BRISC
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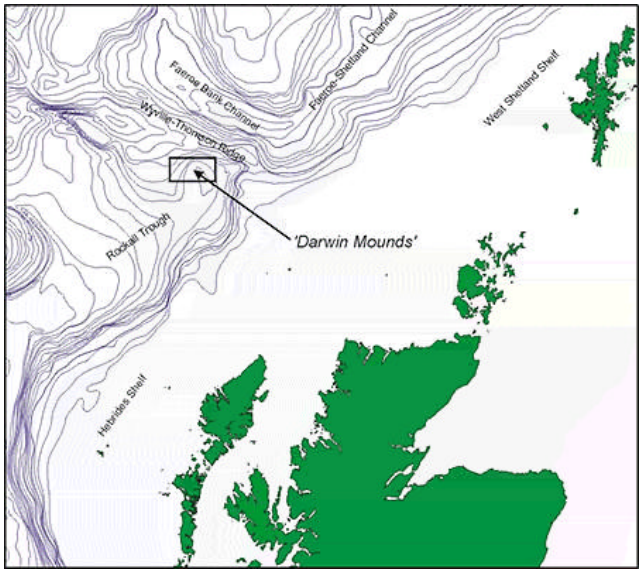
# Recorder News



## THE DARWIN MOUNDS

When environmental surveys of the seabed in the north-east Rockall Trough were conducted for a consortium of oil companies, referred to as the Atlantic Frontier Environment Network (AFEN), a new feature was identified. Mounds, up to 10m high and several hundred metres across were seen. Such features had not previously been identified in the UK offshore area. They were termed the Darwin Mounds. They lie 100 miles to the north of Cape Wrath and have been likened in importance to the Great Barrier Reef. The surveys were led by the Southampton Oceanography Centre (SOC), and included scientists from many research institutes including several from Scotland. Much scientific literature has been published by SOC in the last two to three years.

The Darwin mounds cover an area of 100km$^2$ in about 1000m water depth centered on 59°48'N 7°23'W. A second, smaller area was identified in 1999 about 15km to the east centered on 59° 51'N 7°5'W. This corner of the Rockall Trough is an embayment in the north-east, surrounded by the Hebridean slope to the east and the Wyville-Thomson Ridge to the north. The sites are at the foot of these slopes. The water temperature is in the range 7–8°C and salinity of 3.52%. The mounds are typically 50 – 100m diameter and 3–5m high. They are usually elliptical, with their long axis orientated in the direction of the prevailing bottom current.



Location of the Darwin Mounds

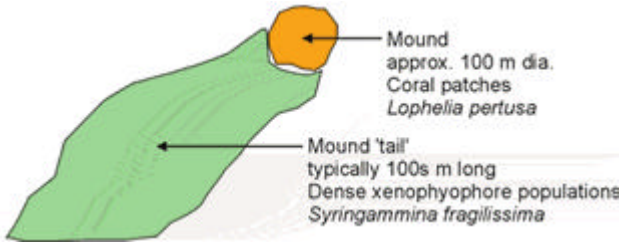
High-resolution seismic records and short cores show the sediments beneath the mounds to be well layered, deposited by icebergs during the many glacial periods, up to 5m in the last 100,000 years. The sediment after falling from icebergs was then modified by along slope currents that have moved anti-clockwise around the Rockall Trough. The high-resolution seismic records also show small-scale faulting and shallow gas/fluid flow features. The gas and/or fluids may be derived from the biogenic degradation of organic matter in the underlying sediments and sediment compaction forced up by the loading on adjacent areas by glacial sediments on the Hebridean slope. Other evidence for the flow of gas/fluids includes extensive areas of pockmarks to the south and south-west of the Darwin mounds. Pockmarks are hollows about 100m diameter and

1m deep. Photographs often show pebbles at the base that may be the result of winnowing finer sediment.

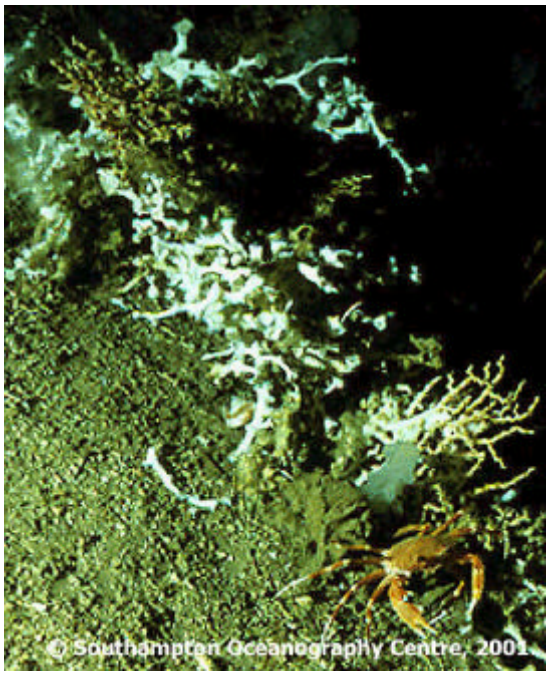
The seafloor comprises extremely well sorted, silty, very fine sand. The video images showed that locally the surface sand has sediment-waves indicating movement from the north-east. Dropstones of a few centimetres occur spasmodically. On the mounds, cohesive sediments appear to protrude through the surface sediments to form upstanding features of a few centimetres amplitude. The most striking images of the mounds is the extensive presence of the cold water coral *Lophelia pertusa*. Although the mounds themselves do not comprise *Lophelia pertusa* or coral debris, they provide an elevated position on which the coral grows.

At first they were often referred to as carbonate mounds because there are similarities to very large mounds west of Ireland that comprise extensive carbonate sediments, principally cold water coral. However, samples showed that the sediment that comprises the mounds themselves contains no more carbonate than that of the surround seafloor and that the sand is predominantly quartz.

An interesting feature about the mounds is the presence of a 'tail' observed on side scan sonar records, in extreme cases this extends 500m away from the mound. Although not distinguishable on profile data or from samples, these tails located down current towards the south-west from the mounds are the sites of increases in abundance in the order of a magnitude of the xenophyophore *Syringammina fragilissima*, a giant protozoan (up to 10cm diameter). The mounds have coral colony densities of 1 per $4m^2$ with individual mounds typically having a thousand or more colonies of *Lophelia pertusa*. Another coral present, *Madrepora oculata* occurs, forming colonies, but is less abundant. These corals provide a habitat for other species such as sponges (hexactinellids and demosponges) and brisingiid starfish. Sea urchins and crabs have also been found. Studies suggest that invertebrate density is 2-3 times higher on the mounds than the surround background sediments.




French and Irish fishermen have increasingly fished the area in recent years for species such as round-nosed grenadier and orange roughy. Concerns have been growing over the effects of deep-sea trawling on this rare habitat, and pressure has been mounting for the government to take action. Recent surveys have shown trawl-marks across some mounds and scattered coral debris. In August 2003 a ban was imposed by the European Commission following a request from the UK. This is an emergency measure to ban deep-water fishing in the area for the next six months. This could be extended by a further six months as the commission brings forward measures to make the ban permanent.




Lophelia pertuse – also notice the crab in foreground

Under the EC Habitats Directive, Member States are required to take action to protect deep-water coral reefs. The UK is also taking steps to designate the Darwin Mounds as a candidate Special Area of Conservation under the EC Habitats Directive. This will ensure that the area is managed to prevent damage to the habitat from any activity taking place in the area. The area was deliberately excluded from the last round of deepwater oil exploration licenses.

Dave Long
British Geological Survey, Edinburgh

[*The map, line drawing and photograph have all been reproduced by kind permission of the Southampton Oceanography Centre. See also their website at* http://www.soc.soton.ac.uk *for more illustrations and a video. Ed*]

## SCOTLAND'S MOLES

We have only one species of mole in Scotland and that is *Talpa europaea*. It is distributed throughout mainland Scotland, England and Wales but is absent from Ireland and many of the Scottish Islands including Harris and Lewis, Coll, Tiree, Islay and Arran. Compared with some other common mammals relatively little is known about its biology and ecology. This probably stems from the fact that, because moles live underground, very few people have ever seen a wild mole even though people will recognise their molehills.

Moles almost exclusively feed on food that enters their tunnel system, which acts as a pitfall trap. Earthworms, particularly our largest species *Lumbricus terrestris*, are the primary food source but in summer, when earthworms tend to aestivate and therefore less likely to be caught, insect larvae, myriapods and molluscs are eaten. The mole can also store earthworms, usually in spring and autumn, by

mutilating the anterior end and incapacitating them. It has been estimated that an 80g mole will eat about 50g earthworms a day.

Moles usually live solitary territorial lives except when the opposite sexes meet during the mating season, which is probably May-June in Scotland. Gestation is approximately 4 weeks, the normal litter size is four, and the young disperse after 5-6 weeks. Most animals within a population are under 1 year old, but some have been known to live for up to 6 years. Compared with other small mammals, especially rodents, mole populations are thought to be relatively stable and fluctuate little.

Moles are active in 3-4 hour periods thought a 24 hour day for most of the year, but their mole hills are most readily seen in late winter and early spring (February–March) when vegetation is short. It has been estimated that population densities can be as great as 16 per hectare, but in a study in north-east Scotland densities in woodland and pasture remained similar throughout the year at 4-5 per hectare. Molehills, which are not necessarily a good indicator of population size, are often aggregated in a given area of a field and probably represent the existence of more favourable areas for feeding, due to the numbers of earthworms or soil conditions which aid survival, e.g. are not likely to flood.

Moles are usually considered pests by farmers, horticulturists and gardeners (I have had over 40 molehills in my lawn which measures 20m x 15m). However while molehills may damage some farm machinery, and surface tunnels damage roots of plants, moles can also be of some benefit. They are known to eat larvae of harmful insects, e.g. cockchafer and carrotfly, and their tunneling may aid drainage and aeration of soils.

The reliance of moles on earthworms as a major constituent of their diet has meant that they are most likely to be found in the west of Scotland in permanent grassland or long term leys. They are less often found in intensively farmed agricultural land in the east of Scotland, where frequent cultivation and the use of pesticides means there are fewer earthworms. A survey of the earthworm population in 132 grass fields in Scotland found the average population to be 326 per square metre.

Until recently the main threat to moles has been considered predation by tawny owls, buzzards, stoats, domestic cats, dogs and vehicles (moles can also still be trapped or poisoned, but this probably occurs less often than in the past). However, coincidental appearance of the New Zealand flatworm in an area of agricultural land in the west of Scotland with the disappearance of the mole from that area, where it had once been a pest, would suggest that this alien flatworm might have the potential to make a dramatic detrimental impact on mole populations in Scotland, which exceeds that of any predator. The fact that there were no molehills to be found in 59 fields on 5 farms, and flatworms were found in 55 of those fields, would suggest that the flatworm had eradicated the moles from these farm. This hypothesis was further supported when it was found that in another small glen in which there were 14 fields, 7 fields had flatworms and no mole-hills, and 7 fields had mole-hills and no flatworms. These observations would suggest that the absence of molehills in an area where they had previously been found might act as an indicator to the invasion of that area by flatworms.

Intermittent small surveys of moles in grass fields undertaken between January and March over the last 5 years during car journeys in the west of Scotland would suggest that 60 – 70% of fields have moles. In fact, very rarely were there more that 4-5 consecutive fields without moles. The exceptions were fields at high altitude that were probably strongly acidic. Earthworms are sensitive to low pH levels especially below pH4 and the absence of moles in these fields would be expected.

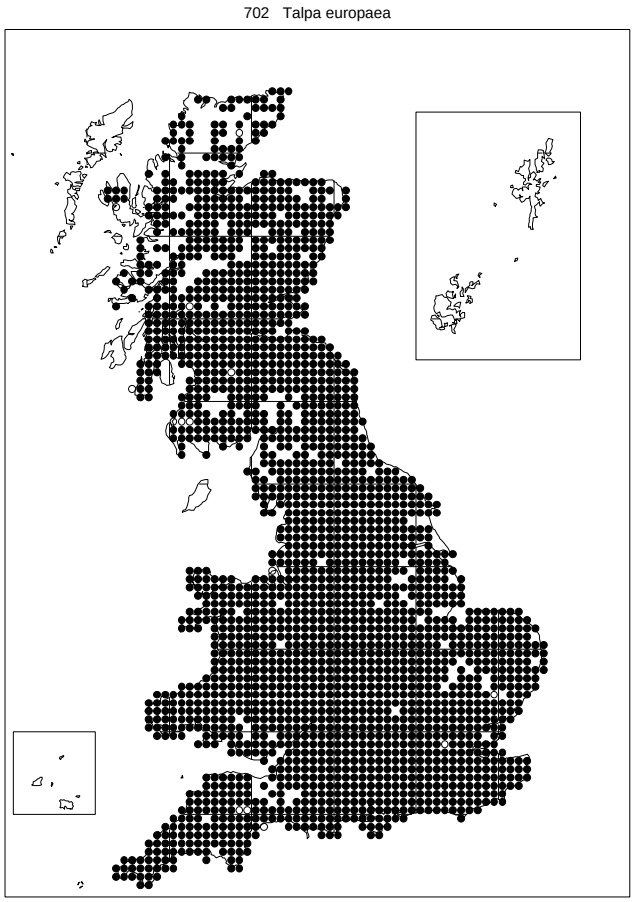



Fig 1. Map of moles from *the Provisional Atlas of Mammals,* (circles are pre 1960 - dots are post 1960) Reproduced with kind permission of BRC at CEH, Monks Wood

The presence of moles in Scotland has been under-recorded, as seen by the number of empty 10km$^2$ in the *Provisional Atlas of Mammals in the British Isles*. Fig 1.

In an attempt to :-

a) get more baseline information on the distribution of moles in Scotland and
b) identify potentially areas of Scotland where the New Zealand flatworm has become an agricultural pest

it is proposed that there should be a national survey of moles in Scotland.

**Protocol for Proposed Survey of Moles in Scotland**

This should roughly follow that used by the mammal society record form.
(see:- www.abdn.ac.uk/mammal/recordform.doc)

However, instead of the survey recording actual moles it should be restricted to molehills. Information required would include:- **date, ordnance survey grid reference, location or site name, habitat, an estimate of the number of mole-hills and the area covered, plus the recorder's name, address and telephone number.** Comments upon the status of the New Zealand flatworm in an area, if available, and the possibility that they could be responsible for the lack of molehills in that area would also be included.

As with the New Zealand flatworm survey, which was coordinated through BRISC, the data from the forms would be collected and mapped to show the distribution of moles in Scotland. Any data collected would also be passed onto Dr. Martyn Gorman, who produced the mole distribution map for the Mammal Society.

Information on the distribution of mole hills in Scotland and observation on the possible absence of moles due to the presence of the New Zealand flatworm should be sent to:-

Brian Boag,
Birch Brae, Knapp, Perth and Kinross, PH14 9SW
or emailed to bboag@scri.sari.ac.uk

## IUCN: CONSERVATION'S BEST KEPT SECRET

A global biodiversity conservation body with almost a thousand organisations as members, along with well over ten thousand individuals participating as volunteers and a thousand staff spread throughout the world. Can you believe it? More to the point have you ever heard of it? The name is not helpful: The International Union of the Conservation of Nature and Natural Resources. No wonder it is more informally called The World Conservation Union, for that is precisely what it is: a 'union'. And to add to the complexity the member organisations are both government and non-government. The UK and many other national governments are members alongside WWF and Birdlife and many other environmental charities. Literally, the Union crosses the divides within the voluntary sector and within the state sector, and between the two sectors, in an effort to achieve positive benefits for biodiversity and for the peoples of the world, who depend on its existence and productivity.

Why is it important? Simply because in the world of biodiversity conservation we need to cross the organisational and cultural divides if progress is to be made. So it is vital to have formal arrangements globally, regionally and nationally for debating the big issues, and seeking to influence decision-makers on biodiversity conservation and anything and everything which affects it. This is epitomised in IUCN's mission of 'a just world that values and conserves nature'. This strap line merits analysis: social justice and environmental justice are two of the cornerstones of sustainable development, and it is entirely appropriate that IUCN reflects these in its mission statement. Social justice because too many of the world's peoples have had their rights diminished and their access to natural resources removed, environmental justice because without properly functioning natural systems and their ecological productivity, then life chances now and for future generations will be much reduced. It is therefore seen as an imperative that societies throughout the world both recognise the value and benefits of nature and take steps to put a value on it alongside valuing other assets, such as human ingenuity.

What does it do? IUCN, as a Union, seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. The Union has many programmes at global, regional, national and local levels. IUCN has global programmes covering ecosystem management, protected areas, species protection, environmental law, marine ecosystems, and forest conservation. It also has special initiatives on business and biodiversity, indigenous peoples and biodiversity, sustainable development, and sustainable use. To find out more look at the web site www.iucn.org Perhaps of most interest to BRISC members will be the work on the protocols for species surveillance and their application to species groups and to the totality of species through the Red Data Books and Lists.

How does it achieve influence? Internationally IUCN has observer at the UN, and works closely with the various UN institutions, such as UNEP (UN Education Programme), UNDP (UN Development Programme) and UNESCO. It works with the all of the major international conservation organisations, such as WWF, Birdlife, TNC (The Nature Conservancy) and CI (Conservation International). It also is developing dialogue with commercial representative bodies whose activities are often in conflict with biodiversity conservation: mining, tourism and agriculture for example. Policy papers, data collection and analysis, demonstration projects in different parts of the world, workshops and seminars, resolutions and recommendations to key decision-making bodies and to key influencers, are all used. The work is undertaken by staff employed for the purpose and based at locations around the world. The largest group is at the headquarters in Gland, Switzerland. The European Regional Office is based in Brussels with subsidiary offices in Moscow and Warsaw. In addition, individuals work as volunteers on a range of topics through being members of Commissions dealing with: Protected Areas, Species Survival, Environmental Law, Ecosystem Management, Education and Communication, and Environmental, Economic and Social Policy.

In Europe for example, a major area of activity is to provide briefing and practical examples on how the present agricultural policies of the European Union are having a detrimental effect on biodiversity and how other approaches would be more sustainable ecologically. On protected areas, for example, there is a global network of 1400 volunteers with knowledge and expertise on all aspects of protected areas. They work together to produce guidance on best practice, are developing data and information networks,

have training mechanisms, and most significantly, in September 2003, have been holding their decal World Parks Congress in Durban, South Africa, to discuss and agree an outreach programme for linking protected areas much more effectively with environmental systems and processes and with the various human constituencies of interests beyond the boundaries. Hence the title of the Congress was 'Benefits Beyond Boundaries' in order to promote the many benefits which protected areas provide to society and to biodiversity conservation. This outreach programme was captured in the Durban Accord: 'A Global Commitment for people and Protected Areas' and in a detailed Action Plan (drafts available on the IUCN web site). There are outcomes in relation to management, monitoring and evaluation of the effectiveness of protected areas and on how to ensure that, at next year's meeting of the Conference of Parties of the Convention on Biological Diversity, global targets and a global work programme for protected areas will be agreed.

How does it operate in the UK and in Scotland? The member organisations of IUCN based in the UK, such as RSPB and Plantlife International, the individual members of the various IUCN Commissions, and the staff of IUCN based largely in Cambridge, constitute the IUCN UK National Committee (not a committee as such but a group of all the various constituencies of the Union). Its role is to stimulate debate and action on biodiversity conservation by bringing the various constituencies together and by focussing on key topics. In recent years the Committee has dealt with ecosystem management, agriculture, protected areas and the sustainable use of wild living resources. It meets twice a year and further information can be obtained from the Secretary at JNCC in Peterborough: john.hensonwebb@jncc.gov.uk or the web site www.iucn-uk.org The work is lead and overseen by an Executive Committee chaired by Jane Smart of Plantlife International. Scottish Environment LINK is represented by Bob Aitken, and the statutory agencies by Marion Hughes of SNH.

How can you get involved? There are a number of ways. You can join one of the Commissions as an individual expert by contacting the Commission secretaries based at the global headquarters in Gland, Switzerland: see www.iucn.org for details. You can attend one of the UK Committee meetings: see www.iucn-uk.org for details. You can contact Bob Aitken at Bob_Aitken@btopenworld.com about activities in Scotland.

Roger Crofts
Former Chair of IUCN UK National Committee,
Chair European Region IUCN World commission on Protected Areas roger@dodin.idps.co.uk

## BRISC Conference and AGM 2004

'Secret Wildlife: Recording in the Urban Environment'

**Saturday 6 March 2004** in the Students Union at Teviot Place, Edinburgh. *Please put this date in your diary.* Full programme and booking form will be included with the January mailing.

## NOTES FROM THE CHAIR

**As I write, a number of members are still to pay their 2003/4 subscription to BRISC, and a postcard with a reminder will be sent to all those whose sub is still outstanding. We feel BRISC is good value for money and we look forward to your continued support!**

**Committee News** - Readers will be pleased to know that we have been able to recruit two new committee members: Jenny Story, Ecologist, and Jonathan Willet, LBAP Officer, both from North Lanarkshire Council. Jenny and Jonathan will be sharing their commitment to the committee. David Beaumont, who has been representing the interests of RSPB on the committee, has decided to stand down, due to pressure of work, but he will try and find a replacement within RSPB. We thank David for his work with BRISC and hope to keep in touch.

**Good News for Scotland** - As many members will be aware, BRISC has long been working for a complete network of LRCs in Scotland, but this goal has kept receding into the distance, with some long-established LRCs falling by the wayside in spite of everybody's efforts. However, things are looking up because the Natural Heritage Data Unit of Scottish Natural Heritage have declared themselves strongly in favour of LRCs and now recognise the need for a fully functioning network of LRCs covering all of Scotland.

Since June 2003 BRISC has been working with SNH to look more strategically at what it would take financially and managerially to provide a complete network of professionally run LRCs, each LRC with a minimum of two full-time staff members, thus complying with the model put forward to the NBN.

BRISC has been asked to prepare a draft National Plan, and Alan Cameron has been working hard on this for the last three months. BRISC's draft plan includes proposals on the distribution of LRCs and costings for setting up the network as well as for running it. The final Plan will also include case studies illustrating services currently provided by LRCs. Alan is particularly well placed to carry out this work, having spent much of the last twelve months researching the current status of Scottish LRCs, with personal visits to almost all the existing centres. This knowledge is now being put to good use in documenting how the Scottish network may be achieved through building on existing LRCs as far as possible – with further suggestions for filling the gaps through the creation of new ones.

The plan aims to be as realistic as possible, and it is hoped that SNH will endorse these proposals and will secure agreement from its management to meet a significant proportion of the network costs.

Importantly, Alan McKirdy, head of the NHDU, has also indicated his willingness to champion the network, once agreed, and to build support with other potential funding parties, such as within the Scottish Executive, the Scottish Environment Protection Agency, and the Forestry Commission.

Still to be brought on board are the Local Authorities, and BRISC aims to exert direct influence (for example, through existing LRCs and LBAP partnerships) as well as indirect influence through the new Biodiversity Strategy for Scotland and the new Nature Conservation (Scotland) Bill, both of which are currently under debate. If the Nature Conservation Bill becomes law in its current form, it will place a responsibility on Local Authorities *to have regard to* the biodiversity in their area and to recognise the provisions of the Biodiversity Strategy, thus paving the way to closer relations and financial support for LRCs.

Three events are being staged to contribute to the drafting of the National Plan. The first was a workshop for LBAP officers held on 25 September in Aberdeen, at which three outcomes were sought:

- Increase the understanding of LBAP officers of the role of LRCs and the current position with regard to their development,
- Identify how LRCs can assist with the LBAP process,
- Inform the development of the National Plan for LRCs.

A second event is an internal SNH seminar for Area Officers on 15 October with the following four objectives on the agenda:

- Get feedback from the Areas on LRC development and operational issues,
- Find out what SNH Area staff would like to see LRCs doing for them (data and services),
- Raise awareness of the National Plan for LRCs,
- Begin investigations into alternative SNH funding mechanisms.

On 22 October, a meeting for key stakeholders, organised jointly by SNH and BRISC, will take place at Perth, with the objective of helping SNH develop a business case for providing substantial financial support for a network of fully functioning LRCs. At last it now looks as if we can start to look forward to a network of fully functioning LRCs, working to the NBN model.

Anne-Marie Smout

**BRISC Office: c/o BTCV, 24 Balallan House, Allan Park, Stirling FK8 2QD, Tel/fax 01786 474061**
**e-mail** brisc@btcv.org.uk **(Alan Cameron)**

## AQUATIC HETEROPTERA RECORDING SCHEME

I would like to take this opportunity to introduce myself as the new co-ordinator of the Water Bug Recording Scheme. I have strong links with Scotland having been to school in Blairgowrie and then University in Edinburgh, where I studied Zoology. I have always had a love of natural history but it is only in the last 5-6 years that I have had a specific interest in Heteroptera. However, I agreed to take this on as a retirement project, and I hope to carry on where Thomas Huxley left off, to encourage active recording in all areas and to gather enough interesting data for another Atlas in the future.

Thomas Huxley ran the scheme for a number of years and his hard work culminated in the publication of the *Provisional Atlas of British Water Bugs* early this year, details of which can be found on the BRC Website (www.brc.ac.uk). To see at a glance the distribution by vice county of every British water bug is not only quite fascinating by also useful for the amateur and the professional. It is possible to pick out areas that are devoid of any records, and in Scotland this includes some of the highlands and islands, which is hardly surprising. There are, however, areas throughout Britain that might be targeted and some effort has already been put in this year reconnoitering a few empty 10km$^2$ squares in my area. Although I do not have the atlas data available yet, I am happy to receive any water bug records, preferably by e-mail, but any format is acceptable. Minimum information required is species name, date, location, grid reference and Vice County. Other information such as abundance of adults (males and females separately where information is available), presence of immatures, if known, and any habitat information, such as size of water body, substrate, altitude etc., would be appreciated.

My neighbour and colleague Dr. Bernard Nau, who introduced me to bugs, is coordinator of the Terrestrial Bug Recording Scheme. He and I have restarted a Heteroptera newsletter, *Het News*, which we hope to produce twice a year around spring and autumn. The first issue came out in June and is available on e-mail, or by post for those without access to e-mail. We hope to generate some discussion and welcome any short articles for inclusion in future issues.

Sheila Brooke
18 Park Hill, Toddington, Dunstable, Beds, LU5 6AW
Tel: 01525 873396
e-mail: brooke.aquahet@btopenworld.com

## IT CORNER

**Digitised Watsonian Vice County Boundaries.** The digitisation of these boundaries, undertaken by Charlie Copp on behalf of NBN Trust, is now nearly ready for distribution. Vice County Recorders are asked to test and comments on the Beta release before publication and can still do so by visiting the NBN website at www.nbn.org.uk and clicking on products and services. All comments to be sent to Charles Copp by 28 October. The NBN Trust aims to release the boundaries on CD ROM **free of charge** at the Annual Conference for National Schemes and Societies on 14 November 2003.

**Land Cover Change: Scotland from the 1940s to the 1980s,** as part of the National Countryside Monitoring Scheme (NCMS) is now on CD available from SNH at £5. A book of the same title, with extensive results form NCMS, can be had at £20 from The Stationary Office.

The CD will be reviewed in the January issue of *BRISC Recorder News.*

**Stop Press** - The Nature Conservation Bill was published on 30 September 2003, with few changes from the draft. The published bill can be viewed at – and downloaded from http://www.scottish.parliament.uk/bills/index.htm

## TOWARDS A NATIONAL MACRO-MOTH RECORDING SCHEME

There is more interest in moths now than at any other time, and this interest grows with every year. Moths are sensitive indicators of the health of the natural environment and a vital part of the food chain. Of the 900 macro-moths that occur in Britain and Ireland, many appear to have undergone drastic declines in both abundance and range within the last 50 years.

Unfortunately an accurate assessment of their conservation status is impossible because there is no comprehensive national dataset. During 2003 Butterfly Conservation has held exploratory talks with various organisations on the development of a National Recording Scheme for Macro-moths.

Aims of the National Macro-Moth Recording Scheme (NMMRS) are to:

- Raise awareness of moths,
- Encourage and train new recorders,
- Make information available to a wide audience,
- Provide data to identify and promote conservation priorities, influence planning decisions, inform government policy and contribute to scientific research.

These discussions identified the need for a thorough planning phase as a first step towards the establishment of a new scheme. Butterfly Conservation is now conducting a planning phase, with the support of the British Entomological and Natural History Society, English Nature, RSPB, Biodiversity Challenge, the Biological Records Centre, the National Biodiversity Network, Joint Nature Conservation Committee, Countryside Council for Wales, Scottish Natural Heritage, Royal Entomological Society, Rothamsted Insect Survey and the Heritage Lottery Fund.

There are many hurdles to overcome before such a scheme could be launched, and we need your support. We are holding a series of FREE meetings throughout the UK in December 2003 and January 2004, at which we hope to engage with moth recorders, explain more about the scheme and listen to your views. There will be guest speakers and workshop sessions.

The Scottish meeting will be at:
SNH's Battleby Centre, Redgorton, Perth
**Saturday 13th December 2003** 10.00 – 16.30

The meeting will be chaired by imminent entomologist Dr Mark Young, and there will speakers from Butterfly Conservation HQ and the Rothamsted light-trap scheme, together with workshops. There will also be demonstrations of recording software and traders with moth-related equipment. As lunch will be provided free and numbers are limited, it is essential that you book a place if you wish to attend. Please e-mail bookings@mothrecording.org.uk or write to NMMRS (planning), Norfolk House, 16-17 Lemon Street, Truro, TR1 2LS, specifying contact details (name, address, telephone), the number of people attending, (and if any special dietary requirements are required).

Butterfly Conservation Scotland is very grateful to BRISC and SNH for helping to support this meeting.

It will also help us tremendously if you can complete our online questionnaire (even if you can come to the meeting) at http://www.mothrecording.org.uk/index.php, where there are also more details of the scheme.

Paul Kirkland
Butterfly Conservation Scotland

## BOOK REVIEWS

**Preston, C.D., Pearman, D. A., & Dines, T.D. (eds). (2002). *The New Atlas of the British and Irish Flora: an Atlas of Vascular Plants*. Oxford University Press. ISBN 0-19-851067-5 (hbk and CD) £99.95**

'This slim volume...'. In byegone days, this phrase was often used by a reviewer if his opinion of a book was low. But it can hardly be applied to this New Atlas: it is good, and it is large, very large, in almost all respects - its concept, its implementation, its coverage, its actual physical size (260 x 280cm, 6cm in width, over 900 pages and feeling like half a ton to lift), and its price. At all but £100 it is expensive, although it can be got for good deal less from various sources. Those of us who remember the first Atlas of 1962 thought *it* was big in a number of ways but this new version is twice the size and contains much more. Some further statistics and facts: over 4,000 taxa in the project, almost all the 3,880 x 10 km squares in the country covered, colour coding for the date categories (post 1987, 1970-87 and pre-1970), 50 introductory pages of descriptive and analytical material, including a chapter each on plant diversity and changes between 1930-99, which in turn has an innovative 'change index', quoted on each map. These are three to a page, and are accompanied by brief notes on habitat, status, frequency, etc., and references to a comprehensive bibliography.

These then are the factual details - how about utilising them? As the arrangement is taxonomic, the index has to be consulted first and because of the sheer volume of the pages it can be rather a task to locate a desired map. These employ blue dots for native species and red for aliens, with degrees of shading for the date categories; when all three occur of the one map it can be difficult differentiating 1970-87 from pre-1970. Reference should be made to the controversial decision to divide introductions into 'archaeophytes' (those naturalised before 1500) and 'neophytes' (those intro-duced after 1500) - terms I'd never heard before. This has resulted in numerous unexpected red maps, e.g. for white campion and field pansy, and will take some getting used to. The habitat and distribution notes are very useful, as are the inclusion of the commoner hybrids and subspecies, although these sometimes indicate the presence of specialists rather than the overall distribution.

The main critical groups, brambles, dandelions and hawkweeds, are excluded. With the book comes a CD-ROM, which allows viewing of the maps together with an additional 942 rare introductions. I understand it works quickly and allows all sorts of comparisons to be made easily.

As BSBI Recorder for Fife & Kinross, I was very much involved, along with a small band of helpers, in both the field and the necessary historical work for the Atlas during much of the 1990s. On occasion it was almost a full-time undertaking and had I not been retired, it would not have been possible to put so much into the project. It is therefore good to see all the hard work come to fruition and although I have some reservations, I go along with a (continental) commentator's opinion that 'undoubtedly, the Atlas is the best that has appeared in Europe', while on a local scale it is already proving its worth to all types of botanist, as well as to planners, civil servants, conservationists and those concerned with and about the countryside.

Not yet possessing a computer that copes with CD-ROMs, my main problem is that of sheer bulk. 'Unputdownable' is another term used by reviewers - but 'unpickup-able' can perhaps be coined in this instance, while I'm sure that, now a year on from publication, some regularly used volumes will be close to breaking their spines. But these are small quibbles and the information contained in the New Atlas is so important and comprehensive that all botanists and, indeed, biological recorders of all complexions must have access to one. The editors, and all who contributed, deserve the thanks of many.

George Ballantyne

**Shrubb, Michael (2003).** ***Birds, Scythes and Combines: A History of Birds and Agricultural Change.*** **Cambridge University Press. ISBN 0-521-81463-4 (hbk) £35.00**

The Rev. Sydney Smith maintained he never read a book before reviewing it 'because it otherwise prejudiced him so'. Agriculture and the effect it has on birds is a subject steeped in the prejudice of commentators and I have approached the task of reviewing Michael Shrubb's book *'Birds, Scythes and Combines*' on your editor's behalf with my own prejudices alive and well. My usual complaint is that commentators writing on agriculture do so from a position of unassailable ignorance, but here that is emphatically not the case. Michael Shrubb has woven together the differing strands of his own very considerable knowledge of practical farming with a lifelong scientific interest in birds. He has added a deep knowledge of modern and early literature, combined that with a careful study of the Board of Agriculture June census returns and overlaid it all with the consolidated results of the Bird Atlases. The result is fascinating.

The reader is taken on a tour of the farming history of Great Britain, of enclosure of the 'wastes', the draining of the fens and through the heyday of farmland birds under Victorian high farming. Recession at the end of the 19th century and the implications for birds are discussed, before wartime expansion (the great plough up) and the post-war onset of mechanisation and intensification are reviewed. At the same time he charts the contraction in range of birds such as the great bustard and the bittern, the corn bunting and the chough and offers explanations for the fluctuations in populations familiar to us all. It is not a lightweight work – the detail is extraordinary, and he is careful to give his references - but the effort made in following his arguments, studying the maps and reviewing his tables will be amply rewarded.

The strength of the book lies in the careful examination of the past. The weakness is in the extrapolation into the future where we are offered only teasers. Agriculture in the UK is at the cusp of great change with the onset of the mid-term review (MTR) of the Common Agricultural Policy. Expansion of the EU, world trade negotiations and budgetary constraints, will mean a reduction in subsidy to UK farmers. It is not clear as I write this, though it will be known soon, to what extent remaining subsidy will be decoupled from production. The implications for birds are immense. Michael Shrubb describes in some detail the effect of stocking rates (particularly with sheep) on birds in the Welsh uplands. Post MTR large areas of the Welsh and Scottish uplands could be abandoned to agriculture altogether. The reduction in tillage described post-1870 could well be repeated for the lowlands in the next decades, though exactly how is not clear. So much depends on the detail within the legislation. It is not always understood by EU drafters that when they are writing an agricultural policy it is an environmental policy too!

I regret that Michael Shrubb is not more aware of modern thinking about the 'top down' impact of predators on populations, rather than just 'bottom up' effects of habitat. Certainly he is right that habitat plays a vital role and the key components for birds of 'high farming' need to be teased out. However, if the narrow view persists amongst the policy makers that 'habitat rules', much money will be spent (and wasted) on agri-environment schemes. It is a pity for example that his references to Dutch studies and Aebischer's work in his final chapter are not fully developed. The conclusions are startling. Nevertheless Michael Shrubb's book ought to be required reading for the policy makers, and anyone else with an opinion on farming!

Edward Baxter

**DATES FOR THE DIARY**

- Friday 14 November 2003 - National Schemes and Societies Annual Conference to be held at London Zoo. Booking from Trevor James, BRC, Monks Wood.
- Saturday 15 November 2003 –Water, Live and Landscape. Forth Naturalist and Historian Symposium Stirling University. Booking from M Scott, Pathfoot C4, University of Stirling, tel. 01786 467269 £10, lunch £6. Fieldtrip to Flanders Moss and other places on Sunday 16 November. £10.00
- Saturday 13 December 2003 -Towards A National Macro-Moth Recording Scheme, SNH's Battleby Centre, Redgorton, Perth. Please book with Butterfly Conservation, for details see page 7 of this newsletter.

**Deadline for next issue is 15 December 2003**. All material, preferably in electronic format to Anne-Marie Smout, amsmout@aol.com or Chesterhill, Shore Road, Anstruther, KY10 3DZ