BSBI NEWS Septem 02
ited by Gw Ellis FLS
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NEW ATLAS OF THE BRITISH & IRISH FLORA

C. D. PRESTON, D. A. PEARMAN & T. D. DINES

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IMPORTANT NOTICES

THE ATLAS AND BEYOND

The Atlas project has finally come to fruition after 5 years of strenuous effort, an effort that has been shared by all our Vice-county Recorders and their local volunteers, guided and often chivvied by Trevor Dines. Where local recorders are thin on the ground, these under-worked areas were visited by teams of members, guided by Trevor and David Pearman, who were keen to ensure that national coverage was reasonably uniform. Once most of the field-data was input by the team headed by Chris Preston at Monks Wood, the organisation and drafting of the species-captions presented another challenge, one to which the various experts who were invited to contribute, rose admirably. But latterly the greatest volume of work and worry has fallen to David and Chris who have guided the work through the inevitable delays and trials but have now been rewarded by the successful production of the book and CD Rom. It truly is a monumental work and we must express our deepest gratitude to all who have contributed but particularly our three principal authors. I feel that we are all now in a position to be able to stand back briefly and pat ourselves on the back – briefly because the next projects, as Vice-county Recorders will already know, are on the horizon!

With the ever-increasing public expectation for environmental protection, an expectation which is reflected in the plethora of current legislation, regulations, directives and advice, it is essential that basic field-data is available so that judgements can be made on the importance of protecting those features of greatest value or those under greatest threat. The New Atlas provides up to date data which will contribute to informing such decisions. It is not, therefore, just the botanical world which must be grateful for this new publication. All those concerned with nature conservation, environmental monitoring, governmental decision-making, as well as consultants and developers and, I'm sure, a host of others, will need to be aware of, and use the information presented in this new and invaluable publication.

One of BSBI's major strengths is its amateur enthusiasm, a strength reflected in the effectiveness of its Vice-County Recorder network, all volunteers, often backed-up by a small army of additional experts, again all volunteers. Speaking for myself, I have no formal botanical qualifications – I was trained as a geologist – and, whilst not professing to be a particularly accomplished botanist, it is the enthusiasm I have for contributing to the overall quest for knowledge which, I feel, drives me forward. The average age of Vice-county Recorders and the BSBI membership as a whole, gives me some cause for concern, there seems to be a general lack of youngsters with either the enthusiasm or knowledge to fill vacancies in the Recorder network as they arise.

So now that the Atlas is finished, we must turn to thinking about where the next generation of field-botanists will come from, those who will be expert enough to undertake the next BSBI recording and monitoring projects, including, maybe, in another forty years time, another Atlas! I guess that, traditionally, the majority of field botanists and County Recorders have developed their expertise as amateurs, and were self-taught or taught by gleaning information from their 'elders' on field excursions. It certainly seems to me that the sort of skills required are not taught and neither is their development encouraged by the current education system. So-called whole-organism biology is not fashionable and it is certainly not 'cool' to be seen to be pursuing what might be perceived by most students as a Victorian Sport. Natural History formed part of the curriculum in my day, albeit a small part, and it was the enthusiasm of my teachers, both in primary and secondary schools, which fired my interest in the subject. In university, taxonomy formed a significant part of my geology course, as it did in both botany and zoology courses. Yet we find today that not only is taxonomy almost completely dropped from university courses but that only 7% of schools now teach biology, physics and chemistry as separate subjects at GCSE. It is essential that field-recognition skills are available to service the ever-increasing demand for base-data: this seems to me to be a major omission in the subjects available to the up-and-coming generation and one which we, as members of the BSBI, need to bring to the attention of our politicians at every opportunity.

Looking to the more immediate future, you will all be aware of Pete Selby's appointment as Volunteers Officer and the hard work he is doing in promoting the next BSBI project on monitoring Local Change. Pete's post is funded by the successful joint bid made by BSBI and Plantlife to the Heritage Lottery Fund. This has not only enabled BSBI and Plantlife to undertake field-research at varying levels depending on the expertise of the members, but has also fostered a much closer working relationship between the two bodies than previously. Less satisfactory is the lack of continued funding for the Threatened Plant Database which Alex Lockton has set-up but which needs much more input to create a comprehensive database of all the threatened species. BSBI is the only body with the data and expertise able to provide comprehensive information on these species to organisations such as the country agencies. We shall continue to seek funding to ensure a successful outcome to this essential project.

The New Atlas is an opportunity to raise awareness of the BSBI amongst latent and prospective members and the pre-publication offer includes encouragement for new recruitment. I hope that all existing BSBI members will take every opportunity to promote the Society during this brief high-profile period in order that it can grow and meet the increasing requirement for basic botanical data which the future demands.

RICHARD PRYCE, President

PAST PATRONS

We were saddened to hear of the death of our Patron in March this year. HM The Queen Elizabeth the Queen Mother had been Patron of the BSBI since 1965. Our first Patron was HRH Princess (Victoria Alexandra Alice) Mary, The Princess Royal, daughter of King George V. Her appointment as Patroness of the Botanical Society and Exchange Club in 1931 followed requests by G. Claridge Druce, Secretary-Treasurer of B.E.C. who was very keen to elevate the status of the Club at the time. The appointment of HRH The Princess Royal as Patroness is described in *The Botanists*, David Elliston Allen, 1986, p. 114.

In 1947 the name of our Society was changed, by a postal vote of all members. The choices were between *Botanical Society and Exchange Club* (as it was at that time), *Botanical Society of the British Isles* and *British Botanical Society*. Minutes of a special Council Meeting held on December 12th 1947 (headed *Botanical Society of the British Isles* as newly chosen) records, under A.O.B., that it was Agreed that 'the President and the Hon. General Secretary would write to HRH The Princess Royal informing her of the Society's change of name.'

Following the death of our 'Patroness' in 1965, HM The Queen Elizabeth The Queen Mother accepted the position — on condition that she would be 'Patron'.

Through the years of her Patronage BSBI received a Garden Party invitation every fourth year, so alternate Presidents, or one of the Officers, represented the Society at a Garden Party at Buckingham Palace in those years.

When I became Hon. General Secretary I inherited, as one of the duties, the sending of a telegram to Her Majesty each year on her Birthday — August 4th. At first I was doubtful if this was really appropriate until I heard on an August 4th news bulletin that Her Majesty was spending the day quietly at home 'reading her telegrams'.

As Patron, Her Majesty received copies of all our serial publications, and we had proof that these were noted as from time to time we received comments on these. In 1972 a field meeting in Caithness in the Programme was followed by the first of two invitations to tea in the Castle of Mey. These two visits were reported in :

- 1972 — *Watsonia* **9**(4): 420–422 (1973), report with illustrations. *Dunnet, Caithness*, B.W. Ribbons
- 1992 — *BSBI Scottish Newsletter* 1993. *At Mey in August*, P. & A.C. Macpherson.

As a tribute on her 90th Birthday, our members contributed towards a Nature Reserve near Albury Nowers, Tring; the opening of the Reserve, attended by Her Majesty, was reported (with illustrations) in:

- *BSBI News* **58**: 5-6 (Sept. 1991).

Two photographs taken on that happy occasion are reproduced, in colour, on the back page of this issue.

Among these occasions, and possibly the most memorable, was Her Majesty's 100th Birthday Parade at which BSBI members walked in the Parade with the many hundreds of organisations of which Her Majesty was Patron; other members joined the spectators. This day was reported (with illustrations in colour) in:

- *BSBI News* **85**: 3, 41 (Sept. 2000).

Council and 'The Palace' will consider the appointment of a Patron for the future, and this will then be announced.

MARY BRIGGS Hon Archivist, 9 Arun Prospect, Pulborough, West Sussex, RH20 1AL

INTERNATIONAL CONFERENCE AND AGM MEETING, CAMBORNE, CORNWALL 8–12 MAY 2003 — ADVANCE NOTICE

Botanical Links in the Atlantic Arc

The aim of this Conference is to bring together a wide range of botanists and ecologists from Britain, Ireland and France to examine the problems of the conservation of vascular plants and vegetation found in the Atlantic regions of Europe which are common to our three countries: particular attention will be given to the ecology and management of the Lizard Peninsula to which there will be a whole day excursion. In addition there will be a half-day excursion to the Eden Project with opportunities to go behind the scenes with specialist staff. There will also be visits to other sites around Bodmin Moor demonstrating restoration of heathland on worked-out china-clay mines. The papers presented will be published.

A total of 25 speakers have agreed to participate with, as the centrepiece, the Presidential Address by Richard Pryce on *The Rhos Pastures of South Wales and their Conservation.* There will also be over 20 exhibits about rare species and the work of the local conservation organisations.

The BSBI is fortunate to have the full co-operation of the Cornwall Wildlife Trust, English Nature, the National Trust and the staff of the Eden Project in preparing what promises to be a fascinating five days.

The full programme and a booking form will be circulated with *BSBI News* **92** in January 2003 but, to help with forward planning and to ensure that, if you wish to come, you will have accommodation, please send your name and address on a postcard **now** to the convenor at the address below. The main hotel, already booked for the conference, is the Crossroads Hotel, Scorrier, Redruth. Please indicate if you would like to stay there (*c.*£35/night, dinner, bed & breakfast staying in a twin room — £8 single room supplement). If you would like details of other accommodation in the area this will be sent to you on receipt of your postcard.

N.B. Please send a postcard if you wish to attend but will not require accommodation: we need to ensure we book a large enough lecture room.

FRANKLYN PERRING, Green Acre, Wood Lane, Oundle, Peterborough, PE8 5TP
E-mail: perring@btinternet.com

FURTHER AMENDMENTS TO *BSBI YEAR BOOK 2002*

Under useful addresses

- p. 40 Wild Flower Society: E-mail address should read: wfs@grantais.demon.co.uk
  Friends of the Royal Botanic Gardens, Kew; the Manager is now Catherin Abley, Tel.: 020 8332 5917.

MARY BRIGGS, Hon. Editor *BSBI Year Book*

WATSONIA INDEXES

I would like to thank all the members who responded to my leaflet, thus showing their interest in the *Watsonia* cumulative index project. To date nearly 200 have responded and I was heartened by the notes of encouragement which many of you wrote on the forms.

The production of the database has been a long process due to other commitments which have taken priority. However, the end is in sight and 50% of the text for the printed version has been completed. I anticipate completion of the camera ready copy by the end of October.

The cumulative index covers *Watsonia* volumes **1** to **20** and several of those who responded asked about incorporating data from the subsequent volumes. It would be very time consuming to integrate the data from these later volumes into the printed version, but I am considering the best options for putting them on the BSBI Web Site and will be discussing these with the Publications Committee.

Because of the work on the cumulative index I must apologise for the non-appearance of the annual index to Vol. **23** with the August issue of *Watsonia*. The index will be mailed to members early in 2003.

CHRIS BOON, Honorary Indexer, 68 Mill Lane, Greenfield, Bedfordshire MK45 5DF

BSBI EDUCATION INITIATIVE

So far this year the BSBI's Education Initiative has made progress in a number of areas.

One-day conference at the Linnean Society on 4 April 'How do we find and train the next generation of field botanists?'

The conference was very well attended with over 100 delegates and 23 speakers including Kees Groen from Holland and Benito Valdes from Spain. Whilst there was general agreement that the normal education curricula allow very few opportunities to teach plant identification there was an enormous awareness of the need to train future field botanists. Many ways in which this might be done outside the confines of formal education were proposed.

The teaching opportunities being created in botanical gardens coordinated by the Botanical Gardens Education Network (BGEN) and the resources now available within many Wildlife Trusts were explored. The concept of ladders of opportunity was developed under which those inspired by exhibitions in gardens or on guided walks by the Trusts would be able to go on via a structured series of courses starting with those for beginners and ascending to specialist courses at Field Study Centres and to diploma courses in collaboration with University Departments of Continuing Education or Lifelong Learning.

The urgency for action was summarised at the end of the day by an environmental consultant who said there never was a time when there was such a need for skilled vascular plant botanists and never such a time when there was such a shortage.

[If anyone would like copies of any of the papers given this can be arranged by getting in touch with the author – address below]

Activities of the Education Group

The Group met soon after the conference on 30 April and has set up a number of working parties to look at ways of bringing botanical inspiration and teaching to the general public from primary school to early retirement so that there will be a next generation of amateur and professional botanists.

Primary Schools

Ways are being sought of providing materials and training for volunteers willing to approach primary schools and offer to enthuse young people with an interest in plants. Erica Bower (BGEN) and Dawn Sanders (Chelsea Physic Garden) are organising three courses to 'Teach the Teachers' during 2003 at Chelsea, Cambridge Botanic Garden and at Chester Zoo (which has splendid gardens!). They hope many BSBI members, especially with primary school teaching experience, would like to attend one of these courses. Contact the author at the address below for details to be sent as soon as they are available.

Courses for adults in botanic gardens

BGEN will shortly carry out a survey of what courses are currently offered and how successful they are. The results will be analysed and presented to a BGEN conference at Wakehurst Place 14-16 November 2002. This meeting will also promote the idea that all botanic gardens dedicate space to advertising botanical organisations like the BSBI active in their area.

Courses being run in collaboration with Wildlife Trusts

The experiment in Northamptonshire of running a series of 8 one-day schools on plant identification for young professionals and Wildlife Trust volunteers is now nearing the end of its second year and has again been oversubscribed whilst achieving a high level of student satisfaction. The demand clearly exists all over the country and, during the last 12 months, 20 Wildlife Trusts have been visited to encourage them to follow the Northants model and many have reacted enthusiastically. The idea was extended to many more Trusts at a meeting of 40 their education officers and other staff near Peterborough on 23 July.

Certificates in Biological Recording and Plant Identification

The highly successful courses run by Birmingham University in partnership with FSC and BSBI have expanded from 12 vascular plant ID modules and 12 students in 1997 to 40 modules and 80 students in 2002. Now other universities are planning to follow suit, and a non-residential two-year Certificate programme will be run by Leicester University starting in the autumn of 2002 (see p. 55).

Spotlight on Plants

The free course at Preston Montford Field Centre for 6th formers, cancelled in 2001 because of a lack of applicants, was redrafted and aimed at students at the end of their first sixth form year. It was so well supported that a second course at Juniper Hall had to be hastily arranged for the end of August. Sadly of the 15 offered a 'free' place at the June course at Preston Montford only eight finally appeared — because students (and parents) had nothing to lose if they did not arrive. In future we shall ask for a substantial deposit, returnable if they attend. However the course was an outstanding success and was highly enjoyed by students and tutors alike. The students all went home bitten by the botanical bug — one wrote 'I hope that my new-found botanical interest, will last a lifetime', and another 'I'll definitely never look at a plant the same way again'. The Field Studies Council will submit a full report after the second course is complete but it is already clear we should repeat the courses in 2003.

Trees and Shrubs web site

This has now been thoroughly tested and modifications made to make it more user friendly to those with no previous knowledge of technical terms. We hope to proceed towards the production of CD Roms, to be widely available for schools, in the near future. Discussions are already underway with Science and Plants for Schools (SAPS) about further web sites for vascular plant identification. If you have not yet tried out the web site it is www-saps.plantsci.cam.ac.uk/trees

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PLANT RECORDS

With the publication of Plant Records in *Watsonia* **24(2)**: 227-250 (August 2002) all the records that I had in my possession, up to and including those for 1999, have now been dealt with.

The next set of records to be published will be for 2000 and hopefully these will appear in the next issue of *Watsonia* in February 2003. Chris Preston at BRC tells me that he has a number of post *Atlas* records (2000+) but so far as he knows all pre 2000 records sent to him have now been forwarded to me. With the immense pressure of work at BRC in recent years in connection with the *New Atlas* it is possible that some may have been mislaid and if any recorder has sent in pre 2000 records for publication and they have not yet appeared please contact me ASAP with details of when they were sent and to whom and I will try to chase them up.

All new records for publication in *Watsonia* should continue to be sent to Dr C.D. Preston, CEH Monks Wood, Abbots Ripton, Huntingdon, PE28 2LS and he will forward them to me. Records which do not qualify for *Watsonia* should be sent to me for publication in *BSBI News*.

With the publication of *The New Atlas of the British and Irish Flora* (what a superb book it is and what a boon the CD-Rom is), Publications Committee will look again at the necessary qualifications and a revised list will appear in the January issue of *BSBI News*.

EDITOR

PROFILES OF NEW HONORARY MEMBERS

Paul Hackney

Paul Hackney FLS was born and educated in Manchester, family holidays were spent in Wales, particularly Snowdonia, and it is from there that his first voucher material was collected and his love of hills and mountains developed. After a BSc at the University of Leeds he moved to Liverpool Museum where he worked for two years with Eric Greenwood as trainee Assistant Keeper. In 1968 he moved to Northern Ireland to the post of Assistant Keeper of Botany and Curator of the Herbarium in the Ulster Museum. He joined the BSBI in 1973 and is now Keeper of Botany, still in the Ulster Museum.

So, what impact has Paul had on botany and particularly botany in Northern Ireland over the last 30 or so years? The answer is simple — without Paul's enthusiasm and commitment, Northern Ireland botany would be a poorer place.

Whenever I have taken student's groups around the Ulster Museum and into the bowels of the building that houses the herbarium, Paul has greeted the visitors with charm and infectious enthusiasm (almost matched by that of his colleague and wife Catherine) that has left the students eager to find out more about botany — usually his beloved ferns. This interest is the result, I suspect, of his early tutoring at the University of Leeds under the incomparable Irene Manton.

Publications have figured high on Paul's agenda. Apart from many papers and notes published over the years, in 1992 he edited the third edition of Stewart and Corry's *Flora of the North-east of Ireland* thus following in the footsteps of Robert Lloyd Praeger himself who edited the second edition with William R. Megaw. Recently, he and I (and Catherine) edited *Biological Collections and Biodiversity*, the conference proceedings of the joint Linnean Society and Royal Horticultural Society meeting in Belfast in 1996. It was a pleasure to work with him on this publication; despite the immense frustration he never lost his sense of humour and I can see him now in Catherine's office doubled up in laughter as he regaled me with stories of his visit sometime after the conference to Professor Viktor Dragavtsev of the Vavilov Institute, St Petersburg, one of our guest speakers. Paul was also responsible for compiling the list of plant species for the Northern Ireland plant protection legislation.

As a field botanist, Paul is probably best known through his work in Co. Down (v.c. 38) where he was vice-county recorder for many years. It is a most beautiful county with both Strangford Lough and the Mourne Mountains and it is perhaps not surprising that invariably when you ring up the Ulster Museum he is away 'doing field work'. Recently he handed over the reins to Graham Day so perhaps in future we can expect him to be in the office more often to answer the telephone! He has been a major contributor to all BSBI publications where Northern Ireland records have been included and is also the Northern Ireland recorder for the British Bryological Society. Conifers are another passion.

For many years he has been on the Committee/Board of Directors of the *Irish Naturalists' Journal* and has helped steer it through some very difficult times. He has edited the Plant Notes section for many years. He has also served on the BSBI's Committee for Ireland, most recently as the Secretary 1994 to 1997 and is a past President of the Belfast Naturalists' Field Club.

Paul has spent considerable time encouraging others, particularly the amateurs in our Society. With Maura Scannell and myself, Paul helped John Harron's work on the *Flora of Lough Neagh* to fruition — as well as writing the sections on *Rubus* and *Taraxacum*. Let's be honest, anyone fool

enough to take on these two groups (and *Hieracium* for which he has a soft spot) deserves honorary membership of our Society! He has also helped Stan Beesley and John Wilde to produce the *Urban Flora of Belfast* and I know that behind the scenes he is quietly encouraging others to write local Floras — such is his manner.

As well as his publications, two other things will form the legacy of Paul's time in Northern Ireland. One is CEDaR (Centre for Environmental Data and Recording) started, after a little hiccough, in 1995. This has gone from strength to strength and the quiet charm that Paul possesses is undoubtedly one of the reasons why it has been so successful and why the recorders of Northern Ireland have taken to it like 'ducks to water' — or should it be 'duckweeds to water'? Additionally, Paul has also been responsible through his work at the Museum for setting up and steering and writing the Flora of Northern Ireland Website; it is his 'baby' and is the most visited website for the whole of the Ulster Museum. Both it and CEDaR are excellent examples of local initiatives driven by people with vision and commitment — and Paul is one of these.

It is both an honour and an immense pleasure for me to recommend Paul Hackney to you for Honorary Membership of our Society. I can think of no-one more deserving of the honour.

BRIAN S. RUSHTON

Chris R. Boon

In the absence of the author, this appreciation was read out by the Hon. General Secretary

First, may I offer my apologies to the AGM and to Chris for being unable to be present in person to deliver this 'appreciation'. I had intended to begin with reference to Blackadder the Third, Baldrick, Turnips and Dr Samuel Johnston, but alas, that intriguing tale will have to await a personal delivery – perhaps in the Pub after the next Records Committee, Publications Committee, or Database Subcommittee Meeting. There is in that last phrase a clue as to why Chris Boon has been nominated for honorary Membership of this Society — he is a member of two of our Permanent Working Committees and one Subcommittee, and not just a member but Secretary of two of them; and, as all past secretaries know, that means work, and lots of it.

Chris joined the Society in 1973 and become Recorder for v.c. 30 (Bedford) in 1982 on the recommendation of his illustrious predecessor, the late John Dony. He joined Publications Committee in 1986 and took over the task of indexing *Watsonia* soon after. In 1991 he was persuaded to take over as Secretary of Publications Committee from Arthur Chater and in the same year was appointed Secretary of the newly formed Database subcommittee. He has also served on Council both in his own right and as Secretary of Pubs (before Secretaries were replaced by Chairmen on Council) and last year was invited to join Records Committee.

One measure of a person's worth is to see how seamlessly they replace illustrious predecessors. And here we have two instances of Chris replacing very illustrious predecessors indeed; the late John Dony as v.c. Recorder for Bedfordshire and Arthur Chater as Secretary of Publications Committee. It is very much to Chris's credit that after 20 years in the first job and 11 in the second, he is still going strong. I have had the privilege of serving on Publications Committee and Database Subcommittee for the whole of Chris's incumbency and can vouch for the energy and enthusiasm he brings to meetings. He has now outlasted two Chairmen of Pubs and is busy helping the third take over the reins. Chris says that he always hated being on committees but does enjoy these BSBI Committees as they actually **DO** things. There is also the small matter of extracurricular activities after meetings in Piccadilly, starting in a pub and ending in a nice Italian Restaurant; Chris has always been an enthusiastic and regular member of the BSBI Eating & Drinking Club.

Chris and I, with George Hutchinson, form the BSBI's Triumvirate of Indexers. George does *BSBI News*, I do BSBI books (well some at least) and Chris does *Watsonia* and what a good job he makes of it. He started indexing volume 16 in 1986 and is now on volume 23. He is also beavering away at volume 1-20 cumulative index — yes (he claims) it is nearly finished and should be available later this year (see note p. 6).

Outside the BSBI, Chris spent his working life as a physicist with what is now the BBSRC (Agricultural Research Council in old money) and researched the aerial environment of farm buildings. He even had some of his work shown on BBC 1's 'Tomorrow's World', and was on the Radio 4 'Science Now' programme. He took early retirement in 1996 and says that he now wishes to retire again! Don't I know that feeling. 'One never believes the tales from retired people about "how they don't know how they ever found time to go to work" — but it's all true.'

In Bedfordshire he took over the defunct local Biological Records Centre to use it for compiling Atlas 2000 data for v.c. 30. The database now holds over 200,000 botanical records and will, hopefully, soon become a (nearly) fully funded organisation so that Chris will be able to retire from it. The other naturalists in Bedfordshire are a bit miffed that there are only botanical records on it, so far. He also hopes to start writing a new Flora of Bedfordshire in a couple of years.

With the tremendous contribution that he has made to the life of the Society, it gives me immense pleasure to recommend Chris Boon for Honorary Membership.

Gwynn Ellis

EDITORIAL

Congratulations to all concerned with the preparation, production and publication of the *New Atlas of the British & Irish Flora*, but especially to the three main editors, Trevor Dines, Chris Preston and David Pearman. It is fitting that the first ever full colour cover for *BSBI News* should commemorate the launch of this magnificent publication. It is invidious to single out one individual for special mention but I am sure that both Chris and Trevor would agree that without David Pearman's heroic efforts, the *New Atlas* project would have struggled to even get off the ground. It was David who, during his years as President of the Society and subsequently, spent an enormous amount of time and effort negotiating with various organisations and individuals to finance and launch the project and who then did the one-hundred-and-one other things that ensured the *New Atlas* was published more-or-less on time.

David thank you

Apologies to Sarah Whild whose e-mail address has been wrongly given in *BSBI News* and *BSBI Year Book* for some years now. Her **correct** e-mail address is : S.J.Whild@bham.ac.uk

Lynne Farrell has a new address and phone number - Scottish Natural Heritage, Battleby, Redgorton, Perth PH1 3EW. Tel.: 01738-444177. E-mail remains the same — lynne.farrell@snh.gov.uk

Diary The Diary section is omitted this issue as there are no new dates. Members are referred to page 6 of the last issue.

Colour section. Since this section needs to be with the printers some days before the main text is finalised, it is sometimes difficult (as with this issue) to give page numbers to the colour section (CS) and to the papers where the photos are referred to. I have therefore decided that from this issue on, the colour section (which always occupies at least the centre pages), will be separately numbered 1–4, and the page references to papers will be given here. CS1 – *Romulea columnae* (p. 34) & *Cardamine pratensis* (p. 28). CS2 – *Scrophularia scopolii* (p. 52). CS3 – *Lapsana communis* (p. 53) & Kickxia spuria (p. 32). CS4 – *Asplenium* × *clermontiae* (p. 30), *Silene colorata* (pp. 51+52) & Peter Macpherson (p. 11). Inside back cover *Salix alba* (p. 25. Outside back cover, our late Patron (p. 4)

Editor's e-mail address. Please note that I now have a new BSBI e-mail address: BSBINewsEditor@aol.com; my old address (bsbihgs@aol.com) will remain in use until December 31st 2002 **but will then cease to exist**. I also have another e-mail address — rgellis@ntlworld.com which is the better one to use if you are sending large files that take some time to download.

And finally our member Carol Bennett has an unwanted Vasculum to give away. If you are interested please write to her at 21 Strait Lane, Ainthorpe, Whitby, N.Yorks YO21 2JZ or ring 01287 660461 (evenings).

EDITOR

HONORARY GENERAL SECRETARY'S NOTES

I must begin with an apology — in the profiles for new Council members presented to the Annual General Meeting, Dr Chris Cheffings was mistakenly described as 'he' — I am very sorry for this error.

The Society's AGM, in Edinburgh was much enjoyed by all who attended and the Royal Botanic Garden was as beautiful as ever. The Wales AGM, which consists of a residential weekend, with an Exhibition and Field Meetings as well as the business part, was held at Plas Tan y Bwlch and was similarly greatly enjoyed (the ferocious Meirionydd midges enjoyed me, too). John Topp who attends the Wales AGM regularly, has suggested that it would be good to arrange a similar 'BSBI House Party' in another region, England, for example, as well; Meetings Committee agreed and Jane Croft and I would be grateful for ideas for a possible venue, perhaps for 2004.

Congratulations to Professor Mick Crawley on his election as a Fellow of The Royal Society; **to** Dr Peter Macpherson on his being made MBE for services to Botany in Scotland (see colour section, p. 4); **and to** Barry Unwin, (Curator of Logan Botanic Garden) also made MBE for services to Natural History.

And congratulations to the Society on the Publication of the New Atlas — members at the Scottish Exhibition Meeting in Edinburgh and at the Exhibition Meeting are invited to partake of a celebratory glass of 'bubbly' (or non-alcoholic alternative) and, may I take this opportunity to remind everyone that the AEM, this year in Cardiff, is on Saturday November 23rd, not, as is usual, the last Saturday of that month?

Congratulations also and thanks to Franklyn Perring and Allan Hamerschlag for the highly successful and much appreciated course for Sixth Formers run at Preston Montford Field Centre 'Spotlight on Plants'. This week was so well supported that a second one has had to be arranged, this time at Juniper Hall Field Centre at the end of August. These courses arise from the BSBI Education Initiative led by Franklyn Perring (see page 6).

I have recently received the news that the Natural History Museum has taken on the rôle of National Focal Point for the Global Taxonomy Initiative [GTI] in the UK; an official notification is shortly to be issued. For further information, Alistair Taylor, the GTI National Focal Point Officer at the NHM may be contacted — tel.: 0207 942 5372, E-mail: a.taylor@nhm.ac.uk

I also have details of the biennial Rolex Awards for Enterprise; these support outstanding initiatives in science and medicine; technology and innovation; exploration and discovery; the environment; and cultural heritage. I can supply further details on request.

David Pearman, as you will know, has sets of botanical postcards for sale, these are most attractive and also serve to advertise the Society; however, he would be very grateful if he could find a volunteer, preferably fairly local to him, who would take from him the task of packing and posting the sets of cards, any offers, please, to me in the first place.

The Society acknowledges with gratitude, the legacy received from the estate of David McClintock.

At the Annual Exhibition Meetings, Séan and Ann Karley have run 'Help', where mystery plants are offered for identification, for the last 21 years and they are asking if there is a volunteer who would be willing to take on this display; offers to them, please.

And I have to end with another apology, I have had problems with the Abstracts from last year's Exhibition Meeting and, I regret to say, they will not be ready for this edition of *'News'*. I apologise unreservedly to those who exhibited, I hope to have copies of the Abstracts available at this year's AEM and they will appear in a subsequent *'News'*. . .

AILSA BURNS, Honorary General Secretary and Meetings Secretary

BSBI PROJECTS

MAKING IT COUNT FOR PEOPLE AND PLANTS

I am your new Volunteers Officer, which means that BSBI receives grants to employ me to help you, the Society's volunteers. My post is part of our joint project with Plantlife 'Making it Count for People and Plants' supported by the Heritage Lottery Fund.

I am enjoying getting to know more of you through the questionnaires, which you should all have received from me, to which I have had lots of really helpful replies. Please could those of you who have not yet responded do so now, as they will help us discover how we can best help you become more involved in the sort of botany you are interested in.

As described in the yellow flyer in the last mailing of *BSBI News*, BSBI is stepping up its programme to update all its rare plant records and will also, in 2003-04, carry out a second survey of the A, J and W tetrads in those 10 km squares surveyed in the 1987-88 Monitoring Scheme, to analyse change at tetrad level. This will thus involve members not only in fieldwork, similar to Atlas 2000, in these tetrads but also in working with rare species on a one-species-at-a-time basis. In addition we plan that computer data entry will be done on a Vice-county basis, or by groups of v.cs working together, which will give opportunities for those who would like to learn to enter plant records on their computers. In this connection we can make available, free, the programme 'MapMate', with the 1987–88 records already loaded.

I am working with steering groups on the rare plant and tetrad recording procedures and these should be available towards the end of the year. Meanwhile I ask each of you to think how you would like to take part and then to let both me and the relevant v.c. Recorders (see pages 12-16 of the *Year Book*) know. You might, for example, be able to help both in your own area and on holiday in another area, or indeed to take a holiday in an area suggested by us. A major objective of the 'Making it Count for People and Plants' project is to involve as many people as possible to keep our Recorder network expanding. If you are an experienced recorder you will be able to take on a tetrad. If not so experienced we will try to find experienced recorders for you to go out with. Two pairs of eyes always spot more species than one and you can enjoy learning at the same time. Less experienced recorders can also help with rare plant recording, as there is only one species to learn at a time.

Please also speak to other botanists you know who are not yet BSBI members and encourage them to become involved. We are really keen to get recorders out in teams of two or more wherever practical, and not always just with their best friends. This will not happen unless each of you starts to think about it and tries to plan accordingly.

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

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

CO-ORDINATOR'S CORNER

Spotlight on Plants

I have a confession to make. When Frank Perring insisted that we should run botanical training courses for seventeen-year-olds I was sceptical. For the last five years or so we have had a popular and successful programme aimed at the thirtysomething professionals, and I thought this was the most appropriate age group for identification training. But I was persuaded to spend a morning demonstrating computers to the select group of seven students, and found them to be great fun and very interested in botany. So I was wrong. Let's run this programme again every year if we can, and make sure that at least a few young people have an understanding of the scientific side of botany from a reasonably early age. All credit to Franklyn for promoting the scheme; our gratitude to Alan Hammerschlag for paying for it; and to Sue Townsend and the staff at the Field Studies Council for making it work.

Reticule

Whilst teaching these students, I realised what a marvellous asset is Quentin Groom's reticule web site, www.reticule.co.uk, which can be reached through the BSBI web site. Reticule contains an on-line key for plant identification together with species accounts, photographs of plants, and much more. There is even a record submission system which brings me a regular stream of interesting records from mostly non-BSBI members. It has been intriguing to find that none of the records sent in this way over the last year or so has been an error or a spoof: they have all been good and interesting finds. Many thanks to Quentin for designing this web site and making it available to us, and of course to everyone who has sent in a record.

Shropshirebotany

My own humble contribution towards the internet era is now available for viewing at www.shropshirebotany.org.uk. This is, for a brief moment, I imagine, the most technologically advanced botanical database around. It contains a hundred thousand records for Shropshire, ranging from the early 17th century up to 1985, when Charles Sinker's Flora was published. There are interactive distribution maps and the ability to list the records by grid square, by species, by site, or by recorder. Most importantly, it gives you the full details of the records, so you know as much about them that we do. I have included bryophytes and vascular plants, but eventually we could add in the animals and fungi, too. The database was constructed by Alan Hale and paid for by the Shropshire Botanical Society and Preston Montford Field Centre, and was constructed originally for students on the University of Birmingham's Masters course, as an ideal biological recording system. But it is not passworded — take a look if you are interested.

Arable Weeds Survey 2002

I am looking forward to receiving lots of arable weed recording forms this autumn. Although it was severely curtailed by foot & mouth restrictions, last year's survey worked rather well. I took all the samples from Cornwall and Orkney and ran the results through a computer program called Twinspan, which divides them into groups according to how similar they are. Then I ran the groups through another program called Match, which assigns them to communities in the National Vegetation Classification. This worked. The computer had no problems deciding which were the Cornish and which were the Orkadian samples, and the NVC communities it decided on seemed quite likely to me. I'm hoping our hardworking contributors, John Crossley and Rose Murphy, will test those results using more standard NVC techniques, and let me know whether they are correct. Bear in mind that our survey is much quicker and easier than the usual NVC methodology.

Although comparing Cornwall with Orkney is not the hardest test you could envisage, the fact that it worked is particularly encouraging. The TPDB is bedevilled by the sheer unscientificness of traditional rare plant recording, which consists, in the main, of just going to have a look at a plant every now and then to see if it's still there, and then planting it back if it dies. This is not exactly rocket science, is it? The arable weed survey, however, gives us a methodology that can be used for so much more, and I believe it will adapt to other habitat types as well. I shall report more fully in future editions of *News*.

Survey techniques

I have another new word for you in this issue of news, coined by BSBI member Juliet Hawkins who was on a survey of Loamhole Dingle with us, and commented: 'we're not working, we're just pootling about. It's fun!' One thing I've noticed is that botanists lack a proper lexicon of technical jargon to describe our activities, which leads to us being accused of being unscientific. But I suspect that what BSBI recorders tend to do automatically may be the most efficient and effective method of finding everything that needs to be found, rather like a bumblebee searching for flowers. It may look random, but it's a lot better than walking in straight lines. As our colleagues at BRC discovered during the Atlas project, what is needed isn't so much better recording but more sophisticated analysis. However, we must admit that we don't describe our activities well, hence the need for words such as pootling and stickling. Would anyone like to write in with a formal definition, or can I assume that you all understand perfectly?

Threatened Plants Database

As Gwynn Ellis mentioned in the last issue of News, the official three-year project came to an end in April, some 42 months after it started. We all enjoyed that project immensely, and are hugely grateful to the Country Agencies for funding it. It boosted the BSBI from one of the smallest data holders in Britain into one of the biggest. I rashly promised 10 million records at the start of the project, but we eventually held 15 million this February, after receiving a copy of the Atlas data from BRC. Thank you very much to all the vice-county recorders, museum curators, records centre managers and university researchers who contributed, and most of all to Henry Arnold and Chris Preston at the BRC, who have been stalwarts throughout. I confess to still being in a bit of a daze at the rate of progress. I have had to upgrade computers and commission new database software every year. Happily, our current SQL internet database has the capacity for 50 million records, so

we're temporarily on top of the situation. We are still aiming for 30 million records by 2010, though, so there is much yet to do.

In the meantime the TPDB project is turning to research and development, while Pete Selby takes over the role of gathering data. Anyone who is interested will hopefully have seen the web site, www.tpdb.org and maybe even dipped into www.whildassociates.co.uk to see the latest species accounts. A lot of our rarities are still poorly understood, but I hope we can unravel some more of their ecological secrets using the analytical capabilities of the TPDB. Tim Rich has been putting it to good use for a couple of years now, and his papers on *Bromus interruptus* (Interrupted Brome) and *Asparagus prostratus* (*Asparagus officinalis* subsp. *prostratus*) (Wild Asparagus) make good use of it. Interesting revelations about many other species are in the pipeline. So please keep the records coming in, and many thanks to everyone who has sent in records over the last few months, even if I don't have the space here to acknowledge each of you personally.

ALEX LOCKTON, 66 North Street, Shrewsbury, Shropshire SY1 2JL; e-mail: coordinator@bsbi.org.uk

RECORDERS AND RECORDING

PANEL OF REFEREES AND SPECIALISTS

We have some new referees:

Luzula:	Mr G.M. Kay, 4 Geneva Road, Bramhall, Cheshire SK7 3HT; e-mail: graeme.m.kay@talk21.com. Mr Kay says please include ripe seeds for *Luzula campestris* / *L. multiflora*.
Trichophorum:	Mr M.E. Braithwaite, Clarilaw, Hawick, Roxburghshire TD9 8PT.
Festuca:	Mr A. Copping, The Nook, Swamp Lane, Roydon, Diss, Norfolk IP22 5FY.
Narcissus:	Professor M. J. Crawley, Imperial College, Silwood Park, Ascot SL5 7PY; e-mail m.crawley@ic.ac.uk.
General coniferous trees:	Cameron Crook's e-mail address has changed and is now cameron.crook@BTopenworld.com

and one change of requirements:

Equisetum	Mr P. Acock would prefer to have fresh green specimens sent to him, e.g. in a ziplock bag, as he finds them easier to determine than dried material.

MARY CLARE SHEAHAN, 61 Westmoreland Road, Barnes, London SW13 9RZ

PANEL OF VICE-COUNTY RECORDERS

Changes in vice-county recorders

Appointments

V.c. 36	Herefords.	Mr P. Garner to be joint recorder (all correspondence to Mrs S. Thomson).
V.c. 29	Cambs.	Mr A.C. Leslie to be joint recorder (all correspondence to Mr N. Millar). Mrs G. Crompton to retire after 28 years in the post, either on her own or with Derek Wells. She will be much missed, but members are urger to look at her website of Cambs. records (www.mnlg.com/gc).

Changes of address

V.c. 103	Mid Ebudes	Miss Lynne Farrell, c/o SNH, Battleby, Redgorton, Perth PH1 3EW

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

NOTES AND ARTICLES

A NEW KEY TO THE TRIBE *BROMEAE* IN BRITAIN AND IRELAND

The following key to *Bromeae* is proposed. It uses the nomenclature in Stace (1997).

1. Lower glume with 1(3) veins; upper glume with 3(5) veins 2
1. Lower glume with 3–5(7) veins; upper glume with 5–7(9) 3

2. Annuals without sterile shoots at flowering; spikelets lanceolate becoming wider at apex as they begin to open and thus then wedge-shaped; lemmas narrow with long awns *Anisantha*
2. Perennials with sterile shoots at flowering; spikelets narrowly oblong, tapering near apex; awns shorter than the lemmas or absent *Bromopsis*

3. Annuals without sterile shoots at flowering; spikelets ovate to linear-lanceolate; not flattened *Bromus*
3. Annuals or perennials; spikelets lanceolate or broadly so, flattened in section because the lemmas fold longitudinally along the thickened central vein (keel) *Ceratochloa*

ANISANTHA

1. Panicle compact, stiffly erect; all panicle-branches shorter than their spikelets; at least one panicle-branch >10 mm; upper glume 10–14.5 mm *A. madritensis*
1. At least some panicle-branches longer than their spikelets 2

2. Panicle erect, lax or dense; upper glume 20–42 mm; awns >35 mm; culm at lowest panicle-node scabrid or with minute hairs (30×) *A. diandra*
2. Panicle lax, spreading; upper glume 7–18(20) mm long; awns <35 mm 3

3. Panicle with long branches, each bearing only 1(3) large spikelets; culm at lowest panicle-node glabrous (30×); upper glume 8–18(20) mm *A. sterilis*
3. Panicle usually crowded with many branches, several bearing >2 small spikelets, or one-sided with several spikelets from the rhachis; culm minutely pubescent (30×); upper glume 7–12mm *A. tectorum*

BROMOPSIS

1. Plant spreading with creeping rhizomes; leaves >4 mm wide; awns 0–2.5(4) mm *B. inermis*
1. Plant compactly tufted; awns >3 mm 2

2. Lower leaves <4 mm wide, becoming inrolled or longitudinally folded; panicle dense, stiffly erect *B. erecta*
2. Leaves >4 mm wide; panicle lax 3

3. A tall robust grass; upper leaf-sheath usually with long soft hairs; panicle very lax and spreading, with long patent branches, eventually drooping with pendent spikelets; several thick cilia usually present on the edge of the culm at the lowest panicle-node *B. ramosa**
3. A shorter, less robust grass; upper leaf-sheath usually with minute patent hairs (30×); panicle erect, lax, narrow with shorter branches often swept to one side, drooping at maturity; thick cilia usually absent (or only a few) on the edge of the culm at the lowest panicle-node *B. benekenii**

* *Festuca gigantea* can resemble these species, but it is glabrous and its 10–18 mm awns are longer than its 6–9 mm lemmas.

BROMUS

1. Panicle spreading with very thin long branches; spikelets linear-lanceolate; anthers 3-5mm long and narrow *B. arvensis*
1. Panicle compact or lax but usually not with very thin branches; spikelets not linear-lanceolate; anthers not exceeding 3.8 mm in length, usually much less, and not narrow 2

2. Awns usually curving out at maturity, arising >1.5 mm below apex of lemma, awns sometimes twisted at base 3
2. Awns usually remaining ± straight, arising <1.5 mm below apex of lemma, awns not twisted at base 4

3. Panicle erect, spreading or drooping, sometimes one-sided; most pedicels longer than spikelets; lemmas 7–9 mm, glabrous or with short hairs *B. japonicus*
3. Panicle erect with short, rigid pedicels/branches; most pedicels shorter than their spikelets; lemmas 11–18 mm, usually with dense long shaggy hairs *B. lanceolatus*

4. Lemmas of leathery texture; lemma veins not protruding when dried 5
4. Lemmas of papery texture; lemma veins protruding when dried 8

5. Spikelets widening substantially by divergence of florets as fruit forms; many rhachillas becoming visible as the lemmas wrap around the caryopses which are U– or V–shaped in section 6
5. Lower leaf-sheath with long patent hairs; spikelets not widening substantially as fruit forms; lemmas continuing to obscure most rhachillas; caryopses flat or crescent-shaped in section 7

6. Lower leaf-sheath glabrous or with sparse thin, usually short hairs; lemmas 7–9 mm; glabrous or with dense very short hairs (30×); rhachillas becoming tough and slow to disarticulate *B. secalinus*
6. Lower leaf-sheath with long patent hairs; lemmas 5.5–6.5 mm; glabrous *B. pseudosecalinus*

7. Panicle narrow ± lax, usually unbranched; pedicels/branches <4 cm long; lemmas glabrous, often minutely scabrid; all awns ± equal in length; anthers 1.5–3.5 mm *B. racemosus*
7. Panicle broad and spreading; some pedicels/branches >4 cm long; lemmas glabrous or pubescent; awn of lowest lemma shorter than the others; anthers 1.3–2.5 mm *B. commutatus*

8. Maritime grass; culm 4–40 cm, stiffly erect or ascending; panicle tightly oval 1–5 cm; all pedicels <5 mm long; spikelets with very dense spreading hairs; awns sometimes curving out when in fruit *B. hordeaceus* subsp. *ferronii*
8. Not with this combination of characters 9

9. Lemmas 5–6.5(6.8) mm with a wide apical notch at least 0.6 mm deep, the awn emerging at its base, glabrous (87%) or pubescent; at least some mature caryopses longer than the palea *B. lepidus*
9. Lemmas 6.5–10.5 mm without a wide or deep apical notch, pubescent or glabrous; mature caryopses not longer than palea 10

10. Lemmas <7 mm, pubescent (54%), others glabrous *B. × pseudothominei*

(Spalton (2001A) could not distinguish plants with longer lemmas from *B. hordeaceus* subsp. *hordeaceus*.)

10. Lemmas >7 mm 11

11. Culm usually <80 cm; panicle 1–10 cm, dense or somewhat lax with not more than 3 pedicels/branches exceeding the length of their spikelets; lemmas pubescent or glabrous; anthers 1–2.6 mm *B. hordeaceus* subsp. *hordeaceus*
11. Robust grass; culm 80–175 mm; panicle 10-20 cm with at least 4 pedicels/branches exceeding the length of their spikelets; lemmas pubescent, rarely glabrous; anthers 2.2–3.8mm *B. hordeaceus* subsp. *longipedicellatus*

CERATOCHLOA

1. Spikelets broadly lanceolate, strongly flattened; lemmas with 9–11 veins; awns 0–3(4) mm; mature palea usually <¾ of the length of the lemma *C. cathartica*
1. Spikelets lanceolate, flattened; lemmas with 7–9 veins; awns (2.5) 3–10 mm; mature palea usually >¾ of the length of the lemma *C. carinata*

NOTES

- Dissection and assessment of lemma texture is facilitated if spikelets are first soaked for an hour or more in water with a few drops of detergent.
- Immature specimens should be ignored.
- Measurements that are not consistent should be averaged and more than one specimen should be examined.
- When there is an overlap in the measurements used to distinguish taxa, the character should only be used if the measured lengths are outside the overlapping lengths.
- 'Panicle-branches' are measured from the node at the rhachis to the base of the terminal spikelet on the branch.
- 'Pedicels/branches' means pedicels or branches or both combined.
- Spikelet shapes and measurements are always before divarication and fruit formation commences.
- Spikelet and lemma measurements exclude the awns.
- The lemma measured is the lowest or second lowest, whichever is the longer.
- Lemma texture is determined by gently prodding pre-soaked lemmas with a blunt needle, as described in Spalton (2001B).
- Anther measurements refer to mature undehisced anthers from the lowest florets; other anthers are smaller.
- Determinations should be checked against the more detailed descriptions in the Floras.
- The key may not be applicable to variations of these taxa in other countries.

Following Sales (1993), Oja & Jaaska (1996) and Acedo & Llamas (1999), *Anisantha rigida* is treated here as *Anisantha diandra* var. *rigida* (Roth) Sales. *Bromus hordeaceus* subsp. *thominei* is not included because, usually, it could not be distinguished from very small specimens of *B. hordeaceus* subsp. *hordeaceus*, often with glabrous lemmas.

I thank Arthur Chater and Arthur Copping for using an earlier version of this key and for their valuable comments on it, Clive Stace for many helpful suggestions after examining the key and the Curators of **BDD, BM, BRISTM, BTN, CAM, DBN, E, GL, GLAM, HAMU, HCCMS, K, LTR, MANCH, NMW, OLDM, OXF, RAMM, RNG, SLBI, SUN, TCD, TOR,** and **WARMS** for the loan of 4700 specimens which, together with 1700 fresh specimens, made the production of this key possible. I also thank those many botanists who have sent me specimens for determination. I hope that they will continue to do so and that botanists who use this key will comment on it.

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NEW ATLAS GENERA IN THEIR NATURAL ORDERS

Introduction

The extent to which plant classification can and should reflect evolutionary relationships has long been controversial. When we were young, Lam (1959) described the 'bitter battle [which] has been and is being fought between taxonomists who at all costs want to keep their minds and methods free from all phylogenetical implications, and those who cannot help pondering how what they observe may have been brought about'. The first group included many expert botanists who regularly maintained that the purpose of a classification was general utility and that any attempt to uncover evolutionary relationships was, in Lam's words, 'nothing but an expression of the authors' opinions on the interrelationships in the taxon studied' or, in W.B. Turrill's phrase, 'pseudophylogeny'. However, the alternative view, that classifications should reflect evolutionary lineages (known technically as 'clades'), rapidly gained ground. A speculative evolutionary system, presented in rich colour, was figured in the introduction to *Flowering Plants of the World* (Heywood 1979).

With the advent of DNA sequencing, it became apparent that genetic code can be used to reveal lineages. Speculation was replaced by good evidence based on segments of code preserved in the cell nucleus, in chloroplasts and in mitochondria. A world-wide project to uncover the lineages of land plants is still in progress, but the broad pattern is now clear. The basic picture for seed plants was presented nearly ten years ago in a paper with 42 authors (Chase *et al.* 1993). Further details have gradually been worked out, so that that a comprehensive overview of the orders of flowering plants and their phylogeny (evolutionary relationships) is now available. The level of available detail still varies quite widely, depending on the number of taxa that have been sampled within a group and whether the DNA-based classification agrees with or contradicts previously accepted views. Reassignments of some genera, and perhaps the merging of some adjacent families, may therefore be expected.

The classification used in the *New Atlas* and its accompanying compact disk (Preston *et al.* 2002) followed Stace (1997), who in turn followed Cronquist's (1981) classification of angiosperm families. We have set out below the way in which the angiosperm genera in the *New Atlas* would be classified in the emerging system based on molecular phylogeny (the technical shorthand for a phylogeny based on genetic code), as set out in a comprehensive review (Angiosperm Phylogeny Group 1998) but including all modifications subsequently proposed by Stevens (2002). Vascular cryptogams are classified according to the results of Kenrick & Crane (1997) and Rydin *et al.* (2002). The sequence is that of Kenrick & Crane (1997). Families have been put in orders that agree with this sequence and also take account of the results of Rydin *et al.* (2002). The classification of conifers is also identical to that of Stace (1997), except that the sequence of families follows the results of Rydin *et al.* (2002).

Here is the basic classification.

LYCOPODIOPSIDA (clubmosses)
POLYPODIOPSIDA (ferns and horsetails)
- Ophioglossidae
- Equisetidae
- Polypodiidae (leptosporiangiate ferns)

PINOPSIDA (conifers)
MAGNOLIOPSIDA (angiosperms)
- Basal angiosperms – Nymphaeales to Ceratophyllales
- Monocots
- Eudicots
  - Basal Eudicots – Ranunculales to Santalales
  - Large clade (Saxifragales to Sapindales) including Rosids
  - Asterids (Cornales to Dipsacales)

The two groups labelled as 'basal' are not clades but consist of a series of lineages, among which the orders are only distantly related, but which branched off before those listed lower down. The

non-basal groups are all thought to be clades, i.e. single lineages. In the native flora of Britain and Ireland, the most basal of all the angiosperm families is Nymphaeaceae, which shares with the gymnosperms some genetic code that has been deleted in almost all other angiosperms (this code is also retained in a very few non-European genera such as *Schisandra*) (Qiu *et al.* 1999).

Of course, any new system of classification is a shock. We get used to the traditional order in which the genera are presented. There are indeed some shocks to be had in the new natural sequence for the angiosperms. On the positive side, the system is built on the rock of genetic code rather than on the sand of macroscopic (or even chemical and microscopic) characters. Therefore the outlines of the system should not change much in future. On the negative side, it is downright irritating to have the newly defined Eudicots separated from the basal angiosperms such as *Laurus*. In principle, it is permissible within the existing phylogeny to reverse the order in which some dichotomies are given (i.e. swivel a few nodes in the hierarchical tree), and one could perfectly well have a natural order that started with the dicots (finishing with Asteraceae) and ended with the monocots (finishing with Orchidaceae). It is not for us to prejudge the wishes of future flora-writers, so we use the sequence proposed by the Angiosperm Phylogeny Group.

What should we say about the new system?

Here are its soothing features:

- Conifers are a single clade.
- Monocots are a single clade.
- Most of the existing families are unaltered, or are altered by combining groups that were well known to be related.
- Grasses, sedges and rushes, together with *Eriocaulon*, *Sparganium* and *Typha*, are in a single clade.
- The big clade Asterids is basically the Metachlamydeae of Clapham, Tutin & Warburg (1962), but also includes their Umbellales.
- Several puzzling genera such as *Acorus*, *Ceratophyllum*, *Gunnera* and *Platanus* are genuinely isolated.

Here are the shocks.

- The ferns are not a clade unless horsetails are included; *Ophioglossum* branched off the fern lineage before *Equisetum* (Pryer *et al.*, 2001).
- Gymnosperms are not a clade; conifers may perhaps be closer to angiosperms than to *Ephedra* (Rydin *et al.* 2002).
- Dicots are not a clade; some lineages, notably Nymphaeales, originated before the divergence of the monocots and the main body of dicots.
- The monocots formerly assigned to Liliaceae fall into several different families in the orders Alismatales, Asparagales, Dioscoreales and Liliales.
- The former Scrophulariaceae are split up into several different families within the Lamiales.
- Roses and nettles are in the same order, Rosales.
- Violets and willows are in another order, Malpighiales.
- Wind pollination arose independently in several other lineages, e.g. *Empetrum*, *Fraxinus*, *Hippuris*, *Mercurialis*, *Thalictrum*.
- Apiaceae are in a clade (Euasterid II) with Asteraceae, Dipsacaceae, *Escallonia*, *Ilex* and *Adoxa*.
- *Paeonia* is in the Saxifragales.

And here are the remaining puzzles.

- *Ceratophyllum* is still of rather doubtful position, but possibly close to the Monocots (Chase *et al.* 1993, Qiu *et al.* 1999, Soltis *et al.* 2000).
- Boraginaceae belong with other Asterids fairly near Gentianales, but the true position is unclear.
- Escalloniaceae are fairly close to Asterales, but the exact position is unclear.

Of course, for most botanists such as ourselves, the unfolding of a taxonomy based on genetic code can only be viewed from the sidelines. The elucidation of this taxonomy is undoubtedly the greatest botanical endeavour of our time, a true revolution. We have taken great pleasure in seeing what it means in for the flora of our islands and hope that other BSBI members will enjoy it also.

Checklist

The checklist below gives classes (-opsida), orders (-ales) and families (-aceae) in which the taxa covered by the *New Atlas* project are included in the new classifications described above. Unless stated, the British and Irish genera included in the families are the same as those allocated to the families in the *New Atlas*. Deviations are explained in brackets after the family name. Sometimes the composition of the family is given (usually as a single genus or a list of genera); in other cases taxa included or excluded from the family are listed. Numerals refer to the notes at the end.

Orders and families which are introduced are *in italics*; in addition, two families (Berberidaceae, Resedaceae) include only doubtfully native and introduced taxa.

LYCOPODIOPSIDA

Lycopodiales
- Lycopodiaceae

Selaginales
- Selaginellaceae

Isoetales
- Isoetaceae

POLYPODIOPSIDA

Ophioglossidae

Ophioglossiales
- Ophioglossaceae

Equisetidae

Equisetales
- Equisetaceae

Polypodiidae

Hymenophyllales
- Hymenophyllaceae

Osmundales
- Osmundaceae

Dicksoniales
- *Dicksoniaceae*

Marsileales
- Marsileaceae
- *Azollaceae*

Polypodiales
- Adiantaceae
- Dennstaedtiaceae
- *Pteridaceae*
- Blechnaceae
- Aspleniaceae
- Dryopteridaceae
- Thelypteridaceae
- Woodsiaceae
- Polypodiaceae

PINOPSIDA

Pinales
- *Araucariaceae*
- Taxaceae
- Taxodiaceae
- Cupressaceae
- Pinaceae

MAGNOLIOPSIDA

BASAL ANGIOSPERMS (not a clade)

Nymphaeales
- *Cabombaceae*
- Nymphaeaceae

Laurales
- *Lauraceae*

Piperales
- *Aristolochiaceae*

Ceratophyllales
- Ceratophyllaceae

MONOCOTS

Acorales
- *Acoraceae* (Acorus) (1)

Alismatales
- Tofieldiaceae
- Araceae (including Lemnaceae, excluding Acorus)
- Alismataceae
- Butomaceae
- Hydrocharitaceae (including Najadaceae)
- Scheuchzeriaceae
- *Aponogetonaceae*
- Juncaginaceae
- Ruppiaceae
- Zosteraceae
- Potamogetonaceae (including Zannichelliceae)

Asparagales
- Orchidaceae
- Iridaceae
- *Hemerocallidaceae* (Hemerocallis, Phormium, Simethis) (2, 3)
- *Asphodelaceae* (Asphodelus, Kniphofia) (2)
- Alliaceae (Allium, Nectaroscordum, Nothoscordum, Tristagma) (2)
- Amaryllidaceae (7 genera from Liliaceae) (2)
- *Agapanthaceae* (Agapanthus) (2)
- Hyacinthaceae (7 genera from Liliaceae) (2)
- *Agavaceae* (excluding Phormium) (3)
- Asparagaceae (Asparagus) (2)
- Ruscaceae (Convallaria, Maianthemum, Polygonatum, Reineckea, Ruscus) (2)

Dioscoreales
- Nartheciaceae (Narthecium) (2)
- Dioscoreaceae

Liliales
Alstroemeriaceae (Alstroemeria) (2)
Colchicaceae (Colchicum) (2)
Liliaceae (6 genera from Liliaceae *sensu* Stace) (2)
Melanthiaceae (Paris) (2)
Poales
Bromeliaceae
Juncaceae
Cyperaceae
Poaceae
Typhaceae (including Sparganiaceae)
Eriocaulaceae
Commelinales
Commelinaceae
Pontederiaceae

EUDICOTS

Basal Eudicots (not a clade)
Ranunculales
Berberidaceae
Ranunculaceae
Papaveraceae
Fumariaceae
Proteales
Platanaceae
Buxales
Buxaceae
Gunnerales
Gunneraceae
Caryophyllales
Droseraceae
Frankeniaceae
Tamaricaceae
Polygonaceae
Plumbaginaceae
Caryophyllaceae
Amaranthaceae (including Chenopodiaceae)
Phytolaccaceae
Aizoaceae
Portulacaceae
Santalales
Santalaceae (including Viscaceae)
Large clade including Rosids
Saxifragales
Paeoniaceae
Crassulaceae
Haloragaceae
Grossulariaceae (Ribes) (4)
Saxifragaceae
Vitales
Vitaceae
Crossosomatales
Staphyleaceae
Geraniales
Geraniaceae
Myrtales
Onagraceae
Lythraceae
Myrtaceae
Celastrales
Celastraceae
Malpighiales
Salicaceae
Violaceae
Linaceae
Elatinaceae
Clusiaceae
Euphorbiaceae
Oxalidales
Oxalidaceae
Fabales
Fabaceae (including Mimosaceae)
Polygalaceae
Rosales
Rosaceae
Elaeagnaceae
Rhamnaceae
Ulmaceae
Celtidaceae (including Cannabaceae)
Moraceae
Urticaceae
Cucurbitales
Cucurbitaceae
Fagales
Nothofagaceae (Nothofagus) (5)
Fagaceae
Juglandaceae
Myricaceae
Betulaceae
Brassicales
Tropaeolaceae
Limnanthaceae
Resedaceae
Brassicaceae
Malvales
Thymelaeaceae
Cistaceae
Malvaceae (including Tiliaceae)
Sapindales
Rutaceae
Simaroubaceae
Anacardiaceae
Sapindaceae (including Aceraceae, *Hippocastanaceae*)
Asterids
Cornales
Cornaceae (Cornus) (6)
Hydrangeaceae
Ericales
Diapensiaceae
Balsaminaceae
Primulaceae
Polemoniaceae
Sarraceniaceae
Ericaceae (including Empetraceae, Monotropaceae, Pyrolaceae)
Garryales
Garryaceae (Aucuba) (6)
(Order uncertain)
Boraginaceae (including Hydrophyllaceae)
Gentianales
Rubiaceae
Gentianaceae
Apocynaceae

Lamiales
- Oleaceae
- *Gesneriaceae*
- *Calceolariaceae* (Calceolaria) (7)
- Plantaginaceae (including Callitrichaceae, Hippuridaceae and 12 genera of Scrophulariaceae) (7)
- *Verbenaceae*
- Lamiaceae
- *Paulowniaceae* (Paulownia) (7)
- *Phrymaceae* (Mimulus) (7)
- *Acanthaceae*
- Scrophulariaceae (*Buddlejaceae* plus Phygelius, Scrophularia, Verbascum) (7)
- Orobanchaceae (including Erinus and 7 genera of hemiparasitic Scrophulariaceae) (7)
- Lentibulariaceae

Solanales
- Convolvulaceae (including Cuscutaceae)
- Solanaceae

(Order uncertain)
- *Escalloniaceae* (Escallonia) (4)

Aquifoliales
- Aquifoliaceae

Apiales
- *Griseliniaceae* (Griselinia) (6)
- *Pittosporaceae*
- Araliaceae (including Hydrocotyle) (8)
- Apiaceae (excluding Hydrocotyle)

Asterales
- Campanulaceae
- Menyanthaceae
- Asteraceae

Dipsacales
- Adoxaceae
- Caprifoliaceae
- Dipsacaceae
- Valerianaceae

Notes

1 Acorus has been transferred from Araceae to Acoraceae.

2 The genera in the Liliaceae *sensu* Stace are now divided between the following 14 families: Tofieldiaceae (Tofieldia); Hemerocallidaceae (Hemerocallis, Simethis); Asphodelaceae (Asphodelus, Kniphofia); Alliaceae (Allium, Nectaroscordum, Nothoscordum, Tristagma); Amaryllidaceae (Amaryllis, Crinum, Galanthus, Leucojum, Narcissus, Pancratium, Sternbergia); Agapanthaceae (Agapanthus); Hyacinthaceae (Chionodoxa, Hyacinthoides, Hyacinthus, Muscari, Ornithogalum, Scilla); Asparagaceae (Asparagus), Ruscaceae (Convallaria, Maianthemum, Polygonatum, Reineckea, Ruscus); Nartheciaceae (Narthecium); Alstroemeriaceae (Alstroemeria); Colchicaceae (Colchicum); Liliaceae (Erythronium, Fritillaria, Gagea, Lilium, Lloydia, Tulipa); Melanthiaceae (Paris).

3 Phormium has been transferred from Agavaceae to Hemerocallidaceae.

4 Escallonia has been transferred from Grossulariaceae to Escalloniaceae.

5 Nothofagus has been transferred from Fagaceae to Nothofagaceae.

6 The genera in the Cornaceae *sensu* Stace are now divided between Cornaceae (Cornus), Garryaceae (Aucuba) and Griseliniaceae (Griselinia).

7 The genera in the Scrophulariaceae *sensu* Stace are now divided between the following 6 families: Calceolariaceae (Calceolaria); Plantaginaceae (Antirrhinum, Asarina, Chaenorhinum, Cymbalaria, Digitalis, Hebe, Kickxia, Limosella, Linaria, Misopates, Sibthorpia, Veronica); Paulowniaceae (Paulownia); Phrymaceae (Mimulus); Scrophulariaceae (Phygelius, Scrophularia, Verbascum); Orobanchaceae (Bartsia, Erinus, Euphrasia, Melampyrum, Odontites, Parentucellia, Pedicularis, Rhinanthus).

8 Hydrocotyle has now been transferred from Apiaceae to Araliaceae.

Acknowledgements

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GERANIUM PRATENSE (MEADOW CRANESBILL)

In recent years I have noted new records of this species along main roads in Dorset, roads that have been improved since I moved here 20 years ago. I do not think verge-cutting regimes have changed, and I am fairly sure that I would not have missed something so obvious before. I can find no reference to plants being introduced with grass-seed mixtures, but the verges of all these rebuilt roads have, of course, been re-sown.

The New Atlas national map of *Geranium pratense* was one where it was almost impossible to apportion records between those that were native and those that were not, and in Dorset the position is totally baffling. In view of the fact that this is one of Plantlife's 'single' species to be surveyed in 2002, has anybody else experience of recent roadside appearances?

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BROMUS SECALINUS — A DECREASING PLANT?

Recent Floras by Stace (1997) and Sell & Murrell (1996) both report that *Bromus secalinus* (Rye Brome) is much decreased and is now an infrequent casual. My experience and that of several colleagues while recording for the Worcestershire Flora Project suggests that this is not the case in our area.

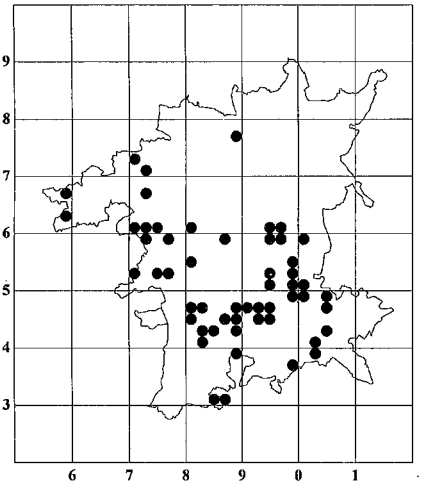
The first records came in 1993 when we recorded the plant infesting a large wheat field in the Vale of Evesham (the field was conveniently situated to give us 4 hectad records!) with a further site on the edge of arable about 15 km west. A few more sites were found over the next 5 years, but since 1999

we have had a minor explosion of records. We now have recent records for 54 tetrads out of our study area of 597 tetrads.

Most of the records are from arable, especially cereals, with only a very few plants in other habitats such as a road verge, rough grassland and on basic hardcore. In several wheat fields *Bromus secalinus* is fast becoming a significant crop contaminant on the heavier soils (Lower Lias, Mercian Mudstone, etc.), with populations of many thousand plants in the worst cases.

I assume that the current increase has been triggered by changes to the sourcing of wheat seed, but I have no direct evidence of this. Whatever the source of the plants, they obviously find local conditions of soil, climate and cultivation much to their liking. Changes in agriculture practice, with

Bromus secalinus



less ploughing and more direct drilling of winter cereals into stubble, has probably helped the spread. Bromes and certain other grasses like *Alopecurus myosuroides* (Black-grass) are rather resistant to chemical control and are becoming more prevalent. An interesting parallel can be drawn with *Phalaris paradoxa* (Awned Canary-grass), which has spread in cereals in the same way. We now have this recorded in 40 tetrads.

There is another Brome that is now common in cereals in our area. It keys out to *Bromus commutatus var. pubens* (Meadow Brome) but in some cases may be referable to the recently described *Bromus hordeaceus* subsp. *longipedicellatus* L.M. Spalton (Soft-brome) (Spalton 2001). The few plants that I have looked at critically seem intermediate between these taxa but collection has been too late for anther measurement. I don't think that the last word has been written on *Bromus* taxonomy yet.

Bromus secalinus is worth looking out for in other areas. Cereal fields are often ignored by botanists (usually with good reason!) but I am sure that our experience in Worcestershire is not unique. Within the modern county boundary, 2 of our records are for v.c. 33 (E. Gloucestershire) and I think it likely that other neighbours will have populations awaiting discovery.

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THE LAST BRITISH RECORD OF *EUPHORBIA PEPLIS*

Euphorbia peplis (Purple Spurge) is one of the few plants that have become extinct in the British Isles since botanical records began. The last record was from Alderney, Channel Isles, in 1976.

Both the 2nd and 3rd editions of the *British Red Data Books 1 Vascular plants* (1983, 1999) give the last record for the Britain as 1965, from Lundy (N. Devon, v.c. 4), a date which we have followed in the imminent *New Atlas*. In a chance conversation, Peter Marren mentioned his hunch that this Lundy record was almost certainly an error for *E. peplus*, and this has been confirmed after a long search by DAP. It transpires that the record was made by a then young and 'over-enthusiastic' amateur botanist, and we have the letter to support this. If that recorder saw the number of Atlas records that we had to deal with that were such slips of the pen, she would be heartened!

The last record for Britain now becomes that from Downderry, in E. Cornwall (v.c. 2), where it was recorded by A.W. Graveson in 1949. This record is supported by a herbarium specimen in **RNG** (see L.J. Margetts & R.W. David, *A review of the Cornish flora 1980* (1981: 144)). However, this drift-line species is notoriously erratic in its appearances, and it may, like another Mediterranean-Atlantic species, *Polygonum maritimum* (Sea Knotgrass), yet reappear after winter storms.

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THE NATURAL HISTORY OF A WHITE WILLOW

Along the Kennet Valley, in water meadows from Avebury to Marlborough, the prevailing south-westerly winds have felled a number of White Willows (*Salix alba*). Most fallen trees have been tidied up, their timber cut up and removed; sometimes there have been local tenantry or other requirements that this be done. However numbers of remaining fallen trees, which often are aligned towards the NE, have not been killed despite fractured trunks and branches, or partial uprooting, or both.

The (female) tree shown in the two photos (inside back cover) had a trunk girth of approximately 550 cm at 1.5 m (5 ft) from the original root (see RH photo). On the basis of 2.5 cm (1 inch) a year, this makes this tree at least 220 years old. The original trunk, as shown in this same photo, was hollow and became fractured on the SW aspect. The LH photo shows the same tree viewed from the NE, but close-to, and partly underneath the old trunk. After the bulky centre of the old tree was angled over to be driven forcibly into the marshy ground, re-rooting subsequently occurred, creating a massive new trunk about 2.5 m NE of the old base of the original bole. This new trunk, (with the dachshund at its base), at its narrowest waist 90 cm (3 ft) from the ground has a girth of 660 cm! Splaying of the original branches has contributed to this huge girth, but the tree has been remodelling for many years so that the new vertical NE trunk is now much bigger and much more stable than the original (now horizontal) parent SW trunk.

In addition, 3 of the 4 horizontal branches have re-rooted by natural layering. The lowest has layered extensively and continuously at 3-6 m from the original root, and also to the south towards the lower right of the RH photo. The uppermost horizontal branch, a continuation of the original main trunk, had crossed the preceding to re-root to the E, 14 m from the original root. The third layering is to the N, 7.5 m from the original root. The new main tree is therefore fixed centrally, and by living struts at 4 points of the compass peripherally (SW, the original rooting, N, S and E).

The tallest vertical branches I estimate to be 15-20 m high, over three quarters the height of adjacent vertical White Willows which they will soon surpass. The girth of the largest vertical trunk is 215 cm at 1.5 m (5 ft) from ground level, and the second largest 155 cm at 1.8 m (6 ft) from the ground. There are 12 other new young vertical trunks arising from the long horizontal branches at levels of 1.5, 1.8 and 2.1 m (5, 6 & 7 ft), with girths ranging from 35-95 cm. The distance from the original root in the SW, along the longest horizontal branch, to the greenery at the top of the most

peripheral large vertical branch, is well over 25 m. A new willow grove is forming from one original tree.

The LH photo also shows the rooting base of an epiphytic Ash tree (*Fraxinus excelsior*). This tree has grown right through the centre of the new White Willow trunk to reach the ground. At 1.5 m (5 ft) from the ground it has a girth of 70 cm, and has reached a height of 9 m. This photo was taken in April before most epiphytic plants were fully in leaf.

There were subsequently dense tangles of Dog-rose (*Rosa canina*). By mid-May within these protective tangles and elsewhere on the tree wherever the cows could not reach, other epiphytes included Short-fruited Willowherb (*Epilobium obscurum*), Ash and *Elder* (*Sambucus nigra*) seedlings, seedlings of 3 Dock species (*Rumex sanguineus*, *R. obtusifolius*, *R. conglomeratus*), Bittersweet (*Solanum dulcamara*, Rye-grass (*Lolium perenne*) and Red Fescue (*Festuca rubra*).

This tree is typical of other White Willows and Crack Willows (*Salix fragilis*) felled by gales in water meadows, which also (only a few!) have been left alone. It is only exceptional in its size, and its stabilisation by the second trunk, and by 3 living layering branches, whereas others may layer in only one place, or have most branches killed by fracturing or most roots killed by uprooting during the fall. Contrary to dogma about pollarding, White (and Crack) Willows can live long lives, if left alone and allowed to re-root. Even the removal of dead branches from angled trees which function as stabilising struts, (and as obstructions to sheep and cows seeking the new living shoots from branches at ground level), may impair the natural long-term survival of wind blown willows. Thorny epiphytes such as Dog-rose, Hawthorn (*Crataegus* spp.), Blackthorn (*Prunus spinosa*) and Bramble (*Rubus fruticosus* agg.), which are certainly not confined to pollarded trees, protect new shoots on fallen willows from herbivory whilst they re-establish themselves in the natural life cycle of these trees.

A line of 30 neatly pollarded, trimmed and cleared-around willows undoubtedly has much biological interest — but in my opinion, less that this single natural unmolested tree.

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DICKIE'S BLADDER-FERN INLAND IN BANFFSHIRE (V.C. 94)

Cystopteris dickieana (Dickie's Bladder-fern) has long been known from sea caves and adjacent cliffs in Kincardineshire (v.c. 91) (Marren 1984, Jermy 1999). These were the only known extant sites in the British Isles until Tennant (1996) reported finds from inland areas of Highland Scotland in Mid Perth (v.c. 88) and Easterness (v.c. 96). He commented in his paper that more sites would likely be found once spores of *C. fragilis* (Brittle Bladder-fern) like plants were more routinely checked under a microscope; the only certain difference between the two species being the spinose spores of *C. fragilis* compared with the rugose spores of *C. dickieana*.

On 19 August 2001 I found what I took to be *C. fragilis*, growing on the sides of an old stone bridge at a site *c.*40 km inland in Banffshire, v.c. 94, at 200 m ASL. As I had never looked at the distinctive spores of this species under a microscope before I collected a single pinna. I was therefore (pleasantly!) surprised to find that the spores were not spinose, but were instead rugose, and apparently a good match for *C. dickieana*.

Being aware of the earlier records made by Tennant, I revisited the site the next day. About 70 clumps of *Cystopteris* were counted, growing on the vertical stonework on both sides of the bridge (aspect about north and south). No *Cystopteris* could be seen on the riverside natural rock outcrops below the bridge or on a second old stone bridge over the same river less than 1 km away. The majority of plants were inaccessible but two fronds from two different clumps were collected. Both specimens had the basic morphology of *C. fragilis* but on microscopic examination had rugose spores. They were sent to Alison Paul at **BM** who confirmed the identification. The specimens are deposited at **BM** and location details have been passed on to the BSBI's Threatened Plants Database, Scottish Natural Heritage and the landowner.

Spore dimensions from the single pinna collected on 19 August 2001 were measured in November 2001. Spores were mounted in water and their maximum length measured at ×400 using a calibrated

eyepiece micrometer. Mean spore length was 48.8 µm (range 37.7–54.6, n = 18). These measurements are slightly larger than those reported by Tennant (1995) and Parks *et al.* (2000) who give mean spore lengths between 43–45 µm (range 39–48). Tennant (1995) raised the possibility of spores shrinking with age and drying. A further sample of 18 spores from the same pinna were measured in July 2002, mean 44.7 µm (range 36.4–49.4). The mean spore lengths in November 2001 and July 2002 were significantly different (t–test, p = 0.003).

The type specimens of *C. dickieana* were collected in 1842 from the classic Kincardineshire sea-cave site. Over the ensuing 160 years there has been continued debate over the taxonomic status of this species (Dyer *et al.* 2000), particularly with the realisation that rugose spored *Cystopteris* occurred at numerous sites around the Northern Hemisphere. Recent isoenzyme studies, for example Parks *et al.* (2000), do not support the maintenance of *C. dickieana* as a separate species. However Dyer *et al.* (2000) state that there are no substantiated reports of plants with rugose spores *and* the frond morphology of plants from the type location at any other site, and Jonsell (2000) confirms that such forms do not occur in Scandinavia.

Jonsell treats *C. dickieana* as a synonym of *C. fragilis*, but goes on to describe three rugose spored forms from Scandinavia; a southern form, indistinguishable from *C. fragilis*, apparently geographically separated from two forms with more northern or Arctic distributions. Jonsell describes the habitat of rugose spored plants in Scandinavia as calcareous and sometimes non-calcareous substrates, often rock shelves and crevices, *on warm south-facing slopes, less frequently in humid and shady places* (my emphases). On the Kincardineshire coast *C. dickieana* grows in damp, cool, tide washed sea caves (Page 1988). At both the inland sites found by Tennant, *C. dickieana* grows along stream gorges, often below overhanging rocks in deep shade, though at the Easterness site it was also present on an old wall in the same area. In contrast the v.c. 94 site is well illuminated and exposed, more in accord with the situation reported from Scandinavia.

Distinctive variation should be recorded and conserved. As a non-taxonomist I suggest that to simply subsume all rugose-spored forms within *C. fragilis* is unsatisfactory as these '*dickieana*' type plants are thought to be rare in Britain. Given that rugose-spored *Cystopteris* have now recently been found at four inland locations in the Scottish Highlands and that they are frequent in central and southern Norway, it would be well worthwhile checking the spores of any apparent *C. fragilis* in the Highlands, and not just those plants in shady or humid sites.

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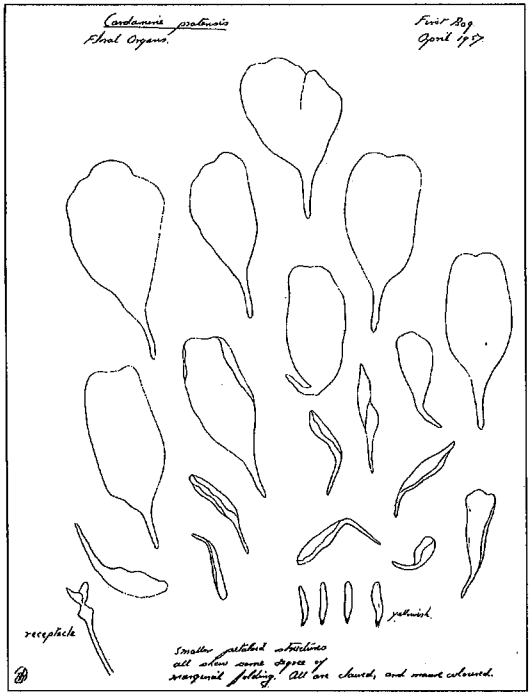
A 'DOUBLE' VARIETY OF *CARDAMINE PRATENSIS* IN THE NEW FOREST

During a Field Course with students from Haberdashers' Aske's School, Elstree (then Hampstead) at Beaulieu Road in April 1957, a colony of 'double' flowered *Cardamine pratensis* (Cuckooflower), in which the inner floral organs were replaced by and supplemented with petaloid structures, was discovered adjacent to the railway fence in the wet carr at the east end of Shatterford Bottom (SU350057). One of the students made a series of drawings of these structures, which is still in my possession (see below). They ranged from more or less typical clawed petals through a series of smaller intermediates, the innermost four being narrowly strap-shaped with yellowish bases. In the specimen dissected, there were 22 of these structures contained within a calyx of four typical sepals. All the flowers in the patch, about 1 m^2, were of the same appearance, and the colony had obviously spread vegetatively, there being no fertile organs; there were no outliers.

The colony persisted until at least 1961. Some time after that, the railway fence was replaced, and a quantity of gravel was introduced into the location, and there was much disturbance. The *Cardamine*, and a fine colony of Musk, *Mimulus moschatus* were lost; repeated efforts to relocate these plants during the late 1970s and 1980s failed. It was with great pleasure and no little surprise, therefore, that on 28 April, 2002, several small patches of the 'double' *Cardamine* were found in the Shatterford carr, in the same general area but several metres from the fence (see photo in colour section, p. 1). It seems that small fragments of the original colony had managed to regenerate. There appear to be no typically-flowered plants in the vicinity.



Note reads: *'Smaller petaloid structure all show some degree of marginal folding. All are clawed and mauve coloured'*

Cardamine pratensis floral organs del. Anon

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SURVIVAL OF *POTAMOGETON COMPRESSUS* IN THE LOCH OF ABOYNE, ABERDEENSHIRE

Potamogeton compressus (Grass-wrack Pondweed) has disappeared from many of its former sites in Britain over the last hundred years, and is now thought to have reached Red Data Book Nationally Rare status (Lockton 2002). Eutrophication has been blamed for its long-term decline (Preston & Croft 1997), but water-based recreational activities are also considered damaging (Lockton 2002). Hence the proposed reopening of the Montgomeryshire Canal is viewed with apprehension, since it holds the strongest extant population in Britain.

I was therefore asked to check on the Loch of Aboyne, the only site in Scotland where *Potamogeton compressus* has been observed in recent years. The aim was not only to see if the plant survived but also to try to establish the factors permitting this, or, alternatively, that had been associated with its extinction.

The Loch of Aboyne lies in western Aberdeenshire (NO53-99-) at 130 m. It extends to *c.*20 ha but is artificial, with a stone dam at its western end. The loch has been used for water skiing since about 1965, and is now subjected to considerable human pressures from both an adjacent caravan site and a golf course. *Potamogeton compressus* was first found there in 1978 by Blair Gerrie, who made a comprehensive survey on *Potamogeton* distribution in Aberdeenshire lochs that summer. In 1988 an SNH Freshwater Survey team recorded *P. compressus* dispersed around the western and northern parts of the loch where deeper water occurs; it was associated with *Potamogeton praelongus* (Long-stalked Pondweed). In 1994 *P. compressus* was not seen by Chris Preston on a brief visit, hence the assumption (Lockton 2002) that no Scottish sites remained.

In July 2002 I surveyed the marginal vegetation around the loch, recognising five habitat types (stony shore, reedswamp, marsh, woodland and grassland) and making species lists for 15 units based on these types covering the different sectors of the loch's margins. I also made lists of floating rooted and unattached/stranded plants. Four unattached shoots of *Potamogeton compressus* were observed close to the stone dam and also a single shoot that was rooted in a crevice of the dam wall. A report of the survey is lodged with the Threatened Plants Database.

Reedswamp is extensive around the loch with *Carex rostrata* (Bottle Sedge), *Phragmites australis* (Common Reed) and *Typha latifolia* (Bulrush) locally dominant, this last much less frequent than the other two species. Stony shores occupy roughly a quarter of the periphery, and have much *Littorella uniflora* (Shoreweed), together with *Eleocharis palustris* (Common Spike-rush), *Mentha aquatica* (Water Mint), *Myosotis scorpioides* (Water Forget-me-not) and *Persicaria amphibia* (Amphibious Bistort). Stranded on the shores were many plants of *Elodea canadensis* (Canadian Waterweed), *Lemna minor* (Common Duckweed), *Myriophyllum alterniflorum* (Alternate Water-milfoil), *Potamogeton gramineus* (Various-leaved Pondweed), *P. perfoliatus* (Perfoliate Pondweed) and *P. praelongus* (Long-stalked Pondweed). Only two floating rooted species were observed, *Nymphaea alba* (White Water-lily) and *Persicaria amphibia*, both at the western edge of the loch where presumably there is less pressure from water skiing. But the numerous stranded *Potamogeta* imply that the underwater vegetation remains substantial.

The marsh, woodland and grassland habitats in my survey occupied a zone of varying extent distal to the loch. Its width was restricted to *c.*10 m on the south east by the embankment of a former railway line, but extended to an arbitrary 80 m limit on the north and north east. A mixture of acidophilous and basiphilous plants occurred in these habitats, exemplified by *Carex curta* (White Sedge), *Pedicularis palustris* (Marsh Lousewort), *Succisa pratensis* (Devil's-bit Scabious) and *Triglochin palustre* (Marsh Arrowgrass) in the marsh, *Betula pubescens* (Downy Birch), *Fraxinus excelsior* (Ash), *Pinus sylvestris* (Scots Pine) and *Quercus robur* (Pedunculate Oak) in the woodland, and *Arrhenatherum elatius* (False Oat-grass), *Chamerion angustifolium* (Rosebay Willowherb), *Holcus lanatus* (Yorkshire-fog) and *Lathyrus pratensis* (Meadow Vetchling) in the grassland. In the rest of the catchment conifer plantations and semi-natural birch-dominated woodland predominate; a tract of farmland to the north east has in recent years been used as cattle pasture and is now being developed into a golf course.

From these species lists it could be expected that the loch would be mesotrophic, and it has been so described in the past; the SNH Freshwater Survey obtained water samples in 1988. However in recent years algal blooms have occurred, and a yellow-green scum covered *c.*80% of the shallow water within 15 m of the shore in July 2002. The caravan site owner has been placing straw bales in the loch in recent summers to alleviate the problem.

The causes of this eutrophication or pollution are not clear. It is now difficult to assess past management in the catchment, and it is also difficult to decide its exact boundaries because slopes are mostly gentle and streams are tiny. But neither the farmland nor the woodland appear to have been managed intensively. This may change once the golf course on the tract of farmland immediately north east of the loch is in use. The long-standing golf course to the west of the loch belonging to different owners (the Aboyne village club) is very unlikely to be responsible since almost all their ground lies outwith the catchment. Other possible sources of enrichment are the caravan site and three houses along the A93 close to the former railway, but I was informed the caravan site effluent goes fully into mains sewers.

Hopefully, now that it is known that a species as threatened as *Potamogeton compressus* still occurs in the loch, there will be measurements on water quality, and an attempt to find out what is causing the apparent eutrophication and algal blooms. The rarity of the plant on this recent survey, and its confinement to a position close to the exit stream, implies that conditions have become unsuitable; likely causes are the skiing disturbance, or water quality, or reduced light levels (consequent on the algal blooms and/or the stirring of the mud on the loch bottom). Thus the continued survival of *Potamogeton compressus* in the Loch of Aboyne is doubtful.

Acknowledgements

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ASPLENIUM × *CLERMONTIAE* (LADY CLERMONT'S SPLEENWORT)

Asplenium trichomanes (Maidenhair Spleenwort) and *A. ruta-muraria* (Wall-rue) are common in Britain and very frequently grow together on mortared walls, yet their hybrid, *Asplenium* × *clermontiae* Syme (Lady Clermont's Spleenwort) is exceedingly rare. Hitherto, the only certain record in the British Isles was in Co. Down, Ireland in 1863. On 5th August 2000, I had the enormously good luck to find this hybrid in Northumberland (v.c. 68). Although the plant was small and rather ragged, photographs of it, taken in the autumn of 2000, were published in *Transactions of the Natural History Society of Northumbria*: **61**, opposite p.71 (2001). However, on 22nd March 2002, Mr Gordon Young photographed the same specimen and his photograph shows how beautifully the plant has grown (presumably thanks to a wet, but not very cold winter). Although I dislike unnecessary duplication, I was so favourably impressed by this photograph, that I felt that it should be published for others to see (colour section p. 4). Many thanks to Gordon Young.

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MORE LAWN WEEDS

I find it surprising that Richard Addington (*BSBI News* **90** (April 2002)) did not include *Sagina procumbens* (Procumbent Pearlwort) as a lawn weed. It appears wherever it can find the smallest bare or thin patch in our lawn and spreads into adjoining grass. A grass which is not in his list which I do not welcome is *Holcus lanatus* (Yorkshire-fog) with its coarse yellow-green tufts after mowing.

He mentions the influence of soil, but the location is also important. In the New Forest or Channel Islands, *Chamaemelum nobile* (Chamomile) is often a welcome 'weed'. In Sark, *Lotus angustissimus* (Slender Bird's-foot Trefoil) or *Oxalis exilis* (Least Yellow-sorrel) sometimes appears. Here in East Wellow near the New Forest we still live in a house which we moved into when it was new about 23 years ago. We have a lawn about 40^2 m in the back garden which I originally sowed a few years later with a commercial strain of *Lolium* (Rye-grass); it is to the north of the house. It never gets water-logged but in parts, in the shade of trees or shrubs, for over 10 years there has been a large patch of *Hydrocotyle vulgaris* (Marsh Pennywort) almost overlapping with a large patch of *Montia fontana* subsp. *chondrosperma* (Blinks). In the front garden there is a lawn of about 50^2 m laid from turf by the builders. It has patches of *Trifolium micranthum* (Slender Trefoil) and *T. dubium* (Lesser Trefoil) which look quite different from each other. There is one patch of *Hypericum humifusum* (Trailing St John's-wort). A single plant of *Vicia lathyroides* (Spring Vetch) lasted only a couple of years. About four years ago a single plant of *Dryopteris filix-mas* (Male-fern) appeared and is still present in spite of mowing. There is no other fern in our garden or in our immediate neighbour's.

We have other weeds adjoining flower-beds such as *Oxalis corniculata* (Procumbent Yellow-sorrel) and *Viola riviniana* (Common Dog-violet) which have invaded adjacent lawn by seeds. Adjoining damp areas it is difficult to prevent *Soleirolia soleirolii* (Mind-your-own-business) from spreading.

The most surprising arrival came about three years ago when numerous seedlings of *Daucus carota* subsp. *sativus* (Carrot) (the taproots of even very young plants had started to swell) appeared scattered over the back lawn with a few in neighbouring flower-beds. Neither our neighbours nor ourselves grow carrots. We do scatter birdseed but we have never come across this as a constituent. Numbers in succeeding years have rapidly declined and we have not seen any this year yet (mid– June).

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UMBILICUS RUPESTRIS — (SLIGHTLY) EASTWARDS HO

The occurrence of the Atlantic species *Umbilicus rupestris* (Navelwort) in London (Edgington 2002) apparently outside its climatic limits may have interesting parallels with its distribution in the Sheffield region. Never a common plant the species had declined to just two populations by the early 1970s. Both populations occurred on millstone grit walls at the edge of the Pennines to the west of Sheffield. Then in the late 1990s it appeared on a wall in Hathersage, Derbyshire *c.*3 km from an existing site. It has spread and now there are more than twenty plants. The plant does not, however, behave as might have been expected. Clapham, Tutin & Moore (1987) give its flowering period as June to August (to September) and I recall seeing plants with green leaves during August holidays in the West Country, which has an Atlantic climate and where *Umbilicus* is abundant. In Hathersage, however, the plant has flowered, set seed and dried to a crisp by the beginning of July. I agree with Edgington (2002) that *Umbilicus* is winter green growing mainly during the cool period between late autumn and early summer but I suspect that its survival is dependent upon more than winter conditions. Mild winters will be important to maximise vegetative growth and seed production but wet summers may also be essential if the shoot is not to be killed prematurely by drought. Premature death of the shoot will reduce reproductive output. More importantly, it may also curtail the build up of carbohydrates in perennating organs, which may cause reduced vegetative vigour in subsequent years.

Colonisation of new sites in London and the Peak District appears to have coincided with a combination of mild winters and wet summers. It would therefore be interesting to know whether the

London plants have a similar phenology to those in Derbyshire, and whether plants in W. Britain consistently retain green leaves well into the autumn. Also, did the historical disappearance of *Umbilicus* in southern counties coincide with a combination of cold winters and hot dry summers?

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UMBILICUS RUPESTRIS — EASTWARD HO? NOT QUITE

I was interested to read of John Edgington's find of *Umbilicus rupestris* (Navelwort), in London (*BSBI News* **90**: 12-13) where it is apparently established. In early 2001 I found a plant growing on a flint, brick and mortar wall in Hughenden Valley, Bucks., v.c. 24. It was doing rather well and was duly reported to the v.c. recorder, Roy Maycock. Visiting the area soon afterwards Roy came upon the owner of the wall and pointed out her new acquisition. Alas, she confessed that whilst on holiday in Cornwall she had grabbed a few dead bits and pieces and stuffed them into her wall. So all was revealed.

However, the plant did well enough to flower and this year, along the lines of mortar, small green buttons of Navelwort can be seen, thus showing that it can survive our eastern winters, at least when they are mild, not only in towns but also in the colder countryside.

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KICKXIA SPURIA — PARTIALLY REGULARLY PELORIC

In September 2001 about 10 plants of *Kickxia spuria* (Round-leaved Fluellen) were found in a field gateway at Purbeck (v.c. 9). Half had normal flowers, but half had a mixture of normal flowers and aberrant ones. The latter were the normal pale yellow *Kickxia* colour, but had corolla tubes about 10 mm long and 1.5 mm wide, ending with patent subequal lobes about 1 mm long. Some of these lobes were tipped with the deep purple of normal *Kickxia* flowers (see photos in colour section p. 3).

Briggs and Walters (1969) describe how plants of *Linaria vulgaris* (Common Toadflax) with aberrant flowers only were seen by Linnaeus, who after finding that they apparently bred true, named them *Peloria*. However, they continue by explaining that Adanson tested the plants at greater length and found that '*Peloria*' seed supplied by Linnaeus produced both normal and aberrant flowers. He concluded that the plant was a monstrosity, not a new species.

In the nineteenth century Masters used the term 'peloric' to describe normally asymmetric flowers becoming symmetric. Martin Cragg-Barber, who kindly supplied me with the information from Briggs and Walters, and from Masters, has had one similar record reported to him from Radnorshire some years ago.

A peloric plant has since been found (August 2002) close to Durlston Country Park Information Centre (SZ031773), also in Dorset (v.c. 9).

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LISTERA CORDATA (LESSER TWAYBLADE) IN BUCKS (V.C. 24)

It is interesting how the discovery of some plants becomes the thing of legend, and if rare enough immortalises the finder — but not necessarily the original finder! Others do not even register as a scrappy note on the back of an envelope or cigarette packet, whose fate is only to be discarded at the end of summer when the car is cleaned out. One such discovery is (or was) that of *Listera cordata* in Buckinghamshire.

In 1980, Nigel Snell, while wandering through Baldwin's Wood, east of Latimer, Bucks (1 km^2 TQ9900) found a group of about 10 plants (2 flowering) of *Listera cordata* (Lesser Twayblade). They were growing in a small glade, close to a footpath, in a plantation of small conifers about 5 metres tall. The plants covered an area approximately 1 m^2, and were being eaten by slugs or snails (was it ever thus). One floret was picked and taken away for confirmation, but not retained. At the time the finder was a keen but inexperienced botanist and was unaware of the significance of the find.

Druce, in his *Flora of Buckinghamshire* (1926) lists no records for Bucks except for one made in error in 1872. There are no records for the neighbouring counties of Oxfordshire (Druce 1927, Killick, Perry & Woodell 1998), Berkshire (Druce 1897, Bowen 1968) or Middlesex (Trimen & Dyer 1869, Kent 1975 & 2000). Interestingly Druce (1897) quotes finds in 'Pine woods at Bournemouth, in S. Hants and Dorset.'

In casual conversation in 2001 Nigel recounted the story of the find, having realised that it was of interest (but not that it was actually a new county record). In the intervening years he had not revisited and so, on 18 May 2002, full of hope the authors made a trek into the Chilterns. The plantation was still there, the Spruce trees were taller and had been thinned but not yet clear felled and the glade was still very obvious. However, despite a thorough search there was no sign of any small green orchids. The ground layer was a dense cover of moss with sparse common woodland plants including *Mercurialis perennis* (Dog's Mercury) and *Glechoma hederacea* (Ground-ivy). Further away from this corner of the wood the soils were chalky, much more typical of the Chilterns, and supported some interesting plants including fine specimens of *Atropa belladonna* (Deadly Nightshade) and a single *Cephalanthera damasonium* (White Helleborine). The lower corner of the wood, where the Lesser Twayblade had been seen 22 years earlier, appeared to be an isolated pocket of acidic soil covering the chalk.

Presumably, by a freak chance, some plants came in with the planted trees and survived, even if only for a while. How many rare plants have had similar fates, to be found but quietly ignored? Not even getting their '15 lines of fame' (to paraphrase the famous remark of Andy Warhol) in an obscure botanical publication.

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ROMULEA COLUMNAE (SAND CROCUS) REFOUND IN CORNWALL AFTER 121 YEARS AND *JUNCUS CAPITATUS* (DWARF RUSH) FOUND NEW TO EAST CORNWALL (V.C. 2)

Whilst undertaking an NVC survey of the Polruan to Polperro SSSI on the south coast of Cornwall for English Nature, during the summer of 2001, I identified a vegetation community around numerous rocky outcrops that topped the cliffs. This community proved to be closest to MC5c, *Armeria maritima–Cerastium diffusum* subsp. *diffusum* maritime therophyte community, *Aira praecox* sub-community (Rodwell, 2000). *Romulea columnae* is listed as a 'rare species' in the description given for MC5c in Rodwell, but does not appear in the tables of samples that are listed.

Romulea columnae was last recorded in East Cornwall in 1879 and 1881 (Davey, 1902; Davey, 1909). The description of the site in Davey (1902) reads as follows: 'this little rarity was found on the cliffs near Polruan, first in May 1879, and again in May 1881, by Miss Kemp. A specimen collected in 1879, and which has been submitted to me for examination, is in Mrs. Graham's Herbarium'. In Davey (1909) the site description is reduced to: 'top of the cliffs near the Coastguard Battery at Polruan, May 1879 & 1881, by Miss Kemp'. The Herbarium referred to is now in the Royal Cornwall Museum, Truro, but the specimen of *R. columnae* is missing, the loss occurring before the Herbarium was placed in the care of the Museum, this increases the importance of such a refind.

Since the original discovery of *R. columnae* near Polruan, several people have attempted to refind it, but without success, as often they searched areas near the Coastguard Lookout (SX1250), looking particularly at any 'grassy slope by the sea', (Davey, 1909), though many of the coastal slopes here have now become much overgrown with scrub and would seem to be unsuitable for the species. Despite this, and although the NVC survey was undertaken during the summer of 2001, after the time in which *R. columnae* would have flowered, it was always the intention to revisit the area to see if *R. columnae* might possibly still occur, very probably in the MC5c communities described by Rodwell (2000).

On a serendipitous, sunny day, May 4th 2002, chosen as a good time to look for open flowers of the *Romulea*, I began the search, but first decided to view the whole coastline from the vantage point of a rocky outcrop (SX1350). *Romulea columnae* was not expected to be here, but many plants of *Moenchia erecta* (Upright Chickweed), rather uncommon in Cornwall, prompted a more intensive search at this site. Within the species-rich, closely grazed turf, small fruits of an unknown plant were seen. Despite the similarity of the leaves, the fruits were wrong for *Scilla verna* (Spring Squill) and *Scilla autumnalis* (Autumn Squill) which are found along the south coast of Cornwall only as far east as Nare Head (SW9237). It was then that I realised that the small fruits were those of *Romulea columnae*. Ironically it was the very same place that I had stood with Steve Payne, the National Trust warden, when deciding the logistics of the NVC survey to be made in 2001. The plants of the *Romulea* were waiting underfoot to be discovered in 2002!

Under the species accounts in Wigginton, (2000), N.F. Stewart states that 'it (*Romulea columnae*) grows on well drained, leached sandy or gravelly soils in established sand dune grassland' at Dawlish Warren in Devon, its sole mainland British locality. The habitat near Polruan is in shallow turf on and around rocky outcrops on cliff tops. McClintock (1975) states that Sand Crocus 'is a delightful speciality of the Channel Islands that bespangles the cliffs of the south and the sandy turf of the north on sunny spring days'. McClintock also states that 'Knowlton saw (*Romulea columnae*) on Monday 6 June 1726 . . . always upon the highest part of the rocks' much the same as the locality seen in 2002 at Polruan. Interestingly when Knowlton first discovered *Romulea columnae* he found the plants in fruit (McClintock 1975).

Although found in Cornwall in the same cliff habitat as in the Channel Islands, the site at Polruan shares several associates with the Dawlish site. These include *Moenchia erecta*, *Myosotis ramosissima* (Early Forget-me-not), *Ornithopus perpusillus* (Bird's-foot), *Plantago coronopus* (Buck's-horn Plantain), *Rumex acetosella* (Sheep's Sorrel) and *Veronica arvensis* (Wall Speedwell). At Polruan the community associated with *Romulea columnae* is closest to MC5c, and *Aira praecox* (Early Hair-grass) and *Festuca ovina* (Sheep's-fescue) are also found as well as species that are

constant in the above community, *Armeria maritima* (Thrift), *Festuca rubra* (Red Fescue), *Cerastium diffusum* (Sea Mouse-ear) and *Sedum anglicum* (English Stonecrop).

I revisited the site on 6th May 2002 with Rosaline J. Murphy (BSBI recorder for East Cornwall, v.c. 2), Dr C.N. French (BSBI recorder for West Cornwall, v.c. 1), Rosemary Parslow (BSBI recorder for the Isles of Scilly, v.c. 1a), Mary Atkinson & T. Atkinson, P. Green (BSBI recorder for South Somerset, v.c. 5) and M.J. Stribley. On this visit plants of *Romulea* were confirmed around not only the outcrop first noted but also on one nearby. The vegetation on and around these outcrops is kept free of scrub by grazing cattle and sheep, and rabbits are also in evidence. The population was estimated at around 1500 plants in total for the site. On small ledges below the second outcrop some of the *Romulea columnae* plants were quite large and straggly, growing around and through wind-pruned *Ulex europaeus* (Gorse). Although some authorities give the numbers of flowers per plant as between 1 and 3, Stace (1997) gives the number as 1 to several, and those at Polruan varied between 2 and 7. A specimen was collected for verification and this is now with Rosaline J. Murphy, ready to be placed in a National Herbarium. Digital photographs of the specimen were taken by P.G. Bennallick, and these were examined by Dr T.C.G. Rich, who compared them with herbarium material from Dawlish, Guernsey, Jersey and France and found them to be a perfect match with the fruiting plants. Digital photographs of plants on site were also taken by M. J. Stribley, (see colour section p. 1). Contact has been made with the owners of the site (National Trust) and future management of the site is being discussed.

In the same week I was contacted by W. Eyre, the National Trust warden for the length of southern Cornish coast between Black Head and Pendower. He wondered if he had found *Minuartia verna* (Spring Sandwort) on The Blouth, a headland north of Nare Head (SW9238). The geology here is very interesting, as the rock types that outcrop are the same as those that outcrop on the Lizard peninsula. Nare Head and The Blouth are both Basalt/Dolerite with Gabbro and Serpentine between. *Minuartia verna* on the Lizard grows on and around Serpentine outcrops, these being ultrabasic, and as two other Lizard specialities, *Orobanche alba* (Thyme Broomrape) and *Allium schoenoprasum* (Chives) had also been recorded near Nare Head, *Minuartia verna* could not be ruled out.

The site was visited on 9th May 2002 by myself and W. Eyre. The plants thought to be *Minuartia verna* proved to be *Sagina subulata* (Heath Pearlwort). With the find of *Romulea columnae* fresh in mind, the communities similar to MC5c in this area were investigated in case *R. columnae* was present here, but none were found. However, whilst looking in shallow erosion pans, similar to those found on the Lizard, several plants of *Radiola linoides* (Allseed) were seen and also a small reddish rush which proved to be *Juncus capitatus* (Dwarf Rush). Around 100 plants were seen and on a second visit on 14th May 2002 with Dr P. Gainey, Mary Atkinson & T. Atkinson, a second colony of around 20 plants was found nearby. *Juncus capitatus* is found in some years in quantity in suitable habitats on the Lizard peninsula, and there are also old records for sites on West Penwith in West Cornwall but the site at The Blouth is new and a first record for East Cornwall, v.c 2.

Species associated with the *Juncus capitatus* at The Blouth include *Anthoxanthum odoratum* (Sweet Vernal-grass), *Aira caryophyllea* (Silver Hair-grass), *A. praecox*, *Festuca ovina*, *Erica cinerea* (Bell Heather), *Plantago coronopus* (Buck's-horn Plantain), *Radiola linoides*, *Ornithopus perpusillus*, with occasional *Sedum anglicum* (English Stonecrop), *Hypochaeris radicata* (Cat's-ear), *Vulpia bromoides* (Squirreltail Fescue), *Lotus corniculatus* (Common Bird's-foot-trefoil), *Lotus subbiflorus* (Hairy Bird's-foot-trefoil), *Danthonia decumbens* (Heath-grass), and more rarely, *Hypericum humifusum* (Trailing St John's-wort), *Hyacinthoides non-scripta* (Bluebell), *Luzula campestris* (Field Wood-rush) and *Teucrium scorodonia* (Wood Sage). Many of the plants of the above species were very small and bare areas were also frequent. The coastal area of The Blouth had been heavily grazed by sheep during 2001, and these were put on when the Foot-and-Mouth crisis restrictions over livestock movements were in effect and when adjacent fields were exhausted of grass for grazing. It is very possible that the increase of grazing created the open habitat needed for the *Juncus capitatus* to appear.

The relocation of the site for *Romulea columnae* at Polruan and the discovery of *Juncus capitatus* in v.c. 2 is a distinct encouragement in the search for further records for the rarer Cornish plants. The

Cliff-top habitat (MC5c community) at Polruan is closest to that where *R. columnae* is found on the Channel Islands and it is also possible that the plant may occur in similar areas along the south coast of Cornwall and perhaps also in Devon. It is hoped that further searches for both species will be undertaken in 2003.

Many thanks to N.F. Stewart who gave much helpful advice on the habitat and species found with *Romulea columnae* at Dawlish Warren, to Dr T.C.G. Rich who confirmed the identification, to P.G. Bennallick and M.J. Stribley for the photographs, to W. Eyre for access to The Blouth and to Rosaline J. Murphy for help and advice.

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VALERIANELLA ERIOCARPA IN DORSET (V.C. 9)

Since the paper in *Watsonia* was published (Pearman & Edwards 2002), *Valerianella eriocarpa* (Hairy-fruited Cornsalad) has been discovered in seven more sites as listed below, increasing the sites in Dorset from 12 to 19. These include one new hectad and three new tetrad records. Six sites are on Limestone and one on Chalk. All of them are in permanent grassland. which is grazed for part of the year. Most plants are in scattered small groups, but in one case the plant is dominant over several square metres. Rosettes were found in two sites in February, confirming that it is a winter annual. The first site was found in 2001, the rest in 2002. The first four sites are on National Trust land.

1. Corfe Castle Mound (SY960823), 600 plants. This is now the furthest site from the sea and out of sight of it. The plants are on the east side of the mound which is chalk and they flower about two weeks later than at most other sites listed here, i.e. they are at their best in late May. This is an easy place to see the plant, parking is free at the National Trust Centre to the north of the castle, i.e. on the left of the main road when approaching from Wareham. Cross the main road, and the side road to Church Knowle; pass through a stile leading to a footpath which winds clockwise around the mound gradually gaining height. The plants are above this path and opposite to some spire shaped conifers in the garden on the other side of the main road. They are scattered in an area *c.*10 m wide and stretching *c.*15 m up the mound.
2. Seacombe Bottom — W facing (SY985766/7), 400 plants. This is the most widespread of the new sites and is near the top of a steepish slope. Plants begin to appear *c.*10 m N of the coast path and occur sporadically over *c.*100 m moving inland and over *c.*40 m up and down the slope.
3. Seacombe Bottom — S facing (SY984768), 200 plants. This is *c.*100 m N of the north end of the previous site, and is also on a steepish bank. Plants occur over an area *c.*20 m wide and 30 m up and down the slope. Near the top of the slope there is an area where the species is dominant over *c.*1 m^2.
4. Middle Field, Spyway (SZ001773), 10 plants. The field name is associated with the 1841 Tithe map. The plants extend over *c.*20 m on the southern edge of an east-west track across the north of the field; the ground is level.
5. 6, &7 Three sites on a private farm (SZ0076(two) & 0078), 1500, 40 & 700 plants. These are not open to visitors. The plants here are mauve when they first appear rather than the usual pink (as they are at the Townsend site reported in Pearman & Edwards (2002). The first site is mostly in

one field, but *c.*30 plants were later found by the farmer over a stone wall in the next field, *c.*50 m away. The main part of the site is *c.*20×40 m, mostly on old sloping quarry banks, but some on level ground. In one place the plant is dominant over *c.*3×4 m. The second site is over *c.*15 m of a shallow bank at the side of a farm track in a field, and was found by the farmer. The third site is over two sloping sides and the flat top of a quarry mound and is *c.*10×10 m. Here the fruits are glabrous, as illustrated in Stace (1997) p. 658 (Stace does not illustrate the normal hairy form).

In addition to the above sites *c.*10 plants were found 100 m W of the Above Blacker's Hole site given in Pearman & Edwards (2002), which may be considered to be an extension of that site. Also a late season plant was found by David Leadbetter *c.*300 m ENE of the Emmett's Hill site in the same paper. This area will be examined in 2003. The species is only noticed at close quarters, and there are probably more sites awaiting discovery in its heartland in Purbeck.

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A NEW HOST FOR MISTLETOE?

Many years ago a Norwich friend and former colleague, Ellis Marks, introduced mistletoe to a small apple tree in his garden. Male and female plants grow side by side and set a good crop of seed annually. Beneath the apple tree a young plant of *Lonicera syringiantha* was planted and, over the years, has sent up strong shoots amongst the apple branches. Much to everyone's surprise, during recent pruning operations, several young mistletoe plants were seen on two of the *Lonicera* stems. *L. syringiantha* is a shrubby ornamental honeysuckle introduced from China in about 1890. Though not commonly planted, it is well distributed across the gardens of Britain and must come close to mistletoe colonies in other places. As the mistletoe's main host is a member of the Rosaceae, its appearance on a plant of the Caprifoliaceae may seem surprising. I wonder whether the fact that the two plants have been in such close proximity for a number of years has had some effect.

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THE SWANSEA MUSEUM HERBARIA — A FORGOTTEN RESOURCE

Swansea Museum, formerly known as the Royal Institution of South Wales (RISW), is home to a number of relatively unknown and seldom-used herbaria spanning the period 1798-1913. Access to the collection is by prior arrangement only since the herbaria are no longer kept in the main building owing to a general lack of storage space. This inaccessibility, coupled with rumours that the whole of the collection was lost during the war years, has, in effect, ensured that few botanists have sought it out for research purposes. As such, the collection represents an important but untapped resource of new and interesting botanical information. Although it is undoubtedly true that many of the specimens were either destroyed or misplaced during the war, some 2,256 still remain and these are generally in quite a good state of preservation. Gerald Gabb (1994) reports that the J.E. Bicheno herbarium, when it entered the collection in 1839, contained some 1,500 specimens. Of these, only 787 have been seen by the present author and this may give us some indication of the extent of specimen loss during the Second World War.

The RISW committee minutes for January 1st 1936 show that Mr H.A. Hyde, Keeper of Botany at the National Museum of Wales (**NMW**) at that time, requested that the collection be sent to Cardiff that he might examine it at his leisure. By June 15th 1937, fourteen boxes had been returned to Swansea with the request that the remaining 8 boxes be sent to Cardiff. Exactly how much of the

collection was seen by Hyde is difficult to determine since the collection, as it stands today, occupies 33 herbarium boxes. However, it is probable that the H.R Wakefield herbarium, which entered the collection in 1936 and comprises 12 boxes of specimens, had not yet been donated. Individual herbarium sheets show that at least part of the collection was examined between 1936-1938 by A. E. Wade, Assistant Keeper of Botany at **NMW**, and a number of specimens re-determined.

Subsequently, during the period 1980-1981, specimen data were transcribed by L.J. Lewis-Jones and R.A. Raven onto index cards and the herbarium sheets treated with an insecticide (Lewis-Jones 1980). Some of these cards, however, are incomplete. Nevertheless, this initial attempt at bringing order out of chaos enabled researchers, for the first time, to locate specimens with relative ease.

Finally, during the period November 2001-July 2002, I was able to re-examine the whole collection and to transcribe the data, where legible, onto sheets which have since been deposited at the museum. Paper samples from representative sheets were sent for analysis to ascertain whether arsenic or mercuric compounds had been used to preserve the earlier specimens. It is hoped that this will form the subject of a future study. Copies of the data sheets were forwarded to Dr G. Hutchinson at the National Museum and Gallery, Cardiff to ensure that the information will henceforth be available to those researchers compiling county floras. The number of specimens occurring in each of the major plant groups is summarised in Table 1.

Table 1: Summary of composition of individual herbaria at Swansea Museum, showing the number of specimens in each major plant group. (Parentheses indicate numbers of specimens which lack locality data.)

Herbarium	Algae	Lichens	Bryophytes	Pteridophytes	Gymnosperms	Angiosperms	Total
J. Ralfs	-	127 (3)	-	-	-	-	127 (3)
H.J. Riddelsdell	59 (1)	-	-	-	-	205 (0)	264 (1)
J.E. Bicheno	11 (7)	-	15 (15)	45 (16)	1 (1)	715 (224)	787 (263)
J. Motley	-	-	-	-	6 (0)	424 (10)	430 (10)
J.W.G. Gutch	-	-	-	9 (1)	-	33 (9)	42 (10)
H.R. Wakefield	-	-	-	-	-	606 (229)	606 (229)
Totals	70 (8)	127 (3)	15 (15)	54 (17)	7 (1)	1983 (472)	2256 (516)

Some 25% of sheets lacked locality data and these specimens, consequently, have no scientific value whatsoever. This is particularly true of the Wakefield collection where a substantial proportion of herbarium sheets may have been prepared for exhibition or teaching purposes. Similarly, the various scrap books of pressed specimens prepared by amateur collectors including two albums of pressed plants collected by Katie Nicholas of Pontypridd County School during the months of August and September 1903; a small booklet of seaweed collected in Jersey in July 1861 and presented to Miss Lucas Llanover; and finally, a small number of algae collected in Torquay. I was unable to locate an album of dried plants donated by A.D. McKellow and referred to in the RISW minutes of March 4th 1936.

The various Watsonian vice-counties and individual collectors represented in each of the herbaria is summarised below. In each case, the format follows Harrison (1985).[A–Algae; B–Bryophyta; F–Fungi; L–Lichens; P–Pteridophyta; S–Spermatophyta].

Composition of individual herbaria

Box 1-12 Wakefield, Harry Rowland (1861-1948)

VCs 1, 3, 5, 6, 9, 16, 18, 19?, 21, 25, 26?, 27/28, 33, 41, 42, 58, 59?, 92 1907-1913 (S606) together with ten teaching or exhibition sheets of pressed tree leaves but no data or locality details and a folder of 15 unidentified specimens, mainly grasses, with no locality details. Entered collection 1936.

Box 13-22 Bicheno, James Ebenezer (1785-1851)

VCs 1, 2?, 3?, 4, 5?, 6?, 9, 10, 13/14, 15, 16, 17, 18, 20, 21, 22, 23, 25/26, 27, 34, 35, 36, 37, 41, 49, 56, 57, 59/60?, 61, 64, 66, 69, 70, 72, 82-85, 87?, 88, 89?, 90, 95?, 100, 103, H1, H8, H33?, Europe 1798-1832 (A11, B15, P45, S716).

Romulea columnae at Polruan, Cornwall, photo © M.J. Stribley 2002

A 'double' variety of *Cardamine pratensis* in the New Forest, photo © P. Selby 2002

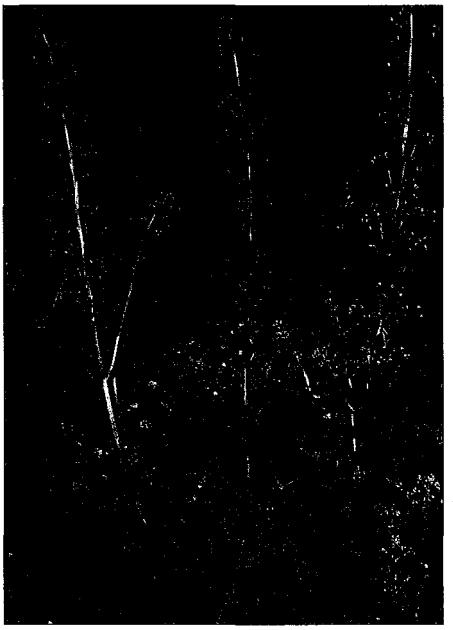


Fig. 1 showing tall branched habit

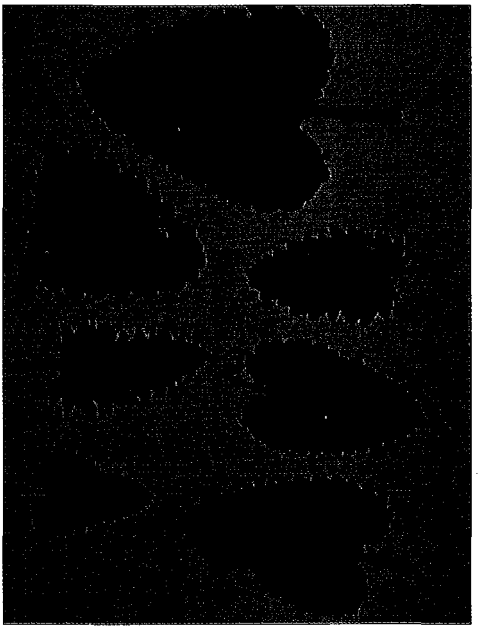


Fig. 2 showing variation in the leaf shape and dentation

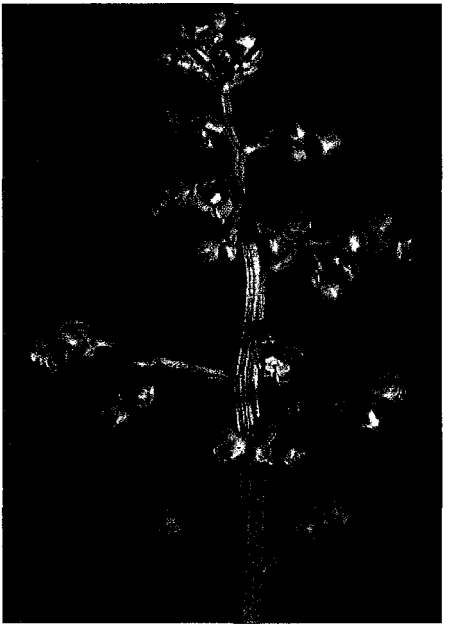


Fig. 3 showing normal flower colour

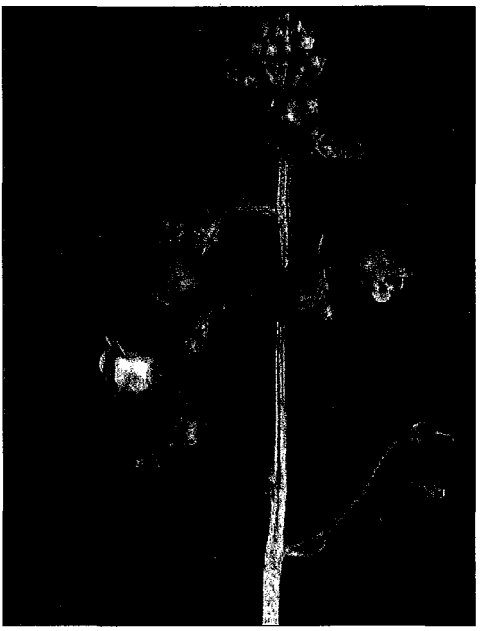
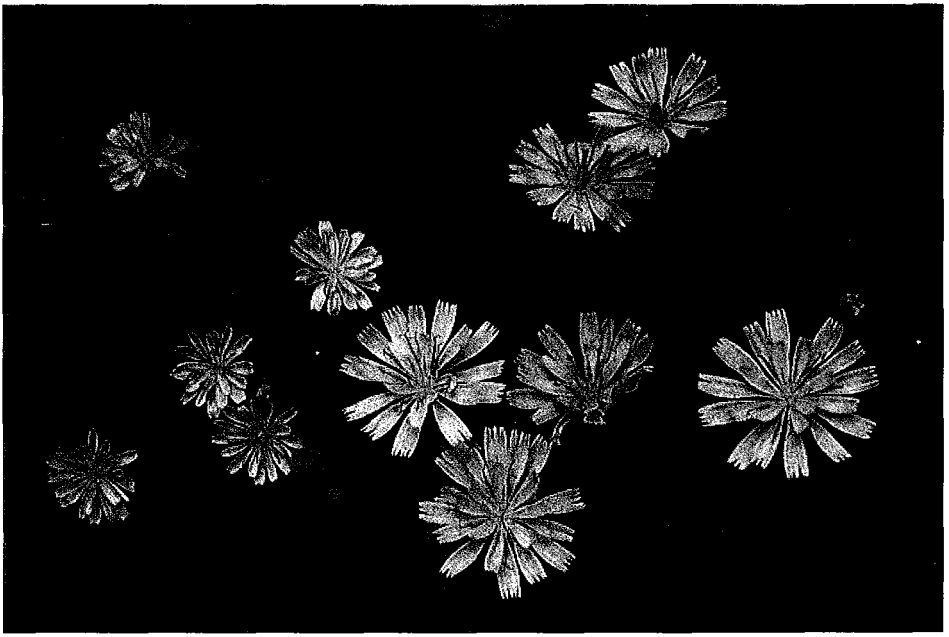
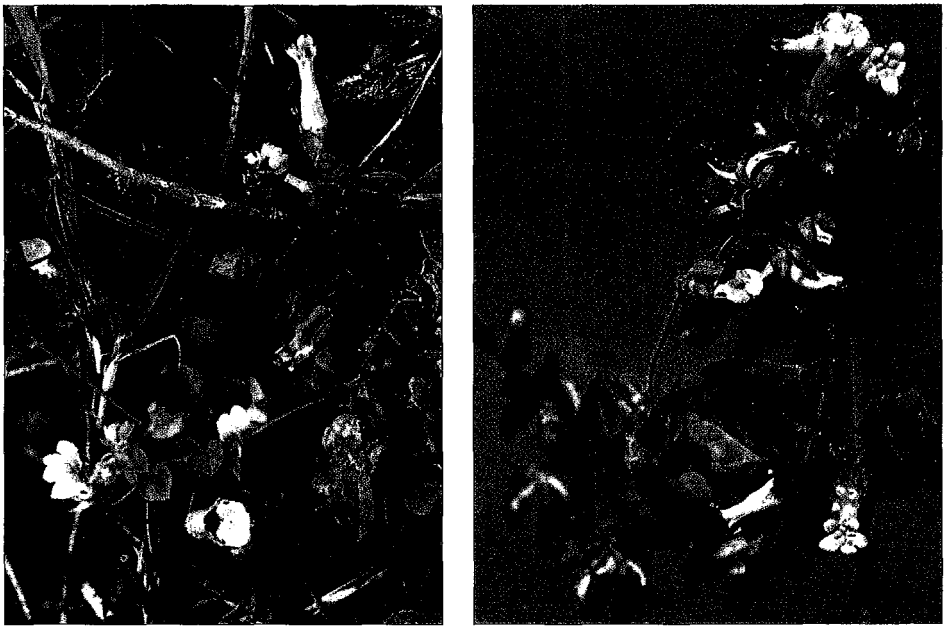


Fig. 4 showing yellow/green flower colour

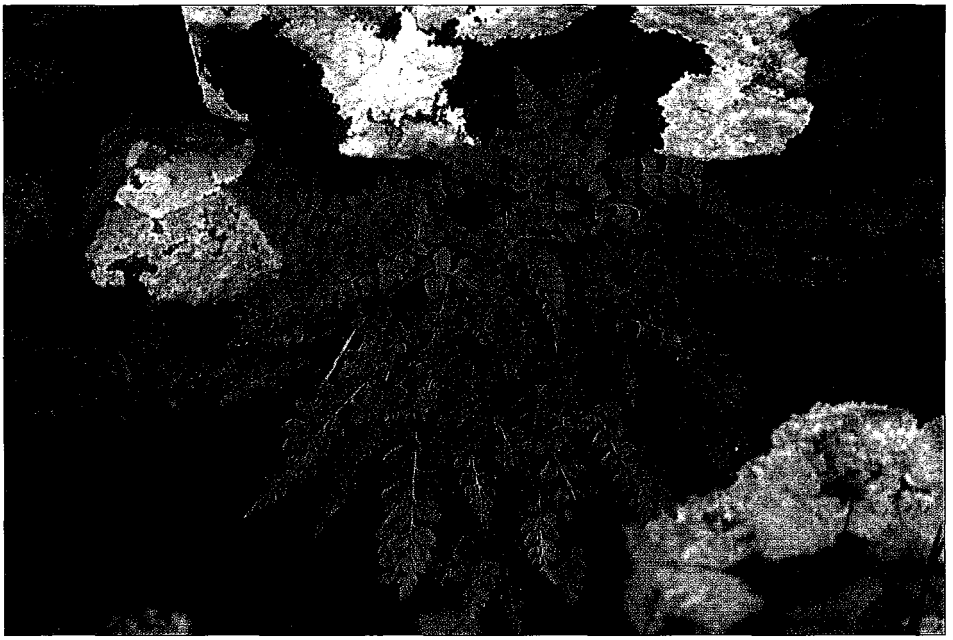
Figs. 1-4 *Scrophularia scopolii* at Owslebury (v.c. 11), photos © A.R.G. Mundell 2002



Lapsana communis subsp. *communis* (l) and subsp. *intermedia* (r), at Owslebury (v.c. 11), photo © A.R.G. Mundell 2002

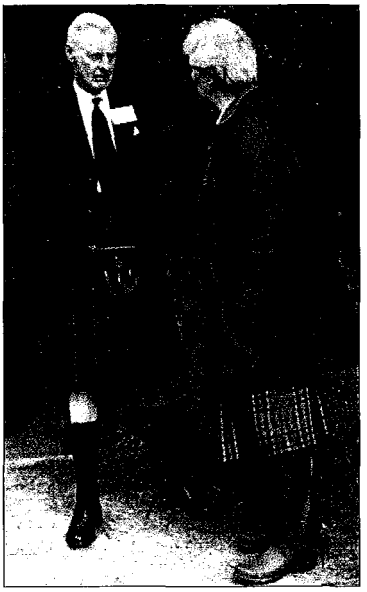


Kickxia spuria showing normal and peloric flowers, Purbeck (v.c. 9), photos © E. Pratt 2002



Asplenium x clermontiae, Northumberland (v.c. 68) photo © G. Young 2002

Silene colorata at Minehead Warren (v.c.5)
photo © P.R. Green 2002



Our Past President Dr Peter Macpherson MBE at Albury Nowers,
photo © M. Briggs 1991

Algae specimens consist solely of *Chara* species but unfortunately, most lack locality details. Woods, Joseph; Tomkins, Emma; E.L.S.; Mertens; Winch; Perret, D.; Forster, T.F.; Borrer, W.; Birch, M; Hooker, W.J.; Holmes, E.; N.G.; G.W.; Dillwyn, L.W.; Forster, E.; Holmes, Rev; Tansley; Tomlins, Miss H.; Horace, E.; Hutton, J.; Don, D.; Smith, Dr; Rohle, D.B.; Colby, Capt; Forsk, E. Entered collection 1839.

Box 23-26 Motley, James (*c.*1822-1859)

VCs 1/2, 3, 4?, 5, 6, 10, 11, 13, 15, 16, 17, 18, 19, 20, 21, 23, 25, 26/27?, 28, 29, 34, 35, 40, 41, 44, 52, 57, 58, 59/60, 61, 63, 64, 66, 70, 87, 90, 92, 96, 105/106, H39, C, Germany, *c.*1813-1845 (S430)

Sheets with much later dates may have been accidentally placed in this herbarium. Some specimens redetermined by A.E. Wade 1936-38. Specimens largely confined to the families Chenopodiaceae, Polygonaceae, Plantaginaceae, Lamiaceae and Poaceae. Backhouse Jr, J.; Hutton, Mrs; Wolley-Dod, A.H.; Sonder, Mr; Reeves, Mr; Garner, D.; Moore, O.A.; Manser; Hooker, W.J.; Hutchins, E.; Prentice, C.; Power, J.A.; Monk; Moggridge, M.; Barton, Miss; Borrer, W.; Notcutt, W.L.; Gardiner, W.; Oliver, Mr; Wood, J.B.; Oliver ters, D.; Denny, Mr; Bromfield, Dr; Riddelsdell, Rev. H.J.; Gibson, G.S.; Stevens, C.A.; Grindon, L.H.; Adair, J.; Steuart, J.H.A.; Gibson, S.; Bicheno, J.E.; Edwards, E.; Babington, C.C.; Druce, G.C.; Moseley, Miss. Entered collection 1848.

Box 27-30 Riddelsdell, Rev. Harry Joseph (1866-1941)

VCs 2, 9, 15, 16, 21, 23, 33, 34, 41, 42, 59, 62, 107?, 109, H1/H2?, 1900-1908 (S205)

Incorporating an earlier collection of algae, some with associated polyzoa. VCs 41, 45, 49, 1857-1874 (A59). Specimens largely confined to the families Chenopodiaceae, Polygonaceae, Plantaginaceae, Lamiaceae, Euphorbiaceae, Cyperaceae and Poaceae. Druce, G.C.; Whitehouse; Vigurs, C.C.; Wheldon, J.A.; Ley, Rev. A.; Groves, J.; Hackel, E. Entered collection 1909.

Box 31 Gutch, John Wheeley Gough (1809-1862)

VCs 3, 41, 1836-1838 (P9, S33). Some specimens determined by A.E. Wade 1938. Entered collection 1838.

Box 32 Ralfs, John (1807-1890)

VCs 1, 3, 4, 42, 48, 49, 1836-1845 (L127). No date of entry into collection given.

Box 33 Seaweeds from Jersey VC C. Seaweeds from Torquay VC 3 (A11) 1861. Two albums of pressed plants, both native and cultivated but without locality details, made during August-September 1903 by Katie Nicholas, County School Pontypridd.

A further album of pressed leaves collected by James Harris (Accession Number MI 7175) is kept at the Swansea Maritime and Industrial Museum. The specimens consist largely of unnamed *Acer* cultivars and lack locality details.

The John Ralfs lichen herbarium is particularly noteworthy since some of the North Wales specimens seemingly predate those listed as the earliest records by Pentecost in his Flora Lichen of Gwynedd (1987). Consequently, a list of specimens has been forwarded to Mr Ray Woods at the Countryside Council for Wales, Llandrindod Wells.

The main purpose of this short article is to facilitate botanical research by making other botanists aware of the Swansea herbaria and their contents. It is hoped that these herbaria will then increasingly be put to the use for which they had always been intended.

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BOTANY IN LITERATURE — 29

The name Humboldt conjures up the mysterious and now defunct author citation H.B.K. (now rendered as Humb., Bonpl. & Kunth), which, along with the equally arcane B.&H. (now Benth. & Hook.f.), E.&P. (now Engl. & Prantl) and P.&H. (now Pax & K.Hoffm.), can prove a stumbling block to the taxonomically uninitiated,

Baron Friedrich Wilhelm Heinrich Alexander von Humboldt (1769-1859), commemorated not only in author citations, but also by the genus name *Humboldtia* and the Humboldt (Peru) Current (South Pacific Ocean), was a German explorer of Central and South America, as well as a scientist and author of, among other works, the thirty volume *Relation historique du voyage aux régions équinoxales du nouveau continent fait en 1799, 1800, 1801, 1802, 1803 et 1804*, the writing of which was completed in Paris in 1834.

The following extract about palms, especially hearts of palm, is from the *Personal Narrative* (Penquin p. 111) (which comprised volumes 28–30), and which has relatively recently (1995) been translated and published by Penguin Classics in a single volume, albeit in abridged form.

> . . . Among the majestic trees that reach 120 to 130 feet [36.6–39.6 m] high our guides pointed out the *curucay*, which yields a whitish, liquid resin with a strong odour. The Cumanajoto and Taigre Indians used to burn it before their idols as incense. The young branches have an agreeable taste, though somewhat acid. Apart from the *curucay* and the enormous trunks of the hymenaea, from 9 to 10 feet [2.34–3 m] in diameter, we noticed above all others, the dragon (*Croton sanguifluum*), whose dark purple resin flows from its white bark; as well as the medicinal *calahuala* fern, and the irasse, *macanilla*, corozo and *praga* palm trees. This latter gives a tasty "heart of palm" that we sometimes ate at the Caripe convent. These palm trees with pinnate and thorny leaves contrast pleasingly with the tree ferns. In the Caripe valley we discovered five new species of tree fern, while in Linnaeus's time botanists had not even found four in both continents.

NOTE

Hearts of palm (palm hearts) are used in the cuisines of Latin America, (for example *Salada de Palmito* (Hearts of palm salad) and *Sopa de Creme de Palmito* (Creamed hearts of palm soup) (both from Brazil)) and the Caribbean *Palmisto guisado* (Stewed palm hearts) and *Palmito revuelto con huevos* (Hearts of palm with scrambled eggs) from the Dominican Republic, and *Chou palmiste en sauce blanche* (Palm hearts in white sauce), and *Acrats de chou palmiste* (Palm heart fritters) from Martinique-Guadeloupe. They can also be sautéed.

In the Spanish-speaking islands of the Caribbean they are known as *palmisto*, while in the French-speaking islands they are called either *chou·palmiste* (cabbage palm), *chou coco* (cabbage coconut), or *chou glouglou* (cabbage gurgle or gobble-gobble), depending on the type of palm which is being used.

By the term 'heart of palm' is meant, as its name suggests, the tender heart or core of the palm tree, and more precisely, the apical bud, that is, the bud at the top of the trunk. Sad to say that the removal of this bud kills the trunk.

Hearts of palm come from several species of palm tree (e.g. *Sabal palmetto* (Swamp cabbage). Humboldt notes (p. 259) that 'In the fiesta women were excluded from dancing and festivities; their sad role was reduced to serving men roast monkey, fermented drinks and palm-tree hearts, which tasted rather like our cauliflowers.'

Hearts of palm from Costa Rica ('Costa Palm') are available canned in brine in the UK.

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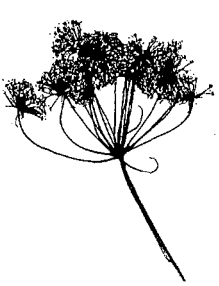
FLOWERS THAT HAVE NOT READ THE FLORAS

1. Carex *pallescens* (Pale Sedge) — All the Floras I have which give the number of male spikes say that the species has just 1, but at least one specimen on the NW side of Glen Fee, Angus (and SW of the *Oxytropis* site) this July had 2 (NO2475).

2. *Cicuta virosa* (Cowbane) — My Floras agree that whereas this species has many bracteoles it has no bracts. But this does not hold for the population at Balgavies Loch, Scottish Wildlife Trust Reserve, Angus (NO5350) where a few bracts can be found.



3. *Orchis mascula* (Early-purple Orchid) — 40 cm is the maximum height given in some Floras, 55 cm in another, 60 cm in others. But one specimen in a private wood near Swanage, Dorset (SZ0079) this year topped out at 71.5 cm!

4. *Polygonum aviculare* (Knotgrass) — Books which give leaf sizes state that the maximum width is 15 mm. However a field near Worth Matravers, Dorset (SY9677) has what the Referee, Dr John Akeroyd, has described as 'a robust variant' with leaves up to 23 mm wide last year and 22 mm this year.

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CONSERVATION NOTES

DEFRA REVIEW OF POLICY ON NON-NATIVE INVASIVE SPECIES 2001–2002

The Department of the Environment, Food and Rural Affairs has last month (July 2002) concluded its 7th and last meeting (at the Royal Botanic Gardens, Kew) of participating members of a DEFRA Policy Review of Non-Native (i.e. Alien) Invasive Species. The Review chaired by DEFRA's European Wildlife Division*, will soon submit it's Report and recommendations to Ministers (Mr Michael Meacher), to the Scottish Executive and to the National Assembly for Wales. The following information (in quotes, with cited documents in **bold**) has been recently supplied by the Review Secretariat.

'**TERMS OF REFERENCE**

Purpose of the Review. The problems caused by non-native species can be serious by transforming our ecosystems, damaging crops, altering natural habitats and threatening native species. This needs to be addressed in a co-ordinated way, involving Government, Industry and Conservation bodies who need to consider the causes of, and problems arising from the introduction and spread of non-native species. For this reason the Government announced, during the passage of the **Countryside and Rights of Way Act**, that it will be beginning a review of its policies concerning non-native species early in 2001.

This undertaking was reinforced in the Government **Rural White Paper Our Countryside: The Future — A Fair Deal For Rural England** (q.v.) which identified the need to carry out a fundamental review of the policy on alien and invasive species.

Objectives. The review process will: -

1. Evaluate the effectiveness of current statutory or non-statutory procedures for dealing with the introduction and establishment of non-native species and identify examples of current best practice within the United Kingdom and abroad.
2. Identify the main vectors for the introduction and spread of non-native species.
3. Put forward practical and proportionate costed proposals for improving measures to limit the ecological and economic impact of non-native species in Great Britain and recommend measures to limit the impact of the introduction of native species beyond their natural range. These could include proposals for statutory or non-statutory measures in areas of research and monitoring, trade, and control of non-native species.
4. Identify appropriate organisations to take forward any measures recommended.

Scope of the Review. The review will:

- be carried out on a Great Britain basis for terrestrial, freshwater and marine environments
- cover all species of fauna and flora except agricultural crops and genetically modified organisms.
- take account of the appropriate **International and European Agreements** relating to the introduction of non-native species.
- Involve all appropriate stakeholders.

Reporting Arrangements. The review group results will be presented to Ministers in the Department for Food, Environment and Rural Affairs, Scottish Executive and the National Assembly for Wales.

Timing. Report by July 2002

Constitution of the Review Group. The review group will be chaired by the DEFRA European Wildlife Division who will also provide its secretariat. Representatives from the organisations listed below will be invited to participate

Department for Environment, Food and Rural Affairs	Department of Trade and Industry*
Central Science Laboratory	Scottish Executive
National Assembly for Wales	Maritime and Coastguard Agency*
British Waterways	Countryside Council for Wales
English Nature	Environment Agency
Forestry Commission	Joint Nature Conservation Committee
Scottish Natural Heritage	National Environmental Research Council*
Scottish Environmental Protection Agency*	Horticultural Trades Association
Kew Gardens	Plantlife
Royal Society for the Prevention of Cruelty to Animals	The Wildlife Trusts
Scottish Society for the Prevention of cruelty to Animals	Wildlife and Countryside Link
Zoos Forum	Association of National Parks*
Centre of Aquatic Plant Management*	Country Land and Business Association*

Local Government Association*
The Pet Care Trust
The National Farmers Union*
Gardening Which?*
The Royal Horticultural Society*
The Welsh Development Agency*
Ornamental Aquatic Trade Association
The National Botanic Garden of Wales*
The Salmon & Trout Association*
University of Liverpool (Dr Jon Huckle)*
The National Marine Aquarium*
Marine Conservation Society*

* Indicates those organisations invited to participate as corresponding members of the review group'

[Note that BSBI is again not represented; WHY? Ed]

As official publicity about the Review may have been limited to a Ministerial announcement in the House of Commons and any notices in the media and the Web were missed, news of the Review only came to light when it was already over. The following additional information was obtained from the Review Group Secretary.

> This is a review of policy and is not a review of species on a case-by-case basis, although reference to relevant illustrative case studies will be made in the final report.
>
> Dr Jon Huckle at the University of Liverpool has been commissioned by English Nature to compile a database covering all taxonomic groups of non-native invasive species www.appliedvegetationdynamics.co.uk/invasivespecies
>
> The review should be completed by July 2002, with a written report submitted to Government within a couple of months. Once this report has been submitted to Government the report will be available on our website www.defra.gov.uk together with a report that was produced under contract by (Mathew Fasham) Ecoscope consultants, **Review of non-native species legislation and guidance.**
>
> **This Department would be happy to receive comments from members of the public on the findings in due course.'**

One would not wish to pre-judge a Review about whose workings and findings nothing is yet known, and in the press of summer field work, it has not been possible to look closely into the matter. Plantlife, who participated in the review, has indicated their views (Harper, in press), quoted the **Convention on Biological Diversity** sixth meeting (The Hague, 2001) and another Review participant's, The Wildlife and Countryside Link, **'Ten Challenges'**.

Owners of land, managers of land and their advisors are inadequately represented at the Review. If any similar enquiry lead up to the Wildlife and Countryside Act 1981, it resulted in ineffectual legislation on the control of Japanese Knotweed (*Fallopia japonica*), Himalayan or Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*) and the fiasco of Dutch Elm disease (Charter, 1999). J. Sheail's (1999) model analysis (constrained by the Public Records Act) of the history of the grey squirrel problem reminds us of officialdom's (but not Local Authorities') past decision-making processes.

There is too little known about the current status of such widely distributed invasive species at the local level, where biological recording is not regionally integrated, and the recording of invasive alien weeds is neglected. No Biodiversity Action Plans seen, unlike for threatened species and habitats, mentions no action plans to monitor and/or control invasive alien weeds.

The potential of such plants to wreak rapid fundamental changes in our urban and rural landscapes is little understood. A large, 300 sq. m expanse of Japanese Knotweed on the bank of the River Rother (probably of pre-war origin) consists only of knotweed. All signs of the normal secondary succession are absent: no tall herbs, shrubs or tree saplings have invaded, as it appears that on senescence and death of a knotweed rootstock any potential gap in the knotweed canopy is filled by new growth from the surrounding colony. Similarly, hedgerow knotweed can be expected to become an indestructible and permanent feature of the countryside. The development of a Japanese knotweed shrub layer (even of low vigour under shade) in any woodland could possibly inhibit shrub and tree regeneration, leading in time to the ultimate displacement of the woodland by pure knotweed. Again, Himalayan Balsam is becoming both a wayside urban and countryside weed; locally in crack willow–nettle swamp and oak–birch–bluebell woods it has been recorded at densities up to 70–80 mature plants per sq. m at 4–5 kg fresh weight (Charter, in prep.). Such biomass can exclude nearly all the much smaller traditional spring ground flora. If distributed at only 1% of this density, such a tall and conspicuous plant would obstruct normal visibility and change the face of these woodlands in summer.

A number of independent 'local reviews' preparatory to the Review proper, resourced to investigate a regional or local invasive species' situation, would have been preferred, promoting awareness and stimulating public opinion. Consequent on the non-enforcement of the Weeds Act 1959 and the 1981 Act Section 14, many inadequately informed organisations have tacitly adopted 'no control' policies (although electorally untested) believing them to be inevitable, and presently do not admit to knowing of the Review. The **White Paper** (p. 124) did also refer to '. . . the well nigh impossibility of controlling species once well established'.

This Review affords a rare opportunity for decisions on a serious environmental problem area which could determine important aspects of our future lives. It may be the case that the Review Group 'set itself a twelve-month timetable' for its work. There is no necessity whatever for hasty action on this 'non-subject' behind closed doors (submissions by participants and key Subgroup Reports such as 'Remedy amd Control' chaired by the official Joint Nature Conservation Committee, JNCC, are unavailable). Publication of the Review Report

at this stage only as a consultative document pending wider public involvement is required before it's recommendations are passed to Ministers. This concern about the 'cart before the horse' decision on public consultation will be communicated to M.Ps and others.

There has clearly been an intercommunication problem here: news on the 'Old Boy Net' in the invasive aliens subject area could be more generally accessible on some centrally-funded usenet facility. It must be essential to exploit this aspect of information technology: workers individually cannot be expected to keep up by tiresome Web and database searches on the off chance of learning of a Ministerial announcement in the House of Commons of a Government Review or of a key publication.

This is a Review of Government policy and not a Public Enquiry (presumably reserved for matters deemed to be of a more weighty, or even controversial, nature). Public Enquiries we understand, may 'kick matters into the long grass: over-hasty Reviews may differ perhaps only in respect of the length of that grass.

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STOP PRESS

KIWI PLANT IN S. LANCASHIRE (V.C. 59) — A CORRECTION

I have just received a note from Dr E.C. Preston pointing out that according to the *European Garden Flora*, Vol. 4, the species is most likely to be *Actinidia deliciosa* not *A. chinensis*. The former species has elipsoid fruit with stiff brown hairs whilst the latter has spherical fruit with soft hairs, becoming almost hairless at maturity. Though the plant flowered profusely this year no fruit has been formed but the probability is accepted that it is *Actinidia deliciosa*.

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PYLONICUS ELECTRICUS IN FRANCE?

As a novice in this field, I hesitate to enter into this erudite correspondence (*BSBI News* **90**: 39), however, I would much appreciate some expert help with taxonomy.

I have noted that there is a very large form which fits the diagnosis of *Pylonicus electricus* — especially the quadrifid base and reticulate structure. It seems to be very rare, there being only one specimen at a single urban station in Northern France. Despite its apparent rarity, it does not seem to be under any threat, even though its whereabouts are well known, and the site is frequently visited.

Is this considered to be just a large form of *P. electricus*, perhaps in optimal conditions, at it has not developed the appendages, probably aerial roots, which are usually present, or is this a separate species?

If so, it has not been named. Might I suggest *Pylonicus eiffelensis* after M. Gustave Eiffel, a Frenchman who closely observed its germination and growth to apparent maturity over a century ago.

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ALIENS

BULBINE SEMIBARBATA (R.BR.) HAW., THE LEEK LILY AS A NEW BRITISH ALIEN

The 80 or so species of the genus *Bulbine* Wolf. (Asphodelaceae) are mainly South African, with extensions as far north as Ethiopia, and about five species in Australia. The centre of diversity being the winter rainfall area of the Cape Provinces. For many years several species have found a place in horticulture as ornamentals and more recently the Australian *B. semibarbata* has come in to vogue as a hardy plant. A colony in my garden has happily persisted for three years without any winter protection and seeded itself about. Last year it began to appear down the street from my house and I note since that others have observed its desire to travel. One British nursery destroyed its stock on the grounds that it was too invasive. It is now available in Cornwall at several nurseries and seed germinates easily.

Currently *B. semibarbata* masquerades in cultivation under various names. Most frequently it can be found as *B. bulbosa* misapplied and *B. annua* misapplied. After growing many seed samples and plants from different sources I can confirm that so far only *B. semibarbata* is in cultivation in the Britain. It is possible that the other two species are present but, if so, they are very rare and only in specialist collections. One other *Bulbine* is commonly cultivated, sometimes out of doors in the south-west, but usually as a conservatory plant. This is *B. caulescens* L. (syn. *B. frutescens*) which is very different in habit with a creeping rhizome and all six filaments bearded. The account in the *European Garden Flora* **1**: 131 (1986) allows easy separation of *B. caulescens* from *B. semibarbata*. Judging by the confusion of names in cultivation, the problem comes with separating *B. bulbosa* (R.Br.) Haw. and *B. annua* (L.) Willd., from each other and from *B. semibarbata*. This latter is easy to separate as it is the only species of the three in which just three of the six filaments are bearded. Hence it is an easy matter to determine that plants grown from seed currently offered by Chiltern Seeds as the South African *B. annua*, are the Australian *B. semibarbata*. More surprising was the discovery that seed supplied by specialists with South African field collection data also gave rise to plants which key out as *B. semibarbata*. This widespread confusion may be due partly to the synopsis and key presented in Jacobsen, *Lexicon of Succulent Plants*: 116 (1970) which gives the impression that only *B. annua* is annual (it can be weakly perennial in cultivation) and without subterranean storage organs. *B. semibarbata*, which is also annual (facultatively at least in the wild, but often perennial in cultivation) and tuberless, is treated in Jacobsen, under *Bulbiniopsis* Borzi, a concept since abandoned.

The most recent account of the genus is in Eggli, *Illustrated handbook of Succulent plants*: *Monocotyledons*: 233-245 (2001). Astonishingly it does not provide keys below generic level, but depends for identification on comparison of descriptions by the reader, which in the case of *B. annua* and *B. bulbosa*, is not facilitated by inconsistent data as both descriptions originated from different authors. If only it had been produced to the standards of the *European Garden Flora*! One key difference is the presence of a subterranean tuber in *B. bulbosa* and larger flowers. The following key points out some of the differences.

Key to 'annual' *Bulbine* species in cultivation.

1a. Three staminal filaments bearded; beardless filaments shorter	*B. semibarbata*
1b. Staminal filaments all bearded	2
2a. Large perennial; tuber present; perianth segments 9-22 mm long	*B. bulbosa*
2b. Small annual; tuber absent; perianth segments 5-6 mm long	*B. annua*

Seed size and shape is another useful character with those of *B. bulbosa* being noticeably larger. However, seed of *B. bulbosa* from Australia has proved very difficult to germinate. The Australian species of the genus have been investigated cytologically and present an interesting complex, for

details see Watson, E.M., Cytoevolutionary studies in the genus *Bulbine* Wolf. 1. The Australian perennial taxa (*B. bulbosa* s.l.), *Austral. J. Bot.* **34(5)**: 481-504 (1986); 2. The Australian annual taxa (*B. semibarbata* s. l.), *op. cit.* 505-522.

Illustrations:

B. annua: *Curtis's Botanical Magazine* **35**: t.1451 (1812) as *Anthericum annuum*.

B. bulbosa: *Curtis's Botanical Magazine* **57**: t.3017 (1830) as *Anthericum bulbosum*; Morley, B.D. & Toelken, H.R. (1983) *Flowering Plants in Australia*: 326; Black, J.M. (1986) *Flora of South Australia* **4**: 1751.

B. semibarbata: Blackall, W.E. & Grieve, B.J. (1974) *How to know Western Australian wildflowers* pt.1: 60; Rotherham *et al.*, (1975) *Plants of Western New South Wales and southern Queensland*: 130; Cunningham *et al.*, (1981) *Plants of western New South Wales*: 183.

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ERAGROSTIS IN WESTERN EUROPE

Many readers will probably be aware of the excellent paper by T.B. Ryves in *Watsonia* **13**: 111–117 (1980), where 51 species of the adventive grass genus *Eragrostis* Wolf (Love-grasses) are carefully keyed out, together with a summary of native origin, frequency and location of voucher herbarium material. This was further enhanced in the BSBI publication by Ryves *et al.*, *Alien Grasses of the British Isles* (1996), with a modified key to the species on pages 119–124.

In 2002, Robert Portal (RP) built on this and other foundations and published a most remarkable book, 'Eragrostis *de France et de l'Europe Occidentale*' that is a full monographic study of all the British taxa, together with all those from western Europe. His definition of the area is much wider than that used by *Flora Europaea* vols1–5: it is almost so wide as to include C. Europe, covering Poland and Czechoslovakia. Ninety taxa are given a full treatment (and others are treated more briefly); this includes both a full-page plate and a full-page descriptive text that includes details of the type specimen, chromosome number and world distribution. There are illustrated keys to all taxa, both in French (pp. 63–121) and English (pp. 122–149), plus a full guide to synonymy and bibliography. It concludes with some magnificent coloured paintings of individual spikelets and their seed-types prepared by Bernard Duhem. The 432 pages also include specialist contributions by eight authors from across Europe. There is a modest two pages (by EJC) on *Le genre* Eragrostis *dans les Isles Britanniques*, translated into French by RP; it summarises the current status of the genus here, but it provides very little new information.

Mr Portal has very generously given the BSBI permission to reproduce here (see p. 47) one of his dramatically beautiful and detailed plates, *viz.* plate 89 (on p. 326), showing *Eragrostis virescens* J. Presl (1830). It shows:

1 – base of plant; 2 – panicle; 3 – spikelet; 4 – glumes; 5 – lemma; 6 – palea; 7 – caryopsis.

The unlabelled scale on the left hand side represents 5 cm; all the numbers along the other scales are distances in millimetres. On pp. 52–54 there is also an article (by Prof. Jean-Edme Loiseau) on its occurrence in 'le bassin moyen de la Loire'. This species is remarkably hardy and sets abundant seed in Britain: it is likely to become established here at some future date.

This book has been a labour of love: it has no commercial backing. Copies can only be obtained directly from Robert Portal, 16 rue Louis Brioude, 43750 Vals Près Le Puy, France (tel.: 04-71-09-57-65). To avoid excessive bank charges, **payment is only accepted by international money order**: it costs 40€ + 4.27€ (postage). It is strongly recommended, even for readers unable to cope with the French language.

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Eragrostis virescens J. Presl del. R. Portal © 2002.
Published privately in book-form, 2002, Vals Près Le Puy, France.

AGROSTIS LACHNANTHA IN BRITAIN (AND BEYOND)

On 31 October 2001, EJC noticed that a section of fencing separating the Sir Harold Hillier Gardens and Arboretum (Ampfield, S. Hants, v.c. 12) from the adjoining Hillier Garden Centre had been removed. Inquisitive (as ever!), EJC proceeded through the gap and discovered a sea of weeds growing over a derelict area that had clearly once been used as a store for potted plants. A ?natural spring had provided plenty of moisture, and *Mimulus guttatus* (Monkeyflower) was dominant. Scattered tussocks of *Cyperus eragrostis* (Pale Galingale) and *Polypogon viridis* (Water Bent) added to the exotic content. A few tufts of a mystery *Cyperus* were also present; a specimen sent to Kew was named by Dr D.A. Simpson as being as being close to the S. African *C. congestus* (Dense Flat-sedge), but a lack of mature achenes made a positive identification impossible. Nearly overlooked by EJC were several small clumps of a remarkably tall and erect *Agrostis ?stolonifera* that was reluctantly sampled (being of a genus that so often taunts one's identification skills) and deposited in the Hillier herbarium. A duplicate was sent to TAC, and after comparison with herbarium material he had no doubts that it was *Agrostis lachnantha* Nees (African Bent) — see Clive Stace's *New Flora of the British Isles*, ed. 2 (1997), p. 874. The herbarium (**K**) has many sheets of this variable grass as a native (from Ethiopia, Sudan, Uganda, and Tanzania to S. Africa, with an outlier in Yemen), but also fourteen vouchers collected as adventives which seem worthy of record here. They are arranged in order of date:

United Kingdom:

Selkirk, junction of Gala and Tweed, 5 October 1909, *Hayward* s.n. [1st British record]
Beds, Biggleswade, 30 August 1951, *Dony* s.n.
Worcs, Charlton, July 1957, *Bannister* s.n.
Worcs, Charlton, 23 September 1957, *Lousley* W/447
SW Yorks, Idle, 2 October 1957, *McCallum Webster* 1489
Beds, Shefford sidings, 9 July 1958, *Lousley* W/841
SW Yorks, Bradford City sidings, 22 August 1960, *McCallum Webster* 2776
N. Hants, Blackmoor, 17 September 1960, *McCallum Webster* 5209
Worcs, Charlton, 2 October 1960, *Lousley* W/1544
Worcs, Charlton, 9 October 1961, McCallum Webster 7069
N. Hants, Blackmoor, cult. Kingston, 13 April 1972, *Ryves* s.n.

Elsewhere:

Belgium, Graviers de la Vesdre, 6 March 1948, *Fasseaux* s.n.
Germany, Karlsruhe, cult. Baden, July 1910 – 1913, *Kneucker* 857
?Netherlands, Filburg, 18 August 1940, *Kloos* s.n.

Noteworthily, **all** the UK localities above are well known as wool-alien sites. Although the species was seen at Charlton in 1957, 1960 and 1961, there is no suggestion that it was ever established there, or anywhere else. Furthermore, a brief literature search failed to locate any country where *A. lachnantha* is naturalised: e.g. Australia and New Zealand apparently do not possess even casual records. It is ephemeral in Sweden and Germany, according to *Svensk Botanisk Tidskrift* **91(5)**: 434 (1997) and Hegi's *Illustrierte Flora von Mitteleuropa* **1(3, lieferung 5)**: 336–337 (1989), respectively. More middle-European wool alien records can be found in ref. **R13**. (Consult pp. 133–147 of Ryves *et al.*, *Alien Grasses of the British Isles* (1996) for all reference numbers quoted herein). In ref. **R13** (p. 18), the native country of origin 'Nepal' is a careless error for 'Natal'! It also (?mis)spells Filburg (see above) as Tillburg.

Descriptions of *A. lachnantha* are not difficult to find — Ryves *et al.* (*loc. cit.*) lists three of them, but somehow ref. **D82*** was not listed, and ref. **R4** should have read **R4*** (*i.e.* an illustration is present). The latter volume gives an excellent description and a photo of a herbarium sheet of the Selkirk plant, where it as found to be 'plentiful and freely seeding.' The recent (1995) *Flora of Ethiopia and Eritrea* 7: 47 & 48 (illustration), authored by Sylvia Phillips (Kew), tells us that '*A. lachnantha* is unusual in *Agrostis* in possessing a 3-nerved lemma, the majority of species having a 5-nerved lemma.' Yet, Sell & Murrell, *Flora of Great Britain and Ireland* **5**: 189 (1996) claim a

'5-veined lemma.' This character needs to be interpreted with caution, *e.g.* Hubbard's *Grasses* (3rd edn, 1984) illustration of *A. gigantea* (p. 300) clearly shows a 3-nerved lemma, but the text clarifies the situation as being '3-5-nerved' in this one species. Indeed, TAC has observed that within a single panicle of *Agrostis* the terminal florets may have 5-nerved lemmas, whereas the others have 3-nerved lemmas.

The epithet *lachnantha* is derived from the Greek, meaning 'downy flower', and refers to the pilose lemma, but a glabrous variant (var. *glabra* Goossens & Papendorf) is known. Nowadays, *A. huttoniae* (Hack.) C.E. Hubbard is also regarded (*e.g.* in ref. **D82**) as a mere variant, although it has a nearly glabrous lemma with a bearded callus (the hairs ± equalling the lemma) and also has a rachilla extension: such a plant, from an unspecified British locality, was drawn by Charles Rowlands (in *c.*1962) for David McClintock's proposed *Alien Flora* (never published). DMcC's vivid manuscript description of typical *A. lachnantha* may be welcomed by readers:

> A minutely scabrid S. African [sic] perennial grass, often flowering in the first year. Stems to 50 cm, 2–4 noded, ligule 2–5 mm, rounded, blades green or subglaucous; inflorescence a narrow panicle to 25 cm, the branches unequal, erect, pedicels mostly no longer than the pale green spikelets which are 1.5–2 mm long, 1–flowered, shining, with glumes subequal, *c.*2 mm, 1–veined, keels rather stout, scabrid, nearly as long as lemma which is obtuse, 3–veined, hairy, unawned, bearded at the base, palea *c.*2 mm; grain *c.*2 mm, narrowly ovoid. Fls July–October. A wool alien.

Sadly, a return visit to the Ampfield site in April 2002 revealed that this interesting habitat had been totally destroyed by extensive work on a new Hillier Visitors' Centre: we shall never know if it was an established alien here. But, fortunately, a piece of rootstock had been removed by EJC and planted in his garden. It grew luxuriantly (in spite of total neglect over a mild winter) and it produced one large panicle in April 2002, and by mid-June eighteen more had emerged. Part 216 of ref. **D82** says it 'flowers throughout the year' — seemingly it is from April to November in Gosport. This is in marked contrast with all native *Agrostis* tufted species that mostly have a single, late flush of flowers (in late June/July).

It is exceedingly likely (judging by EJC's clumsy discovery!) that this grass is being overlooked elsewhere in Britain: nursery centres and water-gardens are clearly the most likely habitats: as a native it is 'always in wet places' (ref. **D5**). Any 'suspect' should be apprehended and despatched (after death by desiccation) to TAC. Any *Agrostis* with a long and narrow panicle developing a drooping tip and side branches should be inspected for the tell-tale MINUTE cream-coloured exserted anthers. (All native species have anthers at least 1–1.5 mm long). 'How minute?' depends on which book one consults: ref. **R4** states '¼ line' (=0.05 mm), which is ?copied from *Flora Capensis* **7**: 549 (1899), whereas **D82** gives '0.4–0.5 mm'. The Ampfield plant, which has ± no ornamental value, has fresh anthers measuring *c.*0.3 mm; it also has a culm that is minutely scabrid beneath the nodes, but this 'blind-man's character' may not be a constant one in this species (no native species provides this feature).

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ZIZANIA LATIFOLIA (POACEAE) FOUND AT ANOTHER SITE IN WEST SUSSEX

Further to the recent articles in *BSBI News* (**84**: 38-39, 40-41 & **85**: 39-40), reporting Manchurian Wild Rice (*Zizania latifolia*) in some lakes in southern counties of England, we should like to add another locality in West Sussex where this plant has been found.

At a recent (11 May 2002) field meeting of the Sussex Botanical Recording Society to Parham Park, two large patches of *Zizania* were seen, about 30 m apart, at the eastern end of the ornamental lake. The O.S. Grid Refs were TQ05861440 and TQ05861442 by GPS. Each patch was about 15 m

along the lake margin, extending up to 3 m out into the lake. The leaves were the characteristic vivid green colour, projecting *c.*45–60 cm above the water, mostly growing through the very pale beige tussocks of last year's dead foliage. As at Patching Pond in 2000, there was no sign of any dead flowering or fruiting stems, and the dead tussocks were separated. Within a few weeks, this would become a continuous solid mass of tall leaves.

Examination in the hand showed that the midrib divided the lamina into two unequal halves, the serrated leaf margins were clearly evident, and the small maroon patch at the base of each leaf sheath — a useful diagnostic feature — was already visible.

We have so far been unable to find any clue as to when this grass was planted here — the estate staff concerned probably retired long ago.

We are grateful to the owner, the Lady Emma Barnett, for her permission to botanise over the estate, and to Joe Reardon-Smith who kindly accompanied and guided us around.

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PENNISETUM CLANDESTINUM (KIKUYU-GRASS) — A POSSIBLE NEW RECORD FOR MENORCA

While visiting Menorca in May the lawn grass near my apartment caught my attention. The lawn mower blades were so blunt that the mown grass was covered with white strands of torn leaves, or so it appeared at first glance. Then, the observation that these white strands bore a yellow anther at the apex demanded a rethink and a closer look. The white strands were of course staminal filaments; about 5 cm long, they originated in groups of three from the axils of short opposite leaves along a pencil-thick rhizome. Obviously a grass, but unlike anything I had seen before. A few days later large clumps of the same grass were found along roadsides and on waste ground, still with the enormously exserted stamens, which were the most obvious link to the lawn grass. The whole habit and shape of the plant were so different that only after cultivation experiments am I now certain that they are one and the same taxon.

Confirming the identification of the grass as *Pennisetum clandestinum* (Kikuyu-grass) was quite easy thanks to the illustration in Ryves *et al.*, *Alien grasses of the British Isles*: 100, fig. 15j, k (1996). It is known from a few sites in Britain as a wool alien. Elsewhere it seems to be deliberately cultivated as a lawn grass and then escapes. Which raised the question of why does it not appear in any horticultural literature? Most such works mention other widely cultivated lawn grasses of warm climes including *Stenotaphrum secundatum* (Walt.) Kuntze, Buffalo Grass, which can even be purchased as a house plant, and of course, *Cynodon dactylon* (Bermuda-grass).

Furthermore, there do not appear to be any records for *P. clandestinum* in literature relating to the flora of the Balerics. The well known work by E. Beckett, *Illustrated Flora of Mallorca* (1993), which also contains records for the other Balearic islands does not mention this grass. Nor does another book, available on Menorca, by M.C. Barredo, *Les flors de Menorca* (1996), which between pages 114–119, provides a useful checklist for the island. Thus suggesting that this *Pennisetum* is either a recent arrival or has just been too clandestine. It has been reported from Madeira, but none of the other Macaronesian islands.

Pennisetum clandestinum is native to east Africa. A *Kikuyu Botanical Dictionary* by F.N. Gachathi (1989): 147 relates that this is an excellent grass for cattle and very useful for checking soil erosion. The roots are used in preparing treatment for liver troubles and gonorrhoea. In Ethiopia the grass forms a close sward resistant to grazing on fertile soils in highland areas. *The Flora of Ethiopia and Eritrea* 7: 264-266 (1995) adds that the anthers emerge at night on their long filaments and are visible in the morning as a greyish-white haze over the sward. Further descriptions can be found in *Flora Zambesiaca* **10(3)**: 179 (1989) and *Flora of Tropical East Africa, Gramineae*: 675 (1982).

Unlike many plants native to the Ethiopian highlands this grass has not been recorded from the wild in the mountains of Yemen. It is recorded as cultivated in Saudi Arabia and North Yemen by T.A. Cope in his *Key to grasses of the Arabian peninsula*: 49 (1985). J.R.I. Wood adds that it had recently been introduced as a lawn grass in the Sana'a region of Yemen (*Handbook of the Yemen Flora:* 386 (1997), adding that it is not easily propagated by seed.

An examination of a few other Floras soon revealed that it is now very widespread. A.S. Hitchcock's *Manual of the Grasses of the United States* **2**: 729-730 (1950) records its appearance in southern California as a 'troublesome weed', which has become 'noxious weed' by 1993 in *The Jepson Manual*: 1280–1281. *Flora Mesoamericana* **6**: 374 (1994) enumerates collections from Chiapas, Mexico; Guatemala; Nicaragua; Costa Rica and Panama. It is also known from Veracruz, Mexico (*Flora de Veracruz, Lista Floristico*, fasc. **82**: 124 (1984). Further south, the recent floristic checklists published by Missouri Botanical Gardens give localities in Argentina, Peru and Ecuador. It was recorded as early as 1936 for the Flora of Peru project, and is now 'often naturalised in Peru' (Brako & Zarucchi, *Cat. Fl. Pl. Peru* 1993: 965.). Steve Renvoize also provides localities for Bolivia (La Paz & Cochabamba) in *Gramineas de Bolivia*: 544 (1997).

In the Old World, apart from Africa, records from Australia are numerous with Burbidge's *Australian Grasses* (1966: 204) declaring it is known in all states. It is also treated in the *Flora of Taiwan* 2nd ed. 5: 502, 504 (2000) and the *Revised handbook to the Flora of Ceylon* **8**: 362-363 (1994). One of the best illustrations of the spikelet and exserted stamens appears in the recently published *Flora of Bhutan* **3(2)**: 739 fig. 46e–f, 741, (2000) where it is recorded from all areas with cultivation (first record for Bhutan was 1987) along with adjacent Sikkim (first introduced via an experimental grass farm in Gangtok about 1940) and Darjeeling. However, it does not appear in the *Enumeration of Flowering plants of Nepal* **1** (1978).

Botanically this species is of interest for its remarkable stamens and very reduced inflorescence. Clayton & Renvoize comment in *Genera Graminum* (1986: 305) '*P. clandestinum* is a peculiar species in which the inflorescence is reduced to a single cluster hidden within the uppermost leaf-sheath from which the elongated stigmas and filaments protrude. It is linked to the body of sect. *Pennisetum* through *P. longistylum*', which is another native of the Ethiopian highlands. Gerrit Davidse (*Handbk. Fl. Ceylon* **8**: 363, 1994) speculates that the 'stamens are apparently nonfunctional with some frequency since it is not unusual to find spikelets with fully developed caryopsides that also enclose somewhat smaller, never exserted anthers.' Pohl in *Fieldiana, Bot.* n.s. **4**: 463 (1980) suggests that the fruit are dispersed in the manure of grazing animals.

This plant may also make an interesting addition to ornamental grasses in cultivation.

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SILENE COLORATA — A NEW SPECIES FOR BRITAIN? — 1

Two small patches of *Silene colorata* Poiret, a Mediterranean species, were first found on the dunes at Dunster Beach, (S. Somerset, v.c. 5) in 2000 by Jeanne Webb (*Exmoor Naturalist*). The identification was made by Desmond Meikle.

This annual seems to have disappeared and there were no more sightings until May 2002 when Derek Thomas found eleven plants, but this time on Minehead Warren at the opposite end of the same dune system (see photo in colour section p. 4). This is, as far as I can tell, a species new to the British Isles. It will be interesting to see if it becomes established on the dunes. [See also note on p. 52. Ed.]

Reference

Webb, J. (2001). Botanical Report, 2000. *Exmoor Naturalist* **27**: Spring 2001: 72-79.

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SILENE COLORATA — A NEW SPECIES FOR BRITAIN? — 2

On 12th May 2002, I was walking in the Shell Bay area of Studland, Dorset, when I noticed a small pink flower growing along the side of the road in sandy soil near a café. It was clearly a *Silene*, but I was unable to determine which species. A small piece was later sent by Ted Pratt to Eric Clement, who identified it as *Silene colorata* Poiret.

It is apparently a characteristic annual of the early spring over a wide area of the Mediterranean and can be found in cultivated and waste land, as well as roadsides in dry sandy or stony conditions. The flowers are 12–18 mm diam. in lax clusters of (usually) 1–4, with the petals deeply notched (see photo in colour section p. 4). The calyx is club-shaped and *c.*10–15 mm long.

Eric Clement has drawn our attention to the seeds which are diagnostic. They are of a dark chestnut-brown, with deeply grooved edges between two undulate wings, which can be clearly seen with a lens.

It is interesting to speculate how the species arrived in Dorset. Although it was found growing near a café garden, the species has not apparently been sown there and EC reports that he is unaware of it ever being grown as a garden plant in Britain. The area is very popular with tourists and so the seeds may well have arrived on footwear, or possibly from something shaken from a car while waiting in a queue for the ferry. It is hoped that the few plants seen this year will have set sufficient seed to ensure a good display next year.

[As is apparent from the other note on *Silene colorata* (p. 51) this is the second record for Britain!. Ed.]

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SCROPHULARIA SCOPOLII (ITALIAN FIGWORT) ESTABLISHED IN BRITAIN, PLUS A TALE OF TWO NIPPLEWORTS

In late May 2002, Dr Francis Rose telephoned me to say that he had been sent a specimen of what he had tentatively identified as *Scrophularia umbrosa* (Green Figwort). It had just been found by Graham Long near Owslebury in South Hampshire, SU52, v.c. 11. I immediately set off with my camera, because *S. umbrosa* had never been previously recorded in Hampshire.

Francis had given me two map references, less than 1 km apart, where the plants had been found, growing along the uncultivated headland strip of two arable fields. En-route, whilst walking down a lane close to the two reported sites, I noticed a few plants of an unusual figwort on the lane verge. I collected a piece from here and from one of the two headland strips where there were around 20 plants. The specimens were clearly the same species, but did not match the description (or habitat) of *S. umbrosa*. When I got home I contacted Francis Rose, who agreed that although the bifid staminode made the plants key to *S. umbrosa* in several books, for example Stace (1997), several other characters did not match that species. It seemed to have some of the characteristics of *S. umbrosa* and others of *S. scorodonia* (Balm-leaved Figwort).

I suspected that it was an alien, and using *Flora Europaea* I keyed it to *Scrophularia scopolii* (Italian Figwort) or *S. alpestris* — with the proviso that it may not be a European species! I sent the specimens off to Eric Clement and he confirmed it as *Scrophularia scopolii* and pointed out that this is an extremely variable species that effectively encompasses *S. alpestris*. He said that it is native to several countries in SE Europe and is so variable that seven different varieties are keyed out in the *Flora of Turkey* (Lall & Mill, 1978). There is an old record for it as a casual at Oxford (Clement & Foster 1994) but it has not previously been reported as established in Britain.

I contacted Graham Long who said that he had found the plants whilst doing a survey for the farmer in support of an application under the countryside stewardship scheme. Graham pointed out that there were huge numbers of this figwort at the second site that I had not visited, including some with yellowish-green flowers. He took me to this site, where *Scrophularia scopolii* was growing in gay abandon along 190 m of an uncultivated strip adjacent to two sides of a field. I counted 20 plants

with greenish flowers but it was not practical to individually count the 'normal' purple-flowered ones. There were many hundreds of plants, in fact probably over a thousand. So it is certainly established in Britain now, and as noted above, has set off marching down a lane.

The associated plants included *Cirsium arvense* (Creeping Thistle), *Urtica dioica* (Common Nettle) with *Geranium columbinum* (Long-stalked Crane's-bill) and *Orobanche minor* (Common Broomrape) at one of the sites. It seemed likely that the *Scrophularia scopolii* had come in as a seed-contaminant of one of the farmer's crops, so I specifically looked for other alien plants. All I found were a few plants of *Hyoscyamus niger* (Henbane) and these were in an adjacent area that only had a few of the Italian Figwort plants. However, one corner of the field had a very weed-ridden crop of Lavender shrubs, and the Italian Figwort was abundant there. If the Lavender had been grown from seed, this seems a likely source for the *Scrophularia scopolii* as a contaminant. However, Graham pointed out that the farmer had another Lavender crop elsewhere on his land where there were no Italian Figwort plants.

If any member knows of any cultivated Lavender crops it would be worth checking whether *Scrophularia scopolii* is also present. On the other hand, if the seed came in from SE Europe as a contaminant of an arable crop like wheat or barley, then it could turn up anywhere in the country.

Scrophularia scopolii is both described and illustrated in several books (e.g. Grey-Wilson 1981, Blamey 1993, Huxley 1986). The photographs (colour section p. 2) show the tall very branched habit (fig. 1) and an indication of the remarkable variation in the leaf shape and dentation (fig. 2). Close-ups of the flowers are also presented (figs 3 & 4), showing the colour forms and the scarious margins to the sepals; the bifid staminode may also be just visible.

Incidentally, as I walked down the lane where I found the first *Scrophularia scopolii* my eye was caught by numerous huge bushy plants of *Lapsana communis* (Nipplewort) that were not yet in flower. I thought that they looked odd but I dismissed it as the effect of fertiliser run-off. Later on, Pete Selby, the v.c. 11 recorder, visited the site. He rang me to ask had I also, apart from the *Scrophularia scopolii*, noticed the *Lapsana communis* subsp. *intermedia*. I could have kicked myself! I went back in late June when the *Lapsana communis* subsp. *intermedia* was in full flower. I was amazed to find it abundantly along all the local shady road verges and tracks, colouring them yellow for several kilometres. Few people would call ordinary Nipplewort an attractive plant, but subsp. *intermedia* really is very attractive with its large flowers. This alien subspecies is not quite new to Hampshire (apparently Phil Budd first found it in September 2001 in this same general area, north of Owslebury, and subsequently Paul Stanley found some near Bishop's Waltham SU51). It is not clear whether the *Scrophularia* and *Lapsana* near Owslebury share a common origin.

In the photograph on page 3 of the colour section I have posed both the *Lapsana* subspecies together. Apart from the flower size, subsp. *intermedia* is distinguished by its practically untoothed and linear-lanceolate upper stem leaves. It also branches more widely and profusely. However, the flower size seems to be the most reliable character.

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NOTICES (NON-BSBI)

Dorset Natural History and Archaeological Society

Discovering Plants in Dorset, the world and in history

A lecture series for 2002/2003 at the Dorset County Museum, Dorchester

A series of lectures commemorating the centenary of the death of J.C. Mansel-Pleydell, father of botany in Dorset, and exploring the history and development of the study of plants

Tuesday 15 October 2002

Franklyn Perring, OBE, botanist, founder of the Biological Records Centre and former General Secretary of the Royal Society for Nature Conservation

'The Gondwanan Origins of the Wild Flowers of Western Australia and South Africa'

Including an account of the similarities and differences of these two areas, which are the two richest floristic areas in the world. 66% of their species are found nowhere else

Tuesday 19 November 2002

Professor Sir Ghillean Prance, FRS,VMH, former director, Royal Botanic Gardens, Kew; Science Director, the Eden Project; Visiting Professor, Reading University

'The Amazon Rainforest: destruction or sustainable use?'

What makes the Amazon Rainforest unique and what does the future hold for tropical forests?

Tuesday 21 January 2003

Dr Bob Gibbons, freelance naturalist, author and award-winning photographer

'Flowers at my feet'

A photographic journey through Britain's natural habitats, with special reference to Dorset

KATE HEBDITCH, Deputy Curator, Dorset County Museum High West Street, Dorchester, DT1 1XA
Tel.: 01305 262735

UK FLORA WRITERS EGROUP

Anyone involved in producing a regional flora, checklist or interactive CD should be interested to learn of a new e-mail group recently established. The UK Flora Writers egroup was set up following the BSBI conference on Local Floras last April. It aims to encourage communication and exchange of ideas between people who might otherwise be working in isolation. (It came as a surprise to some that the BSBI did not actively coordinate the efforts of county flora groups).

The egroup aims to be a self-help group, whereby an e-mail sent by a member is automatically forwarded to every other group member, as are any replies. It is hoped that individuals who have recently produced their own county floras will consider joining. They will undoubtedly have much skill and experience to offer the rest of us!

In addition, the group's home page has resources such as links to online herbaria, atlases and floras, plus downloadable files with contributions from Arthur Chater, Geoffrey Halliday and Martin Sanford, amongst others.

Joining is easy, free, and open to anyone with an interest in local floras. Go to www.smartgroups.com/groups/Florawriters and follow the simple on-screen instructions; Alternatively send a blank e-mail to Florawriters-subscribe@smartgroups.com

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ONLINE UMBELLIFERAE ENCYCLOPAEDIA

The first online encyclopaedia pertaining to the British Umbelliferae (Parsley) family, as approved by the British, Cambridge & Oxford Libraries has just been launched. It is hoped this will prove to be an invaluable guide to botanists, pharmacologists, conservationists, cooks, toxicologists, historians and students alike. I would welcome comments from members of the BSBI and would be grateful for a link to this site, on the BSBI website if it meets with your approval. Site address link: http://www.geocities.com/britumbel/umbels1.html.

JAMES M. BURTON, 18A Duke Street, Aberdare, Mid Glamorgan. E-mail: spookspring@hotmail.com

GLOBAL CHALLENGES OF PARKS AND PROTECTED AREAS MANAGEMENT

A Regional Symposium in the Series of International Symposia on Society and Resource Management
La Maddalena National Park, Sardinia, Italy
Rescheduled Dates: October 10-13, 2002

Parks and protected areas (PPA) have become focal points for societal concern over natural resources. The integrity and sustainability of PPA will be determined by our ability to meet the challenges of managing these areas, along a spectrum of wild and natural to settled and pastured landscapes. This symposium is dedicated to an examination of these challenges.

The symposium is hosted by Colorado State University (USA), the University of Sassari (Italy), and the Archipelago of La Maddalena National Park (Italy).
For further details please visit the Symposium Web-page at www.cnr.colostate.edu/NRRT/SSRM/
Kind regards, Ignazio Camarda

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CERTIFICATE IN PLANT STUDIES AND FIELD BOTANY

This new course is being offered by the Institute of Lifelong Learning at the University of Leicester. The two year, part-time programme is intended for adult students with an active interest in botany, plant identification and plant conservation. Through a combination of evening-taught seminars and weekend field and practical work, students will be given a solid grounding in the theoretical and practical aspects of contemporary plant studies and field botany, including identification skills. The course will be taught by members of the teaching staff at the University and other professional botanists (many of whom are BSBI members). It will be of interest to those with field skills who wish to learn more about plant distribution, ecology, evolution and conservation, but will also improve competence in plant taxonomy and identification. No prior qualifications of any kind are required for entry on to the course, but students must be willing to commit themselves to study for two years. The course will meet on Monday evenings at Vaughan College, Leicester, from 6.15–9.15 p.m., commencing 7th October, 2002. Practical sessions will be held at a number of field locations and in the Department of Biology. The course fee is £350 per annum. For further details and an enrolment form, please contact:

KATE PENNY, Course Secretary, Institute of Lifelong Learning, University of Leicester, 128 Regent Road, Leicester, LE1 7PA. Tel: 0116 252 5908; Email gem@le.ac.uk.

REQUESTS

CD-ROM FLORA OF THE BRITISH ISLES — APPEAL TO ALL MEMBERS FOR HELP

The Society's document *BSBI Stategy 2000*, distributed to all members in September 2001, lists the main aims of the BSBI as agreed by a specially convened working party and subsequently modified and ratified by Council. One of these aims is the production of a **CD-ROM Flora of the British Isles**. This project, which will break new ground in the field of plant identification and information provision and which is now well on the way to completion, is a collaborative effort by several individuals and organisations. The bulk of the technical work involved in translating text and other basic elements to a cd-rom is being carried out at the University of Amsterdam by the Biodiversity Centre of ETI (Expertisecentrum voor Taxonomische Identificaties), an organisation that is a world-leader in this field, having already produced dozens of comparable titles. Guiding this complex job are Rob Heijman of ETI and Ruud van der Meijden of the University of Leiden. Together in 1998 they produced a cd-rom Flora of the Netherlands, based on Ruud's standard Dutch Flora.

The basis of our cd-rom Flora will be my *New Flora of the British Isles* (a slightly updated version of edition 2), including its keys and diagnoses, with the following main additional features:

- Distribution maps of each species
- A multi-access 'assisted key', in addition to the sequential keys of the printed Flora
- Illustrations, including colour photographs, coloured plates from existing books, and line drawings
- The whole product will be interactive, allowing easy cross-referencing between any sections, for example between the text entry of a taxon, its illustrations and its map, or from any word in the work to its glossary entry.

Other aspects, such as plant uses, or ecological data, could be added later.

The purpose of this note is to request from the BSBI membership at large illustrations for the third item above.

The BSBI is making available all the illustrations that it possesses, for example the line-drawings that have appeared in *BSBI News* and in the *Handbooks*. In addition one is at liberty to use any published illustrations that are out of copyright, for example the coloured plates in Sowerby's *English Botany* or the line-drawings in *Cambridge British Flora*, plus all the line-drawings and photographs in the *New Flora*. But the main source of illustrative material will be colour-slides (and nowadays digital images) taken by individuals over the years. All the photographs used in the Dutch cd-rom Flora, mainly donated by Dutch amateur botanists equivalent to the bulk of the BSBI membership, will be available to our cd-rom, but we have many species not found in the Netherlands (natives as well as aliens), and in some cases a British or Irish specimen would be preferable. Between us we in the BSBI must have pictures of virtually all the 3000 plus species to be covered; already some people have offered their pictures (including my own few thousand), and we are hoping for many more to come forward. We are not looking for major photographic works of art; so long as they are in focus, correctly exposed, and at sufficient magnification, they will be fine. They would be returned to you after scanning. We can use up to four or five pictures per species, so often flowers, fruits, whole plant portraits and other items such as geographical or ecological variants can be covered. Each picture in the cd-rom will bear the owner's name.

Why should you help out in this way?

In the past few years the BSBI has been making attempts to publicise itself as THE body with the expertise in plant taxonomy, distribution and site monitoring, etc. Our cd-rom will help to highlight the BSBI as the leading field botany society which would always be the obvious choice for consultation on a wide range of matters by other organisations, not least local and national government. It

will also go some way to achieving another of our main aims — the encouragement of a wider interest in our flora and the training of a greater number of people with sufficient expertise to identify wild plants. The next generation will not be content with using traditional Floras to identify plants. It is essential that the BSBI move now to utilise the new technologies to this end; if we do not we will get left behind and sidelined, with the real danger that we shall never be able to catch up. In short we shall lose our leading role and therefore our influence.

This project is not a commercial venture. Cambridge University Press, who own the copyright of my *New Flora*, have given their blessing to our project without charge, and I shall receive no royalties. The cd-rom will be a joint venture between BSBI, ETI, CUP (probably others) and all those individuals who contribute. I hope that many of you will want to become part of this exciting new venture. It will provide an opportunity for those of us who are not expert at plant identification, or those of us who are unable to reach the furthest or highest parts of our islands, to contribute at the fore to an important and long-lasting product.

Please send me your thoughts. You might have a large slide collection, or a few slides of which you are especially fond, or a specialist collection (shoddy aliens, grasses, flower close-ups, etc., etc.). I could send you a (long) list of our urgent requirements if you wish, or you could tell me what you can offer. It is not only rare species that we lack; for example one category badly represented is photographs of whole specimen trees. Don't let any doubts you might have stop you from contacting me. I look forward to hearing from you.

CLIVE STACE, Department of Biology, University of Leicester, Leicester LE1 7RH; Tel.:0116-252-3382 (with voice-mail); E-mail: cas7@le.ac.uk

IBERIS AMARA SEEDS WANTED

I am currently working on a research project on a phytochemical atlas of *Iberis* species, especially *Iberis amara*, used as a medicinal plant in Germany, and am seeking further information and seed samples of this species.

On the BSBI website I saw the report of a field meeting at Goring, Oxfordshire on 4th June 2000, which listed *Iberis amara* (Wild Candytuft) from Watlington Hill and on chalk grassland near Woodcote.

I would be very pleased to come in contact with some of your members who may be able to help me with seed samples of wild grown *Iberis amara* from the British Isles. It is very important for me to include samples from the northernmost limit of the natural distribution of the species.

It would be greatly appreciated if anyone could help me with my project and I look forward to hearing from you.

ERNST SCHNEIDER, Apotheker und Diplom-Biologe, Fanny-Niggl-Straße, 8 83043, Bad Aibling, Germany Tel +49-(0)8061-391876 Fax +49-(0)8061-391892
e-mail: schneider.e@phyto-consulting.de Internet:www.phyto-consulting.de

SALIX ALBA VAR. *CAERULEA* TIMBER WANTED

Bankey Lal Mittal & Company, a newly established and professionally managed timber trader based at Meerut, India, is seeking to purchase *Salix alba* var. *caerulea* timber for use in the manufacture of cricket bats.

If any member knows where this timber can be purchased in bulk quantity please contact:

JITENDRA KUMAR, CEO, Bankey Lal Mittal & Company, 37/04, New Prabhat Nagar, Jail Chungi, Meerut 250 001, Uttar Pradesh, India. Tel.: 91-121-643751, 642382. Fax: 91-121-650485. E-mail: blm@w3c.com

BOOK NOTES

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

Les Orchidées de France, Belgique et Luxembourg. Société Française d'Orchidophile. Pp. 416. Parthénope Collection, Paris. 1998. Price £32 (ISBN 2-9510379-1-0). Available, post free, from Lopinga Books, Tye Green House, Wimbish, Saffron Walden, Essex, CB10 2XE.

Poisonous Plants and Fungi in Britain and Ireland (interactive identification system on CD-ROM). Primary editors E.A. Dauncey *et al.* Royal Botanic Garden, Kew and Medical Toxicology Unit, Guy's and St Thomas' Hospitals, 2001. Price £39.95 (ISBN 1-900347-92-X).

Wild Flowers of Fife and Kinross, a concise checklist. G.H. Ballantyne. Pp. 137. Fife Nature, Glenrothes. Price £5 (no ISBN).

Nature Conservation (A review of the conservation of Wildlife in Britain 1950–2001). Peter Marren. Pp. 344. New Naturalist No. 91. Harper Collins, London. 2002. Price (Hbk) £34.99 (ISBN 000 711305 6); (Pbk) £19.99 (ISBN 000 711306 4).

**Stratford-upon-Avon; A Flora and Fauna*. J.M. Price. Pp. vi+210. Gem Publishing Co. Wallingford. 2002. Price (Pbk) £13 (ISBN 0-906802-09-1).

[Works covering all the natural history orders of an area are few and far between — I can think of only Ilfracombe and Monks Wood in a quick glance at my shelves.

The area covered is Stratford town — about 2½ miles by 2 miles. John Price covers over 3400 species, and not just by listing, but by being able to say something about each, a very impressive achievement in an urban area of about 5 square miles. Nearly 500 plant species are included, and he includes helpful bibliographies after each Order.]

*Flowers at my Feet. *The Wildflowers of Britain and Ireland in Photographs*. Bob Gibbons & David Woodfall. Pp. 192. Harper Collins. 2002. Price £24.99 (ISBN 0-00-220213-1).

[This is a really stunning collection of photographs, beautifully reproduced, of wildflowers. The pictures, 183 in all, are divided between those of plants in their habitat, and close-ups, and personally, it is the former that are much more fun and evocative. The book is arranged by regions (five for England, and one each for Ireland, Scotland and Wales) with a short text, typically around 60 words, against each photograph. This text is, fortunately, not doom-laden! The book was compiled in conjunction with Plantlife, and all parties are to be congratulated on a really superb production.]

**Den Nordiska Floran*. L. Stenberg, illustrated by Bo Mossberg. Pp. 696. Wahlström & Widstrand. 1992. (ISBN 91-46-17234-3).

[I found out about this 'pocket' guide to the Scandinavian Flora about 3 years ago, when Chris Preston brought back a copy from Stockholm. I was able to buy a copy from the author, Lennart Stenberg, at the Flora conference in Liverpool for £20, which Chris tells me was the shop price in Sweden. I think it is now out of print, but it is well worth searching for. The author tells me he is working on a second, expanded, edition, but for £20 odd, the first is an outstanding bargain. It is the best European popular guide I have seen (only Marjory Blamey's *Mediterranean Flowers* and *Illustrated Flora of Britain & N. Europe* would be a rival), containing exquisite paintings of about 2500 plants, including **all** the Cinderellas — grasses, sedges and ferns. The text is in Swedish.]

Alien species: friends or foes?* J.R. Downie (ed). Proceedings of Glasgow Natural History Society's 150th Anniversary Conference, 2001. Supplement to vol. **23 of *GNHS*, 2001. Pp. iii+113. Price £10 (ISSN 0373-241X). Available from Mrs Joan Chapman, 211 Randolph Road, Jordanhill, Glasgow, G11 7DS, for £11.50, incl. p.&p.

[Fifteen full papers, including two that are of particular interest to botanists: '*Alien vascular plants in Scotland: concepts and consequences*' by Prof. J.H. Dickson, and '*Figs, Japanese knotweed and Himalayan balsam enhance the urban ecology of Sheffield*' by Dr O. Gilbert. Both papers examine and largely debunk many of the myths spread by almost every conservation body over

'invasive' and 'invading' alien plants, even to finding positive attributes for invertebrates in Japanese knotweed. Copies of the articles should be force-fed to every self-appointed, doom-preaching eco-'warrior'.]

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

A CHECKLIST OF THE PLANTS OF DERBYSHIRE

Launched at the BSBI Local Flora conference, ***A Checklist of the Plants of Derbyshire*** by N.J. Moyes & A. Willmot, Derby Museum (2002), is the first definitive plant checklist ever produced for Derbyshire. It covers both the botanical vice-county (v.c. 57) and the modern county, and is based on 500,000 recent and historical records. Entries are arranged alphabetically by scientific name and show county status, conservation status and latest year of recording. The 50 page checklist also lists every new county record made since 1981, as well as naming any previously published records now considered as erroneous. It is the most recent step in an ongoing project by the authors to completely update and publish a new Flora of Derbyshire.

Copies can be obtained by sending a cheque for £2.50 (payable to Derbyshire Flora Committee) to:

NICK MOYES, Derby Museum & Art Gallery, The Strand, Derby, DE1 1BS.

THE RARE PLANTS OF SHETLAND

The Rare Plants of Shetland, written by Walter Scott, Paul Harvey, Roger Riddington and Morag Fisher, is due to be published in October 2002. The book provides an up-to-date account of 138 of Shetland's rarest plant taxa. The distribution of each taxa is mapped in full colour, and current population status described, including details of the threats facing those which are most vulnerable. The hardback book comprises 178 pages including 12 pages of colour photographs.

It will be available to BSBI readers at the discount price of £19 (inc. p.&p., cheques made payable to Shetland Amenity Trust) from the Shetland Biological Records Centre, Shetland Amenity Trust, Garthspool, Lerwick, Shetland. The normal retail price will be £21.75.

PAUL HARVEY, Shetland Biological Records Centre, Shetland Amenity Trust, Garthspool, Lerwick, Shetland ZE1 0NY. Tel.: 01595 694688

BOTANICAL CORNWALL 11 (2002)

Editor R J Murphy

The eleventh issue of Botanical Cornwall is now available. As well as many notes about new species found in Cornwall and the rarer plants such as *Asparagus officinalis* subsp. *prostratus* (Wild Asparagus), *Juncus pygmaeus* (Pigmy Rush), *Rumex rupestris* (Shore Dock) and various fumitories; there is information concerning the newly-formed Botanical Cornwall Group, its meetings and its web-site (www.floracam.co.uk/bcg).

Articles include problems concerning the identification of *Myosotis* spp. (Water Forget-me-nots), the distribution of *Sorbus torminalis* (Wild Service-tree) in Cornwall and the sand dunes of Hayle. A list is given of the most important flowering plants and ferns (native and alien!) found in the county since the publication of the latest *Flora of Cornwall* in 1999.

There are plenty of illustrations, both in colour and in black and white, the former including *Asparagus officinalis* subsp. *prostratus* (in fruit) on the North cliffs (a digital photograph by MJ Stribley), *Limonium* sp. (Rock Sea-Lavender) and scanned leaves of *Sorbus torminalis* (one almost

feels that one can lift them off the page). There are two rather nice, garden-worthy aliens, *Polystichum munitum* (Western Sword-fern) (in black and white) and *Symphytum bulbosum* (Bulbous Comfrey), the latter a colour photocopy of an actual specimen.

Copies of *Botanical Cornwall*: **11** are available, priced £5.00 from Environmental Records Centre for Cornwall and the Isles of Scilly, Five Acres, Allet, Truro, TR4 9DJ –. Please make cheques payable to 'Cornwall Wildlife Trust'.

ROSALINE J. MURPHY, Shang-ri-la, Reskadinnick, Camborne, Cornwall TR14 OBH

THE IDEAL FLORA

[Eight of the papers given at the Liverpool Flora Writers Conference will be published in *Watsonia*. Some of the remainder may be published in *BSBI News*. This is the first. Editor].

The following is an abridged version of my talk at the Liverpool Flora Writers Conference in April 2002 which, perhaps, ought to have been entitled 'My Ideal Flora'. I have shelves of county floras — 220 odd at the last count, but I suspect that, like many others, I had merely collected them. The Scarce Plants project and the New Atlas changed all that and I have used them like never before (and won the battle over shelf space with my wife). Notable were those that I never opened, and I wondered why, and this talk will try and explain why some were used and some neglected. I hasten to add that it is easy to be a critic — as a joint author of a very small Flora I can now see how much work is involved.

I have dealt firstly with the introductory chapters, then the main text, followed by extras, some optional, and end with my personal views. I covered the economics of publishing in another talk (with colleagues), and, space permitting, hope to persuade the editor to include these in another issue.

The Talk

Three things need to be decided at the outset:

PURPOSE:

1. Describe current flora of v.c. or region, and try to put it into the context of the past
2. Leave a statement for the future, even up to 100 years away.

MARKET and AUDIENCE:

Try and decide whether you are aiming for a scientific audience, or for beginners, or for tourists. Or for all groups (and consequent falling between stools). (See David Allen's talk in 1963 (BSBI Conference Report No. 7 – Local Floras)

COVERAGE:

Many of the topics that I'll cover are extras and I feel so many people include too much, just because others do it. Only include what you feel can be properly covered — and better that you do it yourself — character rather than completeness (paraphrased from D. Allen 1963, again).

I have starred (*) those that I think must be included.

INTRODUCTORY CHAPTERS

		Praise	Brickbats
PHYSICAL			
Geology	— frequently described & vaguely useful		
Soils	— rarely covered and more interesting than geology	**Glamorgan**	
Weather	— not worth covering		
***TOURS — with species**			
— by region (traditional)		**Hampshire**	
— by habitat (or NVC)		**Shetland**	
— by site		**Bristol**	
If done well, very interesting indeed			

	Praise	Brickbats
***HISTORY OF SITES** Very rarely done and well worth doing. Future workers will just not know what we know.	**Glasgow** **Leics** (via gazetteer)	
NVC & Ecological information (Quadrats & Habitat Studies) Not really certain if this has a place in a flora – Durham was weighted down by it, and it is very, very, rarely followed up.	**Leicestershire** **Hertfordshire**	
LAND USE & AGRICULTURE Again, rarely covered, and of more value for the future.	**Oxford**	
CONSERVATION A personal view is that the County Flora is not the place for this.		
COMPARISON with NEIGHBOURS Minor interest		
PAST WORKERS & HISTORY OF RECORDING IN COUNTY Many old Floras (e.g. Druce) over the top, but useful background.		
CURRENT WORKERS Very rarely done, but probably worthwhile.	**(Bristol)**	
***METHOD/DURATION OF DATA COLLECTION** Absolutely essential and far too frequently omitted.		
***KEY TO MAIN FLORA** **Abbreviations** **Symbols** **Date Classes** Must be covered and must be crystal clear.	**Wiltshire**	
MAIN TEXT		
***COVER ALL SPECIES** **This is fundamental and cannot be compromised**		
Appendices of Extinctions Not satisfactory — all must be in the text. — perhaps casuals could be excluded.		**Wiltshire** **Kent, Bristol**
Allegedly common species not covered Tempting (Shropshire only covered 60% of total) but fatal. All who did it have lived to regret it!		**Salop** ('A' Species) **Surrey** (300 common)
***TAILOR TEXT TO INTEREST OF SPECIES** Expand on local specialities — history, discovery decline or whatever. Wiltshire did essays, which almost worked. **Try & make comments in B.I. context — i.e. not too parochial.**	**Bristol (1912)** **Breckland** **IOM** **Cumbria**	**Bristol (2000)**
HISTORICAL PERSPECTIVE		
At least for declining and increasing species i.e. almost impossible in Dorset to find out what is happening.	**Middlesex**	**Kent** **Essex** **Dorset**
1st dates (at least for aliens / out of range) Very popular in Victorian times and still worth doing.		
Last dates (extinctions) Absolutely essential and negative records worth including — again impossible to work out for Dorset.	**Sussex** **Glasgow** **Essex**	**Dorset**

	Praise	Brickbats
SOURCES		
Previous floras; journals; herbaria	**Shetland**	
Clive Stace has told me (and my own experiences confirm) just how seldom these are properly consulted.		
***ECOLOGY**		
Habitat / or species at county level (usually very poor — especially for common species)	**Hampshire Oxon Cumbria Salop Breckland**	**Almost all others**
***LOCATIONS**		
Either with Grid Ref. or decent gazetteer (or both)		**London**
DISTRIBUTION MAPS		
All or selected?		
I personally think no need for common species just because collected. Many maps merely show the geology. Others disagree, and want all in.	**Kent**	**Kent**
Do not take the place of locations, even at a fine scale		**Assynt**
Not mapped — but tetrads / sites not given		**Devon**
i.e. not enough to say '3 tetrads' but give no details		**Kent**
Integrate with text — i.e. not as separate section. Modern printing advances make this possible.		
RECORDING UNIT		
Grid squares versus sites		
Coverage is the key. I would love to see a well-covered site flora.		
1 km² atlases (eg. Ashdown Forest)	**N.E. Essex**	**Bristol**
A vast amount of work, but very good if they succeed		
***DATE CLASSES**		
Must stick to agreed period		**Devon**
However tempting it is to include earlier records, it devalues all the rest, as you never know what has been added. New Atlas had to take earliest possible date.		**Dorset**
Long spans		**Hants**
Almost better to start again		**Oxon**
		Glamorgan
***STATUS**		
MUST give an opinion — or even better if that could be based on something less parochial than the county in question.		**Dorset** **Bristol**
Why do people omit this?		
Red Data Book, Scarce and other conservation criteria —		
Too ephemeral? Omit.		
ALIENS		
Many floras still poor (& exclude maps)	**Somerset**	
But things are improving and perhaps New Atlas will help	**(Dorset)**	
Most avoid trees in landscape	**Oxon**	

	Praise	Brickbats
CRITICAL GROUPS		
Should they be covered? Yes		
Local keys useful	**Cumbria**	
HYBRIDS / SUBSPECIES		
Yes — include		
Comments on distinctiveness at local level died out, which is a shame.		
INTERPRETATION OF MAPS		
If using tetrads, need geology, rivers at same scale	**Norfolk**	
QUALITY CONTROL		
If doubt over any record, SAY why		**London**
***ERRORS — LIST & Dismiss**		
otherwise endless shelf-life	**Shetland**	
	Cumbria	

EXTRAS

***MAPS** This is a hobby-horse – I cannot understand why so many recent floras omit a proper map. Why so difficult? Ordnance Survey licence no problem.		
— GENERAL MAP		**Dorset** (& many others)
— V.C. BOUNDARY MAP	**Cambs C/L**	
& area covered	**Hants**	
	Beds	
— SPECIAL PRIZE (Regions, Habitats & Habitat Studies)	**Herts**	
GAZETTEER (± 1950 +)		
I think essential — it adds so much	**Leics**	**Inverness**
	Rutland	**IoM**
ABBREVIATIONS OF RECORDERS		
Order — the ideal is A-Z of 1st initial — no point in A-Z of surname.		
INDEX		
Ideal is to merge Latin/English with different fonts		
(*A la* Gwynn Ellis)	**Glamorgan**	**Suffolk**
		East Riding
If separate (2nd choice) make Latin last.		
I like all species, not just genera.		**Dorset**
(Welsh/Gaelic — optional.)		
PHOTOS		
Not just a rag bag — they must be apposite	**Hants**	**Norfolk (1968) & most others**
Habitats very interesting and much more unique and lasting.		
They are a good selling point — but costly — why not do them well?		
LOWER PLANTS, FUNGI		
Tempting, but		
FORMAT		
Hated A4 (Perfectly good maps & text in *Flora of Hampshire*)		
Paper Quality		**Flints**

	MY VIEWS		
BE DISTINCTIVE e.g.	**— brilliant maps/photos**	**Norfolk**	
	— narrative	**London**	
	— if an island flora, text on isolation		
	— Dorset (Prof. Good) on rainfall / soil types & distribution		
AVOID QUIRKINESS	**— Habitats** — too much & too heavy		**Durham**
	— Symbols		**Breckland**
			Warwicks
	10 km² — very odd numbering		**Staffs**
	but Dorset and info on chemicals comes off		
BE SOLID	**— Just do all things well** that I have starred		
KEEP GOING			
MY FAVOURITES	**— Old**	**Kerry**	
		Bristol (1912)	
	— New	**Inverness**	
		Shetland	
		Hants	

Acknowledgements
I am extremely grateful for detailed comments from Chris Preston and help from Arthur Chater.

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

OBITUARY NOTES

Just after *BSBI News* **90** went to press we learnt of the death of Elizabeth Woodward (née Davies), who as Elizabeth Davies was a BSBI member and a botanical researcher. Her research was mainly on some *Carex* species and she described *Carex scandinavica* E.W. Davies, new to science, in 1953 (it is now sunk in *C. viridula* subsp. *viridula*). Later Elizabeth was renowned for her equestrian achievements and a dressage List I judge. There was an illustration of *C. scandinavica* on the order of service for her funeral in March this year. There will be an obituary in *Watsonia*.

We are also very sad to report the death of Lady Anne Brewis in March this year. A BSBI member for 40 years, Anne was for many years Recorder for v.c. 12, N. Hants, spending much time collating and checking records, and checking critical species for *The Flora of Hampshire* 1996 — of which Lady Anne was one of the three authors, with Paul Bowman and Francis Rose.

Lady Anne was a well known and memorable figure, frequently at, and sometimes leading, BSBI field meetings, and regularly at the Annual Exhibition Meeting. Elizabeth Norman tells me of an evocative description of Anne by one of her non–botanical relatives: 'a ripe eccentric . . . dressed like a botanist . . . had no sense of time . . . wrote very well indeed.' Anne will be remembered by many BSBI members with affection and respect. Dickie Finucane wrote in *The Times* of June 5th '. . . The active part she played in the nationwide Wild Flower Society and Botanical Society of the British Isles gave a generation of amateur botanists much knowledge and pleasure. I would like people to know how admired and beloved she was and how greatly she will be missed by a vast number of people.' There will be an obituary in *Watsonia*.

We also sadly report the death of M.W. (Bill) Havers and I am grateful to Rod d'Ayala for the following note. 'Bill Havers, a fine all round naturalist died in June 2002. Though he only joined the BSBI in the year 2000 many members would have met him over the years in his role as reserve manager at Homefield Wood near Marlow, Bucks — the *Orchis militaris* (Military Orchid) site in the Chilterns. Bill was researching the history of this plant, and nobody knew more about it than him.

Under his stewardship the number of plants of this rare plant increased dramatically and the work of truly making it safe was begun with a project to increase the number of sites where it grows'.

Following the obituary of David McClintock in *Watsonia* **24**(2): 257–266, 2002, David Allen writes reminiscing on a botanical expedition when he and DMcC 'explored Hyde Park for weeds in a lunch-time by taxi': David also writes of the time that he 'once got a glorious chuckle out of Lady Anne Brewis on telling her that David McClintock *was* a garden escape'!

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.

HEREFORDSHIRE (v.c. 36) 19th–21st April

The sixteen members and some friends who were able to arrive on the Friday evening were subjected to an illustrated introduction to Herefordshire and some of the plants which, as local botanists, we considered special to the area. These ranged from *Tilia cordata* and *T. platyphyllos* (Small- and Large-leaved Lime), *Sorbus torminalis* (Wild Service-tree) which abounds in some woods and a few hedgerows, *Hyacinthoides non-scripta* (Bluebell), and *Viscum album* (Mistletoe) on Oak, to the very rare occurrence of *Epipogium aphyllum* (Ghost Orchid) whose presence was first recorded in the county in 1854, and was last seen in 1982, and the very recent first county record of *Epipactis phyllanthes* var. *pendula* (Green-flowered Helleborine) in 2001.

On Saturday morning the party, now augmented to twenty-three members, met to hear Dr Anthea Brian give a highly illuminating insight into the history and management of the ancient Lugg Meadow situated on the north-eastern outskirts of Hereford. This is a Lammas Meadow put up for hay at Candlemas, February 2nd, until Lammas, August 1st, when stock belonging to the commoners returns to graze the aftermath.

Dr Brian demonstrated that this practice has been going on since Domesday times and probably earlier, and that this meadow is the largest and almost certainly the least damaged of its kind in the country. The land is held in strips from which the owner takes the hay during July before they are returned to grazing. Amongst the present owners are the Herefordshire Nature Trust and Plantlife.

Regular winter inundations bring in silt and dissolved nutrients (a somewhat doubtful blessing!) which maintain fertility for a rich crop of hay to be produced, whilst the underlying gravels aid quick drainage after floods so that permanently swampy areas are absent.

By the end of Dr Brian's talk the early morning rain had given way to fine weather which blessed us for the rest of the weekend. The group then drove to Lower House Farm, the headquarters of the Nature Trust, and walked to the meadow.

We were naturally too early for most of the meadow plants to be in flower but the initial purpose of holding the meeting at this time was to see the local population of *Fritillaria meleagris* (Fritillary). There were many hundreds of blooms to be seen but unlike the more famous and prolific site at North Meadow, Cricklade, most of the Herefordshire flowers are white, with only a few of the more usual dark pink colour; at least one plant was found with two bells on one stem. *Oenanthe silaifolia* (Narrow-leaved Water-dropwort) also grows in some profusion in the lower, damper parts of the meadow behind the levees. Although it was not in full flower and only a few buds were beginning to open, nevertheless the young shoots of many hundreds of plants were readily seen. We had no *Taraxacum* buff in the party but some floodplain Dandelions have been found, one of which we understand still awaits a name.

On Saturday afternoon we moved to Queen's Wood, Dymock, where Dr Michael Harper led the party, with back-up from Kate Wollen, Conservation Ranger for the Forestry Commission in the area. Almost twenty years ago Dr Harper, who had found some documents from *c.*1890 extolling the Flora and more particularly the Lepidoptera of the woods, made an arrangement with the Forestry Commission to clear conifers from some areas and reintroduce a coppicing regime. We spent the afternoon seeing and hearing about some of the changes which this has wrought.

The wood straddles the border between Herefordshire and Gloucestershire and occupies a low plateau of Downton Castle Sandstone, a formation within the local Old Red Sandstone, on which an acid soil has developed supporting a number of heathland plants including *Calluna vulgaris* (Heather) and *Vaccinium myrtillus* (Bilberry), though much of the area is planted with conifers. The sandstone layer is relatively thin and where streams have cut shallow valleys into the plateau the underlying Silurian limestones have been exposed giving rise to moist calcareous soils with deposits of tufa in some places.

During our visit we went to one reserve parallel with the M50 motorway where Dr Harper and his small working party of Ledbury Naturalists have been coppicing the area for nearly twenty years, re-coppicing at about seven to ten year intervals. *Corylus avellana* (Hazel) is the most common shrub in the area. The party listed all the herbaceous vascular plants and some of the bryophytes seen during the brief visit, and were gratified to note the return of *Narcissus pseudo-narcissus* (Daffodil) which had been an important feature of the flora before coniferisation.

The second reserve to be visited was in a calcareous valley, where flowering had hardly begun but the dry, still upstanding stems of *Calamagrostis epigejos* (Wood Small-reed) were present. We heard about the speed with which *Epipactis palustris* (Marsh Helleborine), *Gymnadenia conopsea* subsp. *densiflora* (Fragrant Orchid) and *Anagallis tenella* (Bog Pimpernel) had returned with the opening up of the canopy. Even more pleasing for the lepidopterist was the presence of breeding Clearwing moths, whose burrows made by wood- chewing caterpillars in coppiced alder and birch, are regularly found by the coppicing parties in re-growth up to three or four years old. The coppiced birch up to about twenty years and over provides food for fifty or more species of moth and several of these depend on different rather narrow age bands. For example the Kentish Glory targets 5–8 year old regrowth.

On Sunday the party enjoyed a gloriously sunny day visiting Lady Park Wood in the morning and The Great Doward in the afternoon. These areas are on steep wooded slopes facing each other across the Wye Gorge downstream from Symonds Yat, where the river is deeply incised into the local Carboniferous Limestone. The two sides of the river are linked by a suspension footbridge.

We were fortunate to be led by Dr George Peterken, whose knowledge of Lady Park Wood is unrivalled and whose concise and lucid paper in *British Wildlife* **(6(4)** April 1995) gives an outline of the history of the wood and some of the results of observations on it made at intervals since it was designated as a research reserve in 1944. Prior to that it had been used by Dr Eustace Jones of Oxford for ecological field work with his students, and he set up some transect lines which are re-surveyed at intervals of about ten years.

This is now a non-intervention area and its response, or rather the response of individual plants, to natural hazards are carefully monitored. The stresses suffered have included severe drought in 1976, which resulted in the eventual demise of many beeches and long-lasting inhibition of growth of those which survived; gales bringing down many trees thus creating gaps in the canopy; further gaps produced by fallen trees sliding down the very steep slope, demolishing all in their path. Dutch Elm disease took its toll from 1971; animal threats are constant, and include a plague of bank voles in 1983, damage by grey squirrels stripping bark from beech trees, and an increase in the number of fallow deer, during the last ten years, which has inhibited new growth.

A contour path across the wood separates the lower slopes, where a coppice regime formerly prevailed and *Corylus avellana* is abundant, from the upper slope which had been managed for timber until 1944. The contrast between the two was striking and readily appreciated at the point where Dr Peterken demonstrated it.

The ground flora had been surveyed at a number of sites by Vanessa Williams in 1979 and these were re-surveyed in 1997 revealing a drop in numbers of species throughout.

Our time in the wood was spent in these fascinating observations of the trees and ecological changes so that the ground flora received limited attention, although we did see a fine flowering stand of *Paris quadrifolia* (Herb-Paris) which was a delight to all, especially those who had never seen it before.

In the afternoon we made our way to the famous Dropping Well area, beside the Biblins camp site on the Herefordshire side of the river, to see *Asplenium trichomanes* subsp. *pachyrachis* (Maidenhair Spleenwort) before moving to one of the Seven Sisters — limestone bluffs forming part of the cliffs of the gorge. Here, still under Dr Peterken's guidance, we saw the three sedges for which the area is well known: *Carex digitata* (Fingered Sedge), *C. humilis* (Dwarf Sedge) and *C. montana* (Soft-leaved Sedge) the latter two here near the northern edge of their range. In addition *Serratula tinctoria* (Saw-wort) was noted and one flower of *Geranium sanguineum* (Bloody Crane's-bill) was found, giving a foretaste of what was to come later in the year.

Finally a visit was made to the fen above the Dropping Well. The area is dominated by *Alnus glutinosa* (Alder), *Frangula alnus* (Alder Buckthorn), *Corylus avellana* (Hazel), and *Phragmites australis* (Common Reed), whilst one specimen of *Sorbus* × *thuringiaca* (*S. aucuparia* × *S. aria*) was identified from last year's fallen leaves. This small fen area has long been known for its botanical treasures. Of the plants reported by Henry Southall in *The Transactions of the Woolhope Naturalist's Field Club* of 1866, the following were seen in addition to those already mentioned: *Daphne laureola* (Spurge-laurel), *Rubia peregrina* (Wild Madder), *Valeriana dioica* (Marsh Valerian), *Molinia caerulea* (Purple Moor-grass) and *Chara vulgaris* (a stonewort). It may also be of interest that on a subsequent visit *Melica nutans* (Mountain Melick), in its only Herefordshire site, was found. Those members standing in water were most helpful in calling out plants seen, amongst which the scribe wrote down *Eriophorum*. Does any member remember seeing this and if so which species? In the 19th century both *E. angustifolium* and *E. latifolium* were recorded here, and so far we have not managed to re-find either, although nearly all the other plants noted then are still present.

In conclusion we extend our warm thanks to Dr Brian, Dr Harper, Kate Wallen and Dr Peterken for their contributions to the success of the weekend. We thoroughly enjoyed welcoming old friends and new to what, for us, was a slightly experimental approach to a BSBI field meeting with its emphasis on ecology and management. We need not have worried as the involvement, enthusiasm and expertise of members of the party added greatly to what, for us, turned out to be a memorable occasion. Thank you all.

PETER & STEPHANIE THOMSON

FALLS OF CLYDE, LANARKSHIRE (v.c. 77) 12th May

As part of the programme arranged in connection with the AGM, a field meeting was held at the Falls of Clyde, and attracted an attendance of 18. The area involved forms part of the Scottish Wildlife Trust (SWT) reserve, from whom permission to hold the meeting had been obtained. Before proceeding, the leader informed the party that there were records for four plants that had not been seen recently: *Cardamine impatiens* (Narrow-leaved Bitter-cress), *Pyrola media* (Intermediate Wintergreen), *Eriophorum latifolium* (Broad-leaved Cottongrass) and *Vicia orobus* (Wood Bitter-vetch).

On leaving the New Lanark Museum Complex the path extends on to duck boards at the edge of the River Clyde. In this area were noted *Cardamine amara* (Large Bitter-cress), *Trollius europaeus* (Globeflower) and a rather tomentose *Ribes rubrum* (Red Currant), but its typical stigmas were demonstrated. My attention was drawn to *Ranunculus auricomus* (Goldilocks Buttercup) for which there had been an old, but unlocalised record within the quadrant. The path then rises to the cliffs above the lower part of the Corra Linn falls. Here there are very steep, rather slippery steps down to the river level and most of those who ventured down made use of a water-ski tow rope which the leader had brought for that purpose and attached to the fence at the top. The cliffs in this region have *Saxifraga oppositifolia* (Purple Saxifrage), *Asplenium viride* (Green Spleenwort) and, more surprisingly, *Valerianella locusta* (Common Cornsalad). It had been intended to lead the party down to the river bank again when we reached the opposite bank, but the water level was so low that, in the first time in the leader's experience, the more intrepid members were able to cross over and see *Vicia sylvatica* (Wood Vetch).

The next stop was, for most of the party, an unexpected bonus — a sight of a Peregrine's nest and the male parent through the telescopes provided by the SWT.

Lunch was taken on the flat rocks below the Bonnington Dam. Plants of note at this point were *Arabis hirsuta* (Hairy Rock-cress), *Melica nutans* (Mountain Melick), *Sedum forsterianum* (Rock Stonecrop) and very abundant *Saxifraga granulata* (Meadow Saxifrage), which in the Falls of Clyde area is actually a rock plant! Again, members were able to cross over to the left bank and so obviate the necessity of scrambling down later from the other side. Note was taken there of the cushion of *Arenaria balearica* (Mossy Sandwort) and further plants of Green Spleenwort. Just up from the picnic spot a member of the party spotted a single plant of *Orchis mascula* (Early-purple Orchid) — a new site within the reserve. Between there and the dam bridge *Laburnum alpinum* (Scottish Laburnum), just breaking into leaf, was demonstrated. After crossing the bridge, a small detour was taken to look for, and find, a large patch of *Chrysosplenium alternifolium* (Alternate-leaved Golden-saxifrage).

Because of the Peregrine's nest, the cliff side path was closed and so *Phegopteris connectilis* and *Gymnocarpium dryopteris* (Beech and Oak Ferns) could not be shown. However, at the side of the path through the wood, *Sambucus racemosa* (Red-berried Elder) was seen, a new record for the quadrant. A Leopard's-bane was noted in profusion on the cliffs near the ruins of Corra Castle. It had previously been identified as *Doronicum plantagineum*. A little further on is the site of the recently located *Bromopsis benekenii* (Lesser Hairy-brome), but it was not in evidence this early in the year. By prior arrangement, some of the cars had been left on the side road adjacent to the entrance to the reserve on this side of the river. This enabled the party to be conveyed back to the New Lanark car park without the necessity of either retracing steps or continuing with the even longer walk down to the Kirkfieldbank bridge and then up the steep hill to Lanark. Despite having in mind the four plants mentioned at the beginning of this report, none was refound. However, the leader is appreciative of those who pointed out rarities and of those who kindly left cars at the Corehouse end.

PETER MACPHERSON

WORLD'S END NEAR LLANGOLLEN, DENBIGHSHIRE (v.c. 50) 18th May

Twenty members met at World's End, an area of limestone cliffs, scree and moorland rising to 500 m above sea level. Offa's Dyke path runs along the valley to Llangollen, 7 km to the south.

We started in a small wet valley, where we found *Potamogeton polygonifolius* (Bog Pondweed) in the stream, with *Viola palustris* (Marsh Violet), *Carex dioica* (Dioecious Sedge), *Drosera rotundifolia* (Round-leaved Sundew), extensive patches of *Narthecium ossifragum* (Bog Asphodel) and also fertile fronds of *Equisetum sylvaticum* (Wood Horsetail), *Oreopteris limbosperma* (Lemon-scented Fern), *Eriophorum angustifolium* and *E. vaginatum* (Common and Hare's-tail Cottongrass). We heard a Cuckoo and watched a cock Black Grouse feeding on *Vaccinium myrtillus* (Bilberry).

After lunch we walked south on the path across scree and under cliffs with *Sorbus* (Whitebeam), *Taxus baccata* (Yew) and *Acer campestre* (Field Maple). We identified *Sorbus anglica* from a young twig and *S. rupicola* from old leaves on the ground (from which tree?). On the stable scree there were abundant new fronds of *Gymnocarpium robertianum* (Limestone Fern) with *Cystopteris fragilis* (Brittle Bladder-fern), *Asplenium viride* (Green Spleenwort) and *A. trichomanes* subsp. *quadrivalens* (Maidenhair Spleenwort). Beside the path were *Saxifraga tridactylites* (Rue-leaved Saxifrage), *Hornungia petraea* (Hutchinsia) still flowering, *Erophila verna* (Common Whitlowgrass), a tiny *Euphrasia* (Eyebright) which we did not identify and also *Ophioglossum vulgatum* (Adder's-tongue), *Botrychium lunaria* (Moonwort) and *Orchis mascula* (Early-purple Orchid) which had somehow escaped the voracious sheep.

We reached a wet gully and found new fronds of *Dryopteris submontana* (Rigid Buckler-fern) in its only North Wales site, growing amongst big boulders, *Pinguicula vulgaris* (Common Butterwort) and *Epilobium brunnescens* (New Zealand Willowherb). We climbed out of the valley on to moorland and walked back across *Vaccinium myrtillus*, *Calluna vulgaris* (Heather) and *Empetrum nigrum* (Crowberry) already fruiting, and found one plant of *Viola lutea* (Mountain Pansy). We had seen an interesting mix of plants on limestone and on acid moorland and had had a good day with superb views.

JEAN A. GREEN

CORS GEIRCH, CAERNARFONSHIRE (v.c. 49) 1st June

Fourteen members met on a beautiful day to explore this 185 hectare calcareous fen. Warden Les Colley outlined the management plan, which included scrub clearance and diverting the river with a series of sluices to maintain the water table. Two-thirds of the site is owned by the Countryside Council for Wales and there are plans to link Cors Geirch to the nearby Cors Edern fen, a special area of conservation (SAC), which will double 'its' size.

Accompanied by the (frisky!) ponies which graze the site, we followed the river, seeing aquatic species such as *Potentilla palustris* (Marsh Cinquefoil), *Lychnis flos-cuculi* (Ragged-Robin) and *Pedicularis palustris* (Marsh Lousewort), into the main fen where Les demonstrated the differences between *Juncus subnodulosus* and *J. acutiflorus* (Blunt- and Sharp-flowered Rush). We spent the morning identifying sedges such as *Carex hostiana* (Tawny Sedge), *C. viridula* subsp. *brachyrrhyncha* (a Yellow-sedge) and the not-so-common *C. lasiocarpa* (Slender Sedge) with its hairy utricles and long, narrow leaves. We were puzzled for a while by *C. diandra* (Lesser Tussock-sedge) or was it *C. disticha* (Brown Sedge)? Both species grow here, Les was happy to inform us! After consulting the Sedge Handbook, we realised that it was indeed *C. diandra*. The Red Data Book species *Eriophorum gracile* (Slender Cottongrass) was many people's highlight of the day; first found here by R.H. Roberts and A.McG. Stirling, it is thriving, increasing from *c.*36 plants in 1995 to 978 this year.

After lunch, the party moved to the south end of the reserve, where a small pool held *Potamogeton berchtoldii* (Small Pondweed), *Eleogiton fluitans* (Floating Club-rush) and *Lemna trisulca* (Ivy-leaved Duckweed). Andy Jones found *Juncus foliosus* (Leafy Rush), a new reserve record and probably for the hectad. The damp grassland was full of marsh-orchids and *Dactylorhiza traunsteineri* (Narrow-leaved Marsh-orchid) was new to some members. As the fen became wetter we found *Hypericum elodes* (Marsh St John's-wort), *Menyanthes trifoliata* (Bogbean) and *Baldellia ranunculoides* (Lesser Water-plantain), with foliage smelling strangely of coriander. In the wettest area we were shown the attractive little *Carex limosa* (Bog-sedge) and also had an encounter with Horse Leeches. Cors Geirch is an important site for invertebrates and the dragonflies were spectacular, especially the Broad-bodied Chaser. Garden and Grasshopper Warblers sang whilst we were there and four pairs of Lapwing breed on the reserve. It is indeed a very special place and our thanks go to Les Colley for sharing his expert knowledge with us.

WENDY MCCARTHY

CRYMLYN BURROWS SSSI, GLAMORGAN (v.c. 41) 22nd June

On an overcast morning 16 members met in the staff car park of the Visteon works (formerly Fords). Most of the day was spent exploring the sandy wastes, and sand dunes which although surrounded on three sides by industry provide a wealth of botanical interest, both native and non-native. We were soon admiring great drifts of *Echium vulgare* (Viper's-bugloss) and *Hypericum perforatum* (Perforate St John's-wort) on land due to be redeveloped with, nearby, *Verbascum pulverulentum* (Hoary Mullein), *Parentucellia viscosa* (Yellow Bartsia) and *Lathyrus nissolia* (Grass Vetchling), the last only discovered by Viv Lewis a few days earlier.

Crossing the dual carriageway of the A483 it was a nice surprise to find it had not yet been mowed and several spikes of *Ophrys apifera* (Bee Orchid) and *Anacamptis pyramidalis* (Pyramidal Orchid) were found among the lush vegetation. Budgetary restraints can be beneficial! In the dunes proper *Geranium pyrenaicum* (Hedgerow Crane's-bill), *Epilobium lanceolatum* (Spear-leaved Willowherb), *Viola tricolor* subsp. *curtisii* (Dune Pansy) and *Vulpia fasciculata* (Dune Fescue) were noteworthy. *Anthyllis vulneraria* (Kidney Vetch) was abundant in many colours from white to rich oranges and reds, while scarcer species such as *Artemisia campestris* (Field Wormwood), here naturalised and not yet flowering, *Lathyrus tuberosus* (Tuberous Pea), established for 70 years and *Equisetum hyemale* (Rough Horsetail) were all of particular interest.

After a picnic lunch we moved into an area between two dune ridges where some excitement was occasioned when Susan Erskine found numerous spikes of *Orobanche minor* var. *flava* (Common Broomrape) which was new to most of us, including the leader who had completely forgotten being told

about it by Dr Charles Hipkin some years ago. Other plants seen in this area included *Sanguisorba officinalis* (Great Burnet), *Campanula persicifolia* (Peach-leaved Bellflower), *Hemerocallis fulva* (Orange Day-lily) and *Yucca recurvifolia* (Curved-leaved Spanish-dagger). Returning to the car park the leader pointed out a single spike of *Epipactis* spp. (a Helleborine). Unfortunately the flowers were not fully developed and shortly after our visit the plant was snapped off. Next year, perhaps.

The sun had come out by the time we reached the nearby Pant-y-sais Fen SSSI where *Medicago arabica* (Spotted Medick) and *Rubus armeniacus* (the bramble 'Himalayan Giant'), the latter identified by Richard Pryce, were seen in the car park. The party made its way over the boardwalk which afforded excellent views of abundant *Osmunda regalis* (Royal Fern) and *Ranunculus lingua* (Greater Spearwort), then along the bordering Tennant Canal. Here the now-familiar introduced aquatics *Azolla filiculoides* (Water Fern), *Elodea canadensis* (Canadian Waterweed) and the increasing *E. nuttallii* (Nuttall's Waterweed) were present together with *Lemna trisulca* (Ivy-leaved Duckweed) and *Nymphaea alba* (White Water-lily), the last-named first recorded from this area in 1773! Time was now getting short so a brief spurt brought us to *Butomus umbellatus* (Flowering-rush) before a halt was called. My thanks to Visteon for kindly allowing us the use of their car park, to B.P. for access to Crymlyn Burrows and to Viv for guarding the cars at Pant-y-sais Fen as well as for her help and support for the meeting.

TONY LEWIS

MEALL NAN TIGHEARN, 95% ARGYLL (V.C. 98); 5% W. PERTH (V.C. 87), 23rd June

This was a joint meeting between the BSS, BSBI and PS & S and restricted to 21 people. Three small landrovers were to transport us to the site but on the day two long wheelbase ones were used. Jim McIntosh liased with the site manager, David Pickett from SNH kindly arranged this (with Forest Enterprise) and David and two of his staff came with us. The site is part of the Ben Lui NNR, which is very well known botanically but this part, lying c. 5 km SW of Ben Lui on the E flank of Meall nan Tighearn (at approx. NN2323) is seldom visited because of its previous remoteness. The forestry track that we used is brand new and permission has to be obtained beforehand for vehicular traffic.

Shortly after the drop off point we were pleased to note the presence of *Carum verticillatum* (Whorled Caraway) in ditches under the electricity pylons; the plant is unknown in the east of the country, where most of us had come from. Also in this area were masses of *Pedicularis palustris* (Marsh Lousewort), more I think, than I have seen anywhere else. Having been one of the wettest seasons and with plenty of rain lately, the river was coming down in near spate causing most of the party to search well upstream for a safe crossing. On reaching the cliffs we were delighted to find how rich they were, especially in *Salix arbuscula* (Mountain Willow) at quite low levels and *S. myrsinites* (Whortle-leaved Willow) higher up. Also at lower levels were about a dozen patches of *Dryas octopetala* (Mountain Avens) though in the main hardly flowering.

About 150 species of flowering plants and ferns were seen on the day, the most exciting being two RDB species, *Woodsia alpina* (Alpine Woodsia) and *Bartsia alpina* (Alpine Bartsia), with about 12 and 25 plants respectively. The *Woodsia* was on the cliff in close proximity to a few flowering *Saxifraga nivalis* (Alpine Saxifrage) but the *Bartsia* was about 50 m away from the cliffs at the head of a steep scree slope. One boulder we came across was carpeted with *Poa alpina* (Alpine Meadow-grass) and very occasionally on wet boulders we found *Hymenophyllum wilsonii* (Wilson's Filmy-fern) and on another boulder were about 10 *Botrychium lunaria* (Moonwort) plants. A selection of the more interesting mainly alpine plants included *Adoxa moschatellina* (Moschatel), *Asplenium viride* (Green Spleenwort), *Carex atrata* (Black Alpine-sedge), *C. capillaris* (Hair Sedge), *Draba incana* (Hoary Whitlowgrass), *Equisetum pratense* (Shady Horsetail), *Juncus triglumis* (Three-flowered Rush), *Polystichum lonchitis* (Holly-fern), *Potentilla crantzii* (Alpine Cinquefoil) and finally *Trollius europaeus* (Globeflower) was quite numerous. Probably *Arabis hirsuta* (Hairy Rock-cress) was the only species found in E. Perthshire and not in the Argyll v.c.

Prof. Watling kindly supplied a list of fungi and several others, mainly Jim McIntosh, Clive Dixon, Jackie Muscott, Stuart Maxwell, Lesley Tucker, Alison Wilson and I contributed to the 150 plants

seen. Presumably because of the persistent wet weather there was a distinct lack of other wildlife, with virtually no birds, moths or butterflies, but on the way back I found one *Cordulegaster boltonii* (Golden-ringed Dragonfly). Generally everyone enjoyed the trip.

DOUGLAS MCKEAN

GREENLAW, BERWICKS. (V.C. 81) 29th June

Eight members met in difficult weather conditions to explore the sandstone gorge of Greenlaw Dean and the raised bog of Dogden Moss. The steep crumbly banks of the dean have abundant *Helianthemum nummularium* (Common Rock-rose) and here David McCosh found a variety of hawkweeds, including *Hieracium caledonicum* and *H. subrude*. The Blackadder Water and an ox-bow lake hold *Berula erecta* (Lesser Water-parsnip) and *Blysmus compressus* (Flat-sedge) in some quantity, with *Lemna trisulca* (Ivy-leaved Duckweed) and *Ranunculus trichophyllus* (Thread-leaved Water-crowfoot). A flushed area on the floodplain has *Dactylorhiza incarnata* subsp. *incarnata* (Early Marsh-orchid) and here the hybrid with *D. purpurella* (Northern Marsh-orchid) was recorded. This habitat has been damaged during the fairly recent creation of a shooting pond, especially by the dumped spoil which has attracted thistles and disturbed the water flow. However, the mud has been colonised by *Catabrosa aquatica* (Whorl-grass) and the hybrid *Juncus effusus* × *J. inflexus* (*J.* × *diffusus* (Soft-rush × Hard Rush), new to v.c. 81. Moving up the Fangrist Burn, *Dactylorhiza incarnata* subsp. *pulchella* was seen and a more acid oxbow yielded *Ranunculus aquatilis* (Common Water-crowfoot), with fertile plants of *Chara globularis* (a stonewort).

The dean is not now grazed until August under a Countryside Premium Scheme and this regime appeared to be benefiting many of the interesting species and to have helped the *Festuca pratensis* (Meadow Fescue) to be quite unusually evident. However, the thistles were also flourishing.

The party then turned to Dogden Moss and after a while a good colony of *Trichophorum cespitosum* subsp. *cespitosum* (Lesser Deergrass) was located on the slope at the very edge of the active area of *Sphagnum* growth. Only a little over half the spikelets were fertile, with the infertile heads having dropped, making it difficult to separate at a glance from *T. cespitosum* nothossp. *foersteri* (Hybrid Deergrass), from which only some of the infertile heads had dropped. However, the hybrid tended to grow on the tussocks with the smaller, more slender, subsp. *cespitosum* in hollows with some water movement. Nearby, proliferous plants of the hybrid were seen. Walking over the extensive bog area the hybrid was locally plentiful and uniformly sterile, with the proliferous plants, on which it is presumably mainly dependant for reproduction, very scarce. Subsp. *cespitosum* was again picked up, but in small quantity, on the western fringe of the Moss. It was noticeable that the fruits of subsp. *cespitosum* were almost ripe and much in advance of the Common Deergrass, subsp. *germanicum*, on the adjoining moor.

We were fortunate to be accompanied by David Long who demonstrated the bryophytes, including *Sphagnum imbricatum* on the bog, while making some additions to his already extensive lists, including *S. fuscum*, new to v.c. 81. The area with the Lesser Deergrass was not notable bryologically. David also made sure we enjoyed the sight of a pair of Peregrines and fresh signs of Otter.

MICHAEL BRAITHWAITE

HOPWAS, STAFFORDSHIRE (V.C. 39) 13th & 14th July

A total of fourteen members and two guests attended the meeting. Twelve were present on each day and they divided into five groups to record in tetrads: mainly in SK10, but with some penetration into neighbouring hectads. This was the fourth of such meetings held in the vice-county in successive years and resulted in a total of more than 2200 new post-1995 tetrad records.

Ken Cavalot met the party on the Saturday morning. He had just completed a national study of *Vaccinium* × *intermedium* (*V. vitis-idaea* × *V. myrtillus*) (Hybrid Bilberry), many of the locations for which are within a few miles of Hopwas. He passed round many fine photographs of the hybrid and of

forms of the two parents. He went on to explain some of the features of the taxa and the difficulties that could arise in distinguishing between them.

Veronica polita (Grey Field-speedwell) is rarely seen in Staffordshire; a single plant was found on the edge of a cornfield near to the ancient Roman Site and National Trust property at Wall. *Anisantha diandra* (Great Brome) appeared to be well established at only its fourth site in the county, at Whittington Heath. It is thought that *Chenopodium ficifolium* (Fig-leaved Goosefoot) was much overlooked in the past, but the third group were not the only ones to spot it during the weekend: on this occasion, north of Hopwas. They also noted *Spergularia rubra* (Sand Spurrey), rarely seen away from Cannock Chase or the extreme south west of the vice-county. *Lactuca serriola* (Prickly Lettuce) is steadily moving north through the region, but it is only during the last three years that *L. virosa* (Great Lettuce) has been seen with any regularity. Records for it were made on the Saturday for Coton and Streethay.

Sunday produced some interesting hybrids, with *Rosa* × *irregularis* (*R. arvensis* × *R. canina*) near Lynn, *Epilobium* × *erroneum* (*E. hirsutum* × *E. montanum*) near Hints Church and *Oenothera* × *fallax* (*O. glazioviana* × *O. biennis*) (Intermediate Evening-primrose) by disused quarry workings not far from the meeting point. This last proved to be the most fruitful area of the weekend, with *Dipsacus pilosus* (Small Teasel), *Filago vulgaris* (Common Cudweed), *F. minima* (Small Cudweed), and more *Spergularia rubra* in the same tetrad. The last two of these species were also found west of Weeford and three more tetrads (in the vicinities of Hilton, Little Hay and Brookhay) were identified as having been invaded by *Lactuca virosa*.

Eleven of the participating botanists had travelled from outside Staffordshire. Their weekend's foot-slogging resulted in a much valued and appreciable contribution to the new v.c. Flora scheduled for publication in 2010.

JOHN HAWKSFORD

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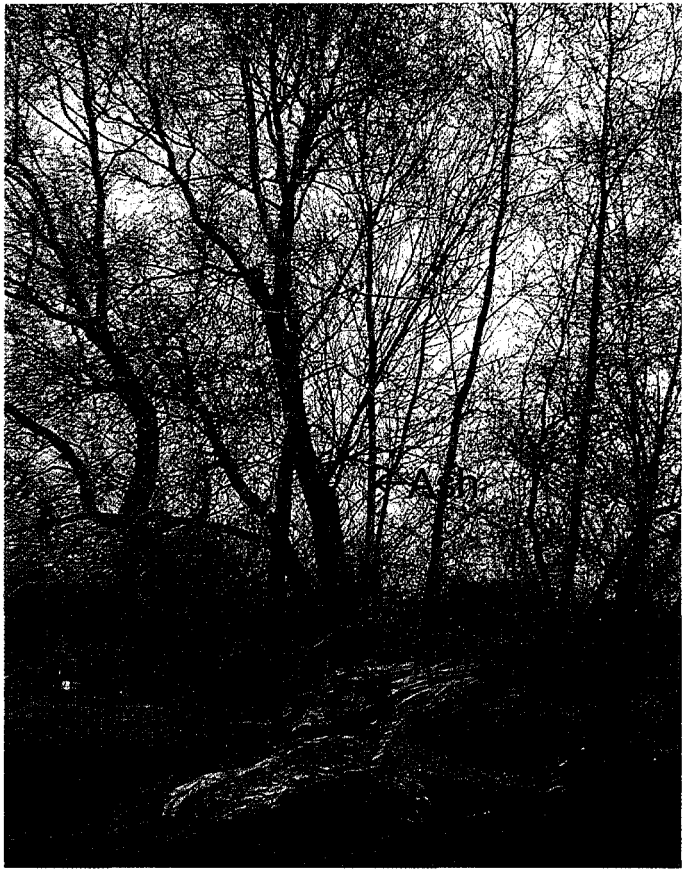

White Willow: extensive re-rooting in 4 places, and the epiphytic 9m Ash

Her late Majesty Queen Elizabeth the Queen Mother, with Mary Briggs (above) and unveiling a commemorative plaque (below) at the opening of the Albury Nowers Nature Reserve, Tring in June 1991 in celebration of Her 90th Birthday.
Top photo D.J. Hambler © 1991; bottom M. Briggs © 1991