



B R I S C

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The idea for a survey started when I wrote the SWA species action plan for Stirling's Biodiversity Action Plan. A little knowledge and increasing curiosity got me wondering if the SWAs were expanding their range much, or were they just staying within their core ancient woodland strongholds? Some of the nests I had seen on a forestry road were small and appeared to be quite new. They were close to much larger nests, so it seemed that they were expanding. A survey of the nests in Stirling district would answer this question. The size and obviousness of the nests make them easy to find and the fact that no other species of ant found in Scotland builds a nest that size makes them ideal for a non-specialist to survey.

There was quite good general locational information of where to find the nests, as most of them were in Forestry Commission woodlands and the staff on the ground had reported their presence. Around 250 nests had been recorded. SWAs prefer open areas close to woodland rides, paths, etc, so this further targets where to start looking.



Nest of the Scottish wood ant *Formica aquilonia* copyright Lorne Gill/SNH

Noting the nests – Where do you find the Scottish Wood Ants in Stirling?

My first sighting of a Scottish wood ant's (SWA) nest was on a university field trip to the Abernethy Forest in 1991. I was suitably impressed by its size and the industry of the ants on its surface, and from my course I knew about their social systems. It did, however, take direct experience to inform me that formic acid smells like vinegar.

Armed with all this information all I needed to do was go to the sites, count, measure, and record the orientation of the nests. This was all pretty low tech, apart from needing a GPS to get detailed grid references for each nest, and my friendly, neighbourhood SNH Office kindly let me borrow theirs.

Just after Christmas, suitably equipped, I headed off to the oak woods to the west of the Pass of Leny. This was right in the middle of the fantastically cold weather we were having then, below -5 degrees centigrade. I had never worn my felt-lined Canadian boots until then, but these banished the enthusiasm-sapping experience of numb feet.

After two days of searching I found 58 active nests, all but two were thatched with material from oak trees, something I had not seen before. This made the nests harder to spot as they were very overgrown. I ascertained activity from the presence of bare areas at the top of the nest. A few nests were completely overgrown and these were also recorded, but as redundant nests. The two nests that were not oak thatched were under two large Sitka spruce, and they were also the closest nests, being only four metres apart. Was each nest using the single spruce tree as its food source? Is there any advantage in using needles as opposed to oak debris to build a nest? These were some of the questions that popped into my head.

From the Pass of Leny I then moved into Drumore wood near Aberfoyle. So far I have spent four days there finding 132 nests, bringing the total to 190 with seven more sites to be checked and further nests suspected in the Drumore area. I am getting quicker at finding them now that I "think like an ant" while looking at an area. The total number of SWA nests will be a lot more than the 250 initially identified. My idea of a few weekends of fieldwork has been stretched into a few weeks, so the survey will continue over the autumn and winter months. Summer is all taken up with nightjars, glow worms and dragonflies, recording-wise.

From my six days of survey I have ascertained that most of the nests have an aspect that ranges from south to west, just as it says in the books. One of the largest nests I found faced north, these ants had not read the books. The biggest nest was 220cm in diameter and 110cm in height. I found one nest in a waterlogged boggy area that was a tower shape, rather than the usual dome, this was atypically as most nests were on the driest available ground in an area.



Nest of the Scottish wood ant *Formica aquilonia* copyright Lorne Gil/SNH

Many nests have signs of disturbance from a real ant specialist, the green woodpecker. I heard the bird, saw the droppings and the small holes it made. A few have much larger holes in them (badger?). One nest was completely destroyed. Destroyed

nests are often used as a platform for new nests: is this just the colony re-building or is this a new colony forming? So many questions. Maybe I will be able to find out some of the answers to them when I get to a library and start doing some research.

Apart from getting me out and about, the findings from this survey will be sent to Forestry Commission Scotland who manage many of the SWA areas, to SNH as there are several SWA sites on SSSIs, and to the Stirling Biodiversity Officer, as this survey is one of the key actions in the Stirling SWA Action Plan. But they will all have to wait until sometime in 2005, as there is plenty of field work still to be done.

See the Stirling SWA plan at:

<http://www.stirling.gov.uk/index/leisure/countryside/cs-biodiversity-lbap/cs-woodland.htm>

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NEW JELLYFISH SURVEY

In tandem with the turtle survey, covered in the July 2004 of *BRISC Recorder News* (no 54), the Marine Conservation Society has launched a jellyfish survey. All details, with a recording form for downloading and an offer of a free coloured ID guide, are on the marine conservation society's website at <http://www.mcsuk.org/> This says:

"Little is known about jellyfish in UK waters, but we do know that they are the staple diet of the critically endangered leatherback turtle. These spectacular reptiles are seasonal visitors to UK seas and are thought to migrate from their tropical nesting beaches to feed on our jellyfish."

"Analyses of stomach contents of dead leatherbacks stranded on UK shores have revealed that they feed on several species of British jellyfish."

"By comparing the distribution of jellyfish with environmental factors such as sea temperature, plankton production and current flow, we hope to understand what influences the seasonal distribution of jellyfish and leatherbacks in UK waters."

"Identification of live jellyfish is usually easy, but once they have washed up on the beach it can become more difficult. "

"Please do not guess if you are not really sure, just record the jellyfish as 'Unidentified' and describe it on the form. If possible, take photos of the jellyfish bell and manubrium (mouth and arms, underside and centre of bell) to help with identification later. If you'd like to learn more about jellyfish ID, the *Collin's Pocket Guide to the Seashore of Britain and Europe* may help."

There is also some precautionary health warning:

Some jellyfish can sting

- Never touch jellyfish with bare hands
- Always use a stick or wear arm length rubber gloves if you need to turn them over for identification
- Beware of the stinging tentacles and keep your face and any exposed skin well clear
- Seek medical attention in the case of a severe sting

A SUMMER OF MOTHS

The summer of 2004 was the summer of moths for me. We have run a 125w Robinson light trap in our garden two or three times a week for several years now, but this year we extended our recording activities by packing a collapsible 15w Heath trap into our campervan, and by connecting to the site's electricity supply we have run the trap on trips to Braemar, Glen Quoich, Cannich, and Auchterader. But it was especially fun to run it abroad. We had taken a holiday home in Denmark in the north of Zealand for the first two weeks in August. The whole family came, but we took our camper, because Chris and I prefer to stay in that, which also makes more space for everyone else. This meant sailing with the Superfast ferry from Rosyth to Zeebrugge, and driving up to Denmark in easy stages. We ran our trap in all the campsites on the way and had wonderful and unexpected catches, which included some spectacular moths, such as the lobster moth, and buff-tip. We also made acquaintance with large numbers of early thorn (second brood) and various species of footmen.

We owned no European moths books, but had taken all our UK ID books with us: Skinner, Wareham, Townsend & Lewington, Goater, Riley & Prior, and were amazed that practically all the macro moths we caught from Belgium right through the Netherlands, Germany and Denmark could be identified from these. Only two or three individuals eluded us. The micro moths were a different matter, and a great number of them had to remain unidentified.

Of course, we also clocked up a good number of birds on the trip: highlights were white stork, spoonbill, great white egret, avocet, ruff, 6 species of tern, wryneck, red-backed shrike, a glorious party of 50+ yellow wagtails, but that could fill an article by itself.

Our house in Denmark at Rørvig was situated about 500m from the sandy beaches of Kattegat. The whole area is basically sand dunes melting into heathland, a wide strip of which was planted up with pine trees in the 18th century to stop the sand storms which were a serious problem. Behind the pines are other, more mixed woodlands, comprising a range of species of different ages, and with good ground cover. Our house – and many other holiday homes – had been situated in small clearings within these very attractive woods, which also provided total privacy. Altogether an idyllic place, with a complete absence of light pollution, which is increasingly becoming a problem for us where we live in Anstruther. In

addition, we were exceptionally lucky with the weather, hitting the only two dry weeks this summer, according to our Danish friends.

A lake – called 'the Deep Lake' – indicating that it was probably a 'pingo' i.e. formed by a large lump of ice left over when the icepack retreated, and which subsequently took a long time to melt - lay between our house and the shore, and we had dragonflies both there and close to the house: migrant hawkler *Aeshna mixta*; southern hawkler *Aeshna cynea*; brown hawkler *Aeshna grandis*; blue-tailed skimmer *Orthetrum corrulescens*, migrant darter *Sympetrum vulgatum*; common blue *Enallagma cyathigerum* and blue-tailed damselfly *Ishnure elegans*, but we did feel we had not properly managed to identify all there was about.

The Heath trap was run most nights and we had huge catches - with more than a hundred of individuals on more than one occasion – and the list at the end of the holiday was over 90 macro species, many of which were new to us. Highlights were the drinker, sycamore, pine hawk-moth, Svenssons copper underwing, black arches, various coxcombs, hooktips, prominents, a yellow tail, the tiny but amazing Chinese character, as well as old friends such as true lovers knot and poplar hawk-moth. Of the micros, however, we only managed to identify 13, including mother of pearl, twenty-plume moth and the bird-cherry ermine, which was common.



Coxcomb prominent at Rørvig – Denmark

photo AMS

It seemed to us that the biological zone was very similar to that of the south of England. I took photos of many of the moths with my new digital camera, which was fun and represents a good record. We let all the moths go, except one of two which were found dead.

The timing of our travels meant that we were also able to contribute to an international even by sending in records to the European Moth Night project (14/15 August) from the campsite at Lingen, a town in Germany near the border with Holland,. I do not suppose that there will be many other moth records submitted from that site. The results – or rather detailing how people participated - can also be viewed at

<http://lepidoptera.freeweb.hu/program/emn/emn1.htm>

Late in September, we had another trip planned to Salina, one of the Aeolian Islands, just north of Sicily, where we

were to visit a friend. Because we had to travel by air part of the way, we did not feel up to taking a trap, but we nevertheless watched out for any moths around the terrace of the house, while Stromboli across the water was smoking and glowing in the dark. By contrast - and not surprisingly - many species were not identifiable from any books we had, though we did identify a dead common garden carpet. The huge convolvulus hawk-moths feeding on the hibiscus at dusk with their incredibly long proboscis were fabulous, as were the humming-bird hawk-moths all over the bougainvilleas. A sad pair of wings of a pine hawk-moth - minus the body - was picked up, perhaps a victim of one of many agile Eleanora's falcons we also saw. The prize, however, must go to the two-tailed pashas. This beautiful butterfly had long been top on our wish list to see, and here it was in some numbers - one even sat on the terrace wall for us to study it in detail. This island was quite obviously a very different biological zone from northern Europe and the UK, and it would be really interesting to run a trap here - and especially to have a good book to help with the identification of the catch.

In between we had to go to British Columbia on a lecture tour, but the only moth we saw there was the large yellow underwing in a hotel garden in Vancouver - quite a surprise. We certainly did not know that its distribution stretched that far!

Anne-Marie Smout

NEW BUTTERFLY AND MOTH SPECIES LEAFLETS

Butterfly Conservation Scotland has recently produced colour leaflets on four UKBAP Priority Species; marsh fritillary, argent & sable, netted mountain moth, and narrow-bordered bee hawk-moth. These 'Learn About' leaflets provide information on identification, life-cycle, foodplants, habitat and suitable land management. They are designed to raise the profile of these threatened and often neglected species to a wide audience including fieldworkers, landowners, conservationists and countryside advisors.

To obtain copies of these leaflets please contact Tom Prescott email: tprescott@butterfly-conservation.org tel 0870 7706160) Each leaflet is also available electronically in .pdf format for downloading.

The leaflets were produced with financial support from Scottish Natural Heritage.

[Illustrations and descriptions of the netted mountain moth and the narrow-bordered bee hawk-moth were included in BRISC Recorder News no 53 (April 2004). This issue should also soon be available electronically from the website at <http://www.brisk.org.uk>

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NOTES FROM THE CHAIR

In order to meet the needs of our members, BRISC tries to run workshops and seminars on relevant topics of current interest, and in August a seminar was organised on the Gateway to inform members of the important new developments in this

NBN project. A report of the seminar can be found elsewhere in the newsletter.

As far as future events are concerned, there are the following plans:

- Recorder 6 seminar later this autumn. Recorder 6, which will replace Recorder 2002, is currently being tested. It is hoped to get Hannah Betts of JNCC up to tell us about this newest version of the Recorder software.
- Data 'drivers' seminar, on 19 January 2005 in Falkirk. This is planned as an informal session for the morning only, to acquaint members with some of the mysterious acronyms, such as SEA, EIR, WFD, what these stand for and how they will impact on public bodies and government and why they need biological records. Please indicate an interest to Alan Cameron, so that he can keep in touch about further details of venue, time, speakers, etc, once these have been decided.
- Annual Conference and AGM 2005. Please note that this event has now been fixed for Saturday 9 April, in the Bute building in St Andrews. The theme will be 'Coastal and Marine Recording' and, following recommendations from the last AGM, part of the afternoon will be given over to a selection of excursions to give delegates a chance to see something of the local wildlife. Please put that date in your diaries.

BRISC also works hard to represent the interests of the Scottish recording community to the best of our ability. Over the past four months, BRISC has worked with the biodiversity task force of Scottish Environment LINK, to make constructive comments on the Scottish Biodiversity Strategy Implementation Plans, and has had a substantial input into a joint response to the consultation on these. A copy of the LINK response can be requested from Alan Cameron.

We contributed to a biodiversity manifesto, jointly drawn up by the Wildlife and Countryside LINK groups in England and Wales, Northern Ireland, and Scotland. The manifesto was launched in Scotland in September at Edinburgh Zoo, to an audience comprising MSPs, the Scottish Executive, national agencies, NGOs, and the media. A copy of the manifesto can be viewed and downloaded in .pdf format from <http://www.scotlink.org/BiodivManifestoSep05.pdf>

BRISC has submitted a research proposal to SNIFFER (Scotland and Northern Ireland Forum For Environmental Research), to evaluate the role of LRCs in supporting the information requirements arising from the new environmental legislation and regulation in the urban environment.

BRISC continues to be represented on the National Biodiversity Network's LRC Steering Group, which advises the NBN Trust on local records centre issues. Three subgroups (think-tanks) have recently been formed, and

Scotland's interests are represented on each of these as follows: Network Development (SNH); Projects and Operations (myself); Professional Development (Alan Cameron).

And lastly but not least, we have a new Treasurer. Allan W Brown has joined the committee as from 4 October, where he will be taking over from Mark Simmons, who stands down from the office at the end of this financial year. My most sincere thanks to Mark for all his many years of loyal commitment to BRISC and for all his sound advice.

Anne-Marie Smout

A brief run-down of the Lichen Apprentice Scheme by Sandy Coppins

The Lichen Apprentice (LA) scheme was an opportunist arrangement, the result of several circumstances coming together:

My husband (Brian Coppins) has held the post of Lichenologist at Royal Botanic Garden Edinburgh for nearly 30 years, being in charge of the lichen section. In that time, he has steadily built up a centre of excellence, with a British collection of lichens in the herbarium that rivals - if not better - that at the British Museum (the Natural History Museum, London). He has carried out numerous field excursions in Scotland, and published widely in the taxonomic field (taxonomy being his main interest).

RBGE have consistently supported Brian and the lichen section, whereas other institutions have let things slide and run down.

A few years ago, we became concerned that when Brian retires (4–5 years time), will his post be replaced? Roy Watling (senior mycologist at RBGE) had served for over 30 years at RBGE, and when he retired, his post was not filled, leaving a huge gap in expertise in Scotland. This was not the fault of RBGE, but rather the Scottish Executive not appreciating the need to keep such posts filled - leading to what is now termed the 'Taxonomic impediment', something which has developed nationwide in the UK.

We therefore lobbied RBGE, and Professor Steve Blackmore¹ - but especially Dr Mary Gibby² - were very sympathetic to the idea of appointing another lichenologist to train up under Brian over the final years, so that there was a smooth take-over, and the excellence in lichenology at RBGE could be maintained. This has been partially successful, with the appointment of Dr Christopher Ellis; however, partially successful, as Chris Ellis was appointed only on a two year contract, funded by the Esmée Fairbairn Trust. The hope (and it is a fervent hope) is that at the end of the two year contract Chris will be taken in as a full member of staff at RBGE as a second lichenologist, becoming senior lichenologist when Brian retires. The Scottish Executive have yet to be convinced.

¹ Regius Keeper of RBGE

² Director of Science, RBGE

We were also concerned that there were no young lichenologists developing skills to carry on fulfilling the needs of Scottish Natural Heritage by undertaking contract lichen surveys, gathering and interpreting data for conservation assessments, etc., etc. At the moment, these needs are met by Brian and myself (I am a consultant lichenologist).

For several years, Brian and I have run lichen courses at Kindrogan Field Centre, which has attracted a wide range of people, of all ages and abilities. In recent years, we began to get young people from the agencies, as well as a few from NGOs.

We also belong to the Native Woodlands Discussion Group (NWDG), and they set up a lower plants section, which included running short workshops in lichens (with Brian and myself) and bryophytes (with Ben Averis).

It was mainly through the NWDG that we began to recruit what became known as 'Lichen Apprentices' - young, professional people, mostly involved in conservation, who showed an aptitude to develop ID skills, and would go out and foray and collect on their own, and come back to Brian with IDs to be checked. We also picked up one or two from the Kindrogan courses.

In effect, these young people were 'head hunted'.

We saw their potential and encouraged it. They all joined the British Lichen Society (BLS), so became more involved in the overall lichen scene nation-wide, and had access to literature, other lichen experts, other meetings and workshops. Through the BLS we were able to give them opportunities to buy microscopes (dissecting and compound) at low prices (ex-university stock), as well as all the equipment that is needed to pursue lichenology: books, off-prints, chemicals, slides & cover-slips, etc.

Yes, it was a lot of hard work, but somehow that didn't matter in the excitement of having recruited a wonderful band of real, young enthusiasts. Brian ran occasional week-end lichen forays especially for the LAs. We invited them to our home for 'microscope week-ends' to improve their skills in section-cutting.

So, we have (1) the centre of excellence at RBGE; (2) Brian in post, with a huge amount of knowledge and experience; (3) several young, enthusiastic potential lichenologists, recruited from workshops and courses; (4) the support of the BLS to enable this interest to be broadened and focussed.

It was a coincidence that I was President of the BLS during this time, and persuaded the BLS that the AGM should be held in Edinburgh (previously it was always held in London). For the afternoon lecture session, I persuaded four of the LAs to talk on lichen projects that they had been involved with (just 15 minutes each), (a) to give them confidence and push them on; and (b) to show to the general BLS membership what was being achieved in Scotland.

Then we had two other happy circumstances:

(1) SNH awarded the BLS with a substantial grant. This was £24,000 a year for 3 years (with the BLS having to match-fund this with £6,000 a year, making £30,000 a year for 3 years). The prime purpose of the grant was to build a comprehensive, site-based lichen database for Scotland. The grant was also intended to go towards training up lichenologists for the future, and to spread knowledge of lichens to a wider audience in Scotland.

(2) Site Condition Monitoring (SCM) for lichens in Scotland: this project came up, and I argued for a single tender contract, with an overall contractor who would appoint several sub-contractors, so that as many SCM sites in Scotland as possible in the time allotted could be covered, using a similar methodology, so that the results would be comparable. This was agreed, and I was appointed main contractor. I saw this an opportunity to marry together the needs of training the LAs, using the expertise of the SCM sub-contractors.

So, the SCM sub-contractors were recruited, allotted sites, and paid through the SCM budget. One of the stipulations was that each sub-contractor must be prepared to be accompanied in the field with at least one LA. The LA expenses (£25 per night, and 25p per mile - or train fares) were met from the SNH grant.

This has worked extremely well - way beyond even my hopes and expectations. Initially, the sub-contractors were a little dubious - they are professionals, working under a very tight schedule, and having 'hangers-on' was not exactly welcomed. However, the LAs are far from being 'hangers-on'. All the sub-contractors have been full of praise for the degree of knowledge that the LAs had already acquired, and how quickly they picked up new knowledge. Not only that, but the sub-contractors quickly realized that having the LAs was a definite advantage - it got round the Health & Safety question of 'lone working' in remote and difficult terrain, at no cost to the sub-contractors; the LAs were able to scout out for likely habitats which was very useful as the SCM has such a tight time schedule; the LAs often were responsible for finding some of the 'target' SCM lichens - and they were good company.

We have now got to the stage where three of the LAs are able to undertake SCM sites themselves - a huge boost to their confidence, and a realization of reward for all the time they have put into training - their own time as LAs, with their expenses only being paid. Now they are acting as full sub-contractors in their own right. SCM is not so demanding as carrying out a full lichen survey; there is a Site Dossier prepared for them, with precise guidelines and proformas to fill in. They have all had extensive experience with working with the other sub-contractors, so are really looking forward to doing their own SCM work, and being paid the full rate.

Throughout, SNH (particularly Chris Sydes) have been tremendously supportive. None of this would have happened without the grant to the BLS. SNH have shown a huge amount of faith and goodwill in letting us have our heads in the way we deliver the goods and hopefully raise the profile of lichens throughout Scotland.

The only problem I can foresee is what happens at the end of the SCM contract, and at the end when the SNH grant is

finished. I have told the LAs that I can not promise them work; that is reliant on SNH and Non-Government Organisations continuing to put out lichen survey contracts. Theoretically (and I do believe it is only theoretically), SNH is supposed to repeat the SCM work every six years, which is optimistic. However, if it happens, there will be lichenologists available in Scotland to do the work, whereas for the setting up of the SCM, I had to recruit all my sub-contractors from the south of England. However, already I have been able to put forward one of the LAs to tender for a job with the Environment Agency in Northumbria - surveying river systems for the BAP lichen *Collema dichotomum* (the river jelly lichen). Both Brian and I have sufficient confidence in the LA to believe he could do this work. Looking for BAP species is very focussed: one species and one habitat. He will be stretched (identifying associated species), and need some help with the report writing, but, it is a start - if he is successful in his tender.

Other things we are planning for the winter: running workshops at RBGE for the LAs on such subjects as: thin-layer chromatography (TLC, now an essential tool in ID for some lichen groups); more microscope work; why do we need national herbaria, how do you make use of them, and when should you make use of them? What is taxonomy - coupled with attempting to write species descriptions, keys, etc.; lichen literature - why you need to be aware of it; when to use it, and how to access it; lichen recording - why it is important, and how to access it and input into it.

Then, next year, we are planning an international workshop 'The Rockers Workshop'. The UK no longer has a resident expert in montane lichens (suddenly very important within the context of global warming). Dr Alan Fryday was Britain's sole montane lichen expert, but lack of work drove him to seek employment in the States, where he is now at Michigan State University. He has agreed to come over for two weeks (end of May, beginning of June) to run the Rockers Workshop, and has suggested inviting other European professional lichenologists who have expertise in the field of montane lichens. The workshop is aimed primarily at the LAs, and I have booked the National Trust for Scotland's Base Camp at Mar Lodge (for the Cairngorms) and the Base Camp at Kintail (for more western montane habitats, including Skye). Funding for this workshop will be met from the SNH grant, although there will be some input from RBGE in Brian's time, and the use of the RBGE minibus. Apart from Alan Fryday, other visiting lichenologists will pay their own way, but LAs' expenses will be met.

The seven LAs come from varying backgrounds, but are all involved in aspects of conservation: one is employed as a Ranger with South Lanarkshire, two work for the Macaulay Institute; one is with SNH; one works at RBGE; one is a consultant ecologist; and one is a post doc., temporarily 'between jobs' but considering the future possibilities of a career in lichenology.

The LAs have proven track records for hard work, experience and commitment, and although 'young' are mature in their sense of commitment. We do not ask any more of them than what they are prepared to give, and have been enormously gratified by how much they are prepared to put into the scheme.

[The above article was originally sent to BRISC as an email in response to an enquiry. I am most grateful to Sandy Coppins for allowing BRISC to reproduce it in this newsletter, as it addresses one of the most critical issues we are facing today regarding ID skills in difficult taxa ed]

REPORT OF GATEWAY SEMINAR

By Alan Cameron

On 26 August BRISC convened a workshop on the NBN Gateway (<http://www.searchnbn.net/>) with support from SNH. We were pleased to invite Andy Brewer, the Gateway Technical Liaison officer based at JNCC in Peterborough to guide us through the latest version of the Gateway, to demonstrate its functions, to explain how access to data is managed, to outline future developments and to answer questions about the practicalities of uploading data to the Gateway. The twenty-three delegates included data managers from LRCs, SNH, the SOC, the BTO, SWT, Butterfly Conservation, and the Scottish Executive.

The Gateway version 3 was launched in June 2004 with the database now on a dedicated SQL Server platform with ARC IMS delivering the mapped output: hardware improvements that will make the Gateway a more reliable and faster tool that will not suffer service interruptions during maintenance and upgrades. The Gateway now holds all statutory site boundaries and RSPB reserve boundaries, which can be used, as can all other sites boundaries contributed by data custodians, to query the database for species records falling within the site. Recent additions to the Gateway include the BRC aquatic Heteroptera, Cantharidae, and Trichoptera datasets, Seabird 2000 data, Butterfly distributions for Great Britain for the period 1995-99 from Butterfly Conservation, and the 8.9 million records in the BSBI Vascular Plants database for Great Britain.

Andy demonstrated how to generate a species list for a 10 km square using selected datasets, and how produce distribution maps for a single species entered as either a common or scientific name. Links to species distribution maps from other websites can be a useful application; Butterfly Conservation have done this from their 'species accounts' pages (<http://www.butterfly-conservation.org.uk/>). The Gateway can also be used to generate a list of sites containing records of a selected individual species although the usual caution is required over records with imprecise grid references.

The Gateway continues to support 'dataset administrators' who control how the data they manage are accessed by different users. Users are encouraged to register on the Gateway and to agree on access terms with the administrator of a dataset. In some cases a user may require enhanced access, such as to records marked as 'sensitive', to additional attribute data, or to

downloads of data (via email). Dataset administrators can now also view statistics on how their data are being used.

Andy outlined some new technical developments, such as the on-line data validation tool that will help data owners to check datasets for invalid entries (such as incorrect dates and grid references) before uploading to the Gateway. Planned developments include enabling searches to be carried out on user-defined polygons, including polygons imported from GIS packages with data delivered as downloads back onto the GIS. It has become easier to upload data to the Gateway, which can now be delivered as tab separated files created in Access or Excel, and it is hoped that Recorder will incorporate an add-in to generate these files in the future.

The seminar provided a very useful overview of the considerable technical developments that have taken place over the last two years. From the perspective of data managers, the Gateway is fast becoming a useful tool to deliver data to users in a controlled way. It is important that the Gateway reaches a 'critical mass' of available data to continue to receive public support and further development. The seminar showed the way forward and Andy is available to help potential users to start engaging with the Gateway: with a little effort from data managers and data users the Gateway will undoubtedly become an invaluable tool to enable biological records to be collected once and used many times. Andy's contact details are:

Andrew Brewer
Technical Liaison Officer
NBN Gateway
Andy.Brewer@jncc.gov.uk
Tel 01733 866819

NEWS FROM THE PRESS

[I am grateful to Matt Shardlow, of Buglife, for drawing my attention to some of these news items, which will be of interest to readers ed]

Killer ladybird on the move

[This item was run by a series of national papers]

Harmonia axyridis, also called the harlequin ladybird, is an Asian species that has killed many insects in the US and other countries where it has been introduced. It's recent arrival in Britain is a "disaster", according to Britain's principal ladybird expert, Dr. Michael Majerus, of Cambridge University's genetics department, because it would outcompete the most familiar of Britain's 45 ladybird species for their principal food, aphids, and when it has eaten all the aphids it would go on to eat other insects such as hoverflies, lacewings and butterflies, their eggs and their larvae. "This is without doubt the ladybird I have least wanted to see here," Dr Majerus said. He is calling for an import ban.

Since the harlequin was introduced into North America to control aphids, it has swept across the US. Yet despite this,

harlequins are still sold in continental Europe by biocontrol companies. In September, Ian Wright found an "odd" ladybird in Sible Hedingham, Essex, which was identified as a harlequin. Since then more harlequin ladybirds have been found in at Battersea, Tottenham and in Canterbury. They are obviously on the march.

Buglife's Conservation Director, Matt Shardlow says: "This is the worst possible news. Our wildlife is now in even greater peril and many species are threatened by this new pest. The international trade in invertebrates is increasing, but the Government does not have a grip on the ecological implications. Action is needed now to halt the importation of species that can damage our environment."

"Many tens of thousands of pounds are spent in America trying to control this ladybird which spread after an introduction in the 1970s. While many imported invertebrates cause no harm and are of no risk, until Government recognises the economic and ecological threat that unfettered importation and trade in live invertebrates presents and gets to grips with controlling this activity then it is likely that we will face more ecological mishaps."

"Buglife hopes that the British winter manages to kill off this invasion, but as they hibernate in peoples houses they could easily survive."

The alert is out. Who knows how long it will take before these ladybirds reach Scotland? If you think that you might have found a harlequin ladybird please contact:-

Michael Majerus, Department of Genetics,
University of Cambridge, CB2 3EH
email m.majerus@gen.cam.ac.uk

'Living fossils' found years after being feared extinct

[Members might have seen this item of news in The Scotsman]

A species of the oldest living creatures on the planet have been discovered in Dumfriesshire - 50 years after they were thought to have become extinct in Scotland. Nature experts have stumbled across the rare colony of tadpole shrimps *Triops cancriformis* at Caerlaverock while they were looking for toads. The crustaceans from the Triassic period, which pre-date dinosaurs, were thought to have been wiped out in Scotland decades ago. They were last seen north of the Border in 1948, until they turned up in a pool at a nature reserve in the Solway Firth. Dr Larry Griffin, a senior researcher, said: "It is like coming across a living fossil in your own back yard. It was really exciting when I realised I was on to something different."

Sunfish caught by fishermen near Aberdeen

[Item gleaned from The Scotsman's website at <http://thescotsman.scotsmen.com/scitech> - you may have to sign up to view! ed]

A 50lb almost 3ft long sunfish was caught near Aberdeen in early October and sold to a fishmonger in Bruntsfield Place, Edinburgh.

The fish is more usually found in the subtropical waters of the mid-Atlantic off Africa and the Americas, where it feeds on drifting shoals of jellyfish. Although they have been found as far north as Scandinavia, sunfish are very rare visitors to Scottish waters, and even rarer off the East Coast.

The fishmonger planned to display it and then to sell it at £10 a pound to customers.

Deep-sea trawling's great harm

[From BBC website at <http://news.bbc.co.uk/1/hi/sci/tech/3719590.stm>

A video showing some of the damage that deep-sea trawling does can be viewed at this site. - See also the book review on p.11 ed]

A coalition of leading environmental and conservation groups has called for a ban on the damaging fishing practice known as bottom-trawling. The Deep Sea Conservation Coalition says the technique of dragging heavy nets across the seafloor is doing immense harm to fragile ecosystems. As well as bringing up valuable fish species, such as orange roughy, the trawlers also gouge out corals. The coalition wants the United Nations General Assembly to ban the practice. Marine scientists and conservationists presented their case at a meeting in London, UK.

The principal of bottom-trawling is simple - drag a heavy net across the ocean floor, and any fish there will be caught. The problem is, everything else is caught, too. It has been likened to fishing with a bulldozer. According to one study discussed at the meeting, a single net can snare a tonne and a half of coral every hour.

Dr Alex Rogers, from the British Antarctic Survey (Bas), says "We've measured the age of some of these off Europe to 8,500 years old. If they're damaged heavily, they may take hundreds or thousands of years to recover - or may not recover at all."

BRISC Publications

A reminder to readers that BRISC still has copies left of our two important publications

Scottish Natural History Societies and Allied Group: Directory (2002).

ISBN 0-9535934-1-X; £5.00 (plus p+p)

This publication is also available on CD

A Source Book for Biological Recording in Scotland (1999);

ISBN 0-9535934-0-1 now reduced to £2.50 (plus p+p)

Please order from Anne-Marie Smout or Alan Cameron. For contact details see back page of this newsletter.

LRC News



The Deputy Minister for the Environmental and Rural Development, Mr Allan Wilson officially launched the Dumfries and Galloway Environmental Resources Centre (DGERC) on Monday 13th September 2004.

The establishment of the DGERC this year continues the expansion of the Scottish Local Records Centre network, and for the first time provides a focal point for the collation and dissemination of environmental information in the region. The Centre will hold information on species and habitats throughout the region and help to make this information available to the whole community.

The launch was attended by around 70 people from all sectors of the community, including representatives from Dumfries and Galloway Council, Scottish Natural Heritage, the Scottish Executive, FWAG, rangers, education professionals, volunteers from the DGERC and a number of local wildlife recorders (and of course Alan Cameron from BRISC). The launch was well covered in the local press, and featured on two local radio stations and Border News.

Speeches were given by Mark Pollitt (DGERC Manager) and Andrew Campbell CBE (Convenor of Dumfries and Galloway Council). The keynote address was given by Mr Wilson, who then officially launched the Centre by formally entering the first record.

In his speech, Mr Wilson spoke positively about the establishment of the new centre and its important function of linking biodiversity with the community and the role it will play in helping to deliver the objectives of the Scottish Biodiversity Strategy and the duties in the new Nature Conservation Act.

“Involving local people in observing and recording information about their environment, together with local authorities, community councils and local conservation organisations, is a key way of engaging people with the natural world and contributing to its conservation. And in doing this, it delivers a central objective of the Scottish Biodiversity Strategy which is public engagement. I am a firm believer that conservation cannot be imposed from above it must be built from below. “

“Choices will have to be made between the pressures and threats facing our habitats and species and our development needs for a modern successful country. What we must ensure is that wherever possible, those responsible for such decisions – often in local authorities – can do so with full understanding of

any likely impact on our natural heritage, not just for the sake of species and habitats, but also for our wider quality of life.”

The Minister also commented on the essential role of partnerships supporting LRCs in helping to mobilise local environmental data.

“The establishment of your Environmental Resource Centre has been made possible through the partnership between your local authority and SNH. I know you recognise the essential contribution of local environmental data recording to the development of national information systems. This process is essential to guide our work to achieve a sustainable future for Scotland and its biodiversity.”

A full version of the Minister’s speech is available from the DGERC.

Mark Pollitt
DGERC Manager

Orkney update

Orkney BRC is doing well. We have all the funding agreed for our technical developments, new machines and customisation of reporting mechanisms. We are just going through the paperwork and hopefully this autumn will be filled with things to get to task with. We were lucky enough to get the approval for a standard GIS and for the 3D analysed GIS.

We have put together a three year business development plan. It is in draft and circulating the partners right now. We have included options for 3 scenarios, Option A: full-time manager and full-time technician, Option B: part-time manager and full-time technician, Option C: part-time manager and part-time technician. It is our hope that we can attain Option A. We are now looking at developing a wider project that would allow us to pursue Option A with the aid of Leader + money.

Nadine Russell
Biodiversity Officer and head of working group for developing the OBRC

Fife Environment Recording Network

FERN are now integrated into Environmental Services within Fife Council. Myself (Simon Scott) and Julie Bett are now part of the newly named Environmental Projects and Partnerships Team which is driving forward the Take a Pride in Fife Initiative that aims to Safeguard and Improve Fife’s Environment. We are already sharing skills and looking to develop a number of projects together with new colleagues. Recent joint projects include development of a toolkit designed to help community groups get projects of the ground, and the *State of the Environment Report* which will be published shortly to inform Fife of the progress that is being made in all aspects of the environment.

FERN lead projects are also progressing nicely. The recent NBN workshop initiated by BRISC has begun the process of making our records available on the NBN Gateway and we are currently in consultation with recorders and the NBN.

We are also looking into developing a Recorder 2002 users network in Fife and are currently gauging interest and undergoing internal training on the software, having installed it ourselves earlier in the year. The Nature of Fife Inventory is a comprehensive annotated species list for Fife, and we are currently developing full online access to this. We have recently completed work on assisting Thomas Huxley with the publication of *The Water Bugs of Fife & Kinross (Vice-county 85)*. We are now planning our next major publication, which will be a reference guide to all sites designated for conservation in Fife.

In addition to our various projects, we continue to offer a comprehensive information service to all, with additional promotional and educational work to further benefit Fife's environment.

Simon Scott
FERN
Unit 6/7, Hanover Court
North Street, Glenrothes
Fife, KY7 5SB
Tel 01592 413550

Dundee

Good news from Dundee - and hopefully for NatureBase, the local records centre! David Henderson says:

"We are being allowed increase our Natural History staff and appoint another Heritage Officer (Curator). This is a wonderful time to get involved because we have just had our lottery application granted for a £7.5 million redevelopment, which will see the museum building be refurbished, new visitor facilities included, a radical redisplay of our exhibits and a separate collections store, labs and offices opened."

Applications for the post have to be in by 22 October.

Please contact

David S Henderson
Heritage Officer (Natural History)
Dundee City Council
McManus Galleries
Albert Square
Dundee, DD1 1DA
Tel. 01382 432384
e-mail david.henderson@dundeecity.gov.uk

Book Reviews

Alder, K. (2002). *The Measure of all Things*. Time Warner Books UK, London. ISBN 0 316 85989 3; hbk. £15.99. ISBN 0 349 115079; pbk. £8.99.

In essence, the plot runs as follows. Until the early years of the 19th Century, length, weight and volume measurements varied from region to region throughout the nations of Europe and their worldwide colonies. The French decided to regulate matters by the provision of a standard unit of length based, not

on some arbitrarily chosen measurement, but on a unit derived from Nature. The unit chosen was one ten-millionth the distance from Pole to Equator: a grand concept which, being derived from the earth itself, should receive universal approbation and greatly benefit commerce, science and the progress of mankind. The plan was to send two scientists along a meridian north and south from Paris, with the instruction to measure by triangulation and with extreme accuracy a distance of slightly more than 1000 kilometres (about 600 miles) across a varied landscape of forests and mountains. This measurement, calibrated by a baseline of about ten kilometres, would allow calculation of the distance from Pole to Equator, and thereby one ten-millionth that distance: the desperately sought after one metre.

This brilliant book tells the story of what actually happened. Its 466 pages (in the hardback edition) provide a list of *dramatis persona*, a prologue and epilogue, twelve chapters much of which describe the travails of one or other of the two scientists Jean-Baptiste-Joseph Delambre and Pierre-François-André Méchain, 72 pages of notes, a summarised 'time-line' of the French Revolution and the adoption of the metric system, a selected bibliography, index and plenty of illustrations. It can be read as the adventures of two expeditions; as the heartbreaking consequence of trying to do something basically simple in circumstances when the whole country is in turmoil (and some of one's benefactors guillotined); as an essay in human relationships when one partner suffers from serious psychological problems; or as a unique perspective on the history of international politics, aspects of which are still grinding their way through today's European malcontents when it comes to agreeing on just about anything between France and the UK/USA.

At the start, everything was open for discussion. For example, the metre could have been the length of a pendulum beating one second (thus going back to Galileo). Internationally joint expeditions were considered and rejected. Newton's discoveries that the earth was not a perfect sphere were realised but the consequences inadequately appreciated. Louis XVI was executed in 1793 and in the same year, the Academy of Sciences, having initiated the whole idea and chosen Delambre and Méchain to carry it out, was dissolved. So early on things began to go wrong. The two scientists and their support teams were increasingly left in limbo; money ran short, they were suspected of spying (for the monarchy or foreign powers) temporarily imprisoned and their carefully constructed wooden triangulation towers (having the same purpose as trig points) toppled overnight. Appalling weather was almost the least of their problem and the whole exhausting project went on for seven years, including taking ten thousand stellar observations to determine the north latitude of a hotel in Barcelona. However, the period in Spain inadvertently lengthened when Méchain was put under house arrest because, early in 1793, Austria, Prussia, England, Holland and Spain – fearing the new virus of Liberty – formed a coalition against France. Indeed the only actor – albeit inhuman – that seems to have been consistently reliable was an instrument called the *Borda repeating circle* (after Jean-

Charles de Borda, the veteran naval commander who invented it). Essentially it comprised two telescopes fixed to two graduated brass circles that could be joined (coupled) so as to move together or move separately (decoupled). This arrangement enabled angles between distant points to be measured with considerable accuracy... so long as certain screws were properly tightened! Two versions were made: one graduated in the now universally adopted 360 degrees, the other like a decimal clock with 100 degrees, mandated by the French government in 1794, but an idea which never won public support.

Essential for the completion of the whole project were two ten kilometres long baselines measured with incredible accuracy by means of four rulers, each about 3.6 metres long. They were made out of platinum set in a wooden sleeve alongside a strip of copper so that the relative expansion of the two metals could be read with microscopic precision. It took Delambre forty-one days, working from dawn to dusk, to traverse one baseline. Alas, the historic end marker has since been destroyed, after being damaged in a road accident.

In due course, Méchain discovered that he had made a mistake and a significant part of the book describes how he first tried to correct it, then hide it by re-writing his notes. When Delambre discovered the mistake – in the course of drafting his three-volume *Base du système métrique* – he made a significant contribution to our understanding of scientific error. Alder writes: “Modern science accepts error as its lot. It does not demand truth from its practitioners, only honesty;” adding: “Delambre understood that Méchain had agonized and died for nothing”; that we have no choice but to live on the surface of the earth, buckled, bent and warped though it is. Debate about the nature of scientific truth led to Adrien-Marie Legendre’s mathematical response, later re-discovered in the 20th Century by K.F.Gaus. This is now known as the method of least squares: a ‘workhorse of modern statistical analysis’.

There is much more in this remarkable book that will surely interest BRISC readers, for example how the need for an accurate metre was fundamental to all elements of the metric system, including grams, litres and degrees centigrade. More problematic, for those of us who experience senior moments, is whether it will help us discard our old friends and much easier to read feet and inches in favour of the metric rule. For my part, I am trying to catch up on the grandchildren and, hopefully, may yet avoid a recently heard exchange between joiners: that a certain height was “2 yards and 43 centimetres.” Nothing changes; there were violent objections when the metric system was first introduced in France.

Thomas Huxley

Clover, Charles. (2004) *The End of the Line*. Ebury Press, London (The Random House Group). 314pp. ISBN 0-09-189780-7 hbk. £14.99

How refreshing to find amidst the greed of fishermen, popularity-counting politicians and the largely indifferent public, to see emerging an articulate and readable champion of

fish and all marine life. The argument convincingly put is that the rape of our marine heritage is unsustainable and will lead to collapse of species after species. Clover points out much of what we catch is simply waste: for example, 7kg of marine animals are killed to produce 450g of sole. The process of catching is also dramatically destructive. In Norway 40% of cold water coral reefs surveyed were found to have been extensively damaged by trawls. He quotes the Dutch scientists Groot and Lendeboom (1994) who estimate that the damage caused by fishing is 100,000 times higher than that of oil or gas exploration.

Recognising that the public collusion with over-fishing and marine damage is a function of ‘out of sight out of mind’ mentality, Clover introduces his work with an imaginative picture of trawling on land.

“...Imagine what people would say if a band of hunters strung a mile of net between two immense all terrain vehicles and dragged it at speed across the plains of Africa. This fantastical assemblage, like something from a *Mad Max* movie, would scoop up everything in its way: predators, such as lions and cheetahs, lumbering endangered herbivores, such as rhinos and elephants, herds of impala and wildebeest, family groups of warthog and wild dog. Pregnant females would be swept up and carried along, with only the smallest juveniles able to wriggle through the mesh.”

“Picture how the net is constructed with a huge metal roller attached to the leading edge. This rolling beam smashes and flattens obstructions, flushing creatures into the approaching filaments. The effect of dragging a huge iron bar across the savannah is to break off every outcrop, uproot every tree, bush and flowing plant, stirring columns of birds into the air. Left behind is a strangely bedraggled landscape resembling a harrowed field. The industrial hunter-gatherers now stop to examine the tangled mess of the writhing or dead creatures behind them. There are no markets for about a third of the animals they have caught because they do not taste too good or because they are simply too small or too squashed. The pile of corpses is dumper....”

Clover has produced what will be a seminal work. It is a wake-up call that, if heeded will minimize the self-inflicted disaster of screwing up a renewable resource.

Andrew Marr, the BBC’s political editor in his Radio 4 ‘Start the Week’ programme, said “...this is one of those books that changes one’s life....”

Readers of this journal and other active environmentalists in Scotland will not have to be persuaded of the ecological disaster already in progress in this country and the world. This book vividly describes how enhanced technology, disregard of sustainability, and what he calls the theft of the sea, are destroying the heritage of the world’s people. He depicts a classic example of Hardin’s ‘Tragedy of the Commons’; “freedom in commons brings ruin to all”. Clover’s descriptive writing is based on seeing for himself;

through worldwide travel, where possible gaining first hand experience of the fishing industry, and rigorous thinking. On meeting him at the WWF sponsored event at the Edinburgh Book Festival he impressed with his thoughtfulness, considered conclusions and as a continuing champion.

This author has a great capacity for putting matters into perspective. He points out for example that the wild-capture fish industry is roughly the size of the lawnmower industry in Britain and no-one would dream of allowing the lawnmower industry to dictate policy.

He has several helpful proposals for minimizing and eventually reversing this unsustainable exploitation of marine resources. These suggestions include, confronting all of us with our behaviour as consumers, the de-politicizing of fisheries management and individual transferable quotas for fishing off shore. He suggests that a way of really retuning the sea and its sock to the people is giving them direct control of policing ocean fishing through satellite navigation systems, the monitoring of which would be done, not only by authorized bodies, but also by anybody with access to the internet. As he puts it "Open access to satellite data would be one of the conditions that went with the generous gift of fishing quota to fishermen by a benevolent public – who own the sea".

This book deserves the widest distribution. Give this book to movers and shakers of your acquaintance and we may just generate the degree of concern and action required for a reversal of current disastrous trends.

F. E. Edwards

MacCaskill, B. (2004) *The Wind in my Face – on the trail of a nature photographer*. Whittles Publishing Ltd., Latheronwheel, Caithness. 160 pp. ISBN 1-904445-14-4 £19.95 (soft cover).

This book is a stunning collection of photographs of nature through the seasons. It is a memorial to the work of Don MacCaskill, who spent most of his life in the Western Highlands as a professional forester and self-taught naturalist and photographer. He died while out walking in May, 2000. In the Foreword, Julian Pettifer appreciates Don's enthusiasm for the study of natural history and his ability to communicate his enthusiasm to others. Don's widow, Bridget, has selected these photographs from over 3,000 of his transparencies. The selection of images for each season is preceded by a page or two of text, introducing the season and describing its significance for the natural world and the photographer. Most of the photographs have descriptive captions which add to the interest of the images. Scattered among the images are poems by Jim Crumley which create atmosphere.

A very rough count revealed that birds are the subject of about 84 photographs. Approximately 46 photographs are of scenes and 45 of mammals. Roughly 39 photographs include trees as the main or secondary subject. Flowers and leaves are represented in 14 and 13 photographs, respectively. Fungi and butterflies are the subjects of 10 photographs each. Eight

photographs are devoted to grasses, 3 to amphibians, 2 to fish and 2 to fruits, and there is one photograph each of a reptile (adder), a spider, a fern, a seaweed, a starfish and a crab. Bird and mammal watchers will be happy with this emphasis but naturalists interested in other animal or plant groups may not be satisfied. Furthermore, there are no technical details about the photography, so naturalists will have to seek advice elsewhere if they want to know how to take good photographs as supporting evidence for biological records.

Nevertheless, the book is an artistic delight and would be welcomed as a gift by naturalists and non-naturalists alike.

Barbara Sumner

DATES for the Diary

21-22 October 2004 - The John Muir Trust's Wild Land Conference at Pitlochry Festival Theatre. Programme and booking see <http://www.jmt.org/birthday/conference.html> or phone Allison Lock on 0131 554 0114

3 November 2004 - Meeting the Biodiversity Information Challenge: a forum for Local Records Centres. Probably in the Ibis Hotel, Birmingham. For booking and details check out the NFBR website at <http://www.nfbr.org.uk>

12-14 November 2004 - Celebrate Scottish Badgers 10th Annual Conference, at Kindrogan Field Studies Centre, Perthshire - For programme and booking, contact Allan or Heather Bantick, Tel: 01479 831768 or email: allanbantick@hotmail.com

19 November 2004 - Fourth NBN conference for Societies and Recording Schemes on "How real are your records – exploring data quality" – The Flett Theatre, Natural History Museum, London SW7. For programme and booking see NBN's website at <http://www.nbn.org.uk>

27 November 2004 - Glasgow Natural History Society are holding a one day conference on "The Natural History of Loch Lomond and The Trossachs" starting at 10am in the Graham Kerr building, University of Glasgow G12 8QQ. Programme and details of cost and booking on the society's website at <http://www.gnhs.freeuk.com>

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DEADLINE for next issue is 16 December 2004. All material – preferably in electronic format – to amsmout@aol.com or by post to Anne-Marie Smout, Chesterhill, Shore Road, Anstruther KY10 3DZ