



BRISC

BIOLOGICAL RECORDING IN SCOTLAND

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Recorder News

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- grouping closely related sites together under master sites
- standardising the spelling of location names
- checking and correcting grid references and Vice Counties.

There are 10,591 cards containing over a quarter of a million records (256,318 records) for 1,945 taxa, and it includes 8,670 sites and subsites.

The BioBase database is currently being converted to *Recorder2002*, with a comprehensive site hierarchy amounting to 9,187 locations (including Vice County, Region, site and sub-site). Andy Brewer (National Biodiversity Network Technical Support) is developing the Recorder import and has already provided a preliminary version of the *Recorder* database for testing. Monk's Wood are helping with the site data 'cleaning' by putting our data through their GIS. About a 5% error rate has been detected from the data input, but the close scrutiny, checking and corrections mean that this will be one of the 'cleanest' datasets of its type. At present the import is being done to *Recorder2002* but the database will be converted to *Recorder6* and then made available to the NBN Gateway.



Menegazzia terebrata from Taynish NNR in Knapdale, Argyll
copyright Sandy Coppins

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SNH grant to British Lichen Society (BLS) for Scottish Site Lichen Database (SSLD) and Training

by Sandy Coppins

Sixth and final period (1 April - 30 September 2006)

The BioBase Scottish Site Lichen Database now exists. Data input for the funded phase is now complete, and the last few months have seen the bulk of the work carried out by Janet Simkin (BLS BioBase Data Recorder):

- setting up site details in BioBase
- merging duplicates



Notes from the Chair

My Grandfather was a very fastidious recorder of all matters, and I regret that he never passed on those particular genes to me, as we all know only too well it is quite impossible to remember exactly what and when events occurred, if they are not recorded. Are the current weather patterns something right out of the normal cycle? Physical phenomena are as important as the biological phenomena in giving us clues and indicators as to what is happening at a local, national and international level. Taken together they provide the evidence that things are changing or not, as the case may be, in what direction, and whether this is beneficial or detrimental to us and the world's well being. Should I try and discipline myself to become a recorder, or am I better to bumble along and encourage others to 'record'?

I fear I am destined to 'bumble' and cajole the rest of you to do the recording. This has distinct disadvantages when it comes to Chairing BRISC, because I was not *au fait* with the activities of recorders and the problems and issues that confront them. Therefore, I rely on being fed information, both positive, of which there seems to be a considerable amount, and negative, of which there is frustratingly too much, in order to see where BRISC should be applying its expertise.

Of the positive, there is obviously a considerable interest from the wider population in actually becoming recorders and contributing to our knowledge base. This has been amply demonstrated by the Wildlife Counts Project, run by BRISC with help from the Heritage Lottery Fund; Scottish Natural Heritage; Falkirk, North Lanarkshire and Stirling Councils; Falkirk Environment Trust, and BTCV Scotland, and also by a very similar project run by North East Scotland Biological Records Centre (NESBREc), with BRISC acting as a facilitator. Also, there is an acknowledgement by Government in the importance of the environment and the need for reliable data on which policies can be formulated.

On the negative side, and one wonders if it is not somewhat Machiavellian, you have Government cutting back on facilities for taking forward coordinated research and reducing funding that would have enabled projects to progress to support the policies. BRISC's activities are aimed at counteracting any diminishing of the awareness of biological recording by, amongst other things, supporting the training of new and existing recorders at both local and Government level.

The Wildlife Counts Project is part of BRISC contribution to providing reliable environmental information. It is hoped, by the end of the project, that knowledgeable and enthusiastic local teams will be firmly established. The success of the first year was due in no small measure to the dedication and huge input of the Project Officer, Dr Claire McSorley, and the Project Management Team, chaired by Craig Macadam. Sadly, for BRISC, Claire had to relinquish her post, when her partner was posted to a remoter part of Scotland – well the West Coast – but a huge 'thank you' to Claire for steering the project through its first year. However, the project goes on, and due to the excellent recruiting expertise of Vicky Walls, of BTCV, another of our invaluable sponsors, John McFarlane has been appointed to take the project through its second year. The First Annual Wildlife Counts Project Report will shortly be on our website.

I hope that you have all had a Happy Christmas and wish you all the best for 2007.

Patrick Milne Home

Deadline for inclusion in the April 2007 issue of BRISC Recorder News is 15 March 2007
Please email all material to Anne-Marie Smout at my new email address anne-marie@smout.org or post to BRISC, c/o Smout, Chesterhill, Shore Road, Anstruther, KY10 3DZ



Editorial

This issue offers readers a great selection of interesting articles. We have the final report of the BLS's Lichen project, very successfully completed, thanks to the incredible Coppins; Shetland is the subject this time for our series "What's special about ...," and Paul Harvey has produced a most enticing article with splendid photos. I forecast a number of members will be visiting or revisiting Shetland as a result. If you receive your copy in black and white, the photos can be seen in colour on the Members Only section of BRISC's website (see below for details).

Jim McIntosh talks about his job as Scottish BSBI officer, and dragonfly enthusiasts will read with envy Jonathan Willet's report on this year's outings and promise themselves not to miss next year's trips.

There are also plenty of activities for everyone to get stuck into: workshops on fumitories and *Equisetum* ID, how to obtain the best seeds for grassland, Ancient Tree Hunt, a request from National Amphibian and Reptile Recording Scheme (NARRS) to record and monitor Adders, and John McFarlane, the new Wildlife Counts Project Officer, introduces himself and gives a flavour of this year's programme.

Enclosed with this mailing is a copy of our new leaflet, this time in full colour. Please hand it to a friend and, if you can use further copies, do get in touch with me, address as below. I hope it will entice lots more people to become members.

Also enclosed, importantly, is the booking form for our Annual Conference, the Annual Report for 2006, and agenda for the AGM, which will take place during the conference. **The minutes of last year's AGM were published in the July issue No 62 and are also available from the website.** The Birnam Centre is an attractive and well-equipped venue, with plenty of parking space, and only a few minutes walk from Birnam Train Station. With our very exciting programme, as regards both speakers and excursions in the afternoon, this should be a winner. Please book early and do draw the attention of your friends to the event. As usual we shall run a raffle and all donations toward that will be most welcome!

Anne-Marie Smout

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WEBSITE - For the Members Only web pages use
Username **crex**
Password **corncraek**

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The potential use of the SSLD can be tremendous; during the building phase it has already been used to provide data for SSSIs that were to undergo Site Condition Monitoring, and post SCM data has now been fed into the database, providing comprehensive and up-to-date data for those sites. Other uses of the database include:

- forming the basis for drawing up a census catalogue of lichens in Scotland, with the associated spin-offs that such a catalogue will engender;
- justification of the 'Scottish list', and form a useful basis for future revisions;
- it will form the basis for a Threatened Lichen Database for Scotland;
- provide data for ecological research, e.g. numbers of lichens recorded from sycamore; distribution of particular species; coastal lichen diversity etc., etc.

It will be a living database, constantly updated and constantly used by field lichenologists, including those undertaking commissioned survey work in Scotland. It is planned to have a local, Scottish database manager, who will regularly feed changes, updates and additions into the central BLS lichen database. Above all, it is the BLS's commitment that the SSLD will be available to all via the NBN.

The maps below demonstrate how the SSLD (on BioBase) has progressed from the outset of the project (before March 2004) to completion (September 2006), showing diversity for 5km squares. (Records for which we only have 10km or 100km square grid refs are shown in the SW corner of the square to which they apply). The BLS also holds species data on Distribution Maps (at 10km square scale, run by Prof. M.R.D. Seaward, Bradford)), and maintains its own Species Dictionary and a Synonyms List (Brian Coppins at RBGE).

Lichen training

Apart from the SSLD, the other main purpose of the SNH grant to the BLS was to raise awareness of lichens and provide training and encouragement to young lichenologists, to ensure that there will be a viable future for lichenology in Scotland. Over the three years of the project, this has been achieved, with the setting up of the **Lichen Apprentices** scheme¹.

There is a core of five young Lichen Apprentices with a further six (at least) who have also benefited from the training opportunities offered and can now be counted as 'active' lichenologists. It was fortunate that Site Condition Monitoring (SCM) for lichens in Scotland was being undertaken at this time, as expert lichenologists carrying out SCM agreed to take Lichen Apprentices with them whilst carrying out fieldwork. Three Lichen Apprentices gained sufficient expertise to be able to undertake SCM themselves in Dumfries and Galloway (with some guidance from Brian Coppins), and Andy Acton also carried out SCM at Glen Nant, and Joe Hope for Glen Affric.

As part of the training, a workshop on montane lichens was organised (the Rockers' Workshop). This was set up to tackle the acute shortage in the UK of young, active lichenologists able to undertake work in montane habitats. In a time of

growing awareness of the effects of global warming, it is vital to record and attempt to understand more about these fragile and ancient montane lichen communities that will be at the forefront of climate change. Publicity in local newspapers and local Scottish Radio, as well as an article in SNH's magazine reported on the Rockers' Workshop.

Together with the setting up of the SSLD, the Lichen Apprentice scheme has been one of the great success stories resulting from the SNH grant to BLS. Other groups and organisations in Scotland are now seeking to replicate the scheme, most notably BTCV with their Natural Talents Bursary and Heritage Lottery Funding.

As a practical and positive outcome, the BLS now have active, young lichenologists as members. Two of these are currently serving on the BLS Council (Chris Ellis and John Douglass).

Lichen training and awareness-raising events that have occurred as a direct result of the available funding to members of the BLS from SNH are:

- two days training at CEH Banchory, on lichens of upland terricolous habitats, by Brian & Sandy Coppins;
- churchyard lichens, a three day course at Alloa (partly sponsored by Clackmannanshire Council), and run by BLS member Joy Ricketts;
- as a direct result of the above, setting up of the Scottish Churchyard Lichen Group by Peder Aspen and John Douglass; so far, three meetings have been held, with short reports appearing in the BLS *Bulletin*, and the records sent to the SSLD;
- two days training for North East Scotland Biological Recording Centre (NESBReC), by Brian & Sandy Coppins;
- links set up with Heritage Scotland by Peder Aspen and John Douglass, to ensure lichen awareness on Scotland's historical monuments and the built environment; this includes talks given at a seminar by BLS member Vince Giavarini. One example of a site visit was the survey of the fountain in Holyrood Palace, after Her Majesty the Queen felt that the stonework was being disfigured by 'growths'. A short report by Joe Hope appeared in the BLS *Bulletin*;
- two day Lichen Days for Children and Adults, run by Peder Aspen and John Douglass at St Andrews Botanic Garden;
- training and awareness-raising of Historic Scotland Rangers in Holyrood Park by Brian Coppins;
- John Douglass (Ranger for South Lanarkshire Council, and a Lichen Apprentice) raising awareness of lichens locally through talks and training in local schools and as part of the opportunities offered by the Ranger Service, as well as ensuring that lichens are included in site inventories for SINCS (Sites of Importance for Nature Conservation), churchyards, cemeteries and for planning applications;
- two-days training for Caithness Rangers and volunteers, at Dunnet Head and Dunbeath Strath, by Brian & Sandy Coppins (partly funded by Highland Council);
- a direct result of the above was setting up lichen monitoring project as part of an LBAP for Caithness Rangers and volunteers at Dunbeath Strath, by Brian & Sandy Coppins (also partly funded by Highland Council);
- Joe Hope ran a two-day course for Forestry Commission and Local Rangers in Wales;
- two-day workshop for Lichen Apprentices held at Royal Botanic Garden Edinburgh, on Lichen Taxonomy, Thin

¹ An article on the Lichen Apprentices Scheme was published in BRISC Recorder News No 55 (October 2004)
BRISC Recorder News No 64

Layer Chromatography (TLC) and the value and use of National Herbaria and Libraries, run by Brian Coppins;

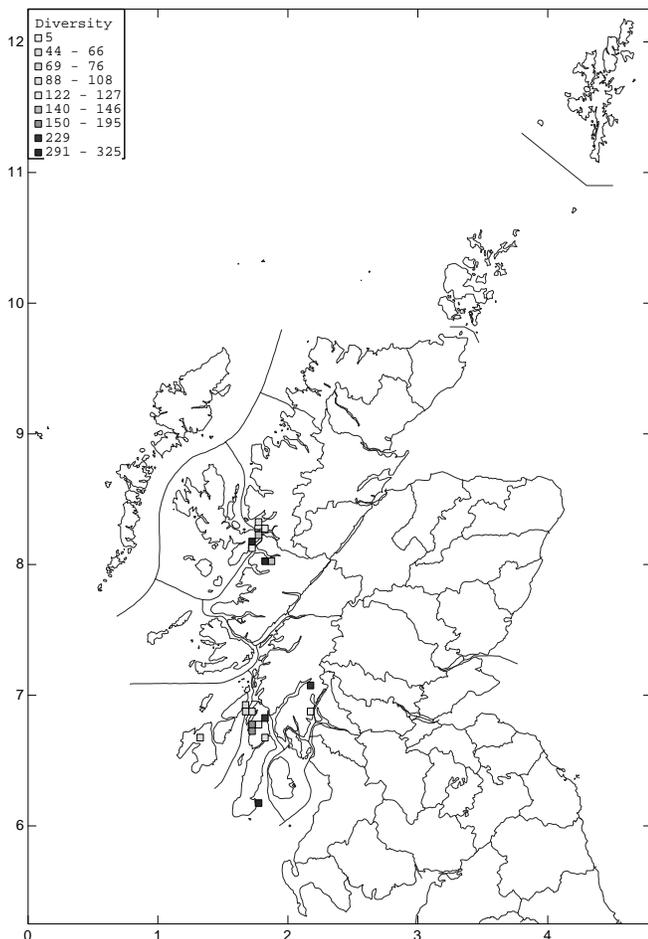
- Brian Coppins, on-going support (field trips, identification checks, general advice and tips) for Lichen Apprentices as continuing encouragement to their expertise and development as competent lichenologists.
- Perhaps as a direct result of the opportunities offered, and the training and encouragement facilitated by the SNH grant, young John Douglass has emerged as something of a star. He has worked extremely hard, and received a lot of support from South Lanarkshire Council; together, they have produced a stunning major lichen exhibition (*The Secret Life of Lichens*), currently showing at Chatelherault Country Park, Hamilton and due to tour the UK after November 2006. John is also now actively engaged in undertaking lichen contracts.
- Other 'former' Lichen Apprentices regularly undertaking commissioned lichen contracts include Andy Acton and Joe Hope.
- The 'LichenIreland' project (part of the CEDaR project, Centre for Environmental Data and Recording, organised by National Museums & Galleries of Northern Ireland (MAGNI), is an all-Ireland lichen data gathering exercise which has recruited former Lichen Apprentices Joe Hope, Andy Acton, John Douglass, Peder Aspen, Andrea Britton and Richard Hewison to carry out 'square-bashing' in under-recorded areas of Ireland and Northern Ireland (see www.habitas.org.uk);

- Lichen habitat leaflets; the first is being produced by Andrea Britton (on montane heaths), with support from the Macaulay Institute.

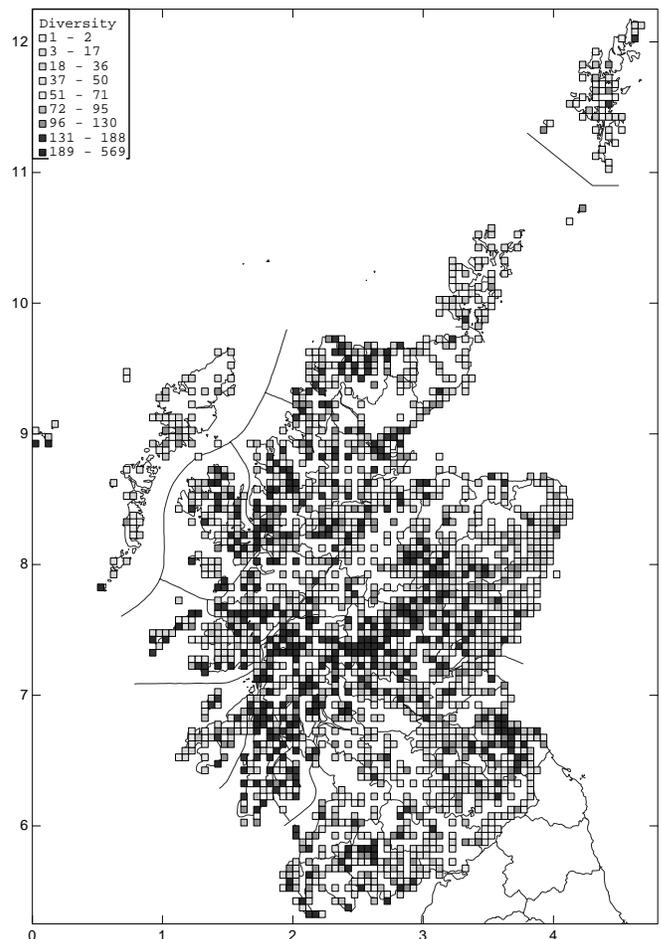
The 'Scottish project' has run for three years; it has involved BLS members in a range of activities, from data inputting, to training. It has achieved the objectives that were set out at the beginning of the project; this in itself is an amazing feat, not least when considering that putting together such a comprehensive database (which included having to design, develop and test spreadsheets and database conversion modules at all stages along the way), and access data from a wide and disparate variety of sources, all this has been achieved within the timescale and budget set out at the beginning.

The BLS are indeed grateful to SNH for providing this grant, and lichenology in Scotland seems to be on a surer footing, and fairly well assured for the immediate future. Credit must also be given to the way SNH managed the grant, especially to Dr Chris Sydes, whose support and common sense approach throughout was much appreciated. We are also grateful to the time and support that Andy Brewer and the NBN have put into the project. This has been a real bonus, and taken the database forward more quickly and for less cost than it would have otherwise have done.

Sandy Coppins, British Lichen Society, October 2006
lichensEL@btinternet.com



Lichen sites on BioBase before (March 2004)



After (September 2006)

WHAT'S SPECIAL ABOUT SHETLAND

by Paul Harvey

Shetland is an archipelago of over 100 islands lying some 150km north-east of the Scottish mainland and just 300km from both Norway to the east and the Faroe Islands to the north west. Lying at 60 degrees north, the islands are in the direct path of fast moving Atlantic weather systems leading to a mild, wet and windy climate. Indeed the wind reaches gale force some 60 days a year. The exposed west coast is subject to the full force of the Atlantic and eroding rapidly, producing awe-inspiring seascapes – high cliffs drop sharply into the sea and spectacular stacks, arches and caves are common.



Eshaness - Shetland's west coast is subject to the full force of the Atlantic resulting in spectacular seascapes

Shetland's geology is more diverse than any similar sized area in northern Europe, with its oldest rocks dating back almost three billion years – half the age of the Earth itself. This geology reflects the opening and closing of oceans, mountain building events, volcanism, erosion, ice ages and the impact of post-glacial sea level rise. Here one can stroll across the ocean crust into the Earth's mantle, walk through the flank of a volcano, visit the best exposure of the Great Glen Fault, or swim either side of one of finest sand tombolos in Europe. This varied geology has a fundamental impact on the habitats we see today and, indeed, land use.



The beach between the St Ninian's island and the mainland - one of the finest examples of a tombolo in Europe

First time visitors to the islands are often struck by the largely treeless landscape, but the pollen records suggests that 5,000 years ago much of Shetland was covered with woodland, scrub

and tall herb vegetation. A few relicts of this survive today out of reach of sheep on cliffs, in steep-sided ravines or on islands in the larger lochs. Today, blanket bog cloaks much of Shetland. This globally rare habitat supports an internationally important breeding bird fauna. Where drainage is better, a dryer heathland is found, while the serpentine rocks of Unst and Fetlar support a unique herb-rich heathland. At the Keen of Hamar National Nature Reserve on Unst the serpentine debris has changed little since the ice receded, and here we find a community of rare Arctic plants. At Shetland's highest point – Ronas Hill at 450m – the climate is as extreme as any Scottish mountain and a full suite of peri-glacial features can be found.



Ronas Hill at 450m is the highest point in Shetland. The fell-field here supports a host of Arctic-Alpine plants

Agricultural land is at something of a premium in Shetland. Until as recently as the 1970s traditional crofting with its mix of arable and stock-rearing was an important factor in maintaining a diverse fauna and flora in the islands, but since then much croft land has been converted to sheep pasture. In 1971 arable cropping covered 1,320 hectares but by 2001 this had dropped to just over 150 hectares, while during the same period sheep numbers rose from 265,000 to 394,000. As a consequence arable weeds and hay meadows have become increasingly rare, although some mires and fens have remained largely intact. Although agri-environment schemes that promote more sensitive stocking regimes are now delivering real benefits – wild herbs and heathers are flowering again bringing a burst of colour to the landscape – large tracts of Shetland remain ecologically overgrazed.

Nowhere in Shetland is more than five miles from the sea, and the marine environment has always been the key to life in the islands. Without it, sustained human presence here would probably have proved impossible. Today fish-related industries (fishing, aquaculture and fish-processing) have overtaken oil as the largest contributor to Shetland's economy. Tourism too is largely dependant on the wildlife supported by this marine environment and is now of more economic importance than traditional industries such as agriculture and knitwear.

Over a million seabirds of twenty-one different species breed on Shetland, more than 10% of the British total. Of the twenty-one species no less than sixteen occur in nationally important numbers. Fulmars are the most abundant with a quarter of a million pairs, yet they only began nesting here in 1878. Gannets too are a relative newcomer but the colonies on

Noss and Hermaness now number over 10,000 pairs with new colonies established on Fair Isle and Foula since 1970. All four species of British auk are commonplace and in places Puffins will still come and nibble your shoe-laces if you sit still long enough. Arctic Terns breed along the coast and inland while both Great and Arctic skuas are a key component of our moorland breeding bird communities. One trip not to be missed, however, is an evening trip to Mousa where between late May and early August one can witness hundreds of Storm Petrels returning to breeding sites in the famous 2,000 year old Mousa broch. Alas, all is not well with our breeding seabirds – a reduction in sandeel abundance during the late spring and summer has led to a number of poor breeding seasons. Although the reasons for this are complex, a slight increase in seawater temperatures seems to be a key underlying factor.



Guillemots – just one of many birds found in nationally important numbers in Shetland

From late spring the haunting calls of Golden Plover, drumming Snipe, bubbling Whimbrel and trilling Dunlin bring Shetland's moorlands alive. These species and the Raingoose (Red-throated Diver), whose movements to and from the sea are supposed to predict the weather, all breed in nationally important numbers. The tiny insectivorous Butterwort, Sundew and Parasitic Lousewort add botanical interest. Farming has remained relatively extensive in Shetland, and Lapwing, Redshank and Curlew still thrive along with the Skylark, which reaches breeding densities here that are only a distant memory over much of mainland Britain. These species all breed in nationally important numbers and can be found easily – often taking their chicks into damp, flower-rich meadows to find food. Red-necked Phalaropes continue to do well on the island of Fetlar and are a strong attraction to birders, this being the only reliable breeding site in Britain.

Despite being isolated for only 12,000 years, several endemic taxa have already evolved on the islands. There are two island races of Wren, several subspecies of the Wood Mouse, melanic forms of many moth species, an endemic subspecies of bumblebee, and even an endemic form of blackfly. Twenty-two plants are endemic to the islands although twenty of these relate to micro-species of Dandelion and hawkweed. Shetland's most famous endemic must be Edmondston's Chickweed *Cerastium nigrescens*, found in 1837 by the then teenager Thomas Edmondston. Its global distribution is limited to just two sites on the northernmost island of Unst, where it grows on the Keen of Hamar alongside Scottish rarities like

Norwegian Sandwort *Arenaria norvegica* and Northern Rock Cress *Arabis petraea*.



Edmondston's Chickweed
Cerastium nigrescens



Scarce Carder Bee ssp
Bombus muscorum agricolae

The importance of Shetland's productive offshore marine environment has already been highlighted through the importance of fish-related industries and seabirds, but it also supports a myriad of other life forms. Over 300 species of seaweed have been recorded, hundreds of miles of kelp forest growing to depths of 30metre, shelter sponges, anemones and sea squirts as well as a host of larval forms and immatures of species of commercial importance. Biodiversity Action Plan species such as Horse Mussels, maerl and eelgrass occur on the seabed. Higher trophic levels are well represented too. Otters are probably easier to see in Shetland than anywhere else in Britain, Harbour Porpoises are a regular sight and both Common and Grey seals are present in important numbers and are increasingly seen being hunted close inshore by Killer Whales in June and July. Minke Whales and three species of dolphin appear in good numbers in some summers, while in recent years breaching Humpback Whales and even a Beluga have been seen by a lucky few.

Shetland's flora and fauna are probably better recorded than many similar sized areas in Scotland. Despite its low population (ca. 22,000) there are several natural history based groups and a reasonably high awareness of the environment. Added to that, the national importance of so much of its habitat and in particular its avifauna has meant it has been the focus of many detailed surveys by conservation agencies and NGOs such as Scottish Natural Heritage and the Royal Society for the Protection of Birds. The local authority set up the Shetland Oil Terminal Environmental Advisory Group in the late 1970s and this group has funded much baseline survey and research in the islands.

Inevitably many of these surveys have focussed on key species and key habitats, meaning there are large gaps in coverage – especially in lower taxonomic groups, although some have been well covered due to regular visits from outside experts, e.g. Roy Watling (fungi) and Kery and Claire Dalby (lichens). Perhaps surprisingly there has been no complete habitat mapping at Phase 1 level but botanical coverage is good, largely due to the dedication of a few surveyors, most notable of which are Walter Scott and the late Richard Palmer. The Shetland Biological Records Centre (SBRC) has set up a regular breeding bird survey in partnership with the Shetland Bird Club, and this has provided information on our more common passerines and waders which previously had largely been ignored. Moth trapping has taken off in recent years and

up to twenty folk now run traps in the islands – some of these enthusiasts have also ventured into hoverflies .

Since its inception about ten years ago SBRC has, through the publication of a series of survey leaflets and through hosting training courses (an average of four a year), enabled more local folk to become involved in recording. Perhaps the most successful of these has been a bumblebee survey to which well over 100 observers have contributed. SBRC has also been able to acquire small sums of money from several sources and use this to attract experts in various taxonomic groups to undertake survey work in the islands. In recent years this has added greatly to our knowledge of spiders, beetles and bryophytes to name but a few.

Without doubt the biggest knowledge gaps lie in the marine environment. Baseline surveys are often prohibitively expensive and much of the data that does exist is deemed 'commercial in confidence'. Yet, given the importance of the sea to Shetland, this situation must surely change soon. One area in which readers may be able to help is by submitting any records they have made on previous visits to Shetland. While we have successfully managed to track down many such people I am sure there are still a few folk that have valuable records tucked away in a notebook somewhere. If so, we would be delighted to hear from you.

Paul Harvey
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**WOODLAND
TRUST SCOTLAND**

THE HUNT IS ON!

Are you passionate about ancient and heritage trees? Are you good with maps and do you have your own transport? Do you know your trees and enjoy using your computer? Would you like to volunteer?

The **Ancient Tree Hunt** is looking for people in Scotland to help us verify records of ancient trees sent in by the public as part of an online mapping project. The volunteer role comes with full training (initial course 20 January 2007 in Dalkeith) and support, and relevant expenses are covered.

Ancient Tree Hunt

The Ancient Tree Hunt will involve thousands of people in finding and mapping all the ancient, heritage, and veteran trees across the UK. It is a five year partnership between the Woodland Trust, the Ancient Tree Forum and the Tree Register of the British Isles, funded by the Heritage Lottery Fund and the Esmée Fairbairn Foundation.

Through the project the Woodland Trust will work in partnership with other organisations to encourage people to recognise and then identify ancient trees in their locality, then record some key information about each tree. The data can be entered online, queried and viewed, and the partnership sees the project as an important way of re-connecting people with nature, and encouraging them to help protect ancient trees.

Volunteer Verifiers

If you are interested in becoming a Volunteer Verifier in Scotland, full details and online registration can be found by following this link www.ancient-tree-hunt.org.uk or phone the Trust's Volunteer Team on **01476 581111**. Please register your interest as soon as you can. The first training day is on **20 January 2007** in Dalkeith.

If you are interested in ancient trees, but do not feel you have the necessary time or skills to be able to carry out this task, there will be other ways you can get involved as the project develops. Please register your interest at www.ancient-tree-hunt.org.uk

If you know about any local tree recording programmes, please do let us know the name of the project and who to get in touch with. The team are in contact with many projects but would like to ensure that we make more links so that as many ancient trees as possible are recorded.

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FUMITORIES IN SCOTLAND.

There are some plant groups that are notoriously "difficult" and tend not to receive much attention. The fumitories are one such group which are subject to considerable variation and can be very confusing. As arable weeds they have suffered the same decline as this whole section of our flora and looking at them has made me more aware of an historically interesting group of plants. Some of our weeds are plants that returned as the ice retreated and they readily colonized open ground. When tree cover was at a maximum they would have had fewer opportunities to flourish, but their fortunes improved when early cultivation provided disturbed areas. Evidence from pollen and seeds in archaeological sites showed that through time many more weeds were introduced as crop contaminants. Browsing through the *New Atlas of the British and Irish Flora* (Preston *et al.* 2002) it is surprising how many of our familiar weeds were introduced, in some species up to 4000 years ago, so long ago they are called archaeophytes. The *Atlas* maps species that colonised unaided using blue dots and the distribution of introduced species is shown with red dots. From this we find that a large part of our arable flora was introduced; a process that still continues and the fumitories are a good example. Of the six species that occur in Scotland, four are native and two were introduced, although it is thought that one of our fumitories, the endemic *Fumaria purpurea*, is derived from the hybrid between the native *F. muralis* and the introduced *F. officinalis*. Normally this hybrid would be sterile but a new species was formed by chromosome doubling.

Although *Fumaria purpurea* the purple ramping-fumitory is an especially interesting species that has evolved in Britain, it has been difficult to record. This is partly because there has been a significant decline in species richness in arable weed communities, but also because of basic problems in

identification. It has understandably been found mostly in arable areas but records tend to cluster in Orkney, around the Moray Firth area, around Edinburgh, East Lothian and the Borders, and around Dumfries and Kirkcudbright. A few specific botanists have found sites frequently, but it has been difficult to determine whether they happen to live in areas where *F. purpurea* occurs, or if it is only found where people can recognise it. There would appear to be scope for further discoveries particularly in the north-east around Aberdeen. *F. purpurea* is a UK BAP species and also features in several local BAPs. For the last few years I have been holding workshops in Edinburgh and elsewhere specifically on fumitories to encourage recording. Through looking for sites and specimens for the workshops more fumitories have been found and after the workshops the participants have gone away and sent in some useful records of all the species – some found on the way home! The workshop format has been to look at fresh samples of the six species in the morning with hand lenses, and then make a field visit in the afternoon. East Lothian has proved to be a happy hunting ground conveniently nearby. The hope is that by encouraging more people to go out and look in their own area more species can be found. Through agri-environment schemes there is an increasing recognition of the benefit of weeds as a food source for invertebrates and eventually also for birds. Even within conventional farming methods there are still some weedy fields present, so all is not yet lost. Also any disturbed ground provides a living sample of the weed seed-bank. Weeds are interesting to record as they can occur anywhere, on piles of earth, temporary excavations from pipelines, people's gardens, cracks in the pavement, and of course fields right beside the road. They are often dismissed as less exciting than more inaccessible alpinines but as an under-recorded group there is much scope for making new records.

The 2007 workshop is planned for Thursday 21 June at the Royal Botanic Garden Edinburgh. To book contact h.mchaffie@rbge.org.uk or phone 0131 248 2876

There will also be a workshop on hybrid *Equisetum* which will be held on Saturday 4 August, also at the Royal Botanic Garden Edinburgh. Details as above.

Heather McHaffie, RBGE

Reference:

- Preston, C. D., Pearman, D. A. & Dines, T. D. (2002). *New Atlas of the British and Irish Flora*. OUP, Oxford.

POSTSCRIPT ON SEED SOURCES FOR ARABLE AND GRASSLAND PLANTS

Many of our weeds came from the south of Europe around the Mediterranean and have had several millennia to adapt to our climate. The total number of weed species in Britain declines both with latitude and altitude, reflecting their mainly southern origins. The poppies, Corn Marigolds and Cornflowers that we think of as traditional cornfield plants were all introduced with crop seeds, but with more intensive agriculture many of these are now very infrequent. Some, such as Corn Cockle for example, appear to have benefited from being stored at the correct humidity among grain and then grew and set seed to be harvested along with the crop again. With improved seed cleaning methods this is no longer a means of perpetuating the

species, and others that used to be recorded were probably only crop contaminants that were repeatedly re-introduced from further south. But there has recently appeared a major new source of seed from seed mixes, which are sown in good faith for conservation or amenity purposes. Much is said about wild flower meadows and wild bird seed mixes, encouraging the sowing of “native” species for wildlife, and seed is readily available from a variety of sources. This has confused the recording of plant distribution, and it is difficult to determine to what extent this is significant as seed has after all been imported for thousands of years. However, of the species that were introduced only some of them have naturalized, and they are now genetically different from the seeds that first arrived. If a modern seed mix is derived from the continent, some species might flower the first year, but not all will set seed and survive in the long term. This can lead to disappointment with planting schemes that are progressively colonised by the more rampant species as they are successively ploughed. There is much emphasis on the preferential use of seed from as local a source as possible, and it is encouraging that the Scottish Executive specified that the seed for the margin of the “new” A1 near Dunbar should come from Scotland. Local seed will be more expensive than seed imported from eastern European countries, but the species composition will be reliable, and the seed will have a far greater chance of growing successfully. If seed is to be required it is beneficial to start sourcing it as soon as possible, as this can be a problem for many short-term projects that look for quick results. With the land owner's permission local seed can be collected and many projects have used the technique of spreading green hay from locally rich sites to establish species-rich grassland. The website for Flora Locale <http://www.floralocale.org/> has a good deal of information on all these issues. Any such project should be reported to the local Vice-County Recorder for the Botanical Society of the British Isles which keeps a record of plant introductions and re-introductions.

Scotia Seeds <http://www.scotiaseeds.co.uk/> are major growers in Scotland and plants can be supplied by Scottish Origins <http://www.scotorigins.co.uk/#Plants> and Var Scotica <http://www.varscotica.com/>

Heather McHaffie, RBGE

The BSBI Scottish Officer

Jim McIntosh

I have been in post for almost exactly two of my four year term now. The post is jointly funded by Botanical Society of the British Isles and SNH. It has three main aims; to encourage botanical recording in Scotland; to support the membership – particularly our key volunteers, the Vice-county Recorders – and to help deliver major projects, such as SNH's Site Condition Monitoring and BSBI's Rare Plant Registers. This article covers the parts of my job which I think are most likely to interest *BRISC Recorder News* readers.



It was great to be invited to help Claire McSorley with the Wildflower Identification days in BRISC's exciting Wildlife Counts programme last summer. BSBI Vice-county Recorders and I helped in the classroom and in the field. At the end of each day we gave a short talk on how participants could develop their interest further and where to go for help. Over 65 people attended the wildflower identification courses. A few of those attending had professional involvement, but mostly they were just very enthusiastic and surprisingly knowledgeable members of the public. I am looking forward to working with John McFarlane on this year's programme. In particular, I think we need to provide continuing support to those who have already attended. We must nurture and grow our future recorders.

For the second year running, Lindsay Mackinlay, National Trust for Scotland's Conservation Officer, invited me to help out with their wildflower identification course for NTS Rangers. This has been really rewarding - they are so enthusiastic and well placed to pass that enthusiasm and knowledge on to the public.

The BSBI asks a lot of its Vice-county Recorders. Until now it has been able to offer them only very limited support. So it has been great fun, but quite challenging, helping them to use computers for records - the main area where support is required. I am working on two fronts here: direct support and training through workshops and individual contact; and projects to help computerise the backlog of paper records. So far I have helped develop a MapMate Handbook for BSBI recorders, and organised two major recorder workshops with sessions on MapMate. And I am planning further workshops to maintain momentum.

The other front I am working on is a series of projects to help BSBI recorders computerise the huge backlog of paper records. We are very keen that the records we hold do not gather dust in recorders' attics but are made available to conservationists and conservation organisations. So far I have raised £115,000 - mostly from SNH but with a significant contribution from the Esmée Fairbairn Foundation - to computerise about three quarters of a million records over five years. To date we have computerised 105,000 records from Skye, Mull, West Lothian & Roxburgh. These data have been handed back to the recorders in MapMate, and we hope that recorders will continue to update and maintain the dataset. The data is on the BSBI Maps Scheme webpages. (Check them out - the maps update those in the *New Atlas of the British & Irish Flora* and include a new date class 2000-2009). It is also currently being uploaded onto the BRC Vascular Plant DataBase and the NBN Gateway.

We have just begun a second tranche of 135,000 records. A key feature of the project is that it uses contractors drawn from the BSBI membership. This was done for a number of reasons - mainly because we want to build capacity within the BSBI to computerise records - but also because they have expertise in taxonomic nomenclature and using MapMate and tend to be very meticulous. This year we are even paying a few recorders to computerise their own records (and who better - no-one has more of a vested interest in getting it right - and if they cannot read the writing there is little hope for anyone else!)

Another area where I am supporting BSBI recorders is developing Data Sharing Agreements with Local Record

Centres. So far only one is in place: between Michael Braithwaite, our man in Berwickshire, and Scottish Borders BRC, and I am looking forward to developing an agreement between BSBI recorders and NESBReC in the New Year. However, progress on agreements has been slow. One of the frustrations of the job is that I see so much that needs to be done, but as a single worker in Scotland have very limited capacity.

However, the great thing about the job is that I do get out in the field and record! The most interesting fieldwork project has been SNH's Site Condition Monitoring programme. The BSBI has monitored 33 of the 150 or so Scottish Sites of Special Scientific Interest (SSSIs) over the past three years, which are specifically designated to protect vascular plants. Organising and marshalling the troops to undertake the work - and doing a significant number of sites personally - has been hugely challenging. It has not been the fieldwork so much as the deskwork, which has been the problem: report-writing has taken at least as long as the fieldwork. A secondary aim of this project is to get interested individuals - botanists, conservationists and even land-managers - out in the field with us. This has made the work very sociable, and people have made useful contacts and learnt a lot.

Good communication with such a disparate and thinly spread BSBI membership and a large number of interested partners - including funding partners - is really important. That is why I have devoted so much time to producing glossy Annual Reports and developing Scottish BSBI webpages. If you would like to find out more about my work as BSBI Scottish Officer check out our website - type "BSBI Scotland" in a search engine, or follow the link from the home page on www.bsbi.org.uk

MAKE THE ADDER COUNT

A spring-time survey

Make the Adder Count is a survey coordinated by the Herpetological Conservation Trust. Following a successful pilot in 2005 we plan to turn it into a long-term national surveillance programme, collating data from many sites, to monitor trends in adder populations. Although the Adder *Vipera berus* is Britain's most widespread snake, there is a strong body of collective information pointing towards long-term national decline. We want to gain a measure of national population status by counting adders *after their springtime emergence* from winter hibernacula. At this time of year (February to May, depending on weather and geographical location) adders are at their most visible, lying out, sometimes in aggregations. If you already have data on the numbers of adders you have seen at a particular site (or sites) over past years, we would also be interested to hear from you.

To take part in the project, or to obtain further information, please contact the project coordinator, John Baker: Tel (01986) 872016, mobile (07884) 441521, email addercount@herpconstrust.org.uk

See also the MTAC website at <http://www.narrs.org.uk/addercount.htm>

BRITISH DRAGONFLY SOCIETY

Highland Field Trips 2006

by Jonathan Willet.

Torricon. 10-11 June

Well it has taken six years, but the scorching weather finally coincided with a BDS field trip I had organised, with temperatures close to 30 degrees on the Saturday. There was a breeze, but it was a bit like standing in front of a giant hairdryer. Aside from the great weather, the breathtaking views of the mountains alone made it worthwhile turning up. The good weather must have put some folk off, as we had only three keen souls turn up on the first day. One of these was Betty Smith, the previous Dragonfly Recorder for Scotland before Pat Batty took on that mantle.

The area we were looking at was a large area of blanket bog with pools, close to sea level, near the village of Fasaig at the Head of Loch Torricon in the north-west Highlands. This bog is part of the National Trust for Scotland's Torricon Estate.

We began by crossing the road from the car park and having a look at a likely bog-pool. Twenty metres from the roadside we had our first guddle in a pool. Before we knew it two and a half hours had elapsed, and we had found lots of Northern Emerald Dragonflies *Somatochlora arctica*. In total we found one pre-flight emergent adult, one dead emerging adult with only its head and part of its thorax exposed, six larvae and seven exuviae. This area had no records for this species prior to our visit, but after the morning we were certain that it was a good habitat for the Northern Emerald.

After a lunch watching the shenanigans of Four-spotted Chasers *Libellula quadrimaculata* over a pond we headed fifteen miles north-west to an area called the Sliver Loch pools. Betty had promised us that they were good for Azure Hawker *Aeshna caerulea* and so they turned out to be with six larvae and one exuvia found. A single, early Emerald Damselfly *Lestes sponsa* was seen on the wing, along with Large Red *Pyrrhosoma nymphula* and Blue-tailed *Enallagma cyathigerum* damselflies and lots of Four-spotted Chasers.

The Sunday was not quite as hot and with less breeze but still no midges. We had a further search of pools near the Visitor Centre and found one Northern Emerald exuvia and the same species on the wing or as larvae yesterday. Our number had remained the same but one member had changed. Isla from the Gower in Wales joined us and, as she was a beginner, we decided it would be best to try and see some dragonflies on the wing. We said goodbye to Betty, as she was off to another entomological field trip the next day, but not before she told us the story of how she first became interested in dragonflies.

It all began at a bus stop in the early 1970s. Betty and her husband Bob met a friend of theirs while waiting to catch a bus. He was very excited and wanted to show them something. He pulled out his lunch box and carefully pulled open the lid to reveal a dragonfly. Such was the impact of seeing this beastie close up that Betty and Bob decided they would like to find out how it had been captured. The location was close to their friend's workplace. It had been a fine day, so he decided to take walk in his lunch break. Whilst walking he saw a dragonfly buzzing about and wanted a closer look. Not having a net he used the next best thing..... his bonnet (flat cap). Having captured the beastie he wondered how he could store it

until he could show his friends, who knew all about the natural world. Thankfully he had brought his lunch with him, so the sandwiches were removed and the dragonfly replaced them. From then on Betty and Bob started searching the ponds round where they lived, identifying and recording the Odonata found there. From this local beginning Betty and Bob travelled over the whole of Scotland, finding new sites and sharing their knowledge with others. Then in the early 1980s Betty was asked by Cyril Hammond to become Scotland's first Dragonfly Recorder.

One of the sites that Betty and Bob told me about was at the Bridge of Grudie on Loch Maree-side, and this was where we next visited. At the edge of the pinewood there we saw five Northern Emerald adults feeding about 10m above the ground. After getting some distant views we headed to the nearby pools and found four White-faced Darter *Leucorrhinia dubia* larvae. Our final sighting of the day was a Golden-ringed Dragonfly *Cordulegaster boltonii*. Our final tally was nine species with five on the wing.

Skye. 17-18 June 2006

Would the weather hold as the days counted down to the weekend trip? Predictably, no. After two weeks of glorious weather the rain started, and I set off early on Saturday morning with the rain hammering down. However, by the time I got to Skye it had stopped and even brightened a little. Again three folk turned up and we headed off to Coille Dalavil. It is a broad glen with a loch a few metres above sea level. An ancient oakwood cloaks its northern slope and a blanket bog lies to the east of the loch.

Ten species had been recorded there over the years, and I was unsure how many we should see or find. Because the weather had been so poor, the water level of the loch was up at least a foot with all the rain. Larval searching would be unproductive as the larvae head for the warmer water further down the water column, plus any exuvia would have been washed off the vegetation. But that said, at the first runnel we got our colanders out and started looking. Keeled Skimmer *Orthetrum coerulescens* had been recorded at this site, but no larvae had been found. We found a larva ...was it a Keeled Skimmer? No, it was a Golden-ringed Dragonfly, but we found two and a Large Red Damselfly larvae, so it was a start.

Walking along the loch side we put up some adult Four-spotted Chasers and just emerged Highland Darters *Sympetrum nigrescens*. I was very surprised to see anything on the wing as it was quite overcast. I had a half-hearted guddle in the water where a stream was entering the loch, and amazingly I trawled up the exuvia of a Beautiful Demoiselle *Calopteryx virgo*. Wow! We carried on to the end of the loch and a likely looking stream. Along the path David spotted a damselfly, a metallic blue one: a docile male Beautiful Demoiselle, so we handled him carefully and got a fantastic close look at him. After carefully setting him back in the long grass we walked the few metres to the stream, and Barbara immediately found a settled female, close to a very torpid Adder.

As it was now late afternoon we made our way back having seen six out of the ten recorded species, which was much more than I expected on such a day. That evening I found out that Coille Dalavil's Beautiful Demoiselles were no longer the

most northerly in Britain. A Highland Council Ranger-led guided walk had seen three adults 5km north a few days previously. Hmm... a field trip for next year to find their breeding site(s).

Strathglass. 1-2 July 2006

The good weather returned and it was hot again. The first day of this weekend was spent at Aigas Field Centre. It is quite an important place for me, as it was here I first became interested in dragonflies eleven years ago. Unfortunately no-one turned up, the weather was too good, perhaps? But all was not lost as five of the Rangers working there tagged along for the morning and spent a lot of time scribbling away notes.

We found seven species at the first pond we looked at, with large numbers of Emerald Damselfly that had emerged over the last 24 hours. We also found exuvia of both Common Hawker *Aeshna juncea* and Southern Hawker *A. cyanea*. This pond had been built eight years ago and as soon as filled a female Southern Hawker had been seen ovipositing there. This female had flown down from the loch a kilometre away.

We then headed up to Loch Cuil na Caillich and found two extra species, giving us a day list of nine: a Golden-ringed Dragonfly larva was found in a muddy runnel, and over twenty Highland Darter larvae and five recently emerged adults were seen. After all that pond-dipping fun the Rangers had to go back to work. I decided to have a look at the moor above the loch.

After I puffed and panted up the hill I was passed by a Golden-ringed Dragonfly and then a dark one. What was it? Thankfully it had settled so I crept up on it and got a good look. It was a Northern Emerald Dragonfly! I had never seen one here before and it turned out to be a new 10km square record. A bit further up the hillside there was a vast area of dry bog pools, so I know where to go looking for larvae next year.

On day two there was a better turn out with Nigel, Bob and Audrey coming along. We spent the morning at the Lochan Dubh (the small black loch), 10 miles west of Loch Ness. This wee lochan had an impressive species list numbering thirteen, which may not sound much to folk from the deep south, but is just about at the top end of what you can expect from a Highland site. All three of the Emerald Dragonflies breed in the loch or in the adjacent pools.

After first arriving we were immediately greeted with the sight of a Brilliant Emerald Dragonfly *Somatochlora metallica*, oh, make that two. Flying close to the water's edge the sunlight showed off their marvellous, green metallic bodies. Things got better, we found an emergent Common Hawker, closely followed by a Southern Hawker doing the same. Then we saw a White-faced Darter on the wing, then another. We managed to see a third at a pond 50m from the main loch. This gave the site a species list of fourteen. Is this the best place in the Highlands to see two thirds of the breeding species in Scotland?

As it turned out it could not be topped, and our afternoon visit to Fiethe Rhiabhachan (the speckled bog) was a bit low on species with Four-spotted Chaser, Large Red Damselfly and several Golden-ringed Dragonflies seen. It was a very pleasant walk though, and we finished the day with a warm glow from the sun and breeze, but also from the most productive morning spent at Lochan Dubh.

2007 BRISC WILDLIFE COUNTS PROJECT

In Stirling, North Lanarkshire and Falkirk

The FREE 2007 BRISC WILDLIFE COUNTS PROJECT is an ideal opportunity for **all the family** to learn about the wonderful wildlife we experience every day in life. All the events are **FREE** and are open to all the family (kids under 16 must be supervised by an adult). This year's events have been re-designed so that they can accommodate experienced recorders from previous events as well as those recorders keen to 'kick-start' their recording careers in 2007. New events for the 2007 events schedule include **'Foraging for Wild Bounty'**, **'Pollinators and Wildflowers'** and a weekend long **'BioBlitz'** family event, which will involve a weekend of recording activities, including identifying wildlife, taking records of the wildlife you encounter, and having lots of fun in the process!!

John Mc Farlane, the new BRISC Wildlife Counts Project Officer, is keen to have many more participants involved this year, which is why the events have been designed in a way that makes them more appealing to a wider audience. Having just completed his BSc Honours degree in Ecotourism at Napier University in Edinburgh, John is keen to stamp his trademark enthusiasm on the 2007 events, whilst making biological recording more appealing to everyone who is interested in conserving and appreciating wildlife, including kids. John was a volunteer with BTCV Scotland for over 3 years while studying and has had a colourful career, which included over 15 years as a chef, so he is particularly looking forward to the 'Foraging for Wild Bounty' events, so that he can show off his cookery skills!



For details on the forthcoming events contact John on 01786 474061, e-mail brisc-wcp@btcv.org.uk or log onto the BRISC website at <http://www.brisec.org.uk/wcounts.php> for further information.

BRISC gratefully acknowledge support from HLF, SNH, Falkirk EnTrust, all the councils and BTCV for this project.

BOOK REVIEWS

Thompson, K. (2006) *No Nettles Required*. Transworld Publishers for Random House, London. ISBN 1903 919681: hbk £10.00. Pbk due out in March 2007.

Les Bisset, former director of the Dundee Botanic Gardens, kindly gave me this highly recommended book about gardening for wildlife. Its author is a plant ecologist at the University of Sheffield and his book is based on a research project, Biodiversity in Urban Gardens in Sheffield or BUGS for short. Written in an easy, almost chatty style, the project on which the book is based was stimulated by Jennifer Owen's study of her garden in Leicester, described in her book *The Ecology of a Garden: The First Fifteen Years*, published in 1991 by Cambridge University Press. In it she described how, in her rather ordinary garden, she recorded about 8,000 species of insects and other invertebrates, demonstrating that a garden can benefit much more than a few birds and butterflies. From

a list of 150 volunteers' gardens, the BUGS project was whittled down to sixty-one study gardens, ranging in age from five to 165 years old, in size from 32 to 940 square metres, in altitude from 40 to 250 metres OD, and in location from the heart of the city to its border with the nearby Peak District National Park. Using a variety of trapping device from pitfall traps, Tullgren funnels and Malaise traps, the surveyors counted about 40,000 individual invertebrates. Although it was not possible to find experts to identify everything, the groups studied in detail demonstrated that the sample of Sheffield gardens provided a major habitat for wildlife (including several nationally rare species) without any special effort being made by the garden owners. This is the point of the book's title. Growing nettles is not necessary, nor are the expensive insect homes sold in garden centres.

The chapter headings give sufficient flavour: *What the ideal wildlife garden doesn't need; Lies, damned lies and compost heaps; It's a jungle out there* and *A chapter about birds*. The chapter on the positive things to do, *Selling your garden to wildlife*, is a lesson in ecological common sense and contains much useful and easy to follow advice. Perhaps the only uncomfortable recommendation, especially for those who love well manicured lawns, is to leave some grass uncut. There is much that is thought provoking, for example about why native plant species are not necessarily more attractive to wildlife than their domesticated relations and a concluding chapter on *Why you should care*. Of course all readers of BRISC Recorder News will pride themselves on knowing all about the importance of conserving biodiversity but do not be too sure that you know everything about gardening for wildlife until you have read Thompson's excellent book. The jacket says it all, this book does indeed describe *the reassuring truth about wildlife gardening*. It's an ideal present for the Easter Bunny.

Thomas Huxley

Lee, Paul (2006) *Atlas of the millipedes (Diplopoda) of Britain and Ireland*. Published by Pensoft, Sofia, Bulgaria on behalf of the Biological Records Centre. ISBN 10: 954-642-277-0; hbk, 23 euros.

A national recording scheme for millipedes has been in operation since about 1972, boosted around 1982 by the formation of the British Myriapod Group, now including woodlice as the British Myriapod and Isopod Group (BMIG). A 'Preliminary atlas' was produced by the BRC in 1988, with 47 maps, but without commentary on the species. The present atlas is the first of a new series to be published by Pensoft for the BRC. It includes a full-page 10km map for each of 56 species, with text on the facing page, plus text alone, with a list of 10km squares, for a further six species established only in glass-houses.

Of the 56 mapped species, 40 occur in Scotland, although some only marginally. Only one of these, *Melogona voigti*, is confined to Scotland (Edinburgh and E Lothian) but probably as a relatively recent introduction – there are no montane/arctic species. It is unfortunate that the map of the closely related *Melogona gallica* treats all records as *M.gallica s.l.* (i.e. possibly *M.voigti*) without distinguishing those that have been certainly identified as *M.gallica s.s.* (i.e. definitely not *M.voigti*) at least two of which are in Scotland. Some of the more recent additions to the Scottish list have been species with southern

and especially south-western distributions in England and Wales that have turned up in some West Highland gardens and some of the Inner Hebrides. These are likely to have been introduced with plant material but are capable of surviving in the relatively mild and wet conditions on the Atlantic coast. These include our largest millipede, *Cylindroiulus londinensis*, found in Benmore Botanical Garden and a private garden in Argyll, and the less conspicuous *Leptoïulus belgicus* on Eigg and *Chordeuma proximum* on Rum.

Recording in Scotland has been most intensive in the eastern lowlands from the Lothians to Angus, but enough has been done elsewhere to indicate some interesting patterns. The conspicuous shining black pill millipede, *Glomeris marginata*, is well recorded in southern Scotland but appears to stop abruptly at the Forth/Clyde. The equally conspicuous and easily recognised *Ommatoiulus sabulosus*, with longitudinal yellow stripes, is widespread on coastal dunes and on some inland moors, including most of the Inner Hebrides, but seems to be absent from Arran, the Outer Hebrides and the Northern Isles.

The maps use two date classes, pre-1980 and 1980 onwards. As so often happens it takes some searching to find that the latter means 1980-mid 2003, with a few particularly significant later records to 2005. A useful feature is that all maps show, by light grey shading, all 10km squares for which at least one millipede has been recorded. The resulting 'empty' squares are mainly in the interior of the northern and central Highlands, the north-east and Ayrshire. The last gap has been to some extent remedied by the annual field meeting of the BMIG in 2006 but too late to make the atlas. The delay between the cut-off date for inclusion of records and publication also means that many records resulting from the surveys of invertebrates in Scottish Wildlife Trust reserves funded by a Heritage Lottery grant in 2002-5 have not made it onto the maps. The text provides data on habitat and phenology (but not altitude); and distribution beyond the British Isles. It also provides a valuable up-to-date summary of the ecology of millipedes in Britain, based upon habitat data requested on the BRC recording cards. A bonus is the inclusion of colour photographs of 23 species.

As with many national recording schemes this project has been undertaken primarily by amateur enthusiasts with support from the BRC. It will provide a very sound base for further monitoring of changes in the composition and distribution of the British and Irish millipede fauna.

Gordon Corbet

DATES FOR THE DIARY: FEBRUARY-MARCH 2007

- **20 January** – Woodland Trust training day for volunteer verifiers for the Ancient Tree Hunt. Dalkeith CP.
- **18 February** - Wildlife Counts new Recorders Forum. Cannonvale House, Larbert.
- **2 March** - Scottish Biodiversity Forum's Action Plan & Science Group: "Incorporating the Ecosystem Approach in the Conservation of Biodiversity", Royal Botanic Garden Edinburgh. Booking by 16 February to Lesley Kirton (Seminar), The Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH
- **24 March** BRISC Annual Conference and AGM. Birnam Centre. Bookings Anne-Marie Smout