

BSBI

2003

Scottish Newsletter

No 25



Marsh Saxifrage

BSBI SCOTTISH NEWSLETTER

Number 25

Spring 2003

CONTENTS

Editorial	2
Chairman's Remarks	3
BSBI Committee for Scotland	4
Scottish Annual Meeting 2002	5
Raasay- 2002 Update	16
Moray- VC 95	16
Scottish Field Meetings 2003	18
Ben Nevis SSSI	18
<i>Rubus latifolius</i>	22
Wild Flower Seeding	25
South Cathkin Coup	25
How to Resist Weeds	26
Pontic Blue-sow-thistle	29
<i>Wild Flowers of Fife & Kinross</i>	30
<i>Melampyrum sylvaticum</i>	30
<i>Crassula tillaea</i>	31
Grass-of Parnassus & Red Campion	32
Hydrilla verticillata	33

Editorial

The Editors sent to Buckingham Palace a copy of last year's *Scottish Newsletter* which contained the Stop Press relating to the death of Her Majesty Queen Elizabeth the Queen Mother as a condolence and to show the esteem in which we had held our Patron. An appreciative acknowledgement was received.

We extend congratulations to the authors of the *New Atlas of the British & Irish Flora*—a massive reference book. Apart from expressions of appreciation, other comments we have heard have included: "It's the largest tome in my bookcase"; "I'll need to get a *new* bookcase"; "When the postman handed it over, I dropped it".

This is the 25th issue that we have produced—a Silver Anniversary. For some time we have been giving thought to the possibility of having silver related articles and/or an appropriate cover illustration. However, despite thumbing through the complete index in the *New Flora of the British Isles* (Stace 1997), nothing really suitable came to mind. Forgive the pun on the marital analogy, we didn't wish it to be the Silver Weeding issue!

In an article in the Herald of 17th March 2003, a botanist from Plantlife was reported as claiming that his finding of Marsh Saxifrage (*Saxifraga hirculus*) at Munsary, Caithness, represented the only extant British record. The find is commented on in the exhibit reports in this *Newsletter*, but without any exaggerated claim. In the *New Atlas* as above (Preston, Pearman & Dines 2002) there is mention of five hectad post 1987 records in Britain (and five in Ireland). We are grateful to Mrs JM Millar for providing a drawing of the plant for the cover illustration, based in part on slides taken in 1999, when we (the editors) visited a site for it in Cumbria.

We much appreciate the fact that most of the material for this issue was submitted on disc, but when that is not possible we are very prepared to receive typed copy. This can usually be scanned into the word processor, though surprisingly (to us) this proved impossible with articles on shiny paper! However, photocopies of these scanned in perfectly.

References

- Preston, CD, Pearman, DA & Dines, TD (2002). *New Atlas of the British & Irish Flora*. Oxford University Press.
Stace, CA (1997). *New Flora of the British Isles*, 2nd ed. Cambridge University Press.
Peter Macpherson
Allan Stirling

Chairman's Remarks, 2003

GORDON ROTHERO

The publishing of the *New Atlas* was the event of the year 2002 and well-worth waiting for, although I have had to re-design my shelving to cope. The CD is also a boon for those of us with computers (an increasing proportion, so I'm told). Another significant event was the holding of the BSBI AGM in Edinburgh in May, a thoroughly enjoyable and well-organised occasion on the Saturday, with some excellent field meetings on the Sunday. The Scottish Annual Meeting was also in Edinburgh in 2002 and again the affable affair that it always is. The launch of the Atlas was belatedly toasted in Champagne at the end of the Scottish Records Meeting. The resultant surge in bonhomie was so marked that your committee is considering whether this should become an annual event – the Champagne not the Atlas.

Any thought of resting on our laurels after the 'Atlas effort' was quickly dispelled with the production of a vice-county recorders charter, exhortation to produce county rare plant registers and the funding of a project which involves us in revisiting the Monitoring Scheme tetrads. I did wonder what the response would be in Scotland and expressed my doubts at the Scottish AGM that the thin covering of botanists in Scotland was robust enough to withstand this kind of loading. However, the response has generally been very good with only a few VCs causing some concern and hopefully that will have been sorted by the time you are reading this. In particular, the number of associated field meetings is remarkable, matching the Atlas effort – I hope that enough people will make the effort to attend to make them worthwhile. For a VC like mine, Main Argyll, with 16 tetrads to deal with, a field meeting is the only way for me to achieve reasonable coverage.

Another project for the BSBI in Scotland in 2002 was to take on some monitoring work for SNH, as a contractor. Site Condition Monitoring of SSSIs is a rolling programme on a six year cycle and the element the BSBI has been involved in is the monitoring of scarce and rare vascular plants on those sites where they are a notified feature. The methodology is not completely settled as yet but the work is interesting, fairly straightforward and obviously happens in nice places. A number of VC recorders (and others) are already involved, having produced monitoring forms in 2002 or taking on further sites in 2003.

We will probably tender for another tranche of sites for survey in 2004 but this may be organised in a different way, depending on how current negotiations with SNH for funding proceed.

BSBI Committee for Scotland

The following is the composition of the Committee from November 2002 to November 2003.

Chairman - Gordon Rothero; Vice-Chairman - Richard Pankhurst; Secretary & Treasurer - Chris Miles; Field Meetings Secretary - Jim McIntosh ; Minutes Secretary - Mark Watson; Exhibition Secretary - Edna Stewart.

Members of Committee - Paddy Braithwaite, Phil Lusby, Ian Strachan, and Ian Green.

Representing SNH – Chris Sydes:

At the AGM on 1st November 2003, Edna Stewart, Jim McIntosh and Paddy Braithwaite retire, the last named being eligible for re-election.

Nominations for the vacancies, signed by two members of the Society normally resident in, or recorders for, a vice-county in Scotland and with written consent of the candidate, who must also qualify as above, should reach the undernoted at Braeside, Boreland, Lockerbie, Dumfriesshire. DG11 2LL by 30 September 2003.

C Miles – Hon Secretary

Recordership E Ross

Peter Wortham has resigned as recorder for VC 106 and Ro Scott, who has been assisting him, is too busy to take on the job, though is willing to continue in her current role. So we are looking for a willing botanist to take on the vacant Recorder-ship of the vice-county of East Ross-shire. If anyone is interested, please contact me:

Gordon Rothero, Chairman of the Scottish Committee,
Stronlogan, Glenmassan, Dunoon, Argyll PA23 8RA.
Email gprothero@aol.com. Tel 01369 706281.

Scottish Annual Meeting 2002

EDNA STEWART

Introduction

The Scottish Annual Meeting of 2002 was held at the Royal Botanic Garden Edinburgh on 2nd November. We are grateful to have the use of the very suitable facilities of this venue. The exhibits were as usual interesting and varied. Our planned speaker had unfortunately lost her voice, and so could not speak on Climate Change and its impact on the Scottish Flora, though she has promised to give the talk next year. However Lynne Farrell nobly stepped into the breach with a very enjoyable slide show on the Flowers of the Picos de Europa. Supper was held in the Loon Fung Restaurant, involving a rather longer walk from the Botanics, but well supported and enjoyable.

Scottish VC Recorders Meeting

42 members attended, 26 of these were Scottish VC Recorders. Gordon Rothero was in the chair.

David Pearman reported the delivery of the *New Atlas*. He mentioned that 90 Recorders have computers, and actually use them for their records. Unfortunately, Pete Selby, the Volunteer Officer, was unable to attend through illness. He was employed by BSBI to assist members with the repeat of the Monitoring Scheme, "Local Change", funded by the HLF, in cooperation with Plantlife. This will involve the use of the computer package Mapmate, which comes with a list of plants previously recorded in each tetrad. The other project we are embarked on is the County Rare Plant Register – none of which are complete in Scotland. There are no grants from the agencies, although they are funding LRCs, some of whose records may be dubious. VC Recorders are to be asked to write an annual statement detailing new records. VCRs who had not already completed and returned the Questionnaire sent out by Pete Selby, were asked to do so as soon as possible.

SNH is undertaking Site Condition Monitoring for rare plants on SSSIs and BSBI contractors are participating in this as a trial to see if BSBI can be further involved. David Pearman is also arranging another project to obtain 6-figure

grid references for the highest altitude for each species, and the lowest altitude for montane species.

David McCosh spoke briefly on the V C Census Catalogue. There were problems with *Hieracia* species, because a new account would come out next year.

Lynne Farrell asked Recorders to search for Charophytes whilst recording for Local Change. Nick Stewart, the Charophyte specialist, would be pleased to receive pressed specimens for identification, not fresh in polythene bags.

The Chairman asked if those Recorders who were not computerised could take part in the monitoring scheme and whether there would be help for Recorders with remote or numerous tetrads. Michael Braithwaite answered that recording could be done on cards. Counties could get together over entering records into computers. He would demonstrate Mapmate. It was not essential that every tetrad should be visited; the emphasis was on good coverage of those done. David Pearman said that help may be available. Richard Pryce mentioned the educational aspect of the project. A booklet with information on Local Change would be issued with the January mailing. There would be two years to complete the work. - 2003 and 2004. There would also be a note on updating the *New Atlas*. Barbara Hogarth said that some people would need to update their computers to use the CD which came with the *New Atlas*.

The provisional list of Field Meetings in connection with the Monitoring Scheme would be given at the afternoon Regional Meeting. It was possible that BRC would be able to photocopy and send the original cards showing routes and times taken. Any questionnaires for members outstanding should be sent to Pete Selby.

Chris Sydes spoke about SNH's project on *Melampyrum sylvaticum*, and asked if data could be sent to Sarah Dalrymple in Aberdeen.

Ken Butler asked if pink cards could still be used for new records, and was told that this was acceptable.

The meeting concluded with a champagne toast to celebrate the completion of the *New Atlas*.

Lecture

A talk illustrated with slides on the Picos de Europa was given by Lynne Farrell. This is an area in Northern Spain that consists of a limestone massif dissected by deep river gorges. It has an Atlantic climate, fairly cool and moist with mist often forming. There are permanent icefields and snow can be found in the valleys for five months of the year. In the SE corner, however, it is much warmer with a sub-Mediterranean zone. Its geographical position means that there are species representing northern, southern, western and eastern elements, which make it a rich area for the ecologist. The annual rainfall in the western massif is equivalent to that of Scotland. The humidity provides a suitable climate for species of ferns, mosses and liverworts, many of which are also found in Scotland and Ireland. In addition, there are some endemic vascular plants such as *Petrocoptis glaucifolia*.

The culture also has familiar elements with bagpipes being played at local fiestas and Celtic words in the local language. It was the first National Park in Spain, declared in 1918, and one of the first in Europe, although it was primarily recognised for historical and religious reasons before the importance of its ecology became known. The main land use in the valleys on the level ground is for growing potatoes, maize and onions, whilst on the higher slopes it is essentially hay meadows and summer grazing. Cheese is made in each of the mountain villages, and honey is another local product. Plants are still used medicinally and the old recipes are handed down. The natural tree line occurs at 1300 metres. Oak, Wych Elm, Small-leaved Lime and Ash woodland is found in the wetter valleys, with Holm and Cork Oaks in the drier areas. Higher up are Sessile Oak and Beech woods.

There are over 70 mammals including bear, chamois and wolves. Birds include various eagles and vultures, capercaillie, wallcreeper and black woodpecker. Reptiles and amphibians are plentiful. There are at least 145 species of butterflies and many more moths.

Several areas were visited from two main bases in Espinama and Posada de Valdeon. Habitats included mixed woodland, dry south-facing slopes, deep gorges, roadside verges often with orchids, sub-alpine and alpine meadows,

and arable fields in the warmer south plains. There were good, easy pathways for botanising and some more challenging walks up the steep hillsides and onto the higher pastures.

Abstracts of Exhibits

Some Fife Imports and Kinross Natives

GH Ballantyne

Fife has a long history of introductions especially through the mediums of ballast and grain, such as Loose Silky-Bent (*Apera spica-venti*), Wild Oat (*Avena fatua*), Wall-rocket (*Diplotaxis tenuifolia*) and Smooth Tare (*Vicia tenuifolia*), while Yellow Bartsia (*Parenucellia viscosa*) is a very recent seed-mix newcomer. Kinross-shire reaches well into the Ochil Hills and its glens and burns support some of VC 85's rarest plants, including Smooth-stalked Sedge (*Carex laevigata*), *C. x fulva* (NCR), Limestone Bedstraw (*Galium sternerii*) and Wilson's Filmy-fern (*Hymenophyllum wilsonii*). Nodding Bur Marigold (*Bidens cernua*) has also been recently refound. Material resembling the hybrid between Japanese Knotweed (*Fallopia japonica*) and Giant Knotweed (*F. sachalinense*) (*F. x bohémica*) from Kirkcaldy was shown and comments on its identity invited.

Trifolium micranthum in Fife & Kinross (VC 85)

GH Ballantyne

Slender Trefoil was first seen in St Andrews in 1992 and ten years later is becoming common in several parts of Fife, mostly in Kirkcaldy, where it is established on lawns, mown grass and gravelly paths in parks, amenity areas, etc. Several specimens were shown along with Lesser Trefoil (*T. dubium*) for comparison, as there can be confusion between the two species.

Mapmate workshop and exhibit – Help and ideas

Michael Braithwaite

The computer programme for BSBI Local Change

Some printouts were displayed to give an introduction to how Mapmate can be used. These covered customising base maps of the VC, Atlases at different

mapping scales – 1km and 5km, and the insertion of charts of record dates for species, the mapping of sites recorded and, crucially, the extraction of the records made into spreadsheets for analysis and annotation. The data for a pilot tetrad recorded in 1987, and recorded again in 2002 using a draft of the BSBI Local Change instructions, had been entered on a laptop on display so there was some opportunity to see Mapmate in action.

BSBI's Rare Plant Recording for SNH, 2002

Michael Braithwaite

Reports from sites in the Scottish Borders

A few BSBI members had taken part in a SNH rare plant contract in 2002. Two of the reports were displayed with a third one done in an effort to find middle ground between all the paper of the SNH system and that old BSBI favourite – the 'pink card'. The use of GPS to plot satisfying detailed maps of plant populations was emphasised. A problem was what to do with all the 8fig grid references generated – they give more detail than is needed for a County Rare Plant Register.

New Zealand Bittercress (*Cardamine corymbosa*)

Michael Braithwaite

A plant with multiple reproduction strategies.
(This is to be the subject of an article in BSBI News).

A rare hybrid of two very familiar thistles?

Michael Braithwaite

Probably *Cirsium x celakovskianum* (*C. arvense* x *C. palustre*)

This plant had been found in VC 80 near Hawick and, although it had stem armature close to *C. palustre*, it had extensive rhizomes and a branching habit more like *C. arvense*. The flowers were all female and infertile. A herbarium specimen and a photo were displayed and a voting paper was provided, in view of the initial uncertainty of the finder and Rod Corner as to its identity.

Enjoying the New Atlas CD-ROM

Michael Braithwaite

Some printouts were exhibited showing the comparison of selected species with environmental datasets and the extraction of tables of data for a selected area for further analysis.

Caithness Plants

Ken Butler

A new site for *Ranunculus flammula* ssp. *minimus*. The *New Atlas* shows three sites for this sub-species of Lesser Spearwort. A new site has been found on a cliff-top on the north coast of Caithness. The specimen was compared to a specimen of ssp. *flammula*.

A new vice-county record for *Hammarbya paludosa*, the Bog Orchid, was found on the Plantlife reserve at Munsary.

Also on Munsary, a new site for the Marsh Saxifrage (*Saxifraga hirculus*). It is a large site with thousands of plants, with many in flower this year.

The casual *Phacelia tanacetifolia*, was found in Caithness at two farms this year. This is a major extension of its range and it has reached the north end of the British Mainland.

**Plants from Roxburgh and Selkirk,
V.C.s 80 & 79**

RWM Corner

V.C. 79

Trichophorum cespitosum nothosubsp. *foersteri* was new to Selkirk as was the "dwarfed" Japanese Knotweed (*Fallopia japonica* var. *compacta*). A plant of the possible variable hybrid *Calamagrostis canescens* x *C. stricta* from a new locality was shown.

V C. 80

Crocus nudiflorus reported by Andrew Bramhall was new and established at several sites along the Tweed. *Ribes spicatum* established by the Tweed at Melrose was a "first" for this type of origin and *Agrostis gigantea* found by Luke Gaskell was a third record of a local species of the area. He also found the hybrid rush *Juncus* x *kern-reichgeltii* (*Juncus effusus* x *conglomeratus*) new to the vice-county.

Carex vaginata

RWM Corner

Plants from the newly discovered sites in the Northern Pennines of Cumbria and the first records for England were shown together with plants from the southern Uplands of Scotland and Iceland.

**Introgression between *Carex bigelowii*
and *C. nigra***

RWM Corner

Herbarium material mainly from Roxburgh and Selkirk was shown to demonstrate the existence of probable introgression between these two species as described in *Watsonia* (2002) 24, 217-220.

Melampyrum sylvaticum

Sarah Dalrymple

This October saw the start of a three-year PhD project on *Melampyrum sylvaticum* at Aberdeen University. The project aims to identify the environmental factors affecting the survival of the hemiparasitic annual that has disappeared from an estimated 70% of its former British distribution. The PhD was initiated by the Scottish Wildlife Trust (SWT) as part of an existing programme of conservation of the existing populations and reinstatement of the species to some of the former Scottish sites from which it has been lost. (see page 30).

What's New in West Sutherland?

Pat and Ian Evans

Most of our noteworthy records in 2002 have been re-discoveries. Glaucous Meadow-grass (*Poa glauca*) was refound by Gordon Rothero on Canisp after 103 years, AG Kenneth's vague record of Parsley Fern (*Cryptogramma crispa*) made in 1966 on 'Quinag, NC22' was located by Claire Belshaw, and Common Cornsalad (*Valerianella locusta*) was refound at Achmelvich after 116 years.

We searched three areas 'near the base' of Canisp for GC Druce's 1917 record of Marsh Clubmoss (*Lycopodiella inundata*) quite without success. However, John Dargie of SNH found a 'new' population at Laxford bridge, which has 5000+ plants.

The hybrid orchid *Dactylorhiza x formosa* had a very good year in Assynt, appearing in six new localities. A sapling of the single-leafed Ash (*Fraxinus excelsior* var. *heterophylla*) was found at Lochinver; it appears to be a natural mutant.

BSBI Scottish Field Meetings in 2002

Lynne Farrell

Photographs of four main field meetings were exhibited, BSBI AGM at Edinburgh, Royal Botanic Gardens 11 May and field meeting at Arthur's Seat on the following day, June 6 and 7 at Culbin, Moray, 3 to 6 August at Tongue, Sutherland, and 23-25 August, Lochs in Kirkcudbrightshire. Specimens of aquatic plants from the lochs were displayed, including the newly confirmed Esthwaite Waterweed (*Hydrilla verticillata*). A short history of this species in Britain and Ireland was given.

The End of the Line

G Halliday

Three species of *Conyza* were exhibited collected from a siding at Penzance Railway Station. Two were new to Cornwall, the rapidly spreading *C. sumatrensis* and the much rarer *C. bonariensis*. Neither was previously known west of Somerset and east Devon; both have old records as wool aliens in the Borders.

Hybridisation and introgression between *Hypericum perforatum* and *H. maculatum*

G Halliday and A Hartley

A histogram was exhibited showing hybrid index scores of material of the two presumed species and hybrids, *H. x desetangii*, from Cumbria, using an index originally devised by Crackles (1990). This showed continuous variation between the two species. While it did not purport to indicate relative frequencies it is evident that in Cumbria pure *H. perforatum* is very common, pure *H. maculatum* is rather rare, and that many specimens which appeared at first sight to be the later were in fact of hybrid origin.

Crackles, FE (1990). *Hypericum x desetangii* Lamotte nm. *desetangii* in Yorkshire, with special reference to its spread along railways. *Watsonia*, 18, 63-67.

Conservation of Native Hazel Trees in Orkney and Shetland

Barbara Hogarth

A poster and examples to illustrate experimental work being undertaken as part of a project to increase stocks of native trees using both traditional propagation techniques of grafting and layering and the more recently developed technique of micropropagation.

A Dilemma

Barbara Hogarth

Brief extracts from a number of Floras highlighting a lack of consistency in their description of Mountain Pansy (*Viola lutea*) and Wild Pansy (*Viola tricolor*) accompanied by sketches to illustrate problems encountered with identification of specimens from relatively low hills and the lower reaches of the Angus glens.

Persicaria runcinata in the Clyde Valley (VC 77)

P Macpherson, EJ Clement & JM Millar

A specimen and an illustration were displayed to demonstrate the features of the above plant, believed to be new to Britain 'in the wild'. In September 2001 it was discovered growing on the bank of the River Clyde at Hazelbank in an area which is under water when the river is in spate. It is presumably either the result of fly-tipping on site or of deposition from upstream. In August 2002 there were three clumps, the largest a rough oval of approximately 2m x 0.6m. As a native it stretches across Asia and is a dominant weed in parts of Bhutan in various crops.

Bromus hordeaceus ssp. *longipedicellatus* in Lanarkshire

P Macpherson

A large specimen of the ordinary *B. hordeaceus* ssp. *hordeaceus* was displayed plus one of ssp. *longipedicellatus* along with a differential diagnosis chart in order that the differences might be appreciated by those not yet familiar with the newly recognised sub-species.

Reference: Spalton, LM (2001). *Watsonia* 23, 525-531.

New and Interesting Plants of Midlothian

Douglas McKean

Pyrola rotundifolia last seen 1863, newly refound by S. Maxwell

Blechnum pinna-marina new to Scotland and possibly the only extant colony in Britain and Ireland.

Sorbaria sorbifolia colonising a wall in Edinburgh, mother tree 40m away.
NCR.

Helianthus laetiflorus group found by Robert Hill at the river at Gorgie,
Edinburgh, NCR

Cannabis sativa not recorded (officially) for a number of years in Midlothian.
Found near Pathhead.

Two Willow specimens from Dunoon Reservoir (VC98) mystifying R.D.
Meikle! (since identified as *Salix caprea* x *phylicifolia*)

**Plant Life of Edinburgh
and the Lothians**

J Muscott, D McKean & P Cochrane

A preview of this book, edited by PM Smith, ROD Dixon and MP Cochrane and published by Edinburgh University Press at the end of November 2002, was presented. It showed extracts from the text including pages from *Flora of the Lothians* and *A Bryophyte Flora of the Lothian*. Examples of the illustrations (supplied by the Art Editor CE Jeffree), and herbarium specimens of some of the more interesting plants that had been recorded during the course of the Botanical Society of Scotland's Botany of the Lothians Project were displayed.

BSBI Publicity Posters

Richard Price

New Dunbartonshire Records (VC 99)

Alison Rutherford

Origanum laevigatum 'Herrenhausen' from Helensburgh.

Begonia Non Stop Series from Rhu 2.5 miles west of Helensburgh.

Clematis tangutica group from Helensburgh.

Lathyrus nissolia also from Helensburgh

**Drosera and Utricularia
in the Outer Hebrides (VC110)**

Paul Smith and Tim Rich

Investigations have been undertaken into two genera of insectivorous plants in the Outer Hebrides (VC 110) – *Drosera* and *Utricularia*. They show that *Drosera intermedia* Hayne (Oblong-leaved Sundew) is over-recorded in the vice-county, because of confusion with the variation in *Drosera anglica* Huds. (Great Sundew) – no specimen of *D. intermedia* from VC 110 has yet been found in E, BM and NMW or recent field collections. Is *D. intermedia* over-recorded elsewhere in Western Scotland? At least two segregates of *Utricularia intermedia* agg. occur in the vice-county, with *U. stygia* G. Thor (Nordic Bladderwort) apparently commoner than *U. ochroleuca* R.W. Hartm. (Pale Bladderwort)

**Watercolours of Some Plants
from Around Scotland**

Barbara Sumner

Species illustrated:

Eryngium maritimum and *Calystegia soldanella* on a sandy beach, Islay

Mertensia maritima on a shingle beach, Islay.

Hypericum pulchrum and *Prunella vulgaris* from coastal grassland, Colonsay.

Armeria maritima, *Lotus corniculatus* and *Polypodium vulgare* on a sea cliff, East Lothian.

Aesculus hippocastanum from wooded policies, East Lothian.

Crataegus monogyna from a hedgerow, Midlothian.

Russula mairei, *R. ochroleuca* and *R. atropurpurea* in a beechwood, Midlothian.

Raasay – 2002 Update

STEPHEN J BUNGARD

The Oskaig salt marsh was less intensively grazed this year allowing *Spergularia media* (Greater Sea-spurrey) to be found. An old Oskaig record is for *S. marina* (Lesser Sea-spurrey).

Potamogeton gramineus (Various-leaved Pondweed) was found in the north end of Loch Eadar da Bhaile and also in Loch an Rathaid.

Nitella translucens (Translucent Stonewort), a very large stonewort was found in Home Loch. The plants measure up to a metre in length,

The Oskaig salt marsh also yielded *Carex extensa* (Long-bracted Sedge) – an old record that had not been found for over thirty years.

Epilobium tetragonum (Square-stalked Willowherb) is present near the steadings at Clachan. Previous records from the east coast may be errors for *E. obscurum* (Short-fruited Willowherb).

Some work in lochs late in the season showed up *Potamogeton praelongus* (Long-stalked Pondweed) in Loch na Meilich – as reported by a SNH Loch Survey in 1989 and by Heslop Harrison in the 1930s.

A new site for *Osmunda regalis* (Royal Fern) was found containing the largest number of plants of any Raasay site. As in most other Raasay sites, the plants are on sea cliffs kept wet by fresh water.

Two different brambles were sent away for expert determination. Initial results suggest that one, which is widespread on Raasay and also on Rona, is *Rubus ebudensis*. A second, known so far only from the Inverarish/Clachan area, may be a new species. Final determinations are awaited for both.

Moray – Vice-county 95

IAN GREEN

The two most exciting discoveries of the year came from Findhorn (NJ06). Hundreds of specimens of *Ophioglossum azoricum* (Small Adder's-tongue)

new for Moray, in very short sand dune grassland. This is a native species but has probably been overlooked because of its tiny size. The second excellent record is *Trifolium suffocatum* (Suffocated Clover) this is not just new for Moray but new for Scotland as well. It was growing with *Trifolium ornithopodioides* (Bird's-foot Clover), which was found in November 1998, the only site for this in Moray and the most northern site in Britain. They both were growing in mown grass areas and on a sandy/gravel area by one of the piers on the west side of the village. The two *Trifoliums* are believed to be non-native in this site as they are both so far north of their normal range, possibly having come in with grass seed.

Garden Centres are often good places to find unusual weeds, the following three were all found to be well established and all new for Moray. *Cardamine corymbosa* (New Zealand Bitter-cress) at Fochabers (NJ35), *Crassula tillaea* (Mossy Stonecrop) at Forres (NJ05) and *Veronica peregrina* (American Speedwell) from Dyke (NH95).

The rubbish tip (NJ26) near Elgin is always a good place for the unexpected. Some unusual aliens turned up in 2002 - *Cannabis sativa*, *Levisticum officinale*, *Malcolmia maritima*, *Nepeta × faassenii*, *Nigella damascena*, *Salvia reflexa*, *Solanum sarrachoides*. More interesting were three native species to Britain, but not recorded from Moray before. Lots of plants of *Alopecurus aequalis* (Orange Foxtail), one plant of *Crassula tillaea* (Mossy Stonecrop) and one beautiful specimen of *Polygonum boreale* (Northern Knotgrass) conf. by John Akeroyd.

Other records of interest were several plants of *Sisymbrium orientale* (Eastern Rocket) in a flowerbed in the grounds of Hewden, Elgin (NJ26); the re-discovery of *Valerianella locusta* (Common Cornsalad) in Moray on dunes and the ruins of Millie Bothy in Roseisle Forest, Burghead (NJ16); *Urtica galeopsifolia* (Stingless Nettle) on the banks of the old railway at Garmouth (NJ36); *Crocus sieberi* (Sieber's Crocus) in Bellie Wood, Fochabers (NJ35). The last two both being new for Moray.

Scottish Field Meetings 2003

Full details of the following meetings will be found in the Year Book

June 7-8	Findhorn and Forres Area, Moray	IP Green
June 27-29	Tongue, West Sutherland	P Evans
July 5	Meall Nan Tarmachan	DR McKean
July 6	Ben Lawers	D Marsden
July 11-13	Isle of Bute	A Hannah
July 18-20	Lockerbie, Dumfriesshire	CD Miles
July 30-		
Aug 1	Isle of Mull	L Farrell
Aug 2-3	Connel, Argyll	GP Rothero
Aug 16-17	Spean Bridge, Westerness	I Strachan

A Few Days Work

GP ROTHERO

Now, according to SNH, somebody had been 'botanising' on this slope a few years back and had recorded *Salix reticulata* (Net-leaved Willow), but I've been all over these wee crags at least twice now, without finding it. It's a nice enough spot; there are small patches of *Dryas octopetala* (Mountain Avens), bits of *Carex vaginata* (Sheathed Sedge) and *Carex saxatilis* (Russet Sedge) and *Equisetum variegatum* (Variegated Horsetail) in flushes below, but no *Salix*. In the heath on the slope close to one of the crags is a nice, big patch of *Arctostaphylos alpinus* (Alpine Bearberry); hmm... this has got reticulate leaves and I wonder..... Failing to re-find plants that have been recorded in the past on sites that I don't know well, brings out the worst in my suspicious nature and I begin to mistrust map references and the competence of any botanist other than me. This is almost always unjustified (!) and if anybody reading this has seen *Salix reticulata* on Beinn na Socaich in the Grey Corries, my sincere apologies.

This is Site Condition Monitoring (SCM) on the Ben Nevis SSSI, part of a BSBI contract with SNH. I am charged with wandering over these hills (the site stretches from the east end of the Grey Corries to the Ben itself) with a

great, long list of plants to look for on various crags, flushes and snow-beds. The first task is to split the site up into manageable 'day-sized' chunks and then to work out the easiest way of getting at the ground I need to cover. Permission to take my van along the network of tracks that serve dams on the British Alcan hydro scheme makes a huge difference to approaching the northern side of the Grey Corries and Aonach Beag. This is also the only ground on the SSSI where serious stalking happens, so this section needed to be done first and soon, so, despite the weather being "changeable" (ie wet) here I am on the slopes of Beinn na Socaich where there are few, small, limestone outcrops.

Heading along the slope towards the head of the coire, all the ground is potentially interesting but excitement is very patchy, with just the odd stand of *Carex saxatilis* in flushes, *Athyrium distentifolium* (Alpine Lady-fern) in a gully, *Salix lapponum* (Downy Willow) bushes on low crags and small amounts of *Dryas octopetala* on rocky ribs. Where the snow lies a bit later, the crags have clumps of *Cerastium arcticum* (Arctic Mouse-ear) and promise better things but do not deliver. The cloud-base lifts around lunchtime to reveal an upper coire and impressive quartzite cliffs and scree. Now is the chance for a quick site photo (part of the SCM job spec) and a bite of lunch, sprawled on the *Silene acaulis* (Moss Champion) turf, before the cloud descends again.

The main job up here is to have a look at the good population of *Saxifraga rivularis* (Highland Saxifrage) in some of the gullies and the small populations of *Saxifraga cespitosa* (Tufted Saxifrage) and *Saxifraga nivalis* (Alpine Saxifrage) on a thin calcareous band at the base of the crag. Trying to give some estimate of the size of the population of *Saxifraga rivularis* is difficult and time consuming; many plants are not flowering and some are tiny and easily missed or double-counted. The ground is not very friendly either, balancing over large, tottering, quartzite blocks with very fresh, sharp edges and easing up unstable scree in steep gullies, all in swirling cloud and a thin drizzle. The small stands of the other rare saxifrages are a doddle to deal with in comparison, except that those of *Saxifraga cespitosa* are worryingly small, though no smaller than when Keith Watson counted the rosettes in 1996.

Even driving up to the hydro dam at the end of the track, still leaves a long walk in to the north-east face of Aonach Beag but it is a wonderful, wild valley to plod up, feeling smug at being away at 6.30 in the morning sunshine. Angling up rakes and picking lines between the crags makes the approach to An Cul Choire that bit easier and after a couple of hours steady walking I was scrambling into the subsidiary ravine at the base of the large open gully that runs up to the bealach between Aonach Beag and Aonach Mor. There is a band of calcareous schist here giving stands of *Veronica alpina* (Alpine Speedwell), *Carex atrata* (Black Alpine-sedge), *Sibbaldia procumbens* (Sibbaldia), *Juncus biglumis* (Two-flowered Rush) and two grasses, *Poa alpina* (Alpine Meadow-grass) and *Poa glauca* (Glaucous Meadow-grass). Some of the latter is the lax variety once distinguished as *Poa balfourii* and which I had previously misidentified as *Poa flexuosa* (Wavy Meadow-grass).

The main line of crags on the left of the broad gully form the lower, northern, ramparts of the NE ridge of Aonach Beag, a good scramble in the summer. Low down there are a few plants of *Cerastium alpinum* (Alpine Mouse-ear) which gradually give way to *Cerastium arcticum* as one works ones way higher up, although distinguishing between these two is not always easy and the thought of hybrids is never far away. To complete the set there is *Cerastium cerastoides* (Starwort Mouse-ear) in the scree, compensating for its weedy habit by having a large, attractive white flower. *Poa alpina* and *Veronica alpina* are frequent along the crags but pride of place here goes to a small stand of *Cystopteris montana* (Mountain Bladder-fern), a patch which seems to have changed little over the 20 years that I have known it. Higher up the hill after skirting a couple of big snow patches, much time was spent teetering around on wee ledges, marking stands of *Saxifraga cernua* (Drooping Saxifrage) and then teetering back down again to photograph the population and then back up again to remove the markers.

The bealach between Aonach Beag and Aonach Mor is an airy spot with great views across to the NE face of 'The Ben' and down the lonely valley that sweeps south to Steall and Glen Nevis. On the ridge up to the summit of Aonach Beag, close to the path, is a huge population of *Luzula arcuata* (Curved Woodrush), with drooping heads now shaking the breeze which was beginning to pick up. The top of the hill, the highest schist in Scotland, is, as it

should be, right on the edge of the NE precipice. It is possible to scramble down here (keep well left!) but the easiest route back down to the coire is to descend the ridge to the SE and take one of the gullies down the face, near where the ridge flattens out. If one picks the right gully, one will be rewarded by what is probably the biggest population of *Saxifraga rivularis* in Scotland, extending down a fine-scrée shoot for some 200m. There are other nice plants here as well, including another stand of *Cystopteris montana*, but it is not ground for the faint-hearted, particularly as it gets steeper and more complex lower down. The cloud had now enveloped the crags and the rain had come on in earnest and I got confused as to which gully I could descend and which gully ended in a nasty drop. Inevitably, I got it wrong and had to climb back up many metres to regain my temper and the right line and it was quite a relief to get down below the cloud and see easier ground ahead.

After the splendid isolation of the approach to Aonach Beag (just one person glimpsed all day), I was not looking forward to the tourist-grind up the Pony Track to the top of Ben Nevis. Another righteous early start kept me out of the crowds but not out of the low cloud and drizzle all the way to the Half-way Lochan. Above this the cloud thinned and almost cleared but there was another band of cloud above. Unbelievably, this cloud in turn thinned as I 'peched' my way up the zig-zags beyond the Red Burn and I eventually emerged into bright sunshine – a wonderful temperature inversion at about 800m with only the bigger Mamores and the Glencoe hills standing proud. So the sun does shine upon the righteous. The whole morning was spent looking at the populations of *Saxifraga rivularis*, *Saxifraga cernua* and *Saxifraga cespitosa* in gullies on the NE face, and in sun-bathing, watching the cloud lap around the top of the Douglas Boulder at the base of Tower Ridge.

Regaining the plateau was a nasty shock to my reclusive soul; word had clearly got around that it was possible to get above the cloud and there were hundreds of people streaming up to or back from the summit. Fortunately, I could avoid the garish throng by heading off for my last site down in South Castle Gully and then angle down to the Half-way Lochan, avoiding the 'zig-zags' all together. The NE face of 'The Ben' is a huge and complex area and it is possible to scramble around on terraces and ledges and reach, with care, seemingly inaccessible places, particularly in the Cam Dearg area. My limited

As for Cramond and the affinities of its *R. latifolius*, we are uncertain. Unfortunately Babington's specimens in CGE appear to be missing (D McCosh, pers comm.), though Watson saw a Babington 1850 specimen in SLBI that had small, short prickles and sublobate leaflets. Perhaps both forms were present at Cramond since Webb's 1876 material has stems with rather few moderate-length prickles and leaves that are markedly doubly serrate and grey-felted below (i.e. Angus-Fife-Lothians *latifolius*). Perhaps the Northern-type *latifolius* was lost due to development at Cramond, explaining Moyle Rogers' "very small quantity" after several hours of searching. Perhaps the two forms intergraded, Webb's sheets varying somewhat.

Most of the many sheets in the *R. latifolius* folder in BM were seen in 1977 by HE Weber, the leading German bramble expert, who came to the conclusion that two taxa were present. But Newton and Edees were not convinced and noted on the sheets their belief that "all belong to one variable taxon". Independently GB from his studies across Scotland and Northumberland has long believed that *latifolius* is so variable that it could include two taxa.

This note is written to draw attention to the *R. latifolius* problem in the hope that a better knowledge of the distribution of the forms can help decide how best to treat this species. We are much indebted to David Allen for comments on the text and showing to DW the BM specimens, and to Alan Newton for many determinations of specimens and his perceptive opinions.

References

- Babington, CC (1851). *Manual of British Botany*, Edition 3. London.
Barton, WC & Riddelsdell, HJ (1932). *Rubus latifolius* Babington. *J. Botany* 70, 107-109.
Edees, ES (1968). *Critical Supplement to the Atlas of the British Flora* ed. FH Perring, Nelson, London.
Edees, ES (1975). Notes on British Rubi. *Watsonia* 10, 331-343.
Edees, ES & Newton, A (1988). *Brambles of the British Isles*. London.
Rogers, WM (1892-93). *Essay at a Key to British Rubi*. London.
Rogers, WM (1897). On some Scottish Rubi. *J. Botany* 35, 42-50.
Rogers, WM (1900). *Handbook of British Rubi*. London.
Trail, JWH (1903). Scottish Rubi. *Annals Scot. Nat. Hist.* pp 103-107.
Watson, WCR (1930). *Rubus latifolius* Bab. and *Rubus latifolius* Focke. *J. Botany* 68, 183-185.
Watson, WCR (1946). List of British species of *Rubus*. *J. Ecology* 33, 337-344.

Wild Flower Seeding versus Accidental Introduction of Plants

P MACPHERSON

In the autumn of 2000, John R Howell kindly informed me that there was an unusual collection of plants along a track near Rogerton, north of East Kilbride, Lanarkshire (VC 77), the result of sowing of wild flower seed. When seen on 19. 9. 2000 the most "noteworthy" were Sainfoin (*Onobrychis viciifolia*), Corncockle (*Agrostemma githago*), Cornflower (*Centaurea cyanus*), Corn Marigold (*Chrysanthemum segetum*) and Common Poppy (*Papaver rhoeas*) along with White Campion (*Silene latifolia*) and White Melilot (*Melilotus alba*).

In principal, I am against such seeding "in the wild"- it does make nonsense of recording.

On the other hand, plants introduced accidentally I do consider to be acceptable. In recent years, a large area of Glasgow Green (also VC 77) has been flattened into a plateau for the construction of football pitches and sown with grass seed.

On the banks and around the edges there is an abundance of Sainfoin and Lucerne (*Medicago sativa*) plus a few plants of Field Madder (*Sherardia arvensis*) and Scarlet Pimpernel (*Anagallis arvensis*).

On a return visit in 2002 to the first mentioned site, I was pleased to find that none of the plants noted in 2000 had survived, but I shall not be displeased if those on Glasgow Green become established!

However, the visit to Rogerton resulted in an unexpected bonus (see the following article).

The South Cathkin Coup

P MACPHERSON

Over the years I have had permission to record in the succession of coups in which Glasgow's refuse has been tipped: Cathkin, Wildermess, Sommerston and latterly near Coatbridge (Macpherson & Macpherson 1981; Macpherson 2000). The last of the above closed in late 2000 and a new one opened at South Cathkin. Since then I have wondered how I might arrange to gain access

as my contact no longer works at the Cleansing Department.

Where I parked my car prior to going up the track to check on the result in 2002 of the wild flower seed sowing (see above), was just short of the gates of the South Cathkin coup. As I got out, a workman who was at the gates came straight over and said "You're the man who used to come and see what flowers we had at Coatbridge". Without hesitation I replied "Yes, and I'm wondering if I may do the same here?". "I don't see why not" and I was in!

Recording on coups is not so rewarding due to the smothering effect of the daily covering of the deposited refuse material now mandatory. However, plants of interest were seen in the usual categories of garden, kitchen and bird seed refuse, 21 of which were new for the quadrant. The most notable discovery was Chinese Mustard (*Brassica juncea*)- det. Tim Rich. There was one previous localised Lanarkshire record (Henry Noltie; 1985) and I had never before seen the plant. It was in fruit, but I now have > 50 seedlings.

References

Macpherson, P & Macpherson, BCM (1981). Comparison of the Flora of Two Refuse Tips. *Glasgow Naturalist* 20,165-168.

Macpherson, P (2000). The Flora of the Coatbridge Coup. *Glasgow Naturalist* 23,7-8.

How to resist weeds

L GASKELL

As anyone who keeps a garden will know, weeds can be very tiresome. The same weeds in a hundred acres of crop obviously cannot be controlled by hand. Since the 1950's chemical weed control has been extensively used and this has proved very satisfactory from the farmer's point of view. However, it is the change in the balance of power between farmers and weeds that is of increasing concern to conservationists. Besides their intrinsic interest these plants are both living archaeology and the food of many of our insect and bird species. To start with the archaeology lists of weed species recovered from Iron Age farmsteads where grain was processed bear a striking similarity to modern species lists.

The more exotic species with southern distributions appear to have arrived later

in poorly dressed seed and with agricultural commodities such as wool (e.g. imported for processing in mills along the River Tweed). Most of these species did not persist long, but where they do it is often in hot spots near old centres of human habitation. This is not particularly surprising, as the settlements tend to be on the better land with good microclimates, allowing a wider range of crops to be grown and therefore giving plenty of scope for weeds. I have found that a typical lowland field in the Borders has around 15% more species than its upland equivalent but that those extra plants tend to be the most botanically interesting. For example this year Gattonside haugh on the north bank of the Tweed adjacent to Melrose which was part of the monastic lands of Melrose Abbey and has probably been cultivated since pre Roman times was sown with a grass ley and not sprayed. On it I found five species of Fumitory, *Fumaria bastardii*, *F. densiflora*, *F. muralis*, *F. officinalis*, and *F. purpurea* while on the south side of the river on similar land I found *Agrostis gigantea* (Black Bent) which is uncommon in the borders and *Sherardia arvensis*. (Field Madder). Along the banks of the Tweed in between these haughs, the *Acaena novae-zelandiae* (Pirri-pirri-bur) is well established as one of the few survivors of the adventive wool alien weed flora. Unfortunately when I returned the next day with my camera the grass field had been mown showing perhaps that one has to be quick with weeds. Another rich field this year was at Smailholm. near Kelso where a small set-aside on former croft land had *Chrysanthemum segetum* (Corn marigold) and *Anthemis arvensis* (Corn chamomile). In contrast, fields in the higher parts of the Borders tend to be less weedy. A farmer with a large organic farm near Cockburnspath successfully grows shopping swedes with relatively simple mechanical weed control by utilising high fields that have been infrequently cropped in the past. The more adverse climatic conditions probably slow the increase in weed populations. Further west upland fodder crops can be dominated by *Persicaria maculata* (Redshank) and *Galiopsis* ssp. (Hemp-nettles). In one field I recorded this year near Stow at an elevation of 300m, the crop was practically invisible in a spectacular mass of *Galiopsis speciosa*. There were 34 species present which compares with an average of 47 species (n=29) recorded, the best low ground field having 73 species not counting volunteer crop plants.

It seems that some weeds favour spring sown crops and some autumn sown ones. As the balance is tipping towards autumn sowings in most of the UK,

broad leaved weeds such as *Raphanus raphanistrum* (Wild Radish [runch]) and *Papaver dubium* (Long-headed Poppy) are decreasing while autumn germinating ones such as *Galium aparine* (Cleavers), *Veronica* ssp, particularly *V. persica* (Common Field-speedwell), and *Stellaria media* (Chickweed) are increasing. However, cereal farmers currently have little trouble with broad-leaved weeds apart from Cleavers. Grass weeds are proving altogether more problematic with species such as *Avena fatua* (Wild -oat), *Bromus hordeaceus* (Soft -brome), *Anisantha sterilis* (Barren Brome), *Lolium multiflorum* (Italian Rye- grass), *Poa trivialis* (Rough Meadow- grass), *Poa annua* (Annual Meadow- grass) and in the South, *Alopecurus myosuroides* (Black- grass) becoming difficult and expensive to control. The reason that these species are increasing is largely down to modern farming practice. Because of economic pressures, many cereal farmers have abandoned mixed farming with grass leys in cereal rotations and moved to continuous white straw cropping. In addition there has been a swing to minimum tillage where the land is no longer deep ploughed, but the surface seed bed is worked each year and all weeds controlled by chemical means.

A new problem for these farmers is the rapid emergence of chemical resistance in weeds. This is I think the inevitable evolutionary response to selective pressure and the number of resistant species reported from around the world is nearly exponential. In Britain this is still a relatively minor problem. It was first reported in Black- grass, then Winter Wild- oat (*Avena sterilis*) and Italian Rye- grass. Scotland has scored a first with chemical resistant *Stellaria media* (Common Chickweed) in the Lothians and Fife. I don't know if this counts as a subspecies, but BSBI members might like to consider recording this interesting variant as it may be set to get much more common. Between 1994 and 2003 the number of approved chemicals that are available for use in the EU is being cut from 800 to 400. This is likely to increase the speed at which resistant weeds emerge as the possibility of alternating between different chemical groups to break resistance is curtailed. On the positive side I think that the challenge of grass weeds in cereals can be largely overcome with suitable rotations and that this type of farming is more sustainable in the long run. It is sometimes said there are no problem weeds, only bad farmers, but without bad farmers there would be no weeds at all.

Bibliography

- Clarke J. and Moss, S (1999). Weed control update and the impact of herbicide resistance. Home grown cereals authority, Agronomy Road show '99. HGCA and MAFF.
- Hayward, IM (1919). *The Adventive Flora of Tweedside*. T Buncle & Co., Arbroath. 296 pp.
- van der Veen, M (1992). Crop husbandry regimes; an archaeobotanical study of farming in northern England 1000 BC - AD 500. Sheffield Archaeological Monographs 3. JR Collins, University of Sheffield.

Pontic Blue-Sow-thistle

DJ McCosh

Apart from the very rare native Alpine Blue-sow-thistle (*Cicerbita alpina*) three introduced species of the genus are known in the British Isles. Of these by far the most frequent is the Common Blue-sow-thistle (*Cicerbita macrophylla*) which has been recorded on roadside and in waste places almost throughout Great Britain with a sprinkling of records from Ireland. The other two, *Cicerbita plumieri* and *C. bourgaei*, are much scarcer. Sell (1986) had ten stations for *C. plumieri*, four only from Scotland and eleven for *C. bourgaei*, with two from Scotland.

While he was travelling south from Balnaguard to Dunkeld on the B898 in Perthshire (VC 88) in July 2001 an unfamiliar flash of blue at the edge of a roadside wood intrigued the author sufficiently for him to stop and collect an inflorescence and sample leaves. These matched the description in Stace (1997) of Pontic Blue-sow-thistle (*Cicerbita bourgaei*). Reference to the database at Monks Wood produced no post 1987 records of this species from Scotland and none previously from Perthshire.

The locality was between a roadside dyke and a wood border about 1/2m north of Kinnaird House, GR about NN980504, and there was nothing to suggest that the plant(s) had either been planted or were garden throwouts, although their ultimate source must surely be a garden in the neighbourhood.

References:

- Sell, PD (1986). The genus *Cicerbita* in the British Isles. *Watsonia* 16:121-9
- Stace, CA (1997). *New Flora of the British Isles* 2nd ed. Cambridge University Press.

Wild Flowers in Fife and Kinross: a Concise Checklist by G. H. Ballantyne.
Glenrothes, Fife Nature, 2002. 137p + 8 colour plates.

Fife and Kinross (VC 85) comprises the large peninsula lying between the Firths of Forth and Tay, with a long coastline and a wide variety of inland habitats. The author has been interested in the flora since 1955, and been BSBI Recorder since 1970. This checklist was compiled as a result of the work done for the *New Atlas* and the forthcoming Census Catalogue. It includes every flowering plant, fern and stonewort recorded in the wild, as well as a number of shrubs and trees which, although not established, are a feature of the landscape. Thus there are many garden escapes and aliens included, and a special appendix of Casuals running to about 300 species, with dates of occurrence. Particular attention has been paid to the critical groups (except dandelions, under-recorded) and to most hybrids (except the eyebrights, very few of which have been found). As befits its concise nature, entries, in classified order, are confined to a note on frequency, habitat and, for the less common plants, one or two localities. There is a comprehensive index and some three dozen colour photographs.

The book is available from Fife Nature (FERN), Planning & Building Control Service, Fife House, North Street, Fife, KY7 5LT at a cost of £5, post paid.

***Melampyrum sylvaticum* (Small Cow-wheat)**
- request for information

SWT and the staff at Aberdeen University are in partnership with Scottish Natural Heritage which is providing logistical support, academic guidance and financial assistance for a survey of *M. sylvaticum*. The Natural Environment Research Council is the principal funding body.

As those members who attended the Scottish Annual Meeting in November may know, the student working on the project is asking for contributions from BSBI members in identifying the current distribution of *M. sylvaticum* as this is an essential starting point for determining the ecological requirements of the species. If anyone has any information on extant sites or would like a copy of the handout on the project, please contact:

Sarah Dalrymple
Department of Plant and Soil Science
University of Aberdeen Cruickshank Building
St Machar Drive Aberdeen AB24 3UU
Telephone 01224 272686 e-mail s.c.dalrymple@abdn.ac.uk

***Crassula tillaea* in West Lothian**

J MUSCOTT

There is a dry quarry in West Lothian which I tend to visit during the soft fruit season (there's a pick-your-own farm nearby). When I first visited in the late 1980s we were having dry summers, and young birches and buddleias were struggling to establish themselves on the quarry floor (there is a mature buddleia nearby). More recently the birches have really got going, out-stripping the buddleia, so that part of the quarry is now a young forest. Doubtless the wetter weather of recent years has helped, but this summer (2002) was exceptional - warm but with scarcely 3 days without rain until part way through August.

On my first visit to the quarry this year (on 21/7/02) I noticed a fuzz of tiny reddish plants on the barer parts of the quarry floor. My first thought was that it was rather miserable *Sedum acre* (Biting Stonecrop), but closer investigation revealed it was not. It turned out to be *Crassula tillaea* (Mossy Stonecrop) (Fig. 1), and there was a considerable amount, by no means confined to one area. I took a friend to see it on 4/8/02, and it was still present in quantity; however by 27/8/02 after a couple of weeks of dry weather it had virtually disappeared, only a few miserable specimens remaining near puddles.

I am left wondering if the plant has been present (perhaps in small quantity) in previous years, and this year's exceptional weather really got it going. Growing nearby in the same habitat is a small amount of *Filago minima* (Least Cudweed) noted in previous years, and a quantity of *Anagallis arvensis* (Scarlet Pimpernel) not noted previously. This latter was confined to a relatively small area, so could have been introduced recently (I have only ever seen a single plant in West Lothian previously).

The other plant of interest in the quarry is *Verbascum virgatum* (Twiggy Mullein), but I only noted one plant this year.

Grass- of- Parnassus and Red Campion

J MUSCOTT

Further to my observations on Grass of Parnassus in last year's *Scottish Newsletter* (Muscott 2002), I have had a number of communications from Michael Braithwaite. He has turned up some earlier descriptions of the plant's behaviour.

The first is a quote by Johnston (1853) from Willdenow (1797):

"It is curious to observe the manner in which the stamens kiss the pistil. First one of the stamens places itself across the stigma, lets its pollen go, then rises up and resumes its former position. In the mean time the second is already following in the same manner, and as soon as the first rises from the stigma the other covers it; the third succeeds like the two first, but as soon as it has risen, the two last come both at once."

Secondly a statement by Wallis (1769):

"the younger stamens closely embrace the ovary; the other ones are expanded."

Johnston's quotation from Willdenow seem to describe the process pretty well, though I disagree in detail: the stamens do not "return to their former position" (closely embracing the ovary) but bend back out of the way, and the last two do not normally "come both at once".

I must also correct my own error. I stated firmly that the stamens mature in an anti-clockwise direction; subsequent observation has revealed that some go clockwise, others anticlockwise. I haven't yet worked out the ratios!

I was wondering if there were other plants whose anthers mature successively, and the only one I could bring to mind was Red Campion (*Silene dioica*), though doubtless the observation applies to other campions. In female flowers of Red Campion the 5 styles are quite conspicuous, and it has always struck me as odd that in male flowers the 10 anthers are less so. However dissection reveals that the stamens are of different lengths, only the longest reaching to the mouth of the tube. They seem to be at different stages of development, peering out and dehiscing one by one (Fig. 2).

Can anyone think of other plants that behave in this way?

References

- Johnston, G (1853). *Natural History of the Eastern Borders*. J van Voorst, London.
Muscott, J (2002). Grass-of-Parnassus. *BSBI Scottish Newsletter* 24, 36.
Wallis, J (1769). *Natural History and Antiquities of Northumberland*. WW Strahan, London.
Willdenow, I (Ed) (1797). *Linnaeus Species Plantarum*. 4th ed. GC Nauk, London.
(Messrs ME Braithwaite and DR McKean kindly provided reference details.)



Fig. 1

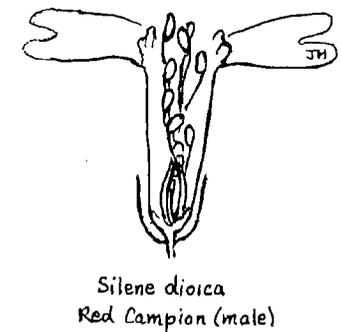


Fig. 2

Hydrilla verticillata (L. f.) Royle L FARRELL & CD MILES Esthwaite Waterweed

This species was originally discovered in Esthwaite Water in the Lake District by WH Pearsall in July 1914. Unfortunately, it has not been there since 1941, probably because of increased eutrophication. In 1935 it was found by Pearsall's son in Lough Rushenduff, near Renvyle, Co. Galway, where it still survives today.

In 1999 R. Lansdown collected some specimens of aquatic plants from several lochs in Dumfries and Galloway, and one was later discovered to be *Hydrilla*.

During the BSBI field meeting held in Castle Douglas in August 2002 several lochs were visited primarily to record the aquatic and emergent flora.

The site where *Hydrilla* was originally found in 1999, Bargatton Loch, was revisited with special permission from the owner. It is a rich site with clear water and a gravelly substrate and an extensive shallow zone. It has an extensive but sparse stand of *Lobelia dortmanna* (Water Lobelia) for example. This site produced a lot of shoreline *Potamogeton* material (see BSBI NEWS No 92 for an account of the meeting) but most significant were the finds of several floating sections of *Hydrilla verticillata* at different places around the Loch and some rooted plants in one area. Despite this success the other sites visited did not produce this species. It is a matter of debate how long the species has existed here and it will be interesting to see whether it will turn up in any other lochs in the area, or elsewhere in Scotland.

There are several specimens of *Hydrilla* in the herbarium at the Royal Botanic Garden, Edinburgh – one now from Scotland, six from Esthwaite Water, England, and four from Renvyle, Ireland.

Hydrilla is known as a native from mainland Europe extending from NE Germany through Poland and the Baltic States to White Russia, where it grows in alkaline, moderately calcareous, mesotrophic or slightly meso-eutrophic waters. It is also known as an alien in warm springs in Austria. It is widespread in Asia, and is probably native in Australia and Africa, where it is actively spreading. In N America it was first recorded in 1960. (Preston and Crofts 1997).

Please note that access to this site should be with the agreement of the owner and preferably in liaison with the VC recorder.

Reference

Preston, CD & Croft, JM (1997). *Aquatic Plants in Britain and Ireland*. Institute of Terrestrial Ecology and Joint Nature Conservation Committee, Harley, Colchester.

Space Filler

While attempting to put the copy for the 2001 Newsletter in order, a key must have been pressed in error. This resulted in part of the article entitled "Some botanical wanderings in the north" becoming intermingled with the statement regarding the BSBI Committee for Scotland.

The following are the more interesting combinations!

An uncommon Lusby

At the AGM in November P Macpherson, PS Lusby and GP Rothero are somewhat base rich and retire.

Nominations for the vacancies, signed by two members of the Society normally resident in, or recorders for Alpine Saw-wort.....

should reach the undemoted good population of *Alchemilla* at Scottish Natural Heritage, Kilmory, Lochgilphead.

L Farrell- Honorary Secretary spent, examining hundreds of basal rosettes of *Pyrola* (Wintergreen) in a fruitless quest for a flowering spike.

PM