the flowering plant and the diagnostic (to farmers!) subterranean fine rhizomes from which tubers develop at the nodes during the summer. It is a dominant weed in parts of Bhutan in various crops.

We are indebted to Mrs Jean M. Millar for the accompanying drawing which was done from fresh material collected at the Hazelbank site.

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ERIC J. CLEMENT, 54 Anglesey Road, Gosport, Hants PO12 2EQ.

Persicaria runcinata del. Mrs Jean M. Miller © 2002

LIMONIUM HYBLAEUM AT WEST BAY, DORSET

In 1992 the late Dr Humphry Bowen found *Limonium hyblaeum* (Rottingdean Sea-lavender), well established on the sea front at West Bay, Dorset. He also found *Frankenia laevis* (Sea-heath), and postulated, to me at least, that it might well be native here. Ten years later the *Limonium* extends for about 400 m along the front, from bare clay cliffs in the west, which were landscaped in the early 1990s, with associates such as *Frankenia laevis*, *Beta vulgaris* (Beet), *Puccinellia fasciculata* (Borrer's Saltmarsh-grass) and *P. maritima* (Common Saltmarsh-grass), along to scruffy amenity gardens in the east, with *Armeria maritima* (Thrift), *Crithmum maritimum* (Rock Samphire), *Catapodium marinum* (Sea Fern-grass) and more *Frankenia*. The *Frankenia* forms huge mats over concrete walls and covers many square metres of bare ground. A visitor would echo Dr Bowen's views, indeed I've been shouted at for uprooting 'protected' plants, when lifting rosettes of the *Limonium* for my rock garden, where it is an attractive addition.

By chance, however, I talked to the owners of a very attractive minimalist seaside garden, which lies in the middle of the site. The garden has lots of stone, plenty of pebbles, plants such as *Crambe maritima* (Sea-kale), *Glaucium corniculatum* (Red Horned-poppy) and, yes, dense mats of *Frankenia* and *Limonium*! They said they had laid out the garden in the 1980s with plants from garden centres and that gulls dug up both of these special plants for their nests and had spread them along the front and the bare cliffs. They had watched it happen year by year. Problem solved, except, when talking to Eric Clement last week, it occurred to me that not only would it have been a very interesting garden centre, but was I sure the *Limonium* was *L. hyblaeum*?

David Pearman, The Old Rectory, Frome St Quintin, Dorchester, Dorset DT2 0HF

RECORDS OF *CRASSULA MULTICAVA* FROM SCILLY (V.C. 1B)

Crassula multicava Lemaire (Fairy Crassula) has apparently been 'twitched' from Tresco (Isles of Scilly) for some years, but the V.c. Recorder, Mrs Rosemary Parslow, tells me (June 2002) that no detailed records have been sent to her personally. Three independent reports, with supporting specimens or photos have reached me, but they apparently all refer to the same general area — they are:

1. Escape from Abbey Gardens, growing at base of steps leading into woods. June 1996. Julie Clarke. See *BSBI News* **74**: 42 (1997).
2. Pathside on woodland edge, by gardens, map ref. SV893.141. October 1996. A.J. Underhill.
3. Abbey Hill, map ref. SV892.143. April 1998. A.A. Butcher.

This glabrous, succulent species, a native of S. Africa (Natal and Cape Province), has made a habit of escaping from gardens in many warmer parts of the world (for example, Azores, Australia, S. India, Hawai'i, Madeira, New Zealand) and becoming ± naturalised, but it still remains a little-known plant. Hence the great value of our splendid cover illustration by Ruth Freeman. The depicted specimen was grown from a tiny offset collected by AJU which was grown on in a pot by C.G. Hanson (Ware, Herts), and that produced flowers in March 2002 on a sprawling plant *c.*45 cm tall.

Roy Lancaster, in the February 1984 issue of *The Garden* (J. Royal Hort. Soc.) **109(2)**: 69 & 68 (coloured photo), tells us of the 1983 Award of Merit achieved by this plant. He describes it as:

> 'a shrubby plant suitable for the cool greenhouse, its stems clothed with bright green fleshy ovate leaves to 3.5 inches (9 cm), while the white starry flowers pale pink in bud are carried in a large terminal panicle with pinkish brown ultimate stalks.'

Sadly, the beautiful flowers soon wither away (CGH). More technically, the four petals, four stamens and pitted (with hydathodes), entire, opposite leaves are diagnostic — the epithet *multicava* (= many hollows) refers to this foliar feature which becomes very obscure in the herbarium. Propagation must be vegetatively, since fruits/seeds are reported to be rarely seen. Oddly, the *Flora New Zealand* **4**: 573 & 575 (1988) insists in the key and description that the flowers are '5–merous', conflicting with all other literature that I have seen, including the descriptive synonym of *C. quadrifida* Bak. f.

I can trace no records of this species from the Channel Islands or Mainland SW England. Conceivably, records have been concealed under an identity of *Saxifraga* sp., the jizz of which is remarkably similar.

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FALLOPIA JAPONICA ON THE ISLE OF ARRAN — AN UPDATE AND CONCLUSION TO STUDY

Since 1992, I have studied *Fallopia japonica* (Japanese Knotweed) on the Isle of Arran (v.c. 100) over a number of years recording the distribution and spread. It was first recorded on the island in 1926 (T. Church pers. com.) at both Brodick and Lamlash. The BRC had some records for hectads for 1950 but no detailed records were available until 1980.

There are four main sources of records for the island: BRC, T. Church (BSBI recorder 1987–2001), T. Smith and myself. The records I obtained personally start from 1992 — survey for first degree dissertation and subsequently, specific surveys in 1998 and 2002. A report after the 1998 survey appeared in *BSBI News* **89**.

At first, there appeared to be an increase in the species, whether this was progressive or not was subjective to recording techniques and dates. In 1998, detailed records of the sites were recorded and this was repeated in 2002.

It can be concluded from the records obtained in 2002 that *F. japonica* has reached its optimum spread or equilibrium on the island. In 2002 there were 3 new sites recorded but they were in close proximity to other established sites. The *New Atlas* shows the species present in all 10 hectads. The sites were more accurately recorded in 2002 using a Global Positioning Satellite (GPS) system. The general trend of the distribution still follows the roads and human habitation around the coastal areas

of the island. There appears to have been some control taking place as some sites had either disappeared or showed signs of control — mechanical or chemical. A site at Brodick beach had been cut down and the stems left lying around. Also the rhizomes were exposed (see Colour Section, Plates 14 & 15). At Claddach, opposite Brodick Castle where were signs of chemical control. If there is no further movement of contaminated soil or dumping of garden waste the only increase that will be seen is of current sites via the rhizome network and of rhizomes being washed down streams and along beaches creating new sites.

Having spoken to people concerned with wildlife on the island there is some concern about other Neophytes on the island such as *Rubus spectabilis* (Salmonberry), the *New Atlas* showing 9 out of 10 hectads on the Island with the species present.

Overall, although *F. japonica* is a problem in small areas of the island there is no threat to wildlife as a whole. It has been decided that any further surveying of *F. japonica* will not reveal anything new in the future unless there is a sudden dramatic increase or decrease in the species.

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POA BULBOSA AT ROSSLARE HARBOUR, CO. WEXFORD

Poa bulbosa (Bulbous Meadow-grass) was first found for Ireland at Rosslare Harbour (T11), Co. Wexford in May of 1997 by my brother Ian. The specimen was confirmed by Dr J.R. Edmondson and placed in **DBN**. When first found there were only about 10 plants on the edge of the dunes next to the road. Visiting the site in June of 2002, I was amazed at how much the *Poa* had increased. All the very short turf between the areas of *Ammophila arenaria* (Marram) was now covered in the *Poa*. The orange mats from the dying leaves made it easy to spot. In just five years the *Poa* has increased from a handful of plants to tens of thousands. Also well naturalised on the dunes are *Anisantha diandra* (Great Brome) (Reynolds 1996) and *Lagurus ovatus* (Hare's-tail) (Reynolds 1994), both since the early 1980s. It is disappointing that the above records for the three species mentioned were passed on, but are not represented in the *New Atlas*, especially as the *Poa bulbosa* is the only known Irish record.

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SILENE COLORATA

With reference to the notes on this species in *BSBI News* **91**: 51 & 52, I have grown *Silene colorata*, from Cretan seed, in Bristol, N. Nottinghamshire, and NW Norfolk. Although it flowers happily, it has not self-sown on any occasion, despite producing seed. In a hot May in Bristol it did ripen seed in five weeks from the original seed being sown! It does start to flower very early in its growth, shortly after producing its first pair of adult leaves. In Crete and Greece it is usually on beach sand where it

appears to germinate in the very early spring (most annuals there germinate in the autumn, triggered by the first rains, and then overwinter), so I suspect it needs a lot of light when growing and benefits from the reflectivity of sand.

[David Cann asks 'would it not be a good idea to prevent this species from establishing itself on the dunes at Dunster Beach?, Somerset'. Ed.]

Lancy Chilton, 17 Bernard Crescent, Huntstanton PE36 6ER; e-mail marengowalks@aol.com

SILENE COLORATA ILLUSTRATION

The superb illustration on page 49 was drawn by Delf Smith to accompany the notes on this species in *BSBI News* **91**: 51 & 52. Unfortunately, the drawing was delayed as a result of a car accident and arrived too late to be included in the last issue, so it is included here. The key to the drawing is as follows:

A — Habit of plant
B — Lower stem leaf
C — Calyx opened at anthesis (much enlarged in fruit)
D — Corolla opened (2 of the 10 stamens shown)
E — Corolla from above
F — Gynoecium with carpophore
G — Ripe capsule, showing persistent petal, filaments and the enlarged carpophore
H — Two views of seed

Delf also noted the following characters:

Stems, leaves and calyx covered with crisped hairs; calyx with 5 teeth and 10 purple veins; petal limb bifid to c.½ way; petal with 2 mm long coronal scales; 5 short stamens arise from base of petal claws; 5 long stamens arise from between base of petal claws; ovary with 3 stigmas / styles; carpophore enlarges in fruit; capsule with 6 teeth / valves; petals and filaments persistent.

General Editor

APOLOGY FOR *QUERCUS EUROCENTICA*

With reference to the note in *BSBI News* **90**: 38 (April 2002), it is well known that *Quercus robur* (Pendunculate Oak) and *Q. petraea* (Sessile Oak) are completely interfertile with their (fertile) hybrid showing any conceivable combination of fruit and leaf characters. From this point of view, *Quercus eurocentica* is neither particularly noteworthy nor indicative of poor botanical knowledge on the part of the German finance authorities. The position of the fruits on a leafless part of the twig (i.e. on previous year's growth), however, makes it clear that here indeed a completely new oak has been created not related to either of the above species and best placed in a subgenus other than subgenus *Quercus*.

In view of these facts, I thought that a joint campaign of botanists, foresters and biology teachers supported by publicity might have a chance of reversing the situation. An inquiry at the German Ministry of Finance (which was obviously already informed about the affair) yielded an answer stating something about 'freedom of art'. This was certainly an excuse to avoid admitting a mistake had been made, because no biologist had been on the jury that had decided about the design of the German €uro coins in 1997. To my disappointment most colleagues I asked regarded the whole thing as too unimportant to make any efforts. So the creation can be regarded as being approved subsequently by the German botanical community and will be a part of the European specie* flora for the foreseeable future.

I have not yet lost all hope that *Quercus eurocentica* will become extinct at some time in the future. If this were to happen then our current coins could turn valuable, so now might be the right time to realise any long-planned botanical holiday in Germany. It would be a pleasure for me to guide any interested BSBI member to our botanical treasures — other than weird oak species!

* specie here means 'money in the form of coins', not a plant taxon.

Dr Bernd Sonnberger, Am Wallersteig 13, D-87700 Memmingen, Germany.

Silene colorata del D.P.J. Smith © 2002

NOTICES (BSBI)

VICE-COMITAL CENSUS CATALOGUE — NOTE TO ALL V.C. RECORDERS

After 13 years' work this project has now been terminated, with expected publication in 2003. Several vice-county recorders have said that they would like one last look at the printout of their vice-county, and this note is to offer such a possibility. If you wish to make a final check please contact me immediately and I will send you the list. If possible please contact me by e-mail and you will then receive an e-mailed reply, the preferred route.

I must warn, however, that time is now very short and only replies received by me within **THREE WEEKS** of the appearance of this note will make it in time for incorporation into the final version. If you cannot make this tight schedule please do not ask for a printout now; it would help me considerably in such cases if you leave your request until the VCCC has been published later this year, when it might be even more up to date.

Finally, the fact that the VCCC project has finished does not, of course, mean that the Vice-County Census Database has closed. This remains open to further contributions, which are very welcome and I hope always will be, so that it can be kept up to date for the foreseeable future.

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BSBI FIELD TRIP TO THE PICOS IN JUNE 2004

It is hoped to arrange a BSBI field trip to the Picos in June 2004. This would be for 10 days, cost about £810 plus flights (cheap flights available to Bilbao from Easyjet/Go). Probably a 2-centre stay at local, family-run hotels. Participants must be fit for mountain walking. Numbers limited to 20 because only a small coach can negotiate the narrow roads. Leaders Teresa Farino and Lynne Farrell.

Anyone wishing to indicate their interest in the trip should contact me at the address below by mid-February 2003.

LYNNE FARRELL, Scottish Natural Heritage, Battleby, Redgorton, Perth PH1 3EW. Tel.: 01738-444177.
E-mail: lynne.farrell@snh.gov.uk

NOTICES (NON-BSBI)

RECORDER 3 USERS GROUP

Anyone using *Recorder* 3.x software to handle botanical records will be interested to learn that a new *Recorder* 3 Users Group has been launched this week.

Aware that formal software support is no longer available, the National Federation for Biological Recording (NFBR) decided to promote this new eGroup to assist users to stay in touch with one another and to share problems and find solutions. The NFBR cannot itself offer formal help or support, although many of its members are active R3 users and have already joined the group. Some of the information and help files made available via the Users Group will be mirrored on new pages on the NFBR's own website. This now includes a page on other popular software programmes, as well as a developing page on *Recorder* 3 itself.

Joining the *Recorder* 3 Users eGroup is easy. It is currently free and open to anyone using 'old' *Recorder*, and is not exclusive to NFBR members.

Go to: www.smartgroups.com/groups/RECORDER3 and follow the simple on-screen instructions. Alternatively send a blank email to: RECORDER3-subscribe@smartgroups.com

NICK MOYES, NFBR Website Manager (www.nfbr.org.uk) c/o. Derbyshire BRC, Derby Museum & Art Gallery, The Strand, Derby, DE1 1BS. Tel: 01332 716655

TARAXACUM (DANDELIONS) IN NORRBOTTEN 2003!

At the beginning of June, 2003, we will study the *Taraxacum* flora in Norrbotten, Sweden, which is rather poorly known. We have seen quite a number of BSBI members in Norrbotten during the last 5 years and we would like to invite anyone with an interest in this field.

It will be a 3 week long expedition of collections and field studies. Our leader will be Hans Ollgaard from Viborg in Denmark, the most well-known Taraxacologist we have in Northern Europe. We are expecting some 6 botanists from southern Sweden and 3 from Finland, so there will be plenty of space for any interested botanists.

We will be gathering on the 6th of June in Älvsbyn where we'll be staying during the first week. For the following two weeks we will go further north to Överkalix and Kangos.

You can came and stay for as many days as you like. Costs for living and daily excursions will be low. You're all very welcome! If interested please contact:

LENNART STENBERG, Fastlagsvägen 13, S-126 48 HÄGERSTEN SWEDEN. Tel.: 00468-645 34 56 or mobile 004670-866 18 89

REQUESTS

BROMEAE SPECIMENS WANTED AND DETERMINED

Specimens of brome-grasses (*Bromus*, *Bromopsis*, *Anisantha* and *Ceratochloa*) collected in the British Isles or abroad are needed for a research project. Fresh or dried specimens will be determined and returned with explanatory text. Postage and all other expenses will be refunded. Whole specimens are preferred but to facilitate dispatch these can be folded 2 or 3 times to about A4 size, and placed between newspaper sheets with a mention of the habitat where found.

LAURIE M. SPALTON, 6 Marine Parade, Budleigh Salterton, Devon, EX9 6NS, Tel: 01395 445813

BRASSICA RAPA

I am a Ph.D. student at Cambridge University, working with Professor John Parker, director of the Cambridge botanical gardens. My research project involves an investigation into the genetic relationships of *Brassica rapa* populations using genetic markers to identify their historical origins and evolutionary pathways. As part of the research I am trying to map and identify the distribution of *B. rapa* in the UK.

B. rapa has several common names, such as bargeman's cabbage, wild turnip or navew. It is locally abundant on roadside, railways, gardens, tips, arable fields, and waste ground, and particularly characteristic in England of rivers and canal banks.

The identification of *B. rapa* is often overlooked, for it is similar in appearance to *Brassica napus*, and can be mistaken for volunteer rape if growing on field margins.

The distinguishing features of *B. rapa* are the bright green leaves, much hairier than those belonging to *B. napus*. The upper stem leaves are also found to be deeply clasping, lanceolate to

oblong in shape. The petals of *B. rapa* are dark yellow in contrast to the pale yellow flowers of *B. napus*. Whilst in flower the open flowers of *B. rapa* are found to overtop the unopened buds, whereas the unopened buds of *B. napus* are found overtopping the flowers. Please refer to *Plant Crib* (1998) (eds) T.C.G Rich and A.C Jermy.

You can view photographs of *B. rapa* at www.niab.com in the 'Research at NIAB' section.

If you think you may have seen *B. rapa* on surveys, or in your local area I would be very pleased to hear about it. I am also in need of forming good networks with many botanists, who would not mind keeping an eye out for *B. rapa* in their area. I am hoping this will extend my distribution survey over a greater area of the UK and provide a comprehensive survey of *B. rapa* locations.

PIPPA BELL, NIAB, Huntingdon Rd, Cambridge, CB3 0LE e-mail: pippa.bell@niab.com

OFFERS

NEW ATLAS OVERLAYS

An A4 overlay, showing 10 km squares, letter codes for the 100 km squares and vice-county boundaries, is available from Summerfield Books for £1 including p&p. I am very grateful to Jeremy Roberts for producing this.

Many members will already know that the Atlas went out of print at the beginning of November, a direct result of the initial print-run being so drastically cut. The reprint will, I'm told, arrive here in late January, and our stocks will be held then by Summerfield Books, and will be available at £70 plus p&p.

DAVID PEARMAN, The Old Rectory, Frome St Quintin, Dorchester, Dorset DT2 0HF

BOOK NOTES

Those that will not be reviewed in *Watsonia* are marked with an asterisk (*). Unattributed comments in square brackets are mine.

The Flora of Ely. R.M. Payne. Pp. i + 29. Privately printed. 2002. Price £4.00. Available for £4.50, incl. p.& p. from Summerfield Books. No ISBN.

[Another little book from one of our urban flora exponents! This covers 'Old Ely', that which existed at the start of the 20th century, and in addition to a complete current checklist, contains much information on habitats, and contrasts those with previous work in King's Lynn and Cambridge. Thus walls, verges, lawns and gardens are all described in full, as well as more recherché habitats as street gratings, roofs and gutters, and tomb tops. A very interesting read, and notable to for the recondite references scattered in the text. I had no idea that Eva Crackles, from Hull, had commented on the decline of *Veronica filiformis* over a long period in urban Hull. I rather thought of it as a very pleasant but permanent fixture.]

The Rare Plants of Shetland. W. Scott, P. Harvey, R. Riddington & M. Fisher. Pp. 166. Shetland Amenity Trust. 2002. Price £21.75. Available from the Shetland Amenity Trust, Garthspool, Lerwick, Shetland ZE1 0NY for £19.00 incl. p.& p. ISBN 0-9543246-0-9.

Oaks, dragonflies and people. N.W. Moore. Pp. 132. Harley Books. 2002. Pbk price £15.95. ISBN 0-946589-71-2.

**Milton Keynes, more than Concrete Cows*. Milton Keynes Natural History Society. 2000. Published by the Society. Price unknown. No ISBN.

[When I summarised Stratford upon Avon in the last issue, I did not realise that this little booklet existed. Like the other, it covers all the natural history orders, and is particularly interesting

because Milton Keynes is a 'new town', constructed since 1968, though the cores of the 'submerged' villages are retained.]

The History and Natural History of Lugg Meadow. A. Brian & P. Thomson. Pp. viii + 56. A. Brian & Logaston Press. 2002. Price £4.95. ISBN 1 873827 38 5.

[Lugg Meadow is a rare survivor, an unenclosed Lammas meadow of 300 acres just below Hereford. Lammas meadows are grazed from 1st August (Lammas) through to 2nd February (Candlemas), and then shut up to grow a hay crop. Its management has remained unchanged for centuries, and, as a result, still has its full suite of wild flowers, notably *Oenanthe silaifolia* (Narrow-leaved Water-dropwort), *Sanguisorba officinalis* (Great Burnet) and many others including *Fritillaria meleagris* (Fritillary).

Chapters on management, ownership, hay making and origins of the landscape complement the section on Natural History. The whole makes an extremely happy little history of this well-known habitat, part of which is a nature reserve.]

Plants of Sark. A checklist of Uncultivated Vascular Plants. R. Veall. Pp. 26, A4 (stapled). 2001. Obtainable from Dr R. Veall, 1 Plant's Close, East Wellow, Romsey, Hants. SO51 6AW @ £4.20 incl. p.& p. No ISBN.

[A new checklist of the island, giving some details of earlier records. All plants outside of gardens and churchyards are included, whether planted or otherwise. Records from the islands of Breqhou and L'Etac are included though no visit to the former has been allowed since 1988.]

**The Flora of Wellow. An Annotated List of Vascular Plants recorded in the Parish of Wellow*. R. Veall. Pp. 48. 2002. ISBN 1-903989-06-X. Obtainable from Wellow History Society, Hollybank Farm, Canada Common, West Willow, Romsey, Hants. SO51 6AW @ £5 + p&p.

[A very interesting Flora with good maps, of this parish lying on acid soils between Salisbury and Southampton. All species are covered with localities if rare, and with notes on frequency.]

Plantlife of Edinburgh and the Lothians. Smith, P.M., Dixon, R.O.D. & Cochrane, M.P. (eds). Pp xii + 545. Edinburgh University Press. 2002. Price £25. ISBN 0 7486 1336 6.

[This book will, of course, be reviewed in *Watsonia*. I must, however, place on record my dismay over the maps, which, I admit, is a personal *bête noire*. Not only is there only an extremely rudimentary topographical map, but the 400 or so tetrad distribution maps have no grid numbering of any sort. Unless one is armed with an Ordnance Survey map, or find the small maps hidden in the Bryophyte section and at the end of the Gazetteer, there is no way of deciphering these. Extraordinary!]

**Suffolk Natural History*. The Transactions of the Suffolk Naturalists' Society, Volume 38. 2000.

[This issue contains, in addition to papers of a Suffolk interest, 6 papers from the very well attended 2001 conference 'Future Flora'. These papers are:

Peter Marren — 'Where have all the wildflowers gone?

Kevin Walker (CEH) — 'The Ecology of a changing flora'

Clive Stace — 'Knowing what we have: the ever-changing inventory'

Chris Preston — 'Approaches to native and alien species'

Martin Harper (Plantlife) — 'Pilot of the Common Plants Survey'

Simon Smart *et al.* (CEH) — 'Vegetation change from 1978 to 1998 – the Countryside Survey'

Altogether an extremely interesting and often provocative group of papers. The whole journal is available for £5 + £1 p&p from Suffolk Naturalists' Society, c/o Ipswich Museum, High Street, Ipswich, Suffolk IP1 3QH.

I am pleased to say that Chris Preston, at Monks Wood, has taken back Book Reviews for *Watsonia*. I will continue with these notes, as long as it is possible to separate the two!

David Pearman, The Old Rectory, Frome St Quintin, Dorchester, Dorset DT2 0HF

OBITUARY NOTES

With regret we report the deaths of three members who had supported the Society through half a century, being members for 50 or more years. *Prof. Alan Burges, a member since 1952 was on the Editorial Committee of *Flora Europaea*, Sir David H. Burnett, also a member since 1952 and *Mrs Margaret Cannon who joined the Society in 1951. Margaret worked in the Dept of Botany, Natural History Museum, London for many years, and was a member of the BSBI Meetings Committee, giving her practical help to the smooth running of many of our meetings — especially at the Annual Exhibition Meetings which were then held in the Dept of Botany.

Members since 1974 were Mrs Joan Stafford, a keen botanist in the Somerset area, and Mr D.M. Turner-Ettlinger, author and specialist in European Orchids. *Mrs Enid Hyde, who was a member since 1975, was a leading botanist in Suffolk and East Anglia. And as we go to press we have sadly heard that *Mrs Joyce Smith has died. Joyce, a member since 1955, was for very many years BSBI Vice-county Recorder for Surrey and Secretary of the Surrey Flora Committee.

There will be an Obituary in one of the next parts of *Watsonia* for those marked *; BSBI was represented at the funerals, and we extend our sympathy to all the families.

MARY BRIGGS, Hon. Obituaries Editor, 9 Arun Prospect, Pulborough, West Sussex RH20 1AL

REPORTS OF FIELD MEETINGS — 2002

Reports of Field Meetings (with the exception of Reports of Irish Meetings written by Alan Hill) are edited by, and should be sent to: Dr Alan Showler, 12 Wedgwood Drive, Hughenden Valley, High Wycombe, Bucks, HP14 4PA, Tel.: 01494 562082. Potential authors of future reports should note that, in future, reports should not be much longer than 500 words (half a page of *News*) for a one day meeting and 1000 words (1 page of *News*) for a weekend.

OTMOOR RIFLE RANGE, OXFORDSHIRE (v.c. 23) 30th May

Eighteen people attended this meeting, with the morning session very satisfactorily arranged by courtesy of the Ministry of Defence. The Range Warden, Harvey Swift, introduced us to the site. The most significant species here is *Viola persicifolia* (Fen Violet), formerly known as *V. stagnina*. The Fen Violet has always been rare and is otherwise known in the UK from only East Anglia at Wicken Fen and Woodwalton Fen. It was seen at Otmoor once in the 19th century and found in the 1960s by Richard Bates about 1.5 km from the present site, where it was discovered in 1997. This followed the removal of *Salix caprea* (Goat Willow) in 1995/6 and harrowing, during a search instigated by the English Nature Species Recovery Programme. About 170 plants were found this year, which was up on the last 3 years but not as many as in 1998. It is hoped to introduce it at the adjacent RSPB site where it can be seen more readily.

A number of other interesting species were seen in this field, including *Carex filiformis* (Downy-fruited Sedge), *C. pulicaris* (Flea Sedge) and *Genista tinctoria* (Dyer's Greenweed). The field is cut for hay and the aftermath grazed; it is NVC type M 24 (*Molinia caerulea-Cirsium dissectum*).

The second half of the visit was spent doing 1 m quadrats as part of a monitoring programme to record the effect of applying farmyard manure to part of the field. BSBI members seemed to enjoy this task and it was most useful for the Rare Plants Group of the Ashmolean Natural History Society who are contracted to do this recording.

In the afternoon we travelled to Bernwood Meadows Nature Reserve, which is owned by the Berks., Bucks. & Oxon. Wildlife Trust, where we parked at the Bernwood Forest car park. We were

pleased to see *Sorbus torminalis* (Wild Service-tree) in good numbers and *Carex pallescens* (Pale Sedge). The meadow itself had a fine showing of *Orchis morio* (Green-winged Orchid). It was pointed out by one of the members that the ridges and furrows were probably dug as drainage channels rather than having been created by ploughing.

CAMILLA LAMBRICK

ULVERSCROFT N.R., LEICESTERSHIRE (v.c. 55) 9th June

The party of 13 that assembled for this meeting was notable in two respects. Firstly, we had representatives from Italy, Denmark and Spain as well as the UK; and secondly the average age was unusually low for a BSBI event, with no-one above retirement age! Perhaps field botany does have a future after all.

Ulverscroft NR is managed by the Leicestershire and Rutland Wildlife Trust, and is part of the Ulverscroft Valley SSSI. The reserve has a range of habitats characteristic of Charnwood Forest, a corner of Leicestershire where the Precambrian outcrops and acid soils impart an upland feel to the landscape.

We started in Fox Covert, a plantation less than a century old. We found a good range of ferns in the roadside ditch, including *Blechnum spicant* (Hard-fern) and *Oreopteris limbosperma* (Lemon-scented Fern). Among the short vegetation at the edge of the road were *Veronica serpyllifolia* (Thyme-leaved Speedwell), *Stellaria uliginosa* (Bog Stitchwort) and an odd plant of *Polemonium caeruleum* (Jacob's-ladder) which was accidentally introduced with hard-core a few years ago. The road leads into Poultney Wood, which has an earlier (possibly ancient) origin and was restored to native broadleaves about ten years ago. Along the roadside here we found a number of sedges including some uncommon ones for the county: *Carex ovalis* (Oval sedge), *C. binervis* (Green-ribbed Sedge), *C. pallescens* (Pale Sedge), *C. pilulifera* (Pill Sedge), an enormous tuft of *C. remota* (Remote Sedge) and a few plants of *C. laevigata* (Smooth-stalked Sedge). The latter has been spreading around the reserve, popping up in new places and declining in others.

We left the woodland on a public footpath to reach the marshes and meadows in the bottom of the Ulverscroft Valley. The stream is fringed with alder carr and ungrazed wet grassland in which we found *Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage) and *Valeriana officinalis* (Common Valerian). We made a non-botanical diversion to inspect a curious old stone construction in the stream channel, possibly a fish-trap, but on the way we noticed *Serratula tinctoria* (Saw-wort).

After consuming packed lunches, we explored Herbert's Meadows — two parcels of neutral grassland, with wet flushes around the outside and dry, heathy grassland in the middle. Dry, that is, when it's not raining! Our finds included *Scirpus sylvaticus* (Wood Club-rush), *Dactylorhiza maculata* (Heath Spotted-orchid), *Valeriana dioica* (Marsh Valerian), *Carex hostiana* (Tawny Sedge) and *Helictotrichon pubescens* (Downy Oat-grass). The international contingent, evidently being unprepared for British weather, retreated to the bushes and were never seen again. The stalwarts moved on to some acid grassland, where *Danthonia decumbens* (Heath-grass) and *Carex viridula* subsp. *oedocarpa* (Yellow-sedge) were added to the list. Finally, we climbed up over the heathland to the Precambrian outcrops, among *Vaccinium myrtillus* (Bilberry) and *Calluna vulgaris* (Heather), back to our starting point.

No startling discoveries then, but we all learned something from each other and had an enjoyable day's botanising. I am grateful to Paul Hughes for keeping a record of what we found.

STEPHEN WOODWARD

BLACKSTAIRS MOUNTAINS & COOLAPHUCA WOOD, CO. CARLOW (v.c. H13) 29th & 30th June

Writing in *The Flora of County Carlow* in 1979, Evelyn Booth — then the vice-county recorder — gave Deer Park, Bunclody as a location for *Hammarbya paludosa* (Bog Orchid). Uncertain as to the exact location, it was a stroke of luck to find that the farmer remembered Miss Booth exploring an area of bog close-by. And so a party of four set out to re-find the orchid. The bog comprises two open

areas surrounded by dense gorse and bramble. Clear water, containing *Montia fontana* (Blinks) and *Potomogeton polygonifolius* (Bog Pondweed), flows down through tussocks of *Molinia caerulea* (Purple Moor-grass), *Calluna vulgaris* (Heather) and *Erica tetralix*, (Cross-leaved Heath) interspersed with *Myrica gale* (Bog-myrtle). In the wetter, more broken ground, *Hypericum elodes* (Marsh St John's-wort) is abundant, with *Anagallis tenella* (Bog Pimpernel) and *Hydrocotyle vulgaris* (Marsh Pennywort) together with occasional plants of the tiny *Pinguicula lusitanica* (Pale Butterwort) and *Drosera rotundifolia* (Round-leaved Sundew). Various sedges occur including *Carex pulicaris* (Flea Sedge), *C. echinata*, (Star Sedge), *C. panicea* (Carnation Sedge) and two clumps of *C. paniculata* (Greater Tussock-sedge). Two species of spike-rush *Eleocharis multicaulis* (Many-stalked Spike-rush) and *E. quinqueflora* (Few-flowered Spike-rush) were recorded and *Eriophorum angustifolium* (Common Cottongrass). Other plants in flower included *Ajuga reptans* (Bugle), *Cardamine pratensis* (Cuckooflower), *Narthecium ossifragum* (Bog Asphodel), *Pedicularis sylvatica* (Lousewort), *Veronica scutellata* (Marsh Speedwell) and the leaves of *Viola palustris* (Marsh Violet). The only orchid in evidence was *Dactylorhiza maculata* (Heath Spotted-orchid), but the habitat still looks good for *Hammarbya paludosa* (Bog Orchid) — and we were a little on the early side.

The afternoon saw us looking for another of Evelyn Booth's rarities — *Ornithopus perpusillus* (Bird's-foot) on Knockroe. We approached from the south following a steep lane between boulder-walls from the crevices of which grow creamy spikes of *Umbilicus rupestris* (Navelwort), giant pink spikes of *Digitalis purpurea* (Foxglove) and the ferns *Asplenium trichomanes* (Maidenhair Spleenwort) and *A. adiantum-nigrum* (Black Spleenwort). The boulders are topped in places by a thin turf from which grows *Aira praecox* (Early Hair-grass) and *Rumex acetosella* (Sheep's Sorrel). The lane leads onto Knockroe, a steep hill covered with *Calluna vulgaris* (Heather) and *Ulex europaeus* (Gorse), which has been burnt, and from the bare exposed peat, tiny red leaves of *Vaccinium myrtillus* (Bilberry) grow and fronds of *Pteridium aquilinum* (Bracken) were unfurling. Amidst islands of unburnt *Calluna vulgaris* (Heather) grew *Melampyrum pratense* (Common Cow-wheat), interestingly never recorded from anywhere in Carlow by Booth. But of *Ornithopus perpusillus* (Bird's-foot) — not a trace: on Knockroe itself, we saw no suitable habitat, but the dry wall-tops on the lane resemble its Anglesey habitat.

The next day, joined by two more members, we set forth to explore the Coolaphuca mixed woodlands upstream from the town, from which Booth recorded *Pyrola minor* (Common Wintergreen) and *Festuca altissima* (Wood Fescue). These woodlands contain some enormous trees of *Quercus* spp. (Oak) and *Fagus sylvatica* (Beech). Where the track leaves one area of woodland and goes along the edge of an arable field, before entering the next section of woodland, we found *Carex divulsa* (Grey Sedge) in abundance. In the second section of woodland, amidst a ground flora of *Vaccinium myrtillus* (Bilberry), *Festuca altissima* (Wood Fescue) was in flower. The track leads past rock outcrops and steep bluffs and here various ferns abound including *Dryopteris aemula* (Hay-scented Buckler-fern), *D. affinis* (Scaly Male-fern) and *Polystichum setiferum* (Soft Shield-fern). Another nice find was the hybrid *Geum* × *intermedium* (Water Avens × Wood Avens). But of the *Pyrola minor* (Common Wintergreen) — not a sign.

But following in the footsteps of Evelyn Booth provided an interesting weekend. And failing to refind species she recorded is just as important an outcome as the excitement of refinding one of her records and establishing that link across the decades.

SHARON PARR & STEPHEN WARD

SHAWS LOCHS, ETTRICK, SELKIRKSHIRE (v.c. 79) 30th June

The BSBI had previously visited the lochs in July 1972 when commercial forestry had not started and the surrounding slopes were bare of trees and it was on this occasion that a new site for the Red Data Book species *Calamagrostis stricta* (Narrow Small-reed) was discovered by the Upper Loch. A post-forestry visit in 1988 failed to refind *Isoetes lacustris* (Quillwort) in the Under Loch and it was thought to be extinct as silt was being carried into the loch from forestry ditching. *Calamagrostis stricta* by

the Upper Loch was still extant. The object of this visit was to observe the changes which had taken place as a result of the forestry.

The party of seven drove up from Hyndhope in Ettrick along the 5.6 km of forestry track to the lochs which lie at 280 m altitude. In spite of the almost constant rain and midges the party were able to make some useful finds and observations. The larger Under Loch was visited first and the grapnel put to use. The first haul produced *Callitriche hermaphroditica* (Autumnal Water-starwort), *Potamogeton filiformis* (Slender-leaved Pondweed) and *Utricularia vulgaris* s.l. (Greater Bladderwort) all new to the loch and other species seen were *Potamogeton* × *zizii* (a hybrid pondweed), *P. gramineus* (Various-leaved Pondweed) and *Nuphar lutea* (Yellow Water-lily) which was found to occur in all three lochs. In the fen along the west side, *Carex lasiocarpa* (Slender Sedge) and *C. diandra* (Lesser Tussock-sedge) were common but *Trollius europaeus* (Globeflower) was rare. In a basic flush on the north side, *Eriophorum latifolium* (Broad-leaved Cottongrass) was refound with *Dactylorhiza incarnata* subsp. *incarnata* (Early Marsh-orchid) and *Carex* × *fulva* (a hybrid sedge) with both parents was new. *Dactylorhiza purpurella* (Northern Marsh-orchid) was conspicuous around the loch but attempts to refind the *Isoetes* were unsuccessful. A fine colony of *Galium boreale* (Northern Bedstraw) was admired on the bank of the burn flowing into the loch.

The Upper Loch although smaller had a larger fringe of fen mainly of *Carex rostrata* (Bottle Sedge). The aquatic flora had *Schoenoplectus lacustris* (Common Club-rush), *Sparganium minimum* (Least Bur-reed) and more *Utricularia vulgaris* and in the surrounding fen *Salix pentandra* (Bay Willow) and *S. phylicifolia* (Tea-leaved Willow) occurred. *Calamagrostis stricta* inflorescences were scattered on the west side over a considerable area with *Carex lasiocarpa* (Slender Sedge) and of especial interest was the presence of a stand of the large unnamed probable hybrid *Calamagrostis* similar to that found at Alemoor and Clearburn Lochs to the south which has yet to be named. *Carex acutiformis* (Lesser Pond-sedge) was locally abundant and *C. acuta* (Slender Tufted-sedge) was also present at the upper limit of its altitudinal range in the British Isles.

A short exploration of the small Pot Loch to the west of the Upper Loch rounded off the day when *Carex limosa* (Bog-sedge) was refound at its second vice-county site in the marginal *Sphagnum* bog. *Salix repens* (Creeping Willow) previously recorded was not refound. Of interest was the rare moss *Pseudobryum cinclidioides*. It had been a successful meeting and the initial pessimism that the forestry had seriously affected the botanical interest of the lochs was dispelled. The large population of *Calamagrostis stricta* is not under any threat at present. Further observations are needed to monitor changes over the years.

I would like to thank Martin Craig of Tilhill Forestry for permission to visit the lochs and use forest tracks and to Ronnie Rose of the Eskdale Wood and Wildlife Management Team for his help in arranging the day. I also wish to thank Jane Croft for her help in obtaining the grapnel.

R.W.M. Corner

Malham Tarn Field Centre, Settle (v.c. 64) 5th–7th July

Lady's-mantle (*Alchemilla*) identification weekend.

Eight people joined me at the Field Centre on the Friday evening. After dinner we reassembled in Whernside, for an illustrated introductory talk and practice on identifying two common species, *A. xanthochlora* (Intermediate Lady's-mantle) and *A. glabra* (Smooth Lady's-mantle) using a number of keys brought by MEB. Next morning the practice was extended to a wider range of species from MEB's garden, followed by a visit to Miss Hilary's Cottage area for an *in situ* study of the common species and *A. wichurae* and then to the lawn and grassland below the house which provided plants of different sizes and the aggressive alien *A. mollis*. The wet summer had produced lush growth in all the meadow species so that even their characters could be somewhat atypical, and so increasing the difficulties of the identification of this critical group. By the Paul Holmes' Memorial Seat, Douglas Bremner (a former Warden) spoke of Paul and the early days of the Centre and pointed out the plaque to the geologist, Prof. McKenny Hughes on the other side of the path. After lunch on the terrace we took the Centre minibus to a wonderfully floriferous lane-side near Pen-y-ghent where, in addition to

the common species of Lady's-mantle, were the densely hairy plants of *A. glaucescens* and a very small quantity of *A. wichurae*, where I first saw it fifty years ago. The local farmer told us of conservation projects on his farm.

An introduction to the dwarf members of *A. filicaulis* s.l. (Hairy Lady's-mantle) was given on Saturday evening, in preparation for a morning on the lower slopes of Ingleborough. Much time spent on hands and knees revealed small plants of *A. glaucescens*, *A. wichurae* and *A. filicaulis* s.l. I found it difficult to be certain that any were var. *minima* as defined in my paper of 1964 (*Watsonia* **6(1)**: 76–81), though I am more confident that plants collected earlier as var. *minima* and var. *filicaulis/vestita* now in cultivation are correct and that both taxa are at the site. Please do not collect whole plants for identification. A visit to the NNR at Colt Park produced more *A. glaucescens* and good *A. filicaulis* var. *vestita*. A final treat was a successful crawl over a pasture, a herb-rich meadow 15 years ago, to find small plants of *A. wichurae* and *A. glomerulans* and other meadow species. This was a herb-rich meadow in the 1960s, but has been grazed for the last 15 years and is clearly a good candidate for restoration as a meadow.

MARGARET E. BRADSHAW

CULBIN FOREST AND THE BURGHEAD AREA, MORAY (v.c. 95) 6th & 7th July

Thirty-two members met on a sunny day to explore the rich flora of Culbin Forest and the adjoining saltmarsh. A large population of *Pyrola minor* (Common Wintergreen) was seen flowering nicely by the parking area. A pond produced *Potamogeton gramineus* (Various-leaved Pondweed) and nearby in bare muddy areas *Lycopodiella inundata* (Marsh Clubmoss) and *Radiola linoides* (Allseed) were seen. Elsewhere in the forest *Listera cordata* (Lesser Twayblade), *Orthilia secunda* (Serrated Wintergreen), *Gnaphalium sylvaticum* (Heath Cudweed) and *Goodyera repens* (Creeping Lady's-tresses) were among the many species found. Lunch was taken sitting on the dunes looking out across the sea. From here, we explored the dried out Buckie Loch seeing an abundance of *Ophioglossum vulgatum* (Adder's-tongue) in its only site in v.c. 95. Next, the party had to see if they could relocate *Linnaea borealis* (Twinflower) in an area of scrub and trees that I hadn't been able to find since 1997, eventually being found by Lynne Farrell. From here, we went on the hunt for *Moneses uniflora* (One-flowered Wintergreen), which was found to be locally common in this part of Culbin Forest. The saltmarsh gave many interesting plants including *Centaurium littorale* (Seaside Centaury) and *Sagina nodosa* (Knotted Pearlwort). The last plant of interest seen that day was *Corynephorus canescens* (Grey Hair-grass). This was only found for the first time in the Forest in 2001, here it seems to be spreading well.

The second day, the morning was spent exploring around the village of Burghead. The Waste ground gave a good variety of plants from *Artemisia verlotiorum* (Chinese Mugwort), *Ornithopus perpusillus* (Bird's-foot) to *Dianthus deltoides* (Maiden Pink). In coastal grassland, *Viola canina* (Heath Dog-violet) and *V. riviniana* (Common Dog-violet) were found and a large vigorous specimen of the hybrid between the two (*V.* × *intersita*). Nearby on shingle a good number of *Mertensia maritima* (Oysterplant) were found and counted. The village playing field produced the plant that was looked at most closely on the day *Trifolium micranthum* (Slender Trefoil), growing with *T. dubium* (Lesser Trefoil) so one could compare the differences.

After lunch the party moved onto Roseisle Forest. Here we explored a large clearing that is the last remaining area of sand dunes amongst the pine trees of this large forest. On the old ruins of Millie Bothy *Valerianella locusta* (Common Cornsalad) were seen, this is at present the only known site for this in v.c. 95. In the nearby Millie Burn there was plenty of *Potamogeton filiformis* (Slender-leaved Pondweed). *Gentianella amarella* subsp. *septentrionalis* (Autumn Gentian) plants were counted, as this is the only site in v.c. 95. Many specimens of *Astragalus danicus* (Purple Milk-vetch) were seen as well as a few specimens of *Botrychium lunaria* (Moonwort).

IAN P. GREEN

CROM & SOUTH WEST CO. FERMANAGH (v.c. H33) 6th & 7th July

Twenty members and friends assembled at Crom to explore the lake shore vegetation of the Upper Lough Erne basin. The ruins of the Old Crom Castle were first visited and *Petroselinum crispum* (Garden Parsley), first found there by Barrington in 1884 was plentiful on the walls. However, recent tidying up of the site had greatly reduced the quantity of *Orobanche hederae* (Ivy Broomrape), though a few spikes were found growing on Ivy on the outside wall. This is one of only two sites for the species in N. Ireland. *Allium scorodoprasum* (Sand Leek) was seen between the castle and the lake. These three species may all be relics of cultivation. Due to the late season, *Carex otrubae* (False Fox-sedge) was about the only plant of interest along the shoreline though *Adiantum capillus-veneris* (Maidenhair Fern) growing abundantly on the walls of the boat house attracted attention. From the bridge over to Inisherk, good views were had of *Sium latifolium* (Greater Water-parsnip), *Cicuta virosa* (Cowbane) and *Butomus umbellatus* (Flowering-rush).

After lunch, the party visited the west shore of Derrymacrow lake where the highlights, apart from various damselflies, a Grasshopper Warbler and a Fallow Deer, were *Carex elongata* (Elongated Sedge), *Carex pseudocyperus* (Cyperus Sedge), *Berula erecta* (Lesser Water-parsnip), *Lathyrus palustris* (Marsh Pea) and *Oenanthe aquatica* (Fine-leaved Water-dropwort). A fen next to Lough Corby was the last site of the day and the most notable species were *Stellaria palustris* (Marsh Stitchwort) and *Thalictrum flavum* (Common Meadow-rue).

On the Sunday morning 14 members met in Derrygonnelly before proceeding to the Correl Glen where we marvelled at the luxuriant *Dryopteris aemula* (Hay-scented Buckler-fern) and saw *Equisetum hyemale* (Rough Horsetail) and *Hymenophyllum tunbridgense* (Tunbridge Filmy-fern). Before ascending one of the scarps in Lough Navar Forest, *Vicia sylvatica* (Wood Vetch) was noted by the roadside. The scarp itself yielded many plants of *Listera cordata* (Lesser Twayblade), with only a few in flower, as well as *Hymenophyllum wilsonii* (Wilson's Filmy-fern), *Empetrum nigrum* (Crowberry), *Huperzia selago* (Fir Clubmoss), *Selaginella selaginoides* (Lesser Clubmoss) and, the speciality of this area, *Orthilia secunda* (Serrated Wintergreen) with many flowering spikes.

The party then proceeded, under gathering clouds, to another scarp to see one of the most inland sites in Ireland for *Asplenium marinum* (Sea Spleenwort) which was flourishing on a sandstone cliff under a large overhang. About 50 flowering plants of *Listera cordata* (Lesser Twayblade) were found in damp *Sphagnum* under the shade of conifers.

Rain was by this time descending, so it was decided to visit a nearby quarry where conditions under foot would be solid and not too marshy. In twenty minutes over 100 species were recorded including *Eleocharis quinqueflora* (Few-flowered Spike-rush). Twenty robust plants of *Sisyrinchium bermudiana* (Blue-eyed-grass) growing on the floor of the quarry started an indeterminate discussion on the status of the species in Ireland.

ROBERT NORTHRIDGE & RALPH FORBES

CORS CARON, CARDIGANSHIRE (v.c. 46) 13th July

Twenty five members and friends met at the site of the former railway station at Ystrad Meurig at the north end of the Cors Caron NNR, by kind permission of the CCW Warden. After a reading from J.S. Henslow's rules for conduct on field meetings, drawn up by him for the parishioners of Hitcham in 1850 (see S.M. Walters & E.A. Stow, 2001. *Darwin's mentor*. Cambridge), we moved off down the disused railway, looking in particular at the sedges. *Carex nigra* (Common Sedge), including some plants forming substantial tussocks 40 cm tall, *C. aquatilis* (Water Sedge), *C. vesicaria* (Bladder Sedge) and *C. rostrata* (Bottle Sedge) were abundant in the ditches and we puzzled over a hybrid colony that had in previous years been confirmed by several experts as *C. acuta* × *C. aquatilis*. This year it was difficult to detect any influence of *C. aquatilis* and what few inflorescences there were looked more likely to be *C. acuta* × *C. nigra*; *C. acuta* (Slender Tufted-sedge) was not seen, but does occur in the area. We found *C. spicata* (Spiked Sedge) in quantity in its only extant Cardiganshire site, with *C. muricata* subsp. *lamprocarpa* (Small-fruited Prickly-sedge) close by for comparison.

After lunch by the Observation Tower we struck off along a boardwalk to investigate some of the oxbow lagoons beside the Teifi where *Persicaria minor* (Small Water-pepper) and *Elatine hexandra* (Six-stamened Waterwort) were the chief interest. Continuing downstream, we crossed the river opposite Maesllyn farm and struggled through dense *Molinia caerulea* (Purple Moor-grass) tussocks at the edge of the West Bog to see a large colony of *Vaccinium* × *intermedium*. Both parents, *V. vitis-idaea* (Cowberry) and *V. myrtillus* (Bilberry), grow with it. Unfortunately the hybrid was scarcely flowering this year and only a single small fruit was found. The *V. vitis-idaea* here has prominent appendages on its anthers, suggesting that some introgression may have taken place.

ARTHUR CHATER

BSBI CHESHIRE *RUBUS* MEETING (v.c. 58) 26th–28th July

Our meeting began on the Friday evening in the Etherow Valley, nr Marple. Noteworthy species seen included *Rubus distractiformis*, *R. warrenii*, *R. wirralensis* and the very localised endemic *R. porphyrocaulis*. A few plants of 'Cheshire glandular accrescens' were seen on the south bank of the River Etherow just within v.c. 57.

On the Saturday the meeting commenced at Hough End sandstone quarry, Alderley Edge where we were able to compare the characters of *Rubus accrescens* and 'Cheshire glandular accrescens'. In woods to the west of 'The Wizard' restaurant *R. bartonii*, *R. intensior* and *R. newbouldii* were seen, before moving on to nearby Slade Lane for 'the Alderley Edge bramble'.

Lunch was taken at Matthew's Garden Centre, Monks Heath where we were able to see plants of the 'Manchester bramble' and *Rubus nemorosus*. After lunch *R. hindii* was confirmed by Alec Bull at Siddington on route to the lane leading to the River Dane at Swettenham. This lane supports *R. robiae*, *R. adspersus* and five members of section corylifolii — *R. eboracensis*, *R. hindii*, *R. intensior*, *R. rubriflorus* and *R. tuberculatus*. A brief stop was made at Swettenham Heath to see *R. infestus*. Venturing into Staffordshire *R. painteri* was seen to the W of Rushton before our final stop at Buckley Farm, Bradnop near Leek for the rare bramble *R. obesifolius*.

On the Sunday the party gathered at Hatchmere, where Alan Newton showed us plants of *R. arrheniiformis* at the only known Cheshire locality. A form of *R. accrescens* was also examined here together with plants of *R. gratus* and *R. incurvatus*. Onward then to Edisbury Hill for *R. calvatus* and *R. subtercanens*.

Lunch was taken at Picton near Chester, where a woodland edge supports robust naturalised plants of *R. winteri* together with indigenous *R. adenanthoides*. The bridle-track to the north is of considerable interest being the only known site in Cheshire for *R. griffithianus*. A brief stop was made at a nearby lane for 'the Lancashire bramble' at a new southern limit before moving onto the Peckforton Hills district. We soon found *R. castrensis* and *R. adenanthoides* at Droppingstone Lane together with *R. chrysoxylon* and *R. hylocharis*.

Our final venue was the lane by Edge Hall quarry. Here a member of the *R. halsteadensis* complex and *R. rubristylus* flourish in the hedgerows. The very rare endemic *R. wolley-dodii* was found after some very painful searching, being sadly near to extinction at this the type locality. It is perhaps fitting to conclude this report with the drastic decline of the population of *R. wolley-dodii* since the days when E.S. Edees and A. Newton explored Edge Hall in order to highlight the quintessential need to constantly monitor the species and communities that make up our British Flora.

DAVE EARL

GRAGEEN BOG, SLIEBE FELIM MOUNTAINS, CO. LIMERICK (v.c. H08) 27th July

Eleven members and friends met in Murroe in east Limerick with the aim of visiting a small flush at about 330 m in the Slieve Felim Mountains. The Grageen Bog flush was first found in 1996 when there was a proposal for a large landfill site in the area. It was obvious at that time that there was an interesting and more diverse flora in the flush than in the surrounding blanket bog which merited further study. Since then, the threat to the site has been averted.

On 27th July, the most conspicuous plants in the flush, which was very wet in places, were *Carex paniculata* (Greater Tussock-sedge) and *Phragmites australis* (Common Reed). The upwelling water has been shown to be relatively rich in calcium, magnesium and iron. Other characteristic plants found there included *Lychnis flos-cuculi* (Ragged-Robin), *Vaccinium oxycoccos* (Cranberry), *Potentilla palustris* (Marsh Cinquefoil), *Menyanthes trifoliata* (Bogbean), *Pedicularis palustris* (Marsh Lousewort), *Galium uliginosum* (Fen Bedstraw), *Cirsium dissectum* (Meadow Thistle), *Crepis paludosa* (Marsh Hawk's-beard), *Triglochin palustre* (Marsh Arrowgrass), *Coeloglossum viride* (Frog Orchid) and a variety of sedges. In addition to the more common *Carex panicea* (Carnation Sedge), *C. viridula* subsp. *brachyrrhyncha* (Yellow-sedge), *C. nigra* (Common Sedge) and *C. rostrata* (Bottle Sedge), the group saw scattered plants of *C. hostiana* (Tawny Sedge) and *C. lasiocarpa* (Slender Sedge). Growing around the edges of small pools were *C. limosa* (Bog-sedge) and *C. dioica* (Dioecious Sedge).

Altogether some 45 species were found in the wet flush, and a further 30 species on the adjacent bog and exposed peat of the firebreak. We had hoped to sort out the *Dactylorhiza* species, but only a few plants were still flowering. *D. maculata* (Heath Spotted-orchid), *D. incarnata* (Early Marsh-orchid) and possibly *D. traunsteineri* (Narrow-leaved Marsh-orchid) and *D. majalis/purpurella* were noted.

Having spent several hours at Grageen Bog, we then went to Glenstal Abbey in the afternoon where we were unexpectedly invited to tea by Brother Anthony before visiting the wooded glen. Rare ferns grow in the glen, including *Hymenophyllum tunbrigense* (Tunbridge Filmy-fern) and *Asplenium trichomanes* subsp. *trichomanes* (Maidenhair Spleenwort).

Apart from the enjoyable botanizing, a satisfying aspect of this field meeting was the contact made between those participants from Cos Limerick, Cork and Offaly who had not previously met each other. Finally, we would like to thank Brother Anthony for his hospitality at Glenstal.

SYLVIA REYNOLDS & MICHAEL QUIRKE

SALISBURY PLAIN, WILTSHIRE (v.c. 7 & 8) 3rd & 4th August

Salisbury Plain is one of the most important sites in NW Europe for a range of calcareous habitats and species, many of which are now threatened elsewhere in lowland Britain. This protection has largely come about as a result of military training which for over a century has protected much of the area from agricultural improvement, as well as creating a range of unique disturbance habitats. Inevitably, training has led to public access being restricted over much of the area. The purpose of this meeting was to visit some of the more inaccessible areas and see a selection of the habitats and species for which the Plain is rightly famous.

Twelve members assembled near Everleigh on an auspiciously bright Saturday morning. From here we set out on a circular walk across colourful open grasslands, investigating the track edges as we went. This provided us with our first Salisbury Plain speciality, *Erucastrum gallicum* (Hairy Rocket), a now ubiquitous weed of track edges, which, as the story goes, arrived on the tracks of a German tank in the 1950s. Close by were a number of other interesting ruderals including *Lotus glaber* (Slender Bird's-foot Trefoil), *Catapodium rigidum* (Fern-grass), *Diplotaxis muralis* (Tall Rocket) and *Clinopodium acinos* (Basil Thyme). In the rank *Bromopsis erecta* (Upright Brome) grasslands lots of *Hippocrepis comosa* (Horseshoe Vetch), *Campanula glomerata* (Clustered Bellflower) and *Thesium humifusum* (Bastard-toadflax) and some fine specimens of *Cirsium acaule* var. *caulescens* (Stemless Thistle) standing over 20 cm tall, accompanied superabundant *Galium verum* (Lady's Bedstraw), *Centaurea scabiosa* and *C. nigra* (Greater and Common Knapweeds). Nearby we located the only patch of *Cirsium tuberosum* (Tuberous Thistle) in the eastern ranges, and at least three patches of its hybrid with *C. acaule*, *C.* × *medium*. Salisbury Plain is the undoubted stronghold of this species in the UK, with well over half the entire population (*c.*2000 plants). In comparison to sites elsewhere in Wiltshire these appear to be virtually free from introgression with *C. acaule*, and many populations appear to be increasing in size in response to warmer summers and the beneficial effects of winter grazing, or in some cases burning.

Next stop was Hound Plantation where we managed to locate some relatively large specimens of *Minuartia hybrida* (Fine-leaved Sandwort) on an area heavily disturbed by tanks. The adjacent downland was a blaze of colour with such typical chalk species as *Helianthemum nummularium* (Common Rock-rose), *Filipendula vulgaris* (Dropwort), *Genista tinctoria* (Dyer's Greenweed), *Succisa pratensis* (Devil's-bit Scabious), *Stachys officinalis* (Betony), *Gentianella amarella* (Autumn Gentian), *Serratula tinctoria* (Saw-wort) and some very diminuive *Onobrychis viciifolia* (Sainfoin). Butterflies seen in this area included Dark Green Fritillary and Marbled White, and many day-flying moths were ably identified for the group by Barry Goater.

In complete contrast our next stop was a weedy field of beans which had recently been cut and sprayed. Despite its rather scruffy appearance this field held a number of notable arable weeds, many of which are still fairly abundant on the more extensively managed farmland within the military ranges. All four poppies were found in flower or fruit (*Papaver rhoeas*, *P. argemone*, *P. dubium* and *P. hybridum*) amongst swathes of *Fumaria densiflora* (Dense-flowered Fumitory), the commonest fumitory on the Plain, and the odd plant of *Valerianella dentata* (Narrow-fruited Cornsalad), *Euphorbia exigua* (Dwarf Spurge), *Chaenorrhinum minus* (Small Toadflax), *Orobanche minor* (Common Broomrape), and yet more *Erucastrum gallicum* (Hairy Rocket). A final stop was made to pay our respects to *Adonis annua* (Pheasant's-eye), still present in recently-disturbed ground at one of its long-known sites near Bulford. A group of four Stone Curlews was seen by the last remaining die-hard members as dusk approached.

On Sunday morning the party moved to the western ranges. The first two hours of the day were spent exploring the impressive chalk combe of Cheverell Down. Although rather too late in the year to see the site's suite of orchids in flower, a stunning range of chalk herbs was nevertheless on display here including masses of *Thesium humifusum* (Bastard-toadflax) and *Asperula cynanchica* (Squinancywort), surely as abundant here as anywhere else in the UK. Chalkhill Blue was amongst the butterflies on the wing here. This was followed by lunch in the sunshine and then a long walk into the Warminster Ranges. On the edge of the danger area the odd specimen of *Cirsium* × *medium* was noted growing in its typical short-grazed downland habitat, and just over the boundary into the danger area a huge clump of *Cirsium tuberosum* (Tuberous Thistle) was found growing amongst rank *Bromopsis erecta* grassland, alongside *Orobanche elatior* (Knapweed Broomrape) which almost exclusively parasitises *Centaurea scabiosa* on the Plain. On the tank tracks nearby were a few specimens of *Kickxia spuria* (Round-leaved Fluellen) and *Mentha* × *gracilis* (Bushy Mint), and in temporary pools hundreds of Fairy Shrimps (*Chirocephalus diaphanus*), a rare crustacean which thrives in the water-filled ruts caused by military vehicles. After a brief stroll into the impact area we headed back to our vehicles for some well-deserved refreshments.

Many thanks to Dominic Ash from Defence Estates who ensured that we didn't run into any tanks during our visit and for providing us with much useful information on the sites visited during the meeting. For those of you who couldn't manage to come this year (and there were many) there may be another in 2003. Watch this space.

KEVIN WALKER & BILL MEEK

GRAIG FAWR SSSI, MELIDEN & FERITH SAND DUNES, PRESTATYN, FLINTSHIRE (v.c. 51) 17th August

On a warm sunny morning eleven members set out to explore Graig Fawr SSSI and to look for five nationally rare plants. The short walk to the site was along part of the route of the former Dyserth railway branch line, now the Prestatyn to Dyserth Walkway, a public footpath and cycle route. The party paused to investigate the flora of the nearby Meliden goods yard where the first of the rare plants *Minuartia verna* (Spring Sandwort) was noted in flower, growing in the lead contaminated railway ballast. The party continued along the Walkway to the foot of the Graig Fawr escarpment where *Helianthemum oelandicum* subsp. *incanum* (Hoary Rock-rose) was seen, with *H. nummularium* (Common Rock-rose) obligingly growing nearby for comparison, both species in flower. Unfortunately, *Silene nutans* subsp. *smithiana* (Nottingham Catchfly) had gone over, but it was interesting to see that this local population is spreading with many more plants present than in previous years. The

final rarity was *Veronica spicata* subsp. *hybrida* (Spiked Speedwell), in flower with many more spikes yet to bloom. A fifth species *Epipactis atrorubens* (Dark-red Helleborine) could not be found, probably grazed out by domestic sheep. After a brief walk to the summit of Graig Fawr, a picnic lunch was taken, while the leader highlighted some of the historical aspects of-the area and pointed out many of the landmarks to be seen from this commanding position.

Sea defences built in the 1970s have cut off much of the supply of sand to the dunes, but enough sand is blown during winter gales to maintain thriving plant communities in the dunes and the dune grassland.

The party divided into groups to explore the area and over 100 species were recorded, including 25 new records for the site, bringing the total to 168 species. Two plants not previously recorded on the coastal dunes in Flintshire were *Agrimonia eupatoria* (Agrimony) and *Thalictrum minus* (Lesser Meadow-rue). The latter occurs at two separate limestone areas in the county.

JOE PHILLIPS

LOCH SURVEY — KIRCUDBRIGHTSHIRE (v.c. 73) 23rd–25th August

On Friday morning 15 people met in Castle Douglas and explored several lochs in the area over the next three days. A number of the lochs had been visited in the mid 1990s as part of the Scottish Natural Heritage national survey. Some had not been visited for some time however. The lochs chosen ranged from typical upland oligotrophic waters to more lowland sites with some nutrient enrichment from surrounding farmland. The principal objective was to find a range of *Potamogeton* taxa and two interesting species found locally, *Najas flexilis* (Slender Naiad) and *Hydrilla verticillata* (Esthwaite Waterweed).

The first site visited was Encrogo Loch. This former curling pond had extensive stands of *Nuphar lutea* (Yellow Water-lily) and *Nymphaea alba* (White Water-lily). Where grazing was controlled wet grassland with typical species for the area like *Carum verticillatum* (Whorled Caraway) formed a good fringing habitat. Lunch was taken by the ruined curling shed which had an ancient curling stone still in the rubble.

In the afternoon we visited Loch Ken. This is a hydro scheme formed by damming the River Dee in the 1920s. It is a rich site being a wetland SSSI and SPA (for winter roost of Greenland White-fronted Geese). Although the water levels are managed the wet summer meant they were probably a metre above normal and so the extensive growths of *Pilularia globulifera* (Pillwort) were not seen.

A surprise at the parking spot on a piece of recently levelled verge was *Crassula tillaea* (Mossy Stonecrop), apparently a new v.c. record. A range of species were found in the extensive fringing marshes with some people getting pretty wet in unseen ditches and hollows. In the *Juncus* and *Filipendula* dominated reed swamp we found *Stellaria palustris* (Marsh Stitchwort), *Lythrum portula* (Water-purslane), *Lythrum salicaria* (Purple-loosestrife) and *Bidens tripartita* (Trifid Bur-marigold). In the pools and at the edge of the main loch *Elatine hexandra* (Six-stamened Waterwort), *Isoetes lacustris* (Quillwort) and *Utricularia* sp. (Bladderwort), were either floating or pulled out with grapples.

In the late afternoon we drove into the Galloway Forest Park on the forest drive to Stroan Loch, part of Laughenghie and Airie Hills SSSI. The clear water of this loch had plenty of *Lobelia dortmanna* (Water Lobelia), *Myriophyllum alternifolium* (Alternate Water-milfoil), *Littorella uniflora* (Shoreweed) and *Subularia aquatica* (Awlwort) just below the car park. In the fast flowing outlet of the loch below the old viaduct there was a good growth of *Potamogeton* × *sparganiifolius* (Ribbon-leaved Pondweed). Four water lilies included *Nuphar pumila* (Least Water-lily) and *Nuphar* × *spenneriana* (Hybrid Water-lily) its hybrid with *N. lutea* were seen.

On Saturday morning we travelled to Bargatton Loch. Travel across the fields in the rain was in the back of a feed trailer behind a tractor courtesy of the farmer. The loch has a lovely setting with some interesting habitat surrounding it. On the western side blanket bog had typical species for the area including *Drosera rotundifolia* (Round-leaved Sundew), *Vaccinium oxycoccus* (Cranberry) and

Narthecium ossifragum (Bog Asphodel). A very small quantity of *Andromeda polifolia* (Bog Rosemary) was also found. The loch itself is a rich site with a gravelly substrate and extensive shallow zone. Many species seen the day before were seen again. Noticeable were the extensive but sparse stands of *Lobelia*. This site produced a lot of shoreline *Potamogeton* material including *P. obtusifolius* (Blunt-leaved Pondweed), *P. perfoliatus* (Perfoliate Pondweed) and *P. berchtoldii* (Small Pondweed). Most significant though, were the finds of several floating sections of *Hydrilla verticillata* at different places around the Loch and some rooted plants in one area. Please note that access to this site has to be with the agreement of the owner and preferably in liaison with the v.c. recorder.

Following a rather wet morning the sun came out and we moved on to look at Blates Mill Dam. This was a largely unknown but very rewarding site. It has a rich wet surrounding grassland dominated by *Carum verticillatum* and *Molinia caerulea*. In very wet areas there was a lot of *Drosera intermedia* (Oblong-leaved Sundew), but surprisingly little *D. rotundifolia*. Other species included *Anagallis tenella* (Bog Pimpernel) and *Veronica scutellata* (Marsh Speedwell). Despite the attempts by fishermen to clear some water there were huge rafts of *Nuphar lutea*. In the shallows there was a fine stand of *Baldellia ranunculoides* (Lesser Water-plantain) in flower as well as *Utricularia minor* (Lesser Bladderwort) also in flower. There was some alternative interest in the sky with close views of at least six Red Kites together, part of the reintroduction programme taking place nearby.

After this we briefly visited the nearby Woodhall Loch where we looked for *Alisma lanceolata* (Narrow-leaved Water-plantain) which has been recorded from the site but only had time to find *A. plantago-aquatica* (Water-plantain) together with other by now familiar things like *Potamogeton lucens* (Shining Pondweed), *Sparganium angustifolium* (Floating Bur-reed) and *Apium inundatum* (Lesser Marshwort).

The Sunday was also fine and we headed for another site for which we had no previous survey data. An attempt had apparently been made to drain this site some 20 years previously and the owner had purchased it to restore the site. It has a very extensive *Phragmites* bed and a largely silty substrate supporting extensive *Carex rostrata* (Bottle Sedge) beds and in deeper water *Schoenoplectus lacustris* (Common Club-rush). *Nuphar pumila* was found here, as were a range of Potamagetons including *P. obtusifolius*, *P. perfoliatus* and *P. alpinus* (Red Pondweed). A small amount of *Utricularia minor* was also found. The owner had asked for any wildlife records so Charles Watson chased after hoverflies and we were able to confirm Water Rail and Willow Tit from their calls in the reedbed. In the outflow burn *Callitriche hamulata* (Intermediate Water-starwort) formed robust cushions.

Our final loch visit was the picturesque Loch Kindar on the slopes of Criffel above New Abbey. This is the only known extant site for *Najas flexilis* in Dumfries and Galloway and it had been found in the 1998 loch survey washed up on the shoreline. Despite examining a lot of washed up material along the western shore no fragments of *Najas* were found. A few Potamogetons included *P. obtusifolius*, *P. perfoliatus*, *P. crispus* (Curled Pondweed) and a lot of a *Nitella*, probably *N. translucens*. Help was summoned for a calving cow and a misunderstanding with the anglers who own the Loch against some of the sampling techniques was settled amicably.

Two weeks later a systematic survey for *Najas* found small quantities of the plant growing in gravelly substrate on a different part of the loch.

Our thanks go to all of the owners of the lochs who allowed access and in some cases moved stock to facilitate our visit. None of the sites should be visited without obtaining the owners' permission.

CHRIS MILES

ANNUAL EXHIBITION MEETING 2001 — ABSTRACTS

The reports that follow have been edited for publication by Ailsa Burns.

POLYSTICHUM SETIFERUM × *P. MUNITUM*

This hybrid between the native *Polystichum setiferum* (Soft Shield-fern) and *P. munitum* (Western Sword-fern), a native of North West America, was found on a Cornish hedgebank at Par on 23 June 2001, during an excursion to Cornwall (v.c. 2) by the British Pteridological Society. A first record for Cornwall, it was only the second record for Great Britain. Western Sword-fern had been known on this hedgebank for over 40 years, the recorder being Philip Hunt. Unlike the same hybrid found in Surrey in 1995, this plant was producing sori. It has therefore been chosen as the holotype. Intermediate in morphology between the two species, the acroscopic auricle of *P. munitum* is replaced in the hybrid by a larger pinnule. The pinnae-segments of the hybrid are only partly separate from one another and each ends in a longish hairpoint more like those of *P. setiferum* than *P. munitum*.

MR P.J. ACOCK, MISS R.J. MURPHY AND DR F.J. RUMSEY

ART IN NATURE

An enduring interest in plants and photography has led to experimentation into ways of capturing and recording the wonderful patterns found in nature. Whilst searching endlessly for suitable subject material, these photographs have been produced either by direct light, or by transmitted light with the aid of a light box, and a macro lens.

The photographs displayed depict flowers, grasses, and leaves, collected in Britain and Europe.

MRS R. BERRY

MY FIRST YEAR WITH A COMPUTER

Separately from the processing of the individual records for v.c. 81, Berwickshire, on 'Recorder' by the local record centre, a table had been constructed on a spreadsheet based on a list of all taxa in the v.c. The basic data were Latin and English names and BRC/Dandy/Kent numbers. To this has been added *New Atlas* hectad data, plant status, typical habitat and plant strategy on the CSR model. This table had been used to prepare a v.c. checklist in various formats, an analysis of archaeophytes and site reports. Many other 'products' are possible at minimum effort. Notes on the flora of the Isle of Canna illustrated this.

A further project was a County Rare Plant Register for v.c. 81 of which sample pages were exhibited.

V.C. 81 BERWICKSHIRE — PLANT RECORDS 2001

Nine interesting records were exhibited using a mixture of photographs, herbarium specimens, drawings and captions. New v.c. records included *Rorippa islandica* (Northern Yellow-cress), and *Fumaria bastardii* (Tall Ramping-fumitory). Full details will be published in 'Plant Records'.

MR M. BRAITHWAITE

ISLE OF CANNA, NEW RECORDS FOR 2001

In mid June, M.E. Braithwaite, P.F. Braithwaite, together with Catriona Murray, v.c. Recorder, visited the Isle of Canna. This is one of the 'Small Isles' which lie within v.c. 104, North Ebudes. During the visit old records were checked and new species added to the island list. Two species were of particular interest:

- *Ajuga pyramidalis* (Pyramidal Bugle), — the first record for Canna since that made by J.W. Heslop Harrison, c.1939.

- *Ruppia maritima* (Beaked Tassselweed) — the first record for the island. This species bore small galls which were later identified by Dr C.D. Preston, *pers. com.* as those caused by *Tetramyxa parasitica*, an organism closely allied to that which causes club-root in Brassicas.

Photographs, specimens and relevant literature were displayed.

MRS P.F. BRAITHWAITE

POLYGONUM AVICULARE AGG. STILL UNRESOLVED

The account of this aggregate in B. Jonsell (ed.), *Flora Nordica* Vol. 1 (2000) by T. Karlsson, when applied to specimens from West Wales, indicated that his *P. aviculare* subsp. *neglectum* was widespread and common there. Specimens confirmed by Karlsson were exhibited, and these showed that this subspecies was excessively heterogeneous, with forms approaching his subsp. *aviculare*, subsp. *rurivagum* and subsp. *microcarpum* (*arenastrum*). Much material from southern Britain can still not be satisfactorily accommodated in any of the existing taxonomic accounts, and members were encouraged to collect material with both main stem leaves and ripe fruit, well annotated with details of growth form (whether prostrate, erect, etc.) and perianth colour in the hope that they may be identifiable in any more comprehensive future account.

MR. A.O. CHATER

PENCIL SKETCHES OF BRITISH PLANTS

Twenty pencil sketches of British Plants were displayed.

MRS J. COMBES

SOME RECENT ABERRATIONS

Heads of Wild Teasel (*Dipsacus fullonum*) doubled, broadened, and one example of lateral proliferation, from the same colony, Nettleton, Wiltshire, this summer.

Feverfew (*Tanacetum parthenium*) 'Minety', bracteate flower as per other cultivars, November, Minety, Wilts.

Honeysuckle (*Lonicera periclymenum*), vestigial flower, Hullavington, Wiltshire, November. Another vestigial flowered honeysuckle reported from Pant Gwyn, Dyffryn Ardudwy

Trifoliate? Leaves on hazel, **1**. Kington Langley, Wiltshire, July 2000 **2**. Chedglow, October 2001.

Apple cultivar, possibly Beauty of Bath, stipules migrating along petioles.

Proliferous flower on *Hedera colchica*, Chedglow, Wiltshire, November 2001.

Proliferous catkin on *Garrya eliptica*, garden, Hullavington, November 2001.

Proliferous rose plantain, (*Plantago major rosularis*), suggesting genetic cause to this condition as these plants were grown from seed of a proliferous stem spotted last year.

I hope to produce a separate report including photocopies of the pressed specimens at some point over the winter.

MR M. CRAGG-BARBER

EXTINCT BRITISH CYPERACEAE STILL FREQUENT IN FRANCE

Photographs and specimens were exhibited of four members of the Cyperaceae from France: *Carex davalliana*, *C. trinervis*, *C. bicolor*, and *Trichophorum alpinum*. Although still fairly frequent in France, these are all species which are now extinct, or have been dubiously recorded, in Britain.

Brief details were given of their principal distinguishing characters and of their geographical range and habitat. Their previous occurrence in Britain was briefly noted.

OENANTHE FLUVIATILIS — HABITAT AND FLOWERING

Brief information and photographs were presented of *Oenanthe fluviatilis* (River Water-dropwort) as a flowering plant as well as in the underwater, non-flowering state. Information was requested for

localities where (a) *Oenanthe fluviatilis* flowers regularly (i.e. on a more or less annual basis) and (b) where it grows in still (i.e. non-flowing) water — and whether it flowers there. Localities were also sought for *O. aquatica* growing in flowing water, i.e. rooted in, rather than on the banks of.

DR M.I.Y. FOLEY

FIVE *CAREX* HYBRIDS

Despite restrictions resulting from Foot and Mouth Disease, it was possible to examine *Carex* hybrids in the field in Cumbria, Dorset and the Scottish Borders, although, of necessity, visits to sites were made rather late in the season. Field visits were supplemented by examination of herbarium material.

The exhibit showed five hybrids: *Carex hostiana* × *C. viridula* subsp. *brachyrrhyncha*, *C. flava* × *C. viridula* subsp. *oedocarpa*, *C. paniculata* × *C. remota*, *C. otrubae* × *C. remota* and *C. rostrata* × *C. vesicaria*. These were displayed alongside their parents, together with notes on the principal distinguishing characters, as observed in the field and in the herbarium. The most useful general characters were found to be overall colour of plant, length and separation of inflorescence, length of bracts, size and shape of female spikes, size, shape and compressibility of utricles and disposition of stomata on leaves.

DR M.J.Y. FOLEY & MR M.S. PORTER

FLORA OF COUNTY WATERFORD

The work on a Flora for Co. Waterford started in 1997 with recording for the Atlas 2000. Recording is done by 5×5 km squares. 107 for the county.

The following were shown; a brief progress report, maps showing the distribution of *Saxifraga spathularis* (St Patrick's-cabbage) and *Mentha* × *gracilis* (Bushy Mint); a list of new county records made during 2001 with specimens of two of these — *Asplenium onopteris* (Irish Spleenwort) and *Gnaphalium luteoalbum* (Jersey Cudweed); a brief account on the history of *Trichomanes speciosum*, (Killarney Fern), in Co. Waterford with photographs of the three sites; a map with the total records for each 10 km square, S60 having the highest number with 631 species recorded to date.

MR P.R. GREEN

CATALOGUE OF *HIERACIUM* AND *PILOSELLA* SPECIMENS FROM THE BRITISH ISLES IN THE WELSH NATIONAL HERBARIUM, NMW

This catalogue makes available data from 5655 *Hieracium* and 506 *Pilosella* specimens from the British Isles held in the Welsh National Herbarium, **NMW** up to December 2000 (See also *BSBI News* **88**: 79). The majority of the British and Irish *Hieracium* material was verified by D. McCosh.

The *Hieracium* collection is at least nationally important and contains one of the top three collections of British hawkweeds. The main collection is that of W.A. Shoolbred (1852-1928), a Doctor from Chepstow, who was one of the main hawkweed workers of his day. By himself, or with E.S. Marshall, he collected numerous specimens many from Scotland. The *Pilosella* collection is not of especial note in its own right.

Any *bona fide* research worker is welcome to visit the collections.

MR S.O. HAND, MR D. MCCOSH & DR T.C.G. RICH

HIERACIUM HOLOSERICEUM (BEAUTIFUL HAWKWEED) IN WALES

Hieracium holosericeum (Beautiful Hawkweed) is an endemic alpine plant which is widespread and locally frequent in the Scottish Highlands but occurs more rarely in southern Scotland, the Lake District and Snowdonia. Historical records indicated between five and seven sites, and it was locally abundant in at least some of those.

A project between the National Museums & Galleries of Wales and the Countryside Council for Wales was established to determine its current status. Field surveys in 2000 revealed only seven

patches in two sites, though another recent site remains to be revisited. The most likely cause of the decline is overgrazing. The shyness of flowering in the wild may be a consequence of sub-optimal climatic conditions, and longer-term there may be significant implications for its survival from global warming.

MR S.O. HAND & DR T.C.G. RICH

ERODIUM LEBELII IN MAJOR BRITISH AND IRISH HERBARIA

The distribution of *Erodium lebelii* (Sticky Stork's-bill), was mapped using specimens in **NMW** and borrowed material from **BEL**, **BM**, **BRISTM**, **DBN**, **E**, **K**, **LIV**, **MANCH**, **OXF**, **RNG**, and **TCD**. Specimens of *E. cicutarium*, including subspecific taxa, were also checked for *E. lebelii*. In total, specimens on 1264 sheets of *Erodium* were examined microscopically. Before plotting, most pre-1969 specimens had to be assigned a hectad following standard BRC practice.

10 additional hectads were found for the 'Critical Supplement' published in 1968. Of the hectads already known, only 3 could be updated. There were no 1969 or 1980+ specimens, the most recent date being 1978, apart from two 1999 specimens from Wales, received recently at **NMW**. A few '*E. lebelii*' specimens were clearly *E. cicutarium* (Common Stork's-bill). Three '*E. cicutarium*' specimens were *E. moschatum* (Musk Stork's-bill) and several *Erodium* specimens could not be named as the material was too poor.

DR G. HUTCHINSON

HELP!

This exhibit has been running for twenty one years now. Its purpose is to give an opportunity for unidentified plants to be displayed and for others to make suggestions as to their identities. Anonymity is offered both ways.

About sixty plants were displayed, and names were offered for most of them. Some of these presented difficulty because they were not covered in the books available to the submitter, others because parts of the plant required by the usual keys were not available; some just looked 'a bit odd'. Some of the species named were:-

Allium paradoxum (Few-flowered Leek), *Bidens ferulifolia* (Fern-leaved Beggarticks), *Cyclamen hederifolium* (Cyclamen), *Erysimum cheiranthoides* (Treacle Mustard), *Gilia achilleifolia/congesta*; *Heliotropium curassavicum* (Seaside Heliotrope), *Oxalis stricta* (Upright Yellow-sorrel), *Salpichroa origanifolia* (Cock's-eggs), *Silene ormena*, *Solanum rostratum* (Buffalo-bur), *Thymus vulgaris* (Garden Thyme), *Calendula officinalis* (Pot Marigold), *Pimpinella saxifraga* (Burnet-saxifrage).

Two specimens of plants bearing galls were also shown. One of these, *Veronica montana* (Wood Speedwell), galled by *Jaapiella veronicae* presents difficulties in identification because the entire inflorescence is involved in the gall, losing all of its normal characters in the process.

Several 'First County Records' were identified here.

The exhibitors also asked for a volunteer to take over **'Help'** for the future.

MR S. & MRS A. KARLEY

A PATIENT GREEK — *RUMEX* × *XENOGENUS* IN BRITAIN

The hybrid between Greek and Patience Docks, *Rumex* × *xenogenus* Rech. *fil.*, has been found in Rainham, S. Essex (v.c. 18), new to the British flora. Material was exhibited, together with the parent species.

No other records have been traced, apart from a plant at Vienna in 1947, which was the basis of its taxonomic description by Rechinger *fil.* [not Reichenbach, as appears in some literature].

The Rainham plant appears to be a hybrid between *Rumex cristatus* DC and *R. patientia* L. ssp. *orientalis* Danser, whereas the previous find had *R. patientia* ssp. *patientia* as a parent.

MR G.D. KITCHENER

RESULTS OF A SEARCH FOR NEW COLONIES OF *LIMONIUM BINERVOSUM* SSP. *MUTATUM* & *L. BRITANNICUM* SSP. *COOMBENSE* IN SOUTH DEVON

The South Hams coastline between the Salcombe Estuary and Start Point supports important populations of two endemic rock sea-lavenders: *Limonium britannicum* subsp. *coombense*, restricted to a handful of localities along the south coast of E. Cornwall and S. Devon; and *L. binervosum* subsp. *mutatum*, known until now from just a single station at Lannacombe and supposedly nowhere else in the world.

In 1999 a small colony of putative '*mutatum*' was discovered about 7 km to the west of Lannacombe, at Limebury Point, at the mouth of the Salcombe Estuary. In 2001 I investigated a few of the more accessible *Limonium* colonies within the Prawle-Start Point SSSI. Starting at Lannacombe, I located three colonies of '*mutatum*' then, working eastwards along Harris's Beach six new '*mutatum*' populations were discovered on the head cliffs, several of them very large (hundreds of plants). Another big colony (200-300 plants) was found at Mattiscombe, along with two small populations between there and Pear Tree Cove.

Likewise, '*coombense*' was found to be considerably more abundant than previously thought, with an exceptionally large colony of 7-10,000 plants on exposures of head at Gara Rock, and further colonies at Prawle Point (Copstone Cove), Ivy Cove and between Mattiscombe and Frenchman's Rock.

Specimens of '*mutatum*' and '*coombense*' were exhibited, together with a map showing the distribution of colonies discovered, and coastal sections searched, during 2001.

MR S.J. LEACH

SOMERSET RARE PLANTS GROUP — ACTIVITIES IN 2001

The year did not start well, with four of the 16 field meetings for the 2001 recording season being cancelled due to Foot & Mouth disease. A map of v.c. 5 (S. Somerset) and v.c. 6 (N. Somerset), (the area covered by the Somerset Rare Plants Group) was displayed showing the locations of the 2001 field meetings that did take place and the rare plants that were recorded there. Species recorded in detail included the following:

Leucojum vernum (Spring Snowflake), *Minuartia hybrida* (Fine-leaved Sandwort), *Carex lasiocarpa* (Slender Sedge), *C.* × *evoluta*, *Scirpoides holoschoenus* (Round-headed Club-rush), *Cuscuta europaea* (Greater Dodder), *Potamogeton nodosus* (Loddon Pondweed), *Lycopodium clavatum* (Stag's-horn Clubmoss), *Sium latifolium* (Greater Water-parsnip), *Asplenium marinum* (Sea Spleenwort), *Cyperus fuscus* (Brown Galingale), and *Persicaria mitis* (Tasteless Water-pepper).

The specially designed forms of the SRPG recording system were shown, with fully completed Site Recording, Species Recording and Photographic Recording Forms.

A 2000 Newsletter, a list of Priority Species in Somerset and a bundle of red marker flags (which are frequently used by the group for counting individual plants and estimating populations) completed the exhibit.

MS E.J. MCDONNELL

QUESTIONS CONCERNING FUMITORIES IN CORNWALL

Descriptions of fumitories in the literature have always included a number of measurements — flower size, sepal size, number of flowers in the raceme, size of fruits. Such measurements have brought a few problems to light as regards Cornish material. How does one measure width of sepals — are the teeth included or not? Where does one measure the proportion of raceme to peduncle? [It can vary considerably on the same plant.] Where, as a diagnostic character, is the line drawn between the numbers of flowers on a raceme — less than 15, more than 20 or somewhere between? Good *Fumaria purpurea* (Purple Ramping-fumitory), has more than 20 flowers and oblong sepals, but its var. *brevisepala* can have fewer flowers and smaller sepals. An unusual *F. muralis* ssp. *boraei* (Common Ramping-fumitory), found at West Pentire (v.c. 1, Cornwall), showed all the difficulties — variable

peduncle length, flower number from 14 to 18, and ovate sepals to 4.2 mm wide instead of the usual 3 mm or less!

MISS R.J. MURPHY

GEOGRAPHICAL AND TEMPORAL VARIATION IN BSBI MEMBERSHIP

This poster described the changes in the number of members from the beginnings of the Botanical Society of London to the present, and also showed the present distribution of members by vice-county. Peaks in membership coincide with the early years of the Botanical Society of London, the activities of Druce at the turn of the century, and a minor one during recording for the first Atlas of the British flora. There are notable differences in the number of members in different counties, and this has implications for the comparability of botanical recording in these areas.

DR T.C.G. RICH

OCCURRENCE OF *ASPARAGUS OFFICINALIS* SUBSP. *PROSTRATUS* IN W. SUSSEX

Details of three herbarium records demonstrating the historical occurrence of *Asparagus prostratus* (*Asparagus officinalis* subsp. *prostratus*), Wild Asparagus, on Shoreham Beach, West Sussex (v.c. 13) between 1877 and 1895 were presented. They are the first confirmed records for Sussex for this taxon, and the most easterly in England. Within the context of Britain they are at the edge of range, but not when seen in context of the whole distribution as it occurs further east at least to Germany.

DR T.C.G. RICH

DISTRIBUTION OF *HIERACIUM CILLENSE*, CRAIG Y CILAU HAWKWEED

Hieracium cillense (Craig y Cilau Hawkweed), is a rare endemic species confined to cliffs around Craig y Cilau National Nature Reserve, Brecon (v.c. 42) in South Wales. It was first found in the 1890s and named as a variety, and was later raised to species status. It is easily recognised by the dense stellate hairs covering the leaves. In 1975, 253 plants were reported from the NNR. In June 2000, 204 plants were found. The decline might be due to differences in recording, or may be real and attributable to sheep grazing. However, another 263 plants were found in an extension of the population to the east outside the NNR. As half of the sole population is included within an NNR and the other half is on old quarry cliffs, mostly on cliffs inaccessible to sheep, it is not at significant risk.

The work was a joint project between the National Museums & Galleries of Wales and the Countryside Council for Wales.

DR T.C.G. RICH

D.H. KENT'S *FLORA OF MIDDLESEX*

Just before he died in 1998, Duggie Kent had largely completed the manuscript for a supplement to his 1975 *Historical Flora of Middlesex*. The manuscript was prepared for publication by Clive Stace with the help of Chris Preston and Rodney Burton. It was published as the *Flora of Middlesex* by the Ray Society in 2001, and was officially launched at the Exhibition meeting.

DR T.C.G. RICH, DR N.I. EVANS & PROF. C.A. STACE

LOW SEED SET IN *SCHOENOPLECTUS TRIQUETER* IN BRITAIN

Schoenoplectus triqueter (Triangular Club-rush), is a rare plant which is declining in Britain. Whilst working on its conservation, we found that seed set in Britain is very low compared to that on the continent which may be a factor contributing to its rarity. To investigate this, we examined herbarium material and cultivated plants. Only 3/160 specimens from Britain and Ireland had seeds in contrast to 52/86 specimens from the continent. To our surprise, cuttings originating from the Tamar and the Shannon set abundant seed in cultivation. The contradiction between the sterility in the wild and

fertility in cultivation is interesting, and requires further experimental investigation. Initial thoughts were that the failure to set seed was due to climatic limitations, but the cultivation experiments now also suggest other possibilities including physiological effects due to brackish growth conditions or fluctuating water levels.

Dr T.C.G. Rich & Lady Rosemary FitzGerald

DISTRIBUTION OF *FUMARIA PURPUREA* (PURPLE RAMPING-FUMITORY)

Fumaria purpurea (Purple Ramping-fumitory), is an endemic, Nationally Scarce species which is declining or even 'almost extinct'. To provide more information for its conservation, records were collated for the Threatened Plants Database. 545 records were traced for the British Isles, of which 240 (44%) were from herbaria. 45 records (8.2%) were probably errors. There are records for 218 10-km squares, of which 49 (22%) are post-1987. Cornwall, Lancashire, SE Scotland and Orkney have particular concentrations of records. Ireland may be underrepresented.

Five sites seen in 1982 around the coast of Morecambe Bay were revisited in 2000, but no plants were refound. Suitable habitat was still present in two of the sites. Although *F. purpurea* is declining, being an annual it has dynamic populations which appear and disappear; the main problem is how to monitor it! We would welcome further records, preferably supported by specimens, and detailed observations on its ecology.

Dr T.C.G. Rich & Mr A. Lockton

SPIRODELA PUNCTATA – THE NEXT INVASIVE DUCKWEED?

Spirodela punctata C.H. Thompson (syn. *S. oligorrhiza* (Kurz.) Hegelm.) is a widespread pan-tropical weed only thus far recorded within Europe as naturalised in the rice fields of Northern Italy (Tutin *et al.*, *Flora Europaea vol. 5* (1980). Following the recent discovery of this species new to the Macaronesian region, where it is the sole duckweed on Santa Maria island, in the Azores, I returned home to see the same plant in my local garden centre! On mentioning this to Richard Lansdown he then proceeded to find it in a Gloucestershire garden centre the next day. I have subsequently found it in another Surrey garden centre and assume that it will prove to be widespread in British horticultural outlets. It is almost certainly introduced with other aquatics, although the source, whether British or Dutch has yet to be established. From the ease with which so many other aquatics have become established it is probably only a matter of time before this species is found in a natural situation. Indeed, given its similarity to the common *Lemna minor* it may already be established but overlooked.

S. punctata can be easily differentiated from *L. minor* — which it resembles in size and to a degree shape, by its purplish violet undersurface and the presence of 2–4 roots per frond as opposed to just 1. From *S. polyrhiza* it differs in size and frond shape; that plant having larger more circular fronds, usually with more roots per frond. It differs from both of these native species in its more marked bilateral asymmetry and an often almost acute apex. The upper surface is also marked by several small punctate projections along the median line which are clearly visible with a hand lens. Records and putative material from natural habitats would be gratefully received.

Dr F.J. Rumsey

TWO NATIVE FERN SPECIES TO RESTORE TO THE BRITISH LIST

Cystopteris alpina (Lam.) Desv. and *Botrychium matricariifolium* (Retz) A. Braun ex W.D.J. Koch have both appeared in British Floras, the former often as *C. regia* Desv. or as a variety of *C. fragilis* (L.) Bernh., the latter lastly in Dandy (1958) where it was marked, alongside two other species not currently regarded as British, as requiring confirmation.

The claim of *B. matricariifolium* to be a British species rests upon a find made by Dr. O. St Brody on the Ayrshire coast in 1875. The supporting specimen, now at **BM**, is indeed *B. matricariifolium*.

The species' occurrence in the British Isles is entirely feasible and unless we conclude that the specimen's provenance is not genuine we are forced to accept it as British.

Cystopteris alpina has been disregarded as a British taxon, partly through nomenclatural confusion and partly as it has been dismissed as an alien. However, it was present as a native in Teesdale (Tennant, 1995), from where it was collected as recently as 1909. Its locality remains essentially unchanged since that time and there must be the not too overly optimistic hope that the species survives.

DR F.J. RUMSEY & MISS A.M. PAUL

FIELD RECORDING WITH A HAND-HELD COMPUTER

Using a Handspring Visor and the BioList Recording Software, the ease of recording using a hand held computer was demonstrated. Selection is from a list of 800 species, with a fast lookup. Species can also have 'crib' notes and a sketch to aid accurate selection. Other details can be copied from the previous record and can be edited as required. The Handspring Visor accepts hand-written input with a stylus to edit site names and grid references and runs the PALM operating system.

The simple transfer of field records into a Mapmate database was also demonstrated; a single button push is required to transfer the record to the PC and then there is an easy import procedure to the Visor. Some of the features of Mapmate were shown, including its listing and mapping and tracing facilities. Mapmate is available from http://www.mapmate.co.uk/ and BioList available from the author.

MR P.J. SELBY

HIERACIUM SECTION *ALPINA* COLLECTION AT NATIONAL MUSEUM OF WALES

During production of a catalogue of *Hieracium* Hawkweed species in the National Welsh Herbarium at the National Museum & Gallery of Wales (**NMW**), the collection of Section *Alpina* was redetermined and found to contain only 14 of the 34 described and undescribed species in Britain. To complete the set, specimens of the missing taxa were donated by D.I. Tennant. As many of the Section *Alpina* species are extremely rare in the wild, botanists are urged to LEARN THE SPECIES IN THE HERBARIUM AND NOT TO COLLECT THEM FROM THE WILD.

Visitors to the **NMW** collection are very welcome to do so if this is arranged in advance.

MR D.I. TENNANT & DR T.C.G. RICH

BOTANICAL PRINTS — ORCHIDS AND PRIMULAS

Six limited edition prints were displayed.

These and other orchid illustrations have been by way of a 'trial run' for a book showing all Britain's orchids. It is anticipated that the project will take the next six years.

MR J.P. TYLER

NEWS FROM SARK

The exhibit showed the difficulty being experienced in conserving the site of *Filago gallica* (Narrow-leaved Cudweed).

Specimens and photographs were shown of:

Rosa canina, Group *Dumales* (Dog-rose). No Dog-rose is common in Sark and this is the first to be critically determined.

Rosa rugosa '*Alba*' (Japanese Rose). Not recorded previously because not 'in the wild'.

Genista germanica (German Greenweed). Stems still in a garden but a roadside feature.

Nicandra physalodes (Apple-of-Peru). Established in two gardens; first record for Sark.

Mentha spicata (Spear Mint). The rugose variety of SW Britain, probably not the first record from Sark.

DR R.M. VEALL

A BOTANICAL TIMELINE FOR SHROPSHIRE (V.C. 40)

In the School of Education, University of Birmingham, there is a programme of introducing scientific ideas to non-scientists on humanities and social science degrees. The module *Vegetation and Variation* offered students an insight into how we look at long-term change in vegetation within a landscape, from the first evidence of land plants through the first written records, to current day floras. Presented in the exhibit were examples from some of the worksheets and assignments completed by the students on the idea of how our resources for documenting vegetational change vary throughout our 'timeline', from fossil evidence through macro- and pollen-remains in peat, to first written records through to current methods for determining changes in vegetation.

DR S.J. WHILD A. CHEADLE, S. DONNELLY, R. GREEN & M. KEAR

CAREX MURICATA SUBSP. *MURICATA* (SCARCE PRICKLY-SEDGE) IN SHROPSHIRE (V.C. 40)

Carex muricata subsp. *muricata* is listed in the current Red Data Book and is a Biodiversity Action Plan priority species.

C. muricata ssp. *muricata* was found for the first time in Shropshire in 1999 on a Shropshire Wildlife Trust reserve, Jones's Rough. This is a reasonably well-surveyed site, where *C. muricata* subsp. *lamprocarpa* has been recorded several times in the past.

Carex muricata subsp. *muricata* is present in abundance on south facing lime stone scree. When the neighbouring hill, Moelydd, was surveyed for the sedge the following year, it was found once more in abundance with several thousand plants present, not on scree, but on mining spoil around what appear to be bell pits although the features have probably resulted from shallow lime stone extraction.

Two reports were presented together with photographs of the populations.

DR S.J. WHILD & MR A.J. LOCKTON

BRIDGEND HEDGEROW SURVEY 1999

This was a collaborative project between Bridgend County Borough Council, local Communities and the National Museums & Galleries of Wales to survey a stratified random sample of 200 hedges to provide a basic assessment of the hedgerow resource in the County Borough of Bridgend.

The average hedge was 3.2 m tall and 2.9 m wide with branches to its base, and was 152 m long. The average number of woody species in a hedge was 7.0, with an average of 4.8 species per 30 m length; 66 woody taxa in total and 36 of the Hedgerows Regulations woodland species were recorded.

Hedges differed in structure and composition by location; overall, about 70% of the hedges in the Bridgend area are likely to qualify as 'important' under the Hedgerows Regulations.

Bridgend hedges compare well in richness with other hedges in South Wales, and are richer than the average for Britain.

MS R. WHITE, DR D.K. CLEMENTS, MR S. MOON, MR R. JONES & DR T.C.G. RICH

MERTHYR TYDFIL POND SURVEY 1999–2000

This was a collaborative project between Merthyr Tydfil County Borough Council, Environment Agency Wales and the National Museum of Wales to assess ponds in the County Borough of Merthyr Tydfil. The survey was carried out in summer 1999 and 2000 by two trained surveyors following the methods used for the national DoE-funded Lowland Ponds Survey 1996. Parameters surveyed included estimates of the physical properties, water quality and sources, botanical composition and amenity value of the ponds. In total 141 ponds were visited of which 37 (28%) had gone. 122 wetland plants were recorded, including 4 bryophytes, 3 charophytes and 1 form of alga, with an average of 13.8 species per pond. Alien plants were present in 14% of the ponds.

One pond had a very high conservation value, 51% had a high value, 33% medium and 15% low conservation value. The best pond was Bedlinog Angling Pond, a recently-created pond containing 49

species. The results show that the ponds in Merthyr are generally of very good quality, and a valuable biodiversity resource.

Ms R. White, Mr M.D.B. Rich, Ms Y. Wright, Mrs C. Grimstead & Dr T.C.G. Rich

The following also exhibited:
Miss A.P. Conolly & Miss A. Burns — Red-fruited 'burnet rose'
Mr B.J. Ozanne — Flora of Guernsey, 2000–01
Ms A. Paul — The Natural History Museum's botanical collections; a conservation resource; the Rare & Endangered British Plants Database Project
Dr F.H. Perring — Trees & shrubs website
Mr R.D. Pryce — BSBI expedition to Sicily, May 2001
Mr R. Vickery — Plant-lore Archive
Mr K. Walker & Dr C.D. Preston — The ecology of extinction in some lowland vice-counties
Summerfield Books
Plantlife
BSBI Field Meetings

Ailsa Burns, Hon. General Secretary

STOP PRESS

Wanted: BSBI members!

Would you enjoy helping beginners get to know wild flowers?

The Wild Flower Society is often the first port of call for many beginners who may find the BSBI, at least to start with, rather intimidating. If you are a botanical beginner, there are no other national societies to join that can get you going with identifying plants. Some local natural history societies and local Wildlife Trusts are excellent but many lack any botanical section or expertise.

WFS has always sought to encourage beginners. For over 100 years WFS has encouraged self-education by members completing a diary or record book of plants found and identified in a year. This is still a good way to learn about plants although we recognise that nowadays people do expect more assistance than the 'distance learning' approach.

We have developed custom-made field meetings for beginners/improvers to fill the gap between the BSBI's specialist weekends on difficult groups like Rubus and WFS traditional field meetings around the UK. These meetings are tailored to the needs of beginners by introducing plants typical of certain habitats, or the presentation of plant families. We provide informal teaching using common names as well as Latin, making sure we explain the scientific concepts involved.

This approach is much needed as there are many whose initial involvement in field botany could die without nourishment at a level suited to their abilities and interest.

We would like to expand this programme – but we need leaders who are comfortable with teaching the basics about common plants. If you would like to be involved, to find out more about the WFS, or attend a field meeting to see how we are trying to cater for beginners, contact Clare Coleman (WFS Publicity Secretary and BSBI Council Member) on 0207 3303098 (weekdays in office hours) or clare.coleman@allenovery.com or write to 94 Florin Court, 6-9 Charterhouse Square, London EC1M 6EX.

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