

Recorder News

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THE UPWING FLIES OR MAYFLIES (Order Ephemeroptera)

by Craig Macadam

Common sights along the shores of many stillwaters or rivers are groups of flies dancing above your head. If you look closely you'll see that they have 2 small wings, 2 large upright wings and two or three tails. These are the upwing flies, more commonly known as mayflies. This common name is quite misleading because this group of flies can appear throughout the year. In fact, at one point they were called dayflies due to some of the species having an adult life of a single day. The common name

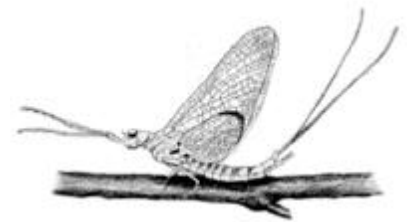
comes from the habit of one species, *Ephemera danica*, which emerge as adults when the Mayflower or Hawthorn is in bloom.



Mayflies are unique as insects in that they have two winged adult forms. The nymph emerges from the water as a dull-coloured sub-imago (or dun) that seeks shelter in bankside vegetation and trees. After a period of a couple of hours or more, the sub-imago once again sheds its skin to transform into the brightly coloured imago (or

spinner). It is not clear why mayflies have retained this unique step in their lifecycle, however it is thought that they may not be able to achieve the change from nymph to sexually mature adult in one step.

A mayfly's life cycle starts with the males forming a swarm above the water and the females flying into the swarm to mate. The male grabs a



passing female with its elongated front legs and the pair mate in flight. After copulation, the male releases the female, which then descends to the surface of the water where she lays her eggs. Once mated she will fall, spent, onto the water surface to lie motionless, with her wings flat on the surface, where fish pick them off at their leisure. The male fly rarely returns to the water but instead he goes off to die on the nearby land.

The eggs fall to the bottom of the water where they stick to plants and stones. Flies of the Mayfly family *Baetidae* pull themselves under the water to attach their eggs directly to the bed before being drowned by the current. The nymphs take anything between a few days to a number of weeks to hatch depending on water conditions and the species, and the

resultant nymphs will spend various lengths of time, up to two years, foraging on the bottom before emerging as an adult fly.

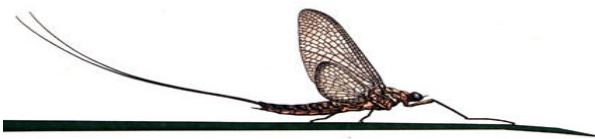
When it is time to emerge, the nymphs make their way to the surface where they pull themselves free of their nymphal shuck and emerge as a sub-imago. While they rest here to dry their newly exposed wings, they are at their most vulnerable to attack from fish.

Collection, Preservation and Identification.

Larval Ephemeroptera are easy to collect. Kick sampling, the disturbance of the bed of a watercourse or waterbody, is the most efficient method in running water, whilst in standing water a net can be swept through submerged vegetation or the substrate can be disturbed and the net swept through the disturbed water. Adult Ephemeroptera can be collected by examining, or beating bankside trees and other vegetation. Alternatively, adults can be caught as they swarm near the water. For species that are attracted to light, traps designed for capturing moths can be used.

Both larvae and adults are best preserved in Isopropyl alcohol, which is available from most chemists. The specimen should be clearly marked with the location, date and grid reference where the specimen was collected together with the collector's name.

The identification of British (and Irish) Ephemeroptera is covered by two scientific publications by the Freshwater Biological Association. These taxonomic keys provide the information required successfully to identify most of the British Ephemeroptera. They also include extensive notes on their life cycles and ecology. It should be noted that there have been some recent revisions and additions to the British Ephemeroptera that are not noted in the FBA keys. The Ephemeroptera Recording Scheme can provide further information on the identification of the British Ephemeroptera and is also willing to provide limited assistance with the identification of specimens, which should be sent, preserved in alcohol. It would be appreciated if you would contact the scheme before sending off any specimens for identification.



Ephemeroptera Recording Scheme

c/o Craig Macadam, 109 Johnston Avenue, Stenhousemuir, Larbert, FK5 4JY. Email: info@ephemeroptera.org.uk
Web: www.ephemeroptera.org.uk Tel: 07786 631369.

Identification keys

Elliott, J.M. & U.H. Humpesch (1983): A key to the Adults of the British Ephemeroptera with notes on their ecology. *Scientific Publications of the Freshwater Biological Association* No. 47, 101pp.

Elliott, J.M., U.H. Humpesch & T.T. Macan (1988): Larvae of British Ephemeroptera: a key with ecological notes. *Scientific Publications of the Freshwater Biological Association* No. 49, 145pp.

Both available from: The Freshwater Biological Association, The Ferry House, Far Sawrey, Ambleside, CUMBRIA, LA22 0LP. Telephone: 015394 42468

Collection Equipment

EFE and GB Nets, PO Box 1, Bodmin, Cornwall, PL31 1YJ.
Tel/Fax 01208 77400 Website: www.gbnetts-uk.com
Email: sales@gbnetts-uk.com

BUGLIFE - A CHAMPION FOR INVERTEBRATE CONSERVATION

Keith Bland

The heightened awareness of biodiversity stimulated by the UK Action Plan process has revealed just how unhealthy the UK invertebrate fauna has become. According to English Nature, some 1260 species of invertebrate appear to have become extinct in the UK in the last 100 years (an average of about 0.2% per year). Similarly most long-term repeat surveys have indicated that 50% of the invertebrate fauna is in decline while only 25% is increasing. Against this backdrop it was apparent that a non-governmental organisation (NGO) was needed to look after the interests of invertebrates: thus the Invertebrate Conservation Trust ('Buglife', for short) was conceived and came into being.

The charity has a board of six trustees, all of whom are experienced entomologists and conservationists, as well as two full-time and one part-time members of staff. Membership of Buglife is open to organisations and individuals who support the Trust's aims of preventing invertebrate extinctions and maintaining sustainable populations of invertebrates in the UK. Buglife intends to achieve these aims by:

- Undertaking and promoting crucial studies and research
- Promoting sound management of land and water in order to maintain and enhance invertebrate diversity
- Supporting the conservation work of other entomological and conservation organisations
- Promoting education and publicising invertebrates and their conservation
- Influencing invertebrate conservation in Europe and worldwide.

In addition Buglife will endeavour to become the professional NGO voice for invertebrate conservation. Its acting as a conduit between the consensus of opinion of the experts and the decision makers will put invertebrate conservation on a par with the conservation of other taxa. The need to attract funding into invertebrate initiatives is self-evident. Buglife hopes to act as a catalyst between funding bodies and invertebrate organisations. It may also supervise multi-partner invertebrate conservation projects and bids where this would increase their efficacy.

Although still in its infancy, the appointment of paid staff has allowed Buglife to become involved with invertebrate conservation from its inception. It is already involved in Biodiversity Action Plan work at both a specific and a general level. It is disseminating the habitat management knowledge of invertebrate specialists to the people who need to enact it. Buglife is conducting a Oil-Beetle (Meloidae) Project; there are nine species in Britain, but six may already be extinct and their hosts, the bees, are not doing too well either. Specific sites and species are also being focused on: the questions in the Scottish Parliament about Aucheninnes Moss and the Bog Bush-cricket were catalysed by them. Buglife appreciates the distinctiveness of the Scottish fauna and realises that for it to have an effective influence in Scotland, those in Scotland must be clearly seen to be amongst the helmsmen. In the longer term it hopes to open an office in Scotland. You will be hearing much more about this organisation in the New Year and beyond.

For further information, please contact
Dr Keith Bland, Curatorial Fellow
National Museums of Scotland,
Chambers Steet, Edinburgh
Tel 0131 247 4218
e-mail k.bland@nms.ac.uk

THE FIFE BIRD ATLAS

Norman Elkins

Between 1991 and 1999, fieldwork aimed at mapping the breeding and non-breeding distribution of birds in Fife was carried out by Fife's birdwatchers. Computer encoding of all the records using the database of the Fife Region Biological Records Centre *Fife Nature* (recently renamed Fife Environmental Recorder Network (FERN)) has now been completed. The outcome of this will be detailed maps of breeding distribution on a 2km x 2km (tetrad) grid and complementary monthly maps of non-breeding distribution on a 5km x 5km grid. This will be the core of a publication that is now in an advanced state of preparation with publication expected in 2003.

The Atlas will, for the first time, map all Fife's birds in great detail. Unlike many atlases, the value of Fife's Atlas is enhanced by the inclusion of data throughout the year, such as national censuses of wintering wildfowl and shorebirds, ringing records, seabird censuses, migration counts, and a host of other smaller surveys carried out during the period of the Atlas fieldwork. The publication is being overseen by the Fife Ornithological Atlas Group (FOAG), chaired by Jim Reid, who co-authored the second national Breeding Bird Atlas. Jim is a resident of Fife, as are most of the expert authors responsible for the species accounts in the text of the book and very familiar with Fife and its birds. The Secretary of the Group and co-ordinator of the Atlas production is Norman Elkins, author of the book *Weather and Bird Behaviour* and BTO Regional Representative. Other members of the group include Allan Brown, well-known for goose and swan studies and WeBS

organising, and Anne-Marie Smout, author of *The Birds of Fife* and chairperson of BRISC. Artwork is being co-ordinated by Derek Robertson, the renowned wildlife artist resident in Fife and author of many wildlife art publications.

The book is expected to be in A4 format with two pages allocated to most of the breeding species described. For each of these species there will be a text and breeding distribution map, with other maps of non-breeding distribution chosen to depict seasonal variation. One or two pages will also be allocated to non-breeding species, with seasonal distribution maps depicted. Appropriate figures showing quantitative data will be included for those species for which these are available. Data has also been used from the Forth islands that form part of the region, including the Isle of May, courtesy of the Isle of May Bird Observatory Trust.

The participation of *FERN* in the production of maps has been an important step towards final publication. 125 species have been recorded breeding in the 386 tetrads, and a further 88 non-breeding species have been recorded in the 75 5km squares. About ¼ million records have been generated, and will be held on *FERN's* database for future use. The data form a unique baseline with which to measure changes in Fife's bird populations, and to act as an important conservation tool. SNH, SOC and Fife Regional Council are all supporting the project, and grants have been received by several other organisations. This support, together with the recent publication of both the Fife Local Biodiversity Action Plan and Gordon B Corbet's *The Nature of Fife*, is indicative of the importance placed on Fife's wildlife.

Although all the fieldwork and preparation of the texts and artwork have been or are being carried out voluntarily, publishing costs will be high. The print-run of the book will probably be around 500, estimated costs for which will be in the order of £25-£30 per book.

For further information or to reserve a copy, contact Norman Elkins at the address below.

Norman Elkins
Secretary FOAG
18 Scotstarvit View
Cupar
Fife KY15 5DX
Tel 01334 654348
Email: jandnelkins@rapidial.co.uk

NOTES FROM THE CHAIR

The next two months are going to be very busy with BRISC organising or helping to organise several events:

A new date – the afternoon of **Friday 17 January** - has been fixed for Bill Butcher's seminar on the Integrated Habitat System, which Somerset Environmental Records Centre (SERC) has devised and is now promoting. The venue is Perth Museum. If you had your name down to attend the cancelled meeting last autumn, you will already have received

an invitation for this day. If you have not, and would like to go, please see separate advert (p.5) in this newsletter.

On **Tuesday 21 January** BRISC is organising a National Biodiversity Network seminar, also at Perth Museum. Because BRISC supports the concept of NBN, and because the committee recognises the importance of keeping people in Scotland up-to-date with developments, we have asked some key people to tell us about the new technical developments and also about some main areas of work in different part of Britain and how these fit into the bigger picture. Essentially, plenty of time has been set aside for discussion. The event will also double up as the official launch of the BRISC Development Project, to be celebrated with a glass of wine. (For the full programme see p.11). There is no charge for the day, but booking is essential. Invitations have already been circulated via the email forum, but if you have not yet had an invite and would like to attend, please contact Alan Cameron on 01786 474061 or e-mail brisc@btcv.org.uk

Saturday 22 February is the date for BRISC's Annual Conference and AGM 2003, to be held at the Burrell Collection, Glasgow. The theme for the day is 'Trends and Change' and programme/ booking form is included with this mailing. Once again we have secured some excellent speakers and it promises to be a most interesting day. The Burrell Collection has proved a particularly popular venue in the past with first class facilities, good food and wonderful surroundings. Do tell your friends and make sure you come along yourself. Please book by 15 February, as we have to arrange for catering.

The new committee will be elected at the AGM. For anyone wishing their name put forward to join the committee, please let me, Alan or any other committee member know beforehand. Candidates will need two sponsors.

Readers will be aware that we are to have a Scottish Biodiversity Strategy as a result of a speech given by the Deputy Environment Minister, Allan Wilson, to the first Scottish Biodiversity Forum at Battleby last February. This is a welcome acknowledgement from the political spectrum that biodiversity actually matters and that there is a need to have a strategy to ensure its future sustainability. It is a golden opportunity for us to place biodiversity at the heart of government but also a very daunting task to condense the great complexity of biodiversity and its needs into a workable and meaningful strategy. The time scale is tight: the draft is to be presented to the Scottish Ministers at the second Biodiversity Forum to be held at Heriot Watt University on 25 February 2003. A first draft was circulated early last November, to which BRISC responded, stressing that the strategy needs to recognise the importance of data collection and adequate data management in monitoring its success or failure. A second draft is now being prepared under the auspices of SNH.

Talking about strategies, it is also becoming evident that if we want to see a fully functioning network of Scottish Local Records Centres we shall need a Scottish strategy for

LRCs, to be recognised and agreed at the highest level (including SNH and the Scottish Executive). This was one of sixteen recommendations put forward by Alan Cameron in his "Summary of Local Records Centres' development priorities in Scotland", a report based on a series of visits to LRCs and the in-depth interviews he has conducted this autumn. The report was submitted to SNH last October and is available on request from Alan.

Finally, the new Recorder 2002 has arrived! I got my copy on 30 December 2002, thus making it before 2003 by 36 hours! At the time of writing, I am still to install it and try it out, but reports from the test centres are very positive. Good luck to all R2002 users and a Very Happy New Year to everyone.

Anne-Marie Smout

OBRC OPEN DAY

Undaunted by their chronic lack of office space, OBRC proudly hosted an action-packed fun-filled OPEN DAY on Thursday 5th December at Kirkwall Town Hall. Orcadians (and visiting BRISC officers) were given a once-in-a-lifetime opportunity to view the OBRC database in action with our brightest boffin, Sydney Gauld, on hand to answer questions and demonstrate all the ins and outs of Recorder 2000.



Expert showing samples (photo Alan Cameron)

Additionally a team of experts was on hand with samples and specimens of plants, trees, seaweed & shells and lepidoptera so visitors could prod and poke to their heart's content and really get to grips with biodiversity in the 'flesh'.

Add to this an array of scintillating displays and presentations, question and answer sessions and free tea & coffee and it all added up to a day not to be missed for the 51 people who flocked through the doors.

For more details, pictures *and* our online greeting card, please visit www.orkney.gov.uk/biodiversity/

Max Scratchmann
Marketing Officer
Orkney Biodiversity Records Centre
Kirkwall

BRISC VISIT TO THE HERBARIUM, ROYAL BOTANIC GARDEN EDINBURGH

At 10.30 a.m. on Saturday, 7th December, eight BRISC members assembled at the Royal Botanic Garden Edinburgh and met Douglas McKean, the RBGE specialist in British plants, who was to give us a guided tour of the Herbarium. He took us through the new reception area past portraits and photographs of Regius Keepers, past and present, and then upstairs past exquisite botanical artwork to our destination. The Herbarium occupies two floors above the Library, and houses a collection of approximately 2.5 million dried specimens of plants from all over the world. When we entered the Herbarium we realised that Douglas had been to a lot of trouble beforehand setting out exhibits for our interest, and he began by showing us the oldest specimen in the collection, a South African plant related to our *Vaccinium* species, which had been collected and pressed in 1697!! Despite its great age, it looked in such good condition that it might have been collected yesterday.

Plants intended for the Herbarium are collected on field expeditions, pressed between sheets of thick blotting paper or newspaper, and left to dry out either naturally or in gentle heat. On entry to the Herbarium, the plants are stored for several days in a freezer at about -20°C to -25°C , to kill off any potentially destructive pests which might be lurking unseen. For final storage each pressed plant is mounted on a sheet of stiff paper with PVA glue, and anchored at intervals with thin strips of tape. A small packet is glued to the top left corner of the paper to house any extra material from the plant (e.g. fruits), and a label is glued to the bottom right corner showing the scientific name of the plant, where it was found and when, who collected it and who identified it. Sometimes a plant might be identified and re-identified more than once, so the labels multiply. The sheets of paper bearing mounted plants are enclosed in folders, which are normally pale beige in colour, but have red edges if they enclose a type specimen. Red-edged folders would be the first to be rescued in a fire, but as all the folders containing mounted specimens are stored in metal cupboards, they are well protected against such a disaster.

The central space on both floors of the Herbarium is occupied by many double rows (back-to-back) of tall metal cabinets containing the cupboards. There is just enough space between the double-rows to open the cupboard doors. Some plant specimens are too bulky to be pressed, mounted and enclosed in folders, so they have to be labelled and stored in boxes or loose. These are kept in different cupboards around the sides of the Herbarium. British plants occupy several rows of cupboards on the first floor, and plants from the rest of the world occupy the remaining cupboards on this floor and the floor above. RBGE is especially rich in Chinese and Himalayan plants, and has substantial collections also from the Indian Ocean (Socotra) and from South America (Brazil). The air-conditioning in the Herbarium keeps all the plant specimens as dry as possible.

Serious research workers can apply to borrow specimens from the collection to assist their investigations, which are often taxonomic or floristic, and lead to publications. Douglas showed us examples of published papers and monographs describing single genera or species, and examples of floras and atlases describing the floristic composition of, and distribution in, an area. Two floras/atlasses had been published not long before our visit. These were the *New Atlas of the British & Irish Flora*, and *Plant Life of Edinburgh and the Lothians*.^{*} Scottish recorders have contributed to both these publications and it was good to see the successful outcomes of so much painstaking work.



At RBGE's Herbarium - From the right: Douglas McKean, Gordon Corbet, Barbara Sumner and Anne-Marie Smout (photo Alan Cameron)

We learnt a lot on our visit to the Herbarium at RBGE and didn't notice how time was passing. Thank you to Anne-Marie for arranging this event and to Douglas for a most absorbing and stimulating morning.

Barbara Sumner

[* *Plant Life of Edinburgh and the Lothians* is reviewed in this issue. Ed.]

Friday 17 January – Integrated Habitat System launch in Scotland by SERC in association with BRISC - Perth Museum, 13.30 – 16.00

Please email SERC at somerc@iname.com (Sue Custance-Baker) to find out if there are any spaces left.

IHS, developed by SERC in consultation with other organisations over the last four years, represents a completely new approach to the recording and management of habitat data in the UK. Designed for GIS-use IHS represents an integration of existing classifications in use with particular emphasis on Biodiversity Broad Habitat Types, Biodiversity Priority Habitat Types, Annex 1 of the Habitats Directive and Phase 1. A software translation tool including translation of Phase 1 data to BAP Priority habitats comes as part of the package. Further details and an introductory demonstration of IHS can be viewed on our web site - www.somerc.com

IT CORNER

ORDNANCE SURVEY MAP TILES

What are map tiles and how can they help me?

Ordnance Survey may be best known for its paper maps but computer data is now the biggest part of its business. More and more organisations are using computer-based geographical information systems (GIS), allowing the rapid integration and analysis of information from many sources.

The National Biodiversity Network (NBN) strives to make biological information accessible in a digitised and exchangeable form. By providing easy access to information people need about wildlife, wise and informed decisions can be made to ensure our natural environment is diverse, rich and sustainable now and for future generations.

To help with the recording of accurate biological data, the NBN Trust is now pleased to announce that as part of an agreement with Ordnance Survey, 1:50,000 scale colour maps are available to use within *Recorder 2000* and *Recorder 2002* software when it is shortly released. For many users the maps will form the ideal backdrop for capturing and displaying biodiversity information.

The maps are available as 'tiles' which are small raster images covering an area of 20km by 20km in size and mirror the popular *OS Landranger Map*[®] series, Britain's most popular map series.

The use of Ordnance Survey map tiles within *Recorder* will enable users accurately to store and manage biological data by visually pin-pointing sightings instead of manually entering 8-figure grid references.

Due to licensing agreements all 812 map tiles are encrypted, therefore you will not immediately be able to view selected map tiles in *Recorder*. However unlocking map tiles is a free service provided by the NBN Trust via codes, otherwise known as 'keys' which can be e-mailed, faxed or posted to you upon request.

It is recommended, however, that you use only 30 - 50 map tiles at any one time, depending on the computer's memory capacity. Although there are no restrictions on the number of map tiles you can order, too many will dramatically slow down the machine.

How to obtain Map Tiles

The map tiles are provided on a set of 5 CDs containing all 812 map tiles of England, Scotland and Wales seamlessly*. Each CD set also contains Map Browser software enabling users to select specific tiles via 100km squares, County, Vice County or *Landranger*[®] codes.

Ordering

A set of CDs is priced £15 inclusive of VAT and can be ordered by completing and returning the attached order form to the NBN Trust Secretariat. Alternatively you can telephone (01636) 670090 with your credit or debit card number. Your CD set will then be immediately dispatched.

Installing the software

Once you have received your CD set, insert CD1 into your machine and follow the on screen instructions provided. When you first use the application you will be prompted to complete your details in a registration screen which then needs to be returned to the NBN Trust Secretariat prior to any orders for encryption keys being made.

Selecting map tiles

To locate and select map tiles, use the Map Browser software on CD1 which enables you to locate the map tile(s) you want to order via 100km squares, County, Vice-County or *Landranger*[®] map codes.

Ordering and receiving encryption keys

Once you are happy with your selection of tiles you can proceed to requesting encryption keys. Following on screen instructions in the Map Browser software generates the request, which can be e-mailed, faxed or posted to the NBN Trust.

Once the encryption key has been returned from the NBN Trust, you enter the given code into the Map Browser software. This will allow the map tile(s) to be extracted into Recorder for immediate use.

If you would like further information or to order a set of Ordnance Survey Map tiles please contact:

Ordnance Survey map tiles
NBN Trust Secretariat
The Kiln, Mather Road
Newark, Notts, NG24 1AW

Tel: (01636) 670090

Fax (01636) 670001

E-mail: support@nbn.org.uk

* Unfortunately map tiles of Northern Ireland are unavailable from the NBN Trust. However they can be obtained from David Mitchel of the Environment and Heritage Service, Belfast. E-mail: david.mitchel@doeni.gov.uk Tel: 028 9054 6599.

[The maps cannot be used for business or financial gains. BRISC can forward a copy of the Licence Agreement on request. Ed]

WATER FRAMEWORK DIRECTIVE RESEARCH DATABASE

A database of WFD-relevant research has been produced with joint funding from SNIFFER (Scotland and Northern Ireland Forum for Environmental Research), UKWIR (UK Water Industry Research Ltd), the Scottish Executive and the Environment Agency. This database is now available over the Internet at <http://www.wfddatabase.com/>. Hopefully this could prove to be a useful resource for all organisations involved in commissioning research and implementing the Water Framework Directive. The usefulness of the resource is dependent on the database being regularly updated and information about on-going research being supplied, so any information is welcome about any research projects you are

aware of that are WFD-relevant. All information input to the database will be quality checked prior to being accepted.

Please use and look after this potentially useful resource and **let others know about its existence**.

Please be patient: approving new users, projects and edits is time-consuming - the administrator will do this as quickly as possible. Also, the functionality of the database will be refined and improved on the basis of comments that we receive about it so please pass these on to rebecca@sniffer.org.uk.

CONSERVATION LIBRARY DATABASE SYSTEM FROM PISCES CONSERVATION, LTD.

In collaboration with the Hampshire and Isle of Wight Wildlife Trust, Pisces has recently developed an interactive Library Database System specifically for use by conservation and environmental organisations.

Its features are:

1. Designed for peer-to-peer network or stand-alone use. Requires Windows 95 or above.
2. Holds library information on Books, Journals, Grey literature and Photographs. All digital photographs can be viewed from within the system.
3. Fully integrated search capability, enabling users to search for items associated with any taxonomic level, from species to class, or habitat type, or alphabetically by title, author, publisher, photographer etc.
4. Unique map search facility - just click on a map (of your county for example) to reveal all items associated with that grid reference, or within a selected distance from it.
5. Full loan tracking facility, alerting users and librarian of overdue items.
6. Track the locations of multiple copies of the same publication.
7. Comes complete with protected species lists (over 2700 species, with all their higher taxa, and 76 different conservation designations).
8. Import wizard enabling import of new information directly from MS Excel or CSV files.
9. Full security & password management.
10. Complete reporting capability, producing 21 different reports ranging from complete book or photograph library listing to lists of most popular items, overdue items or system users.
11. Full telephone support for 12 months.
12. Full help system for both users and librarian.
13. Supplied on CD with sample database and map files.
14. Price £695.00 plus VAT and P&P.

Significant discounts for registered charities and voluntary organisations.

See www.pisces-conservation.com/libman.html for more details.

If your organisation is struggling with its publication and photograph management please contact us for a 30-day evaluation CD.

Pisces Conservation Ltd.
IRCHouse, The Square,
Pennington, Lympington, Hants, SO41 8GN.
Tel 01590 676622
Pisces@irchouse.demon.co.uk

BOOK REVIEWS

Moore, Norman W. (2002). *Oaks, Dragonflies and People*. 132 pp. Harley Books, Colchester. ISBN 0 946589 71 2; pbk. £15.95

Rothschild, Miriam & Marren, Peter (1997) *Rothschild's Reserves*. 242 pp. Balaban Publishers, Israel; distributed in Britain by Harley Books, Colchester. ISBN 0 946589 62 3; pbk £15.00.

As well as being one of the authors of the New Naturalist book on dragonflies (Corbet, P.S. et al (1960), *Dragonflies*, Collins), Norman Moore also wrote a perceptive commentary on the science and politics of nature conservation entitled *The Bird of Time*, (1987, Cambridge). Now he has described the creation of a private nature reserve, including a substantial pond called the Mere, at his home in Swavesey, Cambridgeshire, supplemented by reflections on nature reserves generally and his suggestion for a new concept termed 'Future Care' politics. Although published five years ago, the book about Rothschild's reserves is still of much interest and its perspective on successes and failures in conservation, in the large scale, makes for interesting comparison with Moore's account of conservation at the small scale. Neither book is available in hardback.

Moore's book is in two parts. Part I describes the eight acre property and its surroundings; tree and wood planting schemes; the making of the Mere and the ecological consequences in terms of species colonisation of woods, fields and water, especially by butterflies and dragonflies since the property was bought in 1960. Part II widens out to discuss nature conservation strategy in Britain, in which Moore was a key player over much of the past half century. There are appendices on practical matters about establishing nature reserves, lists of birds and scientific names, plus interesting suggestions for further reading and a helpful index. The book includes a dozen text figures and maps to show changes at Swavesey, 36 excellent colour plates, some black and white photographs, nine tables of statistics and lots of delightful vignettes by the author. I know of several people in Scotland who have done much the same as Moore, planting up paddocks and digging ponds, and I am sure that they and others will not only enjoy reading about the Swavesey project but also be stimulated (if such work is not already in hand) to emulate the author in the punctilious recording of his efforts and the ecological results. He describes how the Butterfly Monitoring Scheme ("one of the most enduring and successful indicators of changes in the status of wild animals in Britain") was first tested during Moore's lunch breaks when working at

Monks Wood and how similar simple techniques can be used to monitor changes in dragonfly numbers.

This is what makes the most favourable impression: that Moore has taken the trouble to write it all down, both his successes and failures. Perhaps, depending on one's own experience, one may need to overlook a certain naïvety regarding some of the planting; or perhaps it is that in Scotland there has been so much planting, there have always been people and examples close at hand from which to learn about what and what not to do. Also, our soils and wetter climate are generally better for tree establishment than in the awful clays of Cambridgeshire, occasionally subject to long periods of drought and major sapling death, as happened at Swavesey.

There are two reasons for reading the Rothschild book. First, notwithstanding the several excellent recent histories of nature conservation in Britain, none has the benefit of being written by the daughter of the person who – more than anyone else – initiated the idea of nature reserves in Britain. Thus the first four chapters have a personal immediacy that is both interesting as a commentary on the movers and shakers of Edwardian Britain, although ultimately very sad. Nathaniel Charles Rothschild died tragically in 1923, aged 46, and thereafter all his efforts at creating the Society for the Promotion of Nature Reserves pretty well went into abeyance until after World War II. However, Rothschild left a tremendously important legacy: a list of 280 proposed nature reserves in the United Kingdom. How the list was made and by whom is described in detail; also the principles and peculiarities for selection and exclusion. The authors conclude that, with all their limitations and oddities, the Rothschild list of desirable reserves was a milestone in the history of nature conservation in Britain. There are about 100 photographs, a third in colour, a bibliography and an index.

The second reason relates to the book's main purpose: to examine what became of the 182 English proposals, beginning – for each site – with an outline of their original character. More than half the book is devoted to these historical pen sketches and, although it is a pity that for reasons of time and space, similar details for the sites in Scotland, Wales and Ireland could not be included, the authors judge that their conclusions relating to the sites in England “convey a good idea of what has happened to wild habitats in general over the past eighty years.” Chapter 5 summarizes the authors' findings regarding the fate of the 182 English sites and chapters 6 to 8 consider loss of species, the influence of the list in the broader development of nature conservation in Britain and how to make progress in today's very different conditions when, as well as climate change and other major environmental alterations, “top scientists seem to be more concerned with outer space and black holes than with the sad reality that on this planet we are fast losing our wild animals and plants”.

From the authors' assessments, aided by lots of other ecologists named in the acknowledgements, the fate of the 182 'Rothschild Reserves' in England is:

- Little or no loss: 19
- Less than 50% loss: 84
- More than 50% loss: 58
- Total loss of most or all of site: 21

These figures, they suggest, will surprise no one. What may surprise is the main reason for the losses: not urban development as Rothschild had anticipated, nor agricultural intensification, land drainage, afforestation or pollution but rather *neglect*. In brief, the heart of the story is that because most of the proposed sites were in early stages of plant succession (and often this is what made them of worthy of conservation) inaction has generally led to a diminution of their value.

And so to return to Norman Moore's book. In the later chapters he discusses what he sees as wrong with present national conservation strategies. In his typical quiet style he provides a thought-provoking alternative commentary to the Rothschild book. Especially, Moore is concerned that British programmes of nature reserve acquisition appear to be losing momentum. However, acquisition is not enough and the two books come together in considering that brutally hard reserve management problem, conservation of a state of change. At the Mere, Moore recognises that the future problem of how to maintain the ideal mix of dragonfly species. He knows that, while a splendid nature reserve has been created, future *neglect* will be its end.

Thomas Huxley

Smith, P.M., Dixon, R.O.D., & Cochrane, M.P. (2002). *Plant Life of Edinburgh and the Lothians*. 545pp. Edinburgh University Press. ISBN 0 7484 1336 6 hbk. £25

Plant life of the Lothians is an impressive volume with a history which must be understood in order to appreciate the book. This history, which is centred around the 'Botany of the Lothians' project, is fully explained in the text, but does not appear until Chapter 12. However, I feel its true importance is reflected by considering it at the beginning of this review.

The book is the culmination of a challenging project envisaged by Dr P.M. Smith and initiated by the Botanical Society of Edinburgh (now the Botanical Society of Scotland, B.S.S.) in 1981. The project was entitled 'The Botany of the Lothians' and its aims were threefold:

- a) to engage the membership of the B.S.S. in some fundamental research activity that would be of value to Scottish society and would increase the knowledge of the plant life of Scotland;
- b) to involve as many members of the B.S.S. as possible in a field project, regardless of initial knowledge and skill;
- c) to disseminate as widely as possible knowledge of, delight in and respect for the flora.

This far-sighted recognition of the value of shared effort and expertise in stimulating interest at both the amateur and professional level resulted in more than 300 people becoming involved in recording the flora over the best part of two decades. I salute the organisational skill which defined the

project's framework and maintained interest over such a long period, producing at the end a book which will indeed be 'of value to Scottish society'. It would have been much simpler, though much less rewarding culturally and socially, for a small group of trained people to do the job themselves. The project organisers successfully resisted this temptation.

The records resulting from all this activity are combined with the records collected by the vice-county recorders for the Botanical Society of the British Isles (B.S.B.I.) to produce Chapter 13 entitled 'Flora of the Lothians' which is the core of the volume. It comprises 206 pages of notes and computer generated maps covering the Pteridophytes, Gymnosperms and Angiosperms of vice-counties 84, 83 and 82, and is edited by the B.S.B.I. VC recorders, J.Muscott, D.R.McKean and E.H.Jackson. In this Flora, most species are represented by maps which show distribution on a tetrad basis, and species density within the 1km x 1km square which was randomly selected for recording within that tetrad. Each map is supported by text giving information about the native or introduced status of the species in the Lothians, and also notes on the 'status' of the taxon within the whole of the Lothians (rare, scarce, local, widespread or common based on the percentage of filled squares). Ecological preferences follow, then comments about the occurrence of the taxon in the three vice-counties. The coverage is admirable, though two aspects could cause difficulties for the user. First the scale of the maps makes the shading used to indicate density within the squares difficult to distinguish unless light is excellent or eyesight is particularly acute. Secondly the use of the word 'status' to define distribution density is at first sight confusing since elsewhere it is often used in the sense of native, colonist etc., as in *The Island of Mull* (Jermy & Crabbe 1978). However, the meaning is clearly defined in the preceding chapter and is consistent with its usage in 'A Bryophyte Flora of the Lothians' (Chapter 9). In general, the editors of Chapter 13 are to be congratulated.

The 'Flora of the Lothians' is immediately preceded by chapters covering the history of higher plant recording in the Lothians, and the background and structure of the present Flora. Thus Chapters 10-14 form a stand-alone unit of 254 pages: roughly half of the book.

Chapter 9 is entitled 'A Bryophyte Flora of the Lothians' edited by D.F.Chamberlain. Recording has been much less intensive here and most of the modern recording has been done by D.F. Chamberlain and D.Long over a period of 30 years using a 10km grid. No maps are included but the 10km squares in which the species occur are listed, together with distribution status and ecological notes. The resulting account gives a comprehensive picture of the present situation, albeit at a lower level of resolution than for vascular plants, and will be a useful basis for future recording. This chapter is in itself another 'stand-alone' unit.

Other groups of plants in the Lothians are also covered: the stoneworts in Chapter 6, the seaweeds in Chapter 8 and the

lichens in Chapter 9. The resolution of recording is much lower in these accounts, though the individual expertise of the authors of the chapters is readily apparent, and perhaps other botanists will rise to the challenge of recording in these groups. The same comment applies to the two other treatments of 'honorary' plants covered by this book, namely the microfungi and the macrofungi. The daunting list of 1,238 species of macrofungi listed by R.Watling is made relatively digestible by the way the author has placed information in an ecological context, but the intellectual challenge is enormous!

The introductory chapters cover geology and soils, the fossil and pollen record and the history of human influence. Following the core chapters of plant records are further chapters which discuss and summarise inferences on habitats, distribution and ecology, phytogeography, land use, and ethnobotany. All of these are interesting, though it would have been helpful if consultation could have ensured that the phytogeographical categories used matched those used in the *New Atlas of the British and Irish Flora* (Preston, Pearman & Dines 2002).

This book is a collaboration between 22 authors, and benefits from the wide range of experience and expertise which their contributions represent. Conversely, it suffers from disparate styles and some discontinuity. In general, however, it is a very valuable contribution to Scottish botany and sets a high standard for future local Floras.

Ruth Ingram

DATES FOR THE DIARY

Friday 17 January – Integrated Habitat System Scottish Launch – Perth Museum, 13.30 – 16.00

See separate advert. This SERC seminar in association with BRISC is free but prior booking essential. Contact somerc@iname.com (Sue Custance-Baker) to find out if there are any spaces left.

Tuesday 21 January – BRISC NBN Seminar – Perth Museum, 10.00 – 16.30 – For the full programme see separate advert. The event is free but prior booking essential. Contact Alan Cameron at 01786 474061 or email brisc@btevc.org.uk

Tuesday 11 February – Symposium on the future of conservation in Scotland – hosted by Centre for Conservation Science (Stirling University) and sponsored by SNH – at Stirling University, 10.00 - 16.00. See separate advertisement below.

Saturday 22 February – BRISC Annual Conference and AGM – The Burrell Collection, Glasgow, 10.00 – 16.30
Cost is £10 for members; £15 for non-members; concessions for students. A booking form – and programme is included with this mailing.

Tuesday 25 February – Second Scottish Biodiversity Forum – Conference Centre, Heriot Watt University, Riccarton Campus, Edinburgh. Registration before 14 February £25. For booking form please contact Caroline Demarco, Scottish Biodiversity Forum, Scottish Executive, Victoria Quay, EH6 6QQ Tel 0131 244 6540 or email biodiversity@scotland.gsi.gov.uk

**Programme for BRISC/NBN seminar
Tuesday 21 January – at Perth Museum**

Please contact Alan Cameron as soon as possible if you wish to attend (see below for contact details)

10.00 Registration - coffee/tea
10.30 Welcome Anne-Marie Smout (BRISC) / Mark Simmons (Perth Museum)
Chairing the morning session: Alan Cameron (BRISC Development Officer)
10.35 Alan McKirdy (Head of Natural Heritage Data Unit, SNH) on *"The NBN's relevance to Scotland and to SNH"*.
10.50 Oliver Grafton (NBN Access & Accreditation Officer) on *"NBN data mobilisation: issues and management"*.
11.20 Andy Brewer (NBN Technical Liaison Officer) on *the "NBN Gateway"*
12.00 Discussion
12.30 Official launch of the BRISC Development Officer project
12.50 Lunch – light buffet

Chairing afternoon session: Anne-Marie Smout (BRISC)
13.30 Geoff Johnson (NBN Co-ordinator, SNH) on *how the NBN is being progressed within SNH and Scotland*.
14.00 Paul Harding (Head of Biological Records Centre, Monks Wood) on *"National Schemes and Societies and the NBN"*.
14.30 Bill Butcher (Somerset Environmental Records Centre and Chair of the National Federation for Biological Recording) on *"Learning from the NBN Pilot Project in SW England"*.
15.00 Patrick Cloughley (Biodiversity Information Team Leader, Countryside Council for Wales) on *"Building a strategy for biological data management in Wales"*.
15.30 Discussion - chaired by Alan McKirdy (SNH)
16.15 Tea / coffee and Dispersal

BRISC's Office details:

Alan Cameron
Development Officer
Balallan House, 24 Balallan Park
Stirling FK8 2QD
Tel/fax 01786 474 061
email brisc@btev.org.uk

Deadline for the next issue of *BRISC Recorder News* is 15 March 2003

**All material, preferably in electronic format, to
Anne-Marie Smout, Chesterhill,
Shore Road, Anstruther, Fife KY10 3DZ
Tel 01333 310330 Fax 01333 311193
Email amsmout@aol.com**



ANNUAL REPORT FOR 2002

Summary - 2002 was a most positive year for BRISC and it is a great pleasure to present the annual report. Membership was up and stood at the end of the year at 138. The finances are under control and fairly healthy, though we are yet again looking for a new treasurer to replace Mark Simmons. We managed to obtain grants to appoint a full-time Development Officer - initially for three years, and work to implement the BRISC Strategic Plan, agreed by members at the previous AGM, progressed a pace. A fully furnished office with computer, telephone, answering machine, fax and email was set up in close association with BTCV Scotland. The BRISC website was redesigned and brought up to date; the LRC email forum was invigorated, and a number of useful events were organised. I would like to thank all the committee for their most valuable input and various contributions to the year's successes.

Development Officer's post - In January we received confirmation from the Esmée Fairbairn Foundation that our grant application towards the post of a three-year Development Officer had been successful, and by March Scottish Natural Heritage agreed to provide matching funding. The post was widely advertised and out of a strong field of applicants Alan Cameron was appointed to take up the post on 10 June. On the recommendation of the Esmée Fairbairn Foundation, a special arrangement was agreed with BTCV Scotland to act as Alan's employer, to ensure that monthly expenses, such as salary, national insurance and pension, would be paid promptly, thus avoiding any difficulties that could arise for BRISC in being temporarily stretched beyond its limited resources.

A Management Team to direct the Development Officer's work programme was formally set up, consisting of three BRISC committee members (Lesley Brown, Paul Kirkland, and BRISC's treasurer (Jon Mercer till he resigned, then Mark Simmons), David Jamieson represents BTCV Scotland, and for SNH Jeanette Hall followed by Geoff Johnson. Anne-Marie Smout was elected chairperson. The Management Team met in July and October, and received reports on work progress.

Top priority for the Development Officer's work programme in the first six months was to work closely with Scottish Local Records Centres, resulting in Alan contacting all of them and visiting most LRCs personally to gather information regarding their management, staff, equipment, data holdings and backlog, partnership support, and development priorities. A report based on the consultations: "Summary of Local Records Centres' development priorities in Scotland", including 16 recommendations to further the establishment of a fully functioning LRC network for Scotland, was produced in October and presented to the SNH Natural Heritage Data Unit. Following reorganisation within SNH, BRISC's

main contact has moved from the Environmental Audit Unit in Edinburgh, to the newly established Natural Heritage Data Unit based at Battleby. Alan McKirdy heads the Unit, assisted by Geoff Johnson, newly appointed National Biodiversity Network Officer for SNH. Geoff kindly agreed to be co-opted onto BRISC's committee in place of Jeanette Hall.

A Workshop for LRC managers and staff was organised by Alan in September and hosted by Fife Environmental Recording Network (formerly Fife Nature) at Fife House, Glenrothes. A "Report on BRISC LRC workshop" was subsequently circulated to all participants and is available electronically to anyone interested. A paper setting out the functions of a 'standard' LRC (included in the Report), which is based closely on one that has been prepared by the National Federation for Biological Recording for the National Biodiversity Network Trust, was agreed in principle by the LRCs present and subsequently circulated on the discussion forum.

Other events

- The 2002 Annual Conference held at Dundee University in early March, was well attended with seven interesting and varied speakers on the subject of 'Habitats and Species'.
- Two seminars were held in May on the software *Recorder 2000*, one in Stirling hosted by CARSE, the other in Aberdeen hosted by NESBReC. BRISC had been fortunate in securing the presence of Stuart Ball, who demonstrated a number of helpful new features to be included in the promised update. Stuart advised participants on improvements to be included in the new release Recorder 2002, and also outlined far-reaching technical developments within the National Biodiversity Network Gateway. Our gratitude goes to JNCC for their support in making these seminars a reality.
- Also in May, BRISC assisted Trevor James, National Schemes and Societies Project Officer in organising a NBN seminar at Battleby, Perth, to address issues relating to Biological Recording in Scotland. The morning had speakers from BRISC, Fife Nature, SNH, National Museums of Scotland and the NBN Trust, with the afternoon given over to three workshops on different themes.
- BRISC took a stand in the Biodiversity Tent at the Scottish Wildlife and Countryside Fair at Vane Farm 31/8 - 1/9, and among other things displayed material supplied by LRCs. A number of 'Source Books' were sold and many Grid Reference Readers handed out free. Alan Cameron manned the stand with help from Anne-Marie Smout. This was BRISC's first presence at this event and a great many people came to see us, though only one person joined on the day.
- Finally in December, a visit was arranged to the internationally famous herbarium at the Royal Botanic Garden Edinburgh, where a small group was guided by Douglas McKean, Curator of British Flora at the herbarium, who took us through the history of the Garden and the herbarium, and demonstrated how material is

collected, identified, preserved and stored, as well as discussing some of the problems involved. All events were covered in more detail in *BRISC Recorder News*.

Publications

- *BRISC Recorder News* was published quarterly during the year and copies mailed out to all members. Each issue contained one or more major articles on particular taxa or important issues, as well as reviews of books considered to be of interest to members. The newsletter is BRISC's main contact with members and tries to cover relevant news and updates, including information technology. Back issues are available for downloading from the website at www.brisc.org.uk
- A Grid Reference Reader was produced, grant-aided by SNH, and included with the July mailing. This was very favourably received and has subsequently been used widely to advertise BRISC and our activities. Members wishing more grid readers should contact Alan Cameron at brisc@btcv.org.uk.
- Work on a directory of "Scottish Natural History Societies and Allied Groups", to be a companion volume to the 'Source Book', was under way throughout 2002. All information had been gathered and the text finalised by the end of October, but because the volume became much bigger than anticipated, printing was delayed until more money could be found. A grant application for £600 has gone to the Russell Trust. If successful, it is hoped to have the final product available for sale at the 2003 Annual Conference and AGM.
- *A Source Book for Biological Recorders in Scotland* is still selling, albeit in small numbers, mainly to people south of the Border, who decry the lack of a similar publication for England. Remaining copies have been reduced to £2.50 each (£2.00 to members), with £2.50 p+p.

Bumblebee survey - The text, keys, and illustrations to aid identification were extended and improved with the assistance of Murdo Macdonald, and more than 60 survey packs were sold during the year, most sales following presentations to local groups by Anne-Marie Smout. The keys, illustrations, both drawing and photographs, as well as helpful text, were made available free on BRISC's website, and a fair amount of activity was reported from this section of the website. Nevertheless, returns from the survey have been slow with only a small percentage returning forms. It is hoped to make a bigger impact in 2003.

The LRC email forum became more active, with Alan Cameron and Julie Bett encouraging LRCs to share common problems and promote a climate of mutual help. The Recording and Computer Skills email groups were used only on a couple of occasions, and much more use could be made of these including by individual members.

Representation on national bodies is an important part of BRISC's work. We endeavour to represent the interests of

the Scottish recording community as best we can. BRISC has representation on the following bodies:

- **The National Biodiversity Network Local Records Centre (NBN LRC) Steering Group**, which meets four times a year, usually in London, to discuss issues relating to the NBN and LRCs and make recommendations to the NBN Trust. Anne-Marie Smout represents BRISC's views. Alan Cameron has also attended two workshops run by NBN's Policy and Projects Advisory Committee to set NBN policy on metadata standards and to draft the NBN's next 5-year Business Plan.
- **The National Federation for Biological Recording** – our sister organisation. BRISC is co-opted to the Council, which meets four times a year, usually in London, to discuss all issues relating to biological recording. Bill Butcher, who chairs NFBR, is also a Trustee of the NBN and consequently well placed to keep Council members up-to-date with developments. Representation is shared by Alan Cameron and Anne-Marie Smout
- **Scottish Biodiversity Forum** – Formerly the Scottish Biodiversity Group, held a consultative 'forum' at Battleby in February 2002, open to any member of BRISC. A Scottish Biodiversity Strategy was invited by the deputy Environment Minister, Allan Wilson, and a number of workshops were subsequently organised with several BRISC members and committee members attending. BRISC has responded to the first draft Strategy, stressing the need to support monitoring, data collection and better data management.

In addition BRISC is a member of **Scottish Environment LINK** - a partnership of 31 voluntary bodies with an interest in the environment. LINK focuses on how best to influence politics in Scotland to the benefit of the environment. Anne-Marie Smout and Brian Boag attended various meetings and seminars and lent BRISC's support and signature to a number of letters to the Scottish Executive and public statements put forward by LINK. A 'congress' of LINK partners was held at Pitlochry in October attended by Brian Boag and Anne-Marie Smout, to discuss how to exert influence for the forthcoming election to the Scottish Parliament. Brian also attended LINK's Agricultural Task Force meetings.

BRISC Committee - David Beaumont (RSPB), Julie Bett (FERN- formerly Fife Nature), and Jon Mercer (Borders BRC) joined the committee as from the AGM. Ann McKillop agreed to be co-opted to the committee in July. Jeanette Hall (SNH Environmental Audit Unit) stood down from the committee in August, following a change of job within SNH, and Geoff Johnson (SNH Natural Heritage Data Unit) agreed to join the committee instead. Jon Mercer had agreed to take on the post of treasurer, but circumstances outside his control prevented this, and Mark Simmons generously stepped into the breach once more. My personal thanks to all the committee members for their support and for their substantial contributions to making 2002 so successful.

Anne-Marie Smout
(Chair of BRISC)