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# Recorder News

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The initial survey (1991-1993) was financed by the then Scottish Office and co-ordinated by BRISC, and involved The Scottish Crop Research Institute, Scottish Agricultural College, National Museums of Scotland, and a number of Universities. The results acted as a benchmark as to the situation at that time, but changes have occurred in the last 10 years and we now know a lot more about this alien. The data collected from the initial survey showed that it was first spread between botanic gardens, nurseries and garden centres, and then infested domestic gardens, and only in the 1980s did it get into agricultural land where it is still only rarely found.



New Zealand flatworm, adult and egg

## THE NEW ZEALAND FLATWORM SITUATION IN SCOTLAND: AN UPDATE.

Interest in the New Zealand flatworm is over a decade old, and to some extent it is now receiving less attention than it did. The reason for this is probably many-fold: the uniqueness of the type of organism in Scotland, its weird ways of reproducing and feeding, the fact that it could withstand starvation by degrowing, etc., caught the imagination of the general public. However, what is certain is that the problem has not gone away but is still increasing, albeit slowly.

Publicity surrounding the New Zealand flatworm was increased when 'Tomorrow's World' ran a national survey (MEGALAB) and 'Blue Peter' had an item on it. At this stage, in 1994-1995, records were coming in from throughout Britain and, since this did not fit BRISC's remit, I took over as coordinator of the Scottish records and Dr. Hugh Jones, Manchester University, took over collating the English records. Inquiries increased with over 20 being received some days. Since then I have received well over 100 records per year. However, when there is publicity, numbers of records can increase dramatically, e.g. at the Scottish Flower Show held at

Ingliston in June 2001, the Scottish Crop Research Institute had a stand informing the general public about the flatworm and I collected over 120 new records.

The geographical spread of records now covers the whole of mainland Scotland and many of the islands including Skye, Coll, Harris, Lewis, Orkney (3 islands), Mull, Arran and Shetland. There has been international recognition of its importance with the OECD (Organisation for Economic Co-operation and Development) convening a meeting in Christchurch, New Zealand, in 1998, and a number of invited papers have been given, e.g. to the Ecological Society of America in 1999. More recently (June, 2001) the New Zealand flatworm was given prominence at the 150<sup>th</sup> Anniversary of the Glasgow Natural History Society's symposium on alien species. It was also the sole topic at a two day meeting, which included delegates from Europe, held at Scottish Agricultural Science Agency, East Craigs, Edinburgh.

The infestation of agricultural land in Northern Ireland has increased dramatically over the last 10 years, with 3 out of 72 farms being infested in 1991, while in 1999 it was 42 out of 62. In Scotland very few farms (13) were known to be infested in 1991-1993 and we still do not know if this figure has dramatically increased as in Northern Ireland. However, there is an area near Dunoon where infestation seems to have been present for many years. The area covers over 50 fields on five farms, and virtually all the fields have been infested with the New Zealand flatworm. Detailed examination of the flatworm and earthworm infestations in six of these fields shows that there are still many earthworms in the wetter areas of the fields where water-logging can occur. An explanation for this is that the flatworm may have initially eaten out virtually all the earthworms and caused the soil to become waterlogged. Earthworms, being better adapted for wetter soils, have then reinvaded these areas but the flatworms have not. It would seem as though the flatworms may have limited their own local distribution by indirectly destroying the habitat best suited for them.

Unfortunately there is strong circumstantial evidence to suggest that the flatworm in this area has been responsible for the eradication of moles. According to retired farmers in the area, they had problems with moles after the Second World War but now none can be found in any of the 50-odd flatworm-infested fields, while moles are still plentiful in other similar areas free of flatworms. Another small glen has seven fields with flatworms and no moles, while another seven fields have moles and no flatworm.

The impact of the New Zealand flatworm on other mammals which sometimes feed on earthworms, e.g. badger, fox and shrew, as well as birds, has not been and is not being investigated. There is anecdotal evidence

from Northern Ireland that birds might be affected. For instance, infested fields can be detected by the fact that, since there are significantly fewer earthworms, seagulls do not bother to follow the plough in these fields. There is no research being done into the impact of the flatworm on agricultural productivity.

The present research, financed by SEERAD, has concentrated on the biology, ecology and molecular studies of the New Zealand flatworm. The results of laboratory experiments at the Central Science Laboratory in York have clearly defined the relatively narrow temperature thresholds where the New Zealand flatworm can exist. It cannot survive below  $-2^{\circ}\text{C}$  or above  $23^{\circ}\text{C}$  for any length of time. These factors could limit its geographical spread if it ever got established in continental Europe, and also mean that temperature could be used to control it by, for example, raising the temperature of containerised plants before they are planted out into gardens.

Molecular work in Northern Ireland, using samples from New Zealand, England, Ireland and Scotland, would suggest that there have been multiple introductions into Britain. In Scotland, three new 'earthworm species' of flatworms have been found in the last five years. One of these, the Australian flatworm, had previously been recorded from England, while another, *Arthurwendyus australis*, is known from near Dunedin. However, another species, which is white/creamy in colour and similar to the common New Zealand flatworm in size, was described from near Edinburgh and named *Arthurwendyus albidus*. It is obvious that it has been introduced from New Zealand but since it has not been found there, we do not know where it has come from. There are over 100 species of flatworm in New Zealand, many of which I have tested there and which are known to be earthworm feeders.

In the last 10 years we have seen flatworms become even more widespread in their distribution in Scotland. However, all is not gloom as we know a lot more about the flatworm's biology, and garden centres and nurseries seem to have got their act together and by good hygiene, etc., have reduced the percentage of wholesale outlets infested from 27% in 1991-1993 to less than 8% in 1998. This means that the most probable means of spread is the exchange of containerised plants by neighbours, relatives or friends.

Unfortunately there are still no ways of eradicating it once it has become established, and investigations into environmentally friendly ways of controlling it, e.g. the use of nematodes, has not proved successful.

Answers to crucial questions as to what impact the New Zealand flatworm will have on our agricultural productivity, soil quality, wildlife, and the environment in

general are not known, and as yet there is no research being undertaken into these topics. However, it can be safely assumed from what we do know that any impact on Scotland's biodiversity will not be beneficial and therefore we must keep trying to slow down its spread both within and between countries.

I am still very keen to have new records of the flatworm and would ask anyone who has them to contact me.

Brian Boag,  
SCRI, Invergowrie, Dundee, DD2 5DA,  
tel 01382562731,  
email:- [bboag@scri.sari.ac.uk](mailto:bboag@scri.sari.ac.uk)

### FROM THE CHAIR

Your committee has taken an important step to try and obtain funding for a three year Development Officer to assist BRISC in achieving the action points set out in our Strategic Document (copies of the agreed version are available on request from me). Money towards such a post has already been promised by Scottish Natural Heritage, and we are now in the throes of applying to the Heritage Lottery Fund for the rest. Assessing HLF grants takes its time, and we are unlikely to hear for at least six months, but here is hoping!

A third of you replied to the questionnaire mailed out with the last newsletter. Thank you to everyone who took the time to reply. The vast majority was happy for names and addresses to be published in the newsletter. Consequently, a list has been included with this mailing. Only names have been published for those who did not respond. About half of the replies indicated that people wanted to join a subgroup, though many of those who did, wanted to join more than one group. The launches of the three subgroups are covered elsewhere in this newsletter, but it should be stressed that there is no time limit on joining. You only need to contact the liaison person of the group to join.

The bumblebee surveys are ready for distribution. They cost £2.50 for the full list of bumblebees, and £1.50 for the garden survey pack. There was a brisk sale of these packs when I took them to the Glasgow Natural History Society's symposium in Glasgow 15/16 June. Please send a cheque, made out to BRISC, when ordering. We are still planning to make the material available on BRISC's website as well as photographs of the different species, once we have sufficiently good photographs to hand.

There are plans to have a joint event with Butterfly Conservation. Many of us missed the launch of the magnificent Millennium Atlas, which took place down south, so BRISC has been lobbying for a Scottish celebration. Provisional date is Monday October 29<sup>th</sup> at Perth Museum. Further information and booking form

will be mailed out by Butterfly Conservation in due course.

As members will know, The Wildlife Trusts have for some years championed the LRC side of the National Biodiversity Network. Sara Hawkswell masterminded a three year project, 'Linking LRCs', with funding from the Esmée Fairbairn Foundation (formerly Charitable Trust). This has now come to an end and with it Alan Cameron's post as Support Officer in Scotland. Alan is currently tying up loose ends down at The Wildlife Trusts office at Newark, and has consequently had to leave the committee. His energy and straight thinking will be sorely missed!

A number of useful publications have come out of the Linking LRCs project, based on pilot schemes, workshops, and consultations over the three years. The latest volumes are 'Running a Local Records Centre' in two ring-binders, 'A Proposal for an Accreditation System for Local Records Centres', 'The NBN Gateway and LRCs: How can they complement each other?', 'Local Records Centres and marine data: guidelines on data management' and last but not least 'A Vision for Local Records Centres in Scotland', putting forward a recommendation, based on wide consultation last autumn, that a network of 14 LRCs should cover Scotland. All reports make interesting reading and individual copies can be obtained from The Wildlife Trusts (tel. 01636 677711, email [info@wildlife-trusts.cix.uk](mailto:info@wildlife-trusts.cix.uk)) and the editor of this newsletter would be delighted if any members wanted to review any of these or start a debate in these pages.

Finally I would like to draw attention to the briefing notes below, on LINK's meeting with Scotland's First Minister. To my mind, this is just the kind of representation which is needed on behalf of environmentally minded groups like BRISC, and completely justifies our membership.

Anne-Marie Smout

### SCOTTISH ENVIRONMENT LINK Briefing note for LINK member bodies and others on LINK meeting with First Minister, May 2001

Following the resignation of Sam Galbraith as Environment Minister (March 2001), a number of LINK bodies signed a letter to Scotland's First Minister (which they published), which registered serious concern at the rumoured intention to discontinue a ministerial portfolio for the environment in Scotland. These organisations were subsequently invited to meet with the First Minister (May 21, 2001). Discussion covered the concern about portfolios, commitment to the environment, and ways in which NGOs and the Executive could work together in future to establish a policy dialogue.

The First Minister gave reassurances about his personal commitment to the environment, his appreciation of the importance of such issues for the Executive and his desire to see environmental perspectives reflected in all government departments. He indicated an intention to develop these points in a public forum at an early opportunity and to begin to show how the Executive will implement an environmental strategy. He suggested a review meeting with LINK bodies in the autumn of 2001, as part of an ongoing relationship between the Executive and LINK, or its member bodies.

LINK bodies were invited to follow up the meeting by setting out how this agenda might be progressed.

In doing so, LINK addressed the nature of policy dialogue as well as some specific issues, reporting that recent experience had shown a disappointing lack of access to ministers, a culture of institutional thirlage within the Executive to perceived traditional, mainstream (economic) interests (e.g., industry, agriculture, and fishing industry), and an apparent hostility to environmental interests in some parts of the Executive. LINK also flagged up the resistance in recent years from the enterprise network in Scotland to the real requirements of sustainable development.

LINK indicated that capacity for environmental NGOs to help bring about a change in attitudes had been inhibited in the three years prior to 2001 by the marked loss of forums for debate and influence - citing the Forum on the Rural Environment, Rural Forum, the Scottish Environmental Education Council and the Advisory Group on Sustainable Development as examples - and observing that persons reflecting the interests of environmental NGOs rarely seem to be included in advisory groups and quango boards.

Noting that this had taken place within a social context which had seen a growth of environmental awareness amongst other interest groups, a general recognition of the interdependence of environmental and economic and social dimensions, increasing public awareness of the links between health, poverty, environment and social welfare and the rising influence of the consumer, LINK bodies made the case for the environmental voice to be heard in policy debate.

LINK's 'structural' advice to government, to remedy the problems and build on the new civic awareness, was to:

- Establish structures for routine policy dialogue exchanges with civil servants, in areas which should include agriculture, education, development, health, enterprise and lifelong learning
- Seek NGO nominations to advisory bodies, agencies and quangos (e.g. visitscotland, Enterprise Boards, Consumer Council, agricultural think tanks and ministerial advisory groups)

- Ensure that Ministers regularly engage with representatives of key bodies and attend their major events/conferences
- Add sustainable development responsibilities to the professional in-service training and induction programmes for civil servants
- To ensure a more engaged relationship between eNGOs and Ministers, including a greater frequency of meetings
- Develop a trend of involving NGOs in informal consultation at the formative stage of policy development (e.g. marine protection, fisheries policy, climate, forestry and agriculture strategy) particularly where the NGOs are leading the agenda, and also in view of demonstrable commitment on the NGOs' part to observe confidentiality
- Identify where new relationships which feature praise and support from the NGOs, as well as critique, can be established.

Short-term policy opportunities which LINK bodies suggested the Executive might pursue included:

- Resource use: giving clear signals on how Scotland would move to a more sensitive use of land, air and sea resources, consistent with meeting the scale of challenge required by sustainable development; demonstrating how enterprise and environment can work together as a strategic objective rather than a matter for isolated pilot projects; improving significantly on recycling practice, particularly in view of Scotland's position close to the bottom of the European league; indicating how resource consumption would be decoupled from economic growth.
- Sustainability: ensuring as a priority a First Ministerial speech on the environment and sustainable development to send encouraging signals, outlining the action and progress which Ministers see as necessary in Scotland, the Executive's role in this, and the Executive's explicit commitment to a Scottish Ministerial presence at the World Summit on Sustainable Development in 2002.
- Quality of life: acknowledging that those living in economic impoverishment are also likely to be those living in environmentally and socially degraded circumstances, and shifting away from dismissal of the environment as marginal, to its inclusion in mainstream social justice concerns. Establishing indicators which demonstrate that government policy and action recognise the links between quality of life, health, housing, transport and economic opportunity in Scotland. Involving LINK member bodies in the integrated policy development which this entails.
- Legislation: addressing concerns within LINK and wider, on the extent to which Part 1 of the current

draft land reform legislation departs from recommendations made by the Access Forum two years ago, and supported then by Scottish Natural Heritage and sportscotland. Ensuring further dialogue with stakeholders between the end of the consultation period and publication of the Bill, including a discussion between NGOs and Ministers. Introducing the proposed wildlife legislation in autumn 2001, in order to modernise the existing legislation and make it relevant to Scotland's real needs.

## REPORTS FROM SUB-GROUPS

It is early days yet, but some activity has taken place for each of the proposed groups. The real success of these groups rests with the membership. To join a group, simply contact the liaison person whose email address is given here. Telephone number and postal address can be found on a separate sheet enclosed with this mailing

### LRC GROUP:

A well attended first meeting of the BRISC LRC network was hosted by Fife Nature in Glenrothes on 17th May. Two workshop sessions looked at the scope and form of the group and how the group could be consulted and express views on LRC matters in Scotland. Discussions were wide ranging and explored the professional development of LRC staff, information exchange and strategic issues. As a result of the meeting an email discussion list has been set up, it is hoped to run a training event and there will be an annual meeting. Contact for this group is Mark Simmons [museum@pkc.gov.uk](mailto:museum@pkc.gov.uk) (Mark Simmons).

### RECORDERS GROUP

An email list has been compiled based on the returns of the questionnaire, but no formal launch of this group has yet taken place. The bumblebee survey has been advertised to the group and it is hoped that there will be a good take-up, and that members will want to communicate with each other. We just need to get going. Good ideas are welcome! Contacts for this group are Paul Kirkland [pkirkland@butterfly-conservation.org](mailto:pkirkland@butterfly-conservation.org) and Anne-Marie Smout [amsmout@aol.com](mailto:amsmout@aol.com)

### COMPUTER SKILLS GROUP

Everyone in this group has been contacted by Andy to ask what kind of training they may be looking for. A course on 'Recorder 2000' is planned for the autumn, and everyone in the group will be advised of this via email. Contact for this group is Andy Wakelin whose email is [andy.wakelin@which.net](mailto:andy.wakelin@which.net)

## THE BRISC WEBSITE

Nowadays it seems like every TV advert and every organisation has a website. However, when you come to

look at some of them you don't get anything more than a simple newspaper advert, but it is 'cool' to have a URL on your printed stationery.

Used properly the WWW is a very effective method of delivering complex content to a wide audience. Sadly, this has been exemplified by the recent Foot and Mouth Disease outbreak. MAFF's site (<http://www.maff.gov.uk>) provided detailed maps of infected areas, updated daily, which allowed visitors to the site to monitor the spread of the infection. It also provided access to large amounts of detailed information about the disease. A very effective use of the technology.

The BRISC website does not have such a need to disseminate real-time information and acts more like a useful reference point for the biological recording community. While the printed quarterly *BRISC Recorder News* acts as the primary point of contact for members, the website acts as an adjunct which contains an archive of information and a live index to other WWW resources. Updates to information that appeared in the 'Source Book' have also been made available on the appropriate sections of the website.

A check of the visitor statistics show that about four people access the site each day and the most popular sections are the News and Links pages with the past Newsletters being very popular. The nature of the Internet means that our hosting company (PlusNet) can log the IP addresses of all visitors. I have looked up a sample of visitors to the site and I find that they are from all over the UK as well as some from Europe and include most of the major ISPs. (In case this worries any of you then I should say that I can only identify visitors at the organisation level. This means your ISP or employer (if you surf at work)).

So far the website provides:

- an archive of past Newsletters
- information on the Scottish Local Biological Records Centres
- contact details of Country Parks and Visitors' Centres
- contact details of National Societies and Recording Schemes
- contact details of National Organisations
- contact details of Book and Equipment Suppliers
- the list of Committee Members
- email contact to Anne-Marie or myself
- a membership form
- the recent questionnaire

Ideas for the future include:

- providing an index to articles in the Newsletters
- providing the sub-groups with their own dedicated content (possibly password protected)
- adding more information from the Source Book

- providing the website on a CD-ROM for those who want offline access

### Other technologies

A fax-to-email service has been set up on 0870 705 2701 for those who don't have email and who want to send documents.

An experimental discussion forum based on email has been set up for the LRC sub-group. We are monitoring its performance and will set up similar forums for the other sub-groups if the LRC forum seems effective.

I am also willing to help any member with computing problems if they can be solved via email (and if I know the solution!).

We are, of course, willing to consider any suggestions from the membership as to future content of the website and other technological solutions to your problems.

Andy Wakelin  
email [andy.wakelin@which.net](mailto:andy.wakelin@which.net)

### Glossary

**IP address:** A unique number assigned to every computer that uses the Internet. Every organisation owns a range of addresses suitable for its purposes.

**ISP:** Internet Service Provider. The organisation that provides individuals with access.

## NEW SATELLITE RECORD CENTRE LAUNCHED TO SERVE LOCH LOMOND & THE TROSSACHS NATIONAL PARK

The Loch Lomond & the Trossachs Park, proposed as Scotland's first National Park, now has a biological record centre based at the Aberfoyle Rangers' Office. CARSE (Central Area Recording System for the Environment), the Stirling-based record centre for the Forth Valley, has established its first satellite record centre on the Rangers' Office's computer.

The satellite centre has the latest 'Recorder 2000' software and is set up so the rangers and other park staff can directly input their own day-to-day wildlife sightings as well as any reports passed on to them by visitors. The information will be downloaded to the main CARSE system for processing and will then be available for use by the staff and other relevant groups.

The largest part of the proposed park area is within CARSE's recording catchment area of Stirling, Falkirk and Clackmannanshire. This includes the Trossachs, the eastern shore of Loch Lomond, Crianlarich and Tyndrum. However, some of the proposed park area extends into

Dumbartonshire and Argyll & Bute. CARSE will also handle these records initially, making them available on request to relevant groups (unless the original recorders specify otherwise). CARSE is registered under the Data Protection Act.

Anyone wishing to contribute records to the proposed Loch Lomond & the Trossachs National Park can do so by contacting the park rangers; via CARSE's online recording sheet on our web site; or directly to me at-

Lesley Brown  
Wildlife Records Officer  
CARSE (Central Area Recording System for the Environment)  
c/o Smith Art Gallery and Museum  
Dumbarton Road, Stirling FK8 2RQ  
tel. 01786-446008  
email [carse@carsec.freeserve.co.uk](mailto:carse@carsec.freeserve.co.uk)  
web site [www.carse.org.uk](http://www.carse.org.uk)



## BIODIVERSITY

THE VARIETY OF LIFE

### SCOTTISH BIODIVERSITY WEEK – 8-16 SEPTEMBER 2001

Following the successful pilot of 'Fife Biodiversity Week' last September, this year a number of LBAP groups in Scotland are running 'Scottish Biodiversity Week'. It is hoped that all LBAP areas will run at least one event to raise awareness of the biodiversity process in their area. Activities will include walks, talks, competitions and practical work opportunities highlighted through the myriad number of LBAP Partners. To date Clackmannanshire, Falkirk, Glasgow, East Renfrewshire, Tayside, and West Lothian have produced a proposed programme of events, with other areas collating ideas.

Each group will be responsible for its own publicity, although it is hoped that the Scottish Biodiversity Group's Press and Media Sub-Group will assist with national press releases and the necessary support to ensure as high a level of coverage as possible.

Jo Lenthall, the National LBAP Officer in Scotland, will be able to pass on contact details of the various LBAP groups involved in the Scottish Biodiversity Week. Please contact her on:

Tel: 0131 311 6512  
email: [joanna.lenthall@rspb.org.uk](mailto:joanna.lenthall@rspb.org.uk)

### SENIOR FINCH KILLED BY CAT

A Danish newspaper reported that a 13 year old chaffinch – ringed as juvenile in West Jutland 21<sup>st</sup> September 1987 – was killed by an English cat as it enjoyed ‘a well-earned rest’ in Norwich. It turned out to have been Denmark’s longest living chaffinch and only a few months short of beating the European record of 14 years, held by a Dutch chaffinch. Chaffinches, like most finches, usually only reach an age of 3-4 years.

AMS

### BOOK REVIEWS

**Sherwood, B.T., Gardiner, B.G. & Harris, T. (Eds.). (2000). *British Saltmarshes*. Forest Text, Cardigan. pp xiii + 417. ISBN 0 95062 076 9 Hardback £45**

Saltmarshes deserve appreciation and understanding. Any book that helps to reveal their influence on the landscape, the richness of their ecology, as well as their role in environmental health is to be warmly welcomed. The communities of diatoms, algae, and flowering plants that hold together the muds around Britain’s estuaries are frequently reduced to fringes of vegetation lying beside biologically sterile sea walls. Even the threat of rising sea levels has not forced universal recognition of the importance of salt marshes in preserving the coastal landscape. All too often areas where salt marshes should flourish are used for so-called ‘reclamation,’ a form of environmental sinning falsely justified by the assumption that any form of coastal dumping must somehow be contributing to the Nation’s shore defence system.

This present volume is not a natural history and catalogue of Britain’s saltmarshes. The editors have instead compiled an almost encyclopaedic work which brings together modern research on all the various aspects of biology which contribute to the ecological health and diversity of saltmarshes. This interface between sea and land is revealed in all its many complexities in terms of hydrology, productivity, stability, pollution and future fate in relation to rising sea levels. Every aspect of the biology is considered from the phytoplankton that bind the surrounding mudflats together, to the plants that consolidate the habitat, as well as the numerous communities of mites, snails, lepidoptera, amphibia and birds that inhabit the marshes and adjoining mud flats.

Much of the impetus for the scientific research that is summarised in this book stems from the declining state of many British saltmarshes. In South East England, studies on the disappearance of saltmarshes began in the 1930s as a result of the loss of inter-tidal *Zostera marina*. Throughout the British Isles the past four decades have seen a reduction and fragmentation of the area covered by saltmarsh. Whether or not there is one specific cause for this habitat loss is at present far from certain. For some saltmarshes in E. England it has been suggested that the

failure of the marshes to regenerate, even when encouraged by the provision of sediment and removal of physical constraints such as sea walls, is due to the grazing activities of the invertebrate fauna. All these questions are among numerous topics carefully reviewed in a chapter on “Biotic interactions in plant communities of saltmarshes,” by Davy and co-authors. Organic pollution and agricultural run-off have been noted for a number of years as causing ecological problems for the natural flora and fauna of low-lying coastal habitats. These negative factors are also considered in two chapters on “saltmarsh erosion in S.E. England” by Pye, and “Historical setback on saltmarshes in the Severn Estuary” by Allen. Also from a historical point of view a chapter by Clifton *et al.* examine how grain size affects the accumulation of radionucleotides in the sediments and their concentration levels as affected by proximity to Sellafield.

Some of these topics have often escaped serious attention in the more usual natural history descriptions of saltmarshes. Even in this book they could be overlooked by the casual reader. In a chapter accurately but intimidatingly entitled “Temporal variability in the critical erosion threshold of saltmarsh and upper intertidal sediments” Paterson and Black present a highly academic discussion of the factors affecting the cohesion between sediment particles in the Skeffling Clays system on the Humber Estuary. Hidden beneath this scientifically worded title lies an important subject which is crucial for the survival of all saltmarshes, namely - what are the factors controlling the microbial activity which excretes the carbohydrate polymers that hold the mud in place, and which are essential in providing stability for the plants to colonise what would otherwise be loose mud?

The chapters which provide long-term historical accounts of change in saltmarshes are particularly valuable. The changing structure and vegetation history of an 85-year old saltmarsh at Berrow in Somerset by A.J. Willis is illuminating for its documentation with maps and photographs dating back to 1921, just eleven years after the inception of the marsh. Another historical account is the extensive review of 25 years of change of Morecambe Bay by Adam which highlights the loss and damage to upper marshes which has risen from sea defence works and greater public use. Also historical in outlook is the account of changes in hydrology and ecology associated with the invasion, spread and die-back of *Spartina anglica* in Poole Harbour, from its arrival in the 1890s to its present decline, raising the question of whether or not a state of equilibrium will be reached or whether there will be repeated cycles of invasion and erosion with their consequent effects on the bird populations.

For those involved in recording specific elements of the biota of Saltmarshes this book presents a very comprehensive integrative review of all the interacting elements which affect both biological and physical

features of these dynamic and varied communities. It could be argued that the pioneer species of salt marshes have often adjusted in the past to changing sea levels and should therefore possess sufficient powers of spatial adjustment and re-establishment to withstand present day changes in their environment. Such an assumption neglects the fact that there are a number of features in the modern coastal environment that have not operated simultaneously in the past and are not directly related to climate change. The uncertainty of how saltmarshes may respond to current environmental conditions emphasizes the need for continuous recording in maintaining vigilance against their slow and insidious ecological deterioration. This present volume should assist the perceptiveness of such recording by providing greater cognisance of the many interactions that exist between the various communities in salt marshes. For this reason alone this book will be an invaluable addition to the library of any biological recorder working in coastal regions.

R.M.M. Crawford

**John Mitchell (2001). *Loch Lomondside: Gateway to the Western Highlands of Scotland*. The New Naturalist; HarperCollins. pp 232. Hardback £34.99; Softback £19.99**

Although collectors of hardback first editions in the New Naturalist series may find that John Mitchell's excellent account of Loch Lomondside is already sold out, rapid ordering may yet secure a softback copy, with its 8 colour plates and over 120 black and white photographs and line drawings. The book is particularly timely because its publication nicely precedes the final stages of government initiatives to create the first national park in Scotland in April 2002, to be called the Loch Lomond and Trossachs National Park. Geographically, this name hints at the difference in area between Mitchell's book and the park: the former concentrates on the catchment of Loch Lomond (from the Fintry and Campsie hills to the East, Dumbarton on the Clyde to the South and Ben Lui and Glen Falloch to the North) whereas the National Park will have a different and wider boundary, taking in all of the Queen Elizabeth and Argyll Forest Parks. Nonetheless, the subsidiary title, *Gateway to the Western Highlands of Scotland*, is a helpful reminder that readers will gain much from the book to enhance not only exploration of the loch and its environs, but also westwards into Cowal. There is a substantial list of further reading and an index.

The thirteen chapters are grouped into four parts: (i) an introductory overview, (ii) the influence of man, (iii) wildlife habitats, communities and species and (iv) conservation: past, present and future. The first part deals with rocks, topography and weather; the second the history of man's occupation, farming, forestry, water supply etc. The third part describes wildlife in relation to major habitats such as the loch itself, the lowland fringe,

woodlands, and muirs and mountains. The writing is both clear and well researched, and enlivened by a wealth of anecdote characteristic of a conversation with the author himself. This is perhaps a book not intended to be read in one go but savoured and sections re-read as particular subjects or places come to one's attention. For example, the chapter on deciduous and coniferous woodlands is of especial interest, because their future management is of such importance for the National Park, and the final chapter provides a succinct account of events over the past hundred years, bringing this important aspect of conservation history as up to date as possible, for developments are ongoing even as this review is being written.

Readers will learn from the Editors' Preface that John Mitchell was the Senior Warden of the Loch Lomond and Ben Lui National Nature Reserves between 1966 and 1994. In the first two years of that period I was still involved in the management of the Loch Lomond NNR and thus at one time worked with John as a colleague, but without foreseeing what thirty years later he would produce. It is therefore particularly pleasing to commend to the readers of *BRISC Recorder News* this excellent addition to the New Naturalist series, from the pen of one of Scotland's most inspirational polymath naturalists.

Thomas Huxley

#### Dates for the diary

18 July 2001 – A grass ID day, especially for rangers. Meet at Plean Country Park at 11.45

8-9 September 2001 Vane Farm Countryside Fai. BRISC may have a stall there.

11-12 September 2001. The state of Scotland's Environment and Natural Heritage. SEPA & SNH's autumn conference at Heriot-Watt University. There will be an excursion on 10 September. Booking form from Helen Forster, SNH, 2 Anderson Place tel: 131 446-2420.

29 October. Joint day with Butterfly Conservation. Details of programme and venue to come.

**DEADLINE FOR NEXT NEWSLETTER IS  
15 September 2001**  
**All material, preferably in electronic format  
to Anne-Marie Smout, Chesterhill, Shore  
Road, Anstruther KY10 3DZ**  
[amsmout@aol.com](mailto:amsmout@aol.com)