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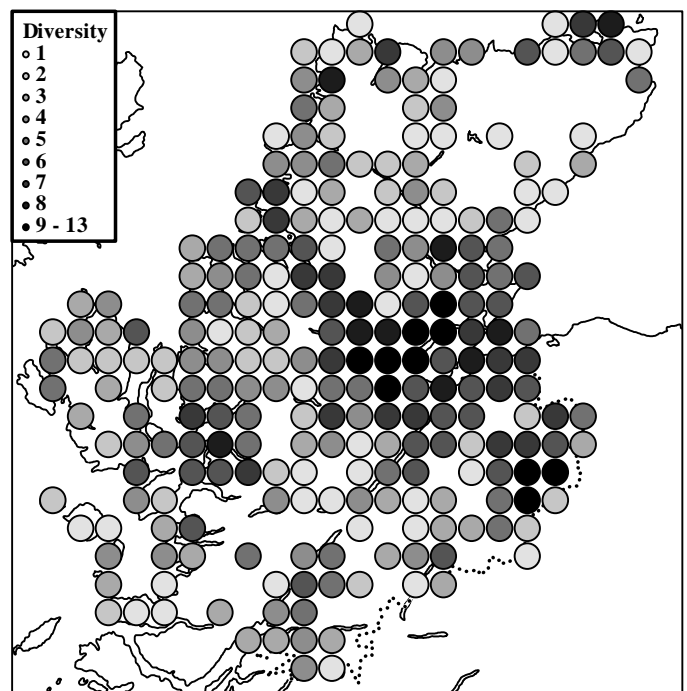
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# Recorder News

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distributions in the ITE/IBRA Atlas, which was based on work in UK and Ireland three decades earlier.

Highland covers a huge area - 351 10km squares are represented, though some of these contain only a little land or are shared with adjacent regions. It also contains a large number of islands and most of the remote and high ground in the country. It is encouraging, therefore, to be able to report good progress to date, with at least one record from 70% of the squares, and 1033 accumulated 'dots'. Two main empty



quarters remain: Lochaber, which we hope to cover this year, and the inland parts of Caithness and Sutherland, which will be a priority in 2003. Then, with two seasons to mop up any obvious gaps, we should be well on the road to comprehensive cover.

Bumblebees have gained a high profile nationally in the past few years as the extent of their decline in many areas, and their importance in the natural community, has been recognised.

## MAPPING BUMBLEBEES IN THE HIGHLANDS

Murdo Macdonald

The Highland Biological Recording Group based in Inverness began a Bumblebee atlas project in 2000. It grew out of casual work I had been doing since 1988, and the aim is to produce a definitive atlas of the 15 species found in Highland, with fieldwork finishing in 2005. This will not only give their current status but also allow comparison with

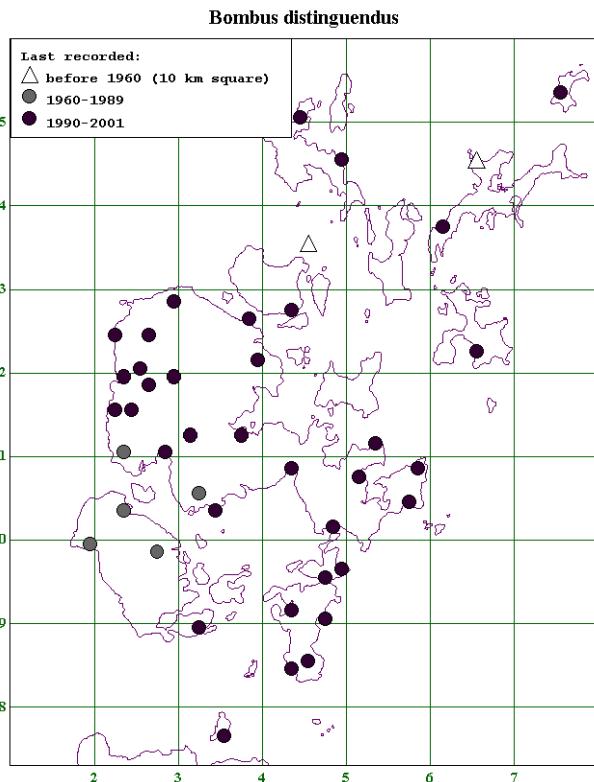
BRISC has instituted its own surveys, and moves are afoot to begin a national (UK) atlas scheme. Highland has certainly set the pace in this. Orkney is well advanced in its own scheme through their Local Records Centre and the enthusiasm of John Crossley (see below). The Shetland BRC has carried out a successful and popular survey of their four species.

It would be very useful if people in other areas of Scotland were to organise intensive mapping schemes for this very interesting group of insects, and to raise awareness of their value and the threats they face.

Murdo Macdonald, Tigh nam Beith, Strathpeffer

**The Great Yellow Bumblebee - *Bombus distinguendus***

This map was sent by John Crossley (see above). It represents the total known records per 10km squares of this bee in Orkney, one of its last strongholds. The black dots show the efforts he and his fellow enthusiasts have made to survey this UK BAP species, which is a magnificent foxy bee with a dark band across the thorax.



Of course, all the other species of bumblebee are recorded as well. John sent me an interesting list of those occurring on Orkney, which shows that if you live in Orkney your garden list might include *B. jonellus* and *B. magnus*. If you would like to help with recording bumblebees on Orkney, John Crossley's address is North Flaws, South Ronaldsay, Orkney KW17 2RW [john@northflaws.fsnet.co.uk](mailto:john@northflaws.fsnet.co.uk) AMS

**NOTES FROM THE CHAIR**

Those of you who were able to attend the conference will be aware that BRISC has been successful in obtaining funding for a three year Development Office, to be hosted by British

Trust for Conservation Volunteers at Stirling. We are extremely grateful to the Esmée Fairbairn Foundation and to Scottish Natural Heritage for their generous and most welcome financial support. An advert for the post has been circulated widely and copy is included with this mailing. The advert is also posted on our website and that of BTCV. Closing date is 3 May 2002.

The annual conference in Dundee was a most successful event, with a good turnout, excellent speakers and very interesting presentations. To provide a permanent record of the event and inform members who could not be present, the talks will be published in *BRISC Recorder News*. Four presentations are included with this issue, and it is hoped to publish the remaining three in the next issue.

You will remember that we asked for SWOT comments on how you feel BRISC is performing (SWOT stands for strengths, weaknesses, opportunities, threats). So far we have only had three returns which, although very welcome, can hardly be fully representative of members' opinions. Surely there must be more people who have comments. There is still time to send them in – to me, please.

A number of bumblebee survey packs were sold at the conference, and we very much hope for a bumper return of records at the end of the year (see above for a challenge from Murdo Macdonald!). The first queen *Bombus terrestris* (Buff-tailed Bumblebee) emerged already mid-March, but we have now (early April) seen *B. lucorum* (White-tailed) and *B. hortorum* (Garden bumblebee), so do look out for 'bumbles' in your garden and elsewhere and do please send in your records at the end of the year. Further survey packs are available from me at £2.50 for the full pack and 1.50 for the smaller garden pack, or check out BRISC website at [www.brisc.org.uk](http://www.brisc.org.uk)

It is increasingly being recognised that gardens provide essential habitats for a number of species, such as bumblebees. Gardens are also great places to extend one's knowledge and identification skills to new groups, and may even provide some great surprises. Last year we added three new species to the Fife list in our own seaside garden – a micro moth (*Yponomeuta padella*), a bee (*Osmia rufa*) and a wasp (*Ectemnius cavifrons*). The moth was caught in a light trap, whereas the other two were found dead – ideal for packing off to experts for identification. The bee and wasp are two of the many species expanding northwards.

Digging ponds and planting nectar rich flowers in one's garden is the recipe for creating good wildlife habitat. Our enthusiasm for gardening has, of course, also introduced many 'aliens' into our environment, some welcome, some not so welcome. I was reminded the other day, when reading a leaflet on the important nature reserve at Delaware Bay (of horseshoe crab fame), that our native and useful plants may become 'invasive aliens' elsewhere. The pamphlet talked about the need to tackle some serious pest species, mentioning especially Purple Loosestrife, and Phragmites!

Getting rid of the unwanted alien species can be a very costly business. The campaign of eradicating the Ruddy Duck in the UK has so far cost around £900,000 – 2558 ducks have been

shot, out of an estimated 4565 birds. Will they manage to get them all? Will it become a £10million question?

Subscriptions for 2002/3 are now due and renewal forms are included with this mailing. It would be much appreciated if members could renew promptly, saving us a lot of time and effort. Attached also is a standing order form for anyone wishing to pay their subscription that way. Members who have already signed a standing order will of course not have to do anything and – hopefully – they should not have received a renewal form. To find out how you paid last year, check the membership code on the envelope. If it contains the letters DD you pay by standing order. Please get in touch with Lesley Brown, our membership secretary, if you have any queries.

Anne-Marie Smout

### **MUTE SWAN CENSUS 2002**

Allan & Lyndesay Brown

The Mute Swan Census 2001 was a victim of the foot and mouth disease outbreak and had to be postponed. The census will now take place in spring 2002. This census will repeat those undertaken in 1983 and 1990, with the specific aims of determining the size of the Mute Swan population, quantifying the number of territorial and breeding pairs in addition to the number of non-territorial birds.

The census is organised by the Wildfowl & Wetlands Trust in association with the British Trust for Ornithology, Swan Study Group, and the Scottish Ornithologists Club, on whose behalf we are coordinating the Scottish part of the survey. Survey methods are very straightforward, involving simply counting all swans and noting whether or not the birds are breeding (e.g. with a nest or a brood of cygnets), primarily within the April/May period. The emphasis is on counting non-breeding flocks in mid-April to avoid problems of double-counting through movements between sites.

The survey unit is the 10km square of the national grid, and observers are asked to visit all suitable habitats for Mute Swans within their allocated square or part of a square. Whilst we hope for full coverage for Scotland, some pre-selection of 10km squares has taken place after discussion with the various local organisers, and these squares must be covered as a minimum requirement of the survey. They relate primarily to areas where on-going studies of the Mute Swan can guarantee full coverage: squares which held 50 or more swans in the 1990 census plus any new squares falling into that category since then; all squares occupied in the 1990 census; a random selection of other squares in the more remote areas. It is hoped that this method will result in counting the vast majority of Mute Swans in Scotland.

Given that the population in our own study area of Lothians and Fife has doubled between 1990 and 2000, we anticipate that many other parts of Scotland will show substantial increases since 1990. Consequently, it is likely that the species has occupied many additional territories and developed new flock sites in recent years, some of these sites themselves being new farm ponds and reservoirs not shown on Ordnance Survey maps. All selected 10km squares, therefore, will require to be checked thoroughly. *In Scotland*

*the additional problems of remoteness of sites and lack of observers could hinder the aim of full coverage. Local organisers, therefore, will greatly appreciate offers of help with the census to ensure its success.*

A list of local organisers in Scotland and the areas for which they are responsible can be found at the back of this newsletter. They will be able to allocate an area to cover and provide survey forms and instructions. Please volunteer your services – even if this is just checking your local site rather than a full 10km square, because such data will be invaluable in achieving a comprehensive survey. If you are unclear which local organiser to contact, please let us know and we will direct you to the relevant person. Even if you cannot commit to a specific area, please keep a note of any territorial or breeding pairs as well as April flocks you come across anywhere in Scotland in 2002, and send your notes to us for forwarding to the respective local organiser. All such observations will be gratefully received.

The support and enthusiasm we have received from local organisers suggests that this promises to be the most successful Mute Swan census in Scotland to date, but this can only be achieved with the support of birdwatchers in Scotland. There are several colour-ringing schemes taking place in Scotland and this can add to the interest of the survey and the value of these studies, so please record any rings (colour and numbers/letters) you may see.

We hope for a successful survey and await with anticipation the forthcoming results, which will be published in *Scottish Birds*.

Allan & Lyndesay Brown,  
61 Watt's Gardens, Cupar, Fife, KY15 4UG  
Tel: 01334 656804  
[swans@allanwbrown.co.uk](mailto:swans@allanwbrown.co.uk)

### **A GIANT SQUID CAPTURED TO THE WEST OF SCOTLAND IN 2002**

Douglas Herdson

At 02:00 hours on the morning of 3rd January 2002, the F. V. Marina Polaris hauled up its net at the end of a five and a half hour tow. It was fishing at 57° 49'N 9° 42'W, at the edge off the continental shelf due west of St. Kilda, about 100 miles of the Hebrides. The depth here is 420 fathoms (770 metres) and they were using a twin-rigged demersal trawl. Their catch was around three and a half tonnes of demersal (bottom) white fish. This was mainly Blue Ling, Angler (Monkfish), Black Scabbard, Ling and Hake, less commercially important species included Bluemouth, Ratfish, and one Giant Squid.

The catch was landed at Scrabster in the north of Scotland on 8 January and shipped to J. Charles (Fish Merchants) in Aberdeen. A visiting buyer from Interfish in Plymouth was at J. Charles when the squid arrived and realised that the National Marine Aquarium in Plymouth might be interested. When the NMA heard of this, they were very keen to obtain this specimen, as they had recently bought a forty foot animatronic Giant Squid to go into their 'Creatures of the Deep' exhibit, which will be opening in May 2002. Mr Andrew Charles of J. Charles very kindly agreed that the aquarium could have the

squid and shipped it down to Interfish in Plymouth. On arrival in Plymouth it was transferred to the National Marine Aquarium, where it was examined by aquarium staff with Dr Malcolm Clarke, an international expert on these squid, and Dr Phil Pascoe, of Plymouth Marine Laboratory. It has now been deep-frozen for further samples to be taken at a later date and for it to be preserved permanently.



The person is 189cm (6' 3") tall.

It is a female *Architeuthis dux* and, with a mantle length of 127cm, this specimen is medium sized. At this stage it was found that most of the two tentacles had been lost and the ends of most of the eight arms had been abraded, the eyes had collapsed, and the head and arms had become detached from the main body (the mantle). However, this kind of damage is to be expected and, generally, the specimen was in good condition. Much of the skin had been lost and the general colour was that of the white muscle tissue; the remaining skin showed the pattern of chromatophores (colour cells) which gave it a speckled dark-red pattern. The presence of the nidamental glands identified it as a female but it was not in breeding condition.

When the specimen is defrosted, attempts will be made to extract the statoliths to determine the age of the animal. These tiny bones in the head serve as balanced organs and may show marks, which are probably day rings, when examined under a microscope - in much the same way as most trees have annual growth rings across their trunks.

Tissue samples will also be taken for DNA analysis. There have been nineteen species of *Architeuthis* described but it is unlikely that there are more than seven, and most recent work suggests that there are three species – *Architeuthis dux* in the north Atlantic, *Architeuthis martensi* or *japonica* in the northern Pacific, and *Architeuthis sanctipauli* in the Southern Ocean. However, DNA studies have so far been carried out

on only two specimens, one from New Zealand and one from Newfoundland (Atlantic coast of Canada), and the results so far published show no significant differences between them.

The squid will be carefully arranged and then preserved in formalin. When preservation is complete, it will be installed in a transparent tank and sealed. It will then go on show from May in the 'Creatures of the Deep' zone at the National Marine Aquarium along with a display of squid beaks. It will be the only *Architeuthis* on public exhibition in Britain.

This is believed to be the 25<sup>th</sup> *Architeuthis* recorded in British waters since 1673. Fifteen have been stranded on the shores of the British Isles, nine caught in fishing gear and one found in the stomach of a sperm whale. Of these, eight were on the Irish coast, sixteen off Scotland, and one stranded in England. Fuller details can be found on Dr Martin Collins's University of Aberdeen website at <http://www.oceanlab.abdn.ac.uk/archi/archbrit.htm>

There is a report of a giant squid being caught by fishermen from Aberdeen in 1971, but nothing more is known about this.

**Characteristics of this squid**

- Total length (Tip of fin to ends of arms, tentacles missing) 315cm (but the ends of the arms were abraded so the intact length would have been about 330cm)
- Mantle length 127cm
- Tentacle length Absent (would expect these to be about 400cm)
- Arm length 167cm
- Head length c. 60cm
- beak length 6cm
- Eye diameter 15cm
- Lower Girth about 120cm
- Weight (without tentacles) 53.2kg
- Sex female

On the above data we estimate that the total length including the tentacles would have been at least 5.5metres, and the total weight would have been around 60kg.

Douglas Herdson,  
National Marine Aquarium, 9.01.2002.



**THE NATIONAL MARINE AQUARIUM  
AND RECORDS OF MARINE LIFE**

Douglas Herdson

**Since the National Marine Aquarium (NMA) was founded, and certainly before the Aquarium opened, it has been recognised as a centre for marine knowledge and the public, anglers, scientists, and the media have been contacting us about unusual animals.**

**To use, please photocopy this form or down load from the NMA's website:**

## United Kingdom Marine Fish Recording Scheme

National Marine Aquarium

Marine Biological Association of the United Kingdom

*National Federation of Sea Anglers*

### **FISH REPORT SHEET**

Common Name		Date of Capture/Landing/Sighting	
Scientific Name (if Known)			
Length (cm)	Weight (kg)	Number	Sex
Description of Animal  Specimen Held: Y / N Photograph Available: Y / N			
Identified By		Verified By	
Location		Grid Reference	Latitude & Longitude
Description of Area & Bottom Type		Depth	Tidal State
Fisherman/ Angler / Vessel		Type of Fishing Gear	
Additional Comments incl other animals caught  All records are useful even if incomplete. Information & positive identifications from sightings and fish returned to the sea are also helpful			
Recorders Name :  Address :  Postcode :  Telephone No : Email :		Please return form as complete as possible to:  The Information Officer National Marine Aquarium Rope Walk Coxside Plymouth PL4 0LF Tel: 01752 275216/600301 Fax: 01752 275217  Douglas.Herdson@national-aquarium.co.uk	

DATA PROTECTION ACT: Information entered on this report sheet will be held on a computer database which may be shared within the National Biodiversity Network and with other similar organisations – please tick box if you wish the information to remain confidential

Throughout the last three years we have been regularly receiving telephone reports of strange fish, fish in unusual places, and other interesting marine life. Our receptionists are getting accustomed to fishermen from the market next door or the general public turning up with something in the bottom of a bucket or a rather limp looking plastic bag. Sometimes these are interesting animals for the aquarium, but the dead specimens all help us to learn more about our marine life. The NMA encourages all reports of unusual fish and other marine life and also wants records of sightings or strandings of turtles, whales, dolphins, sharks, fish, and even jellyfish.

Most of our information comes from fishermen who spend their working lives at sea, but we also received lots of useful data from anglers, sailors, yachtsmen, divers, birdwatchers, coastguards, and the general public. It is helpful if the reports contain as much information as possible - date, species or description of the animal, number, size and behaviour of the animals, other creatures around, depth, type of shore or seabed, name of the boat, name and telephone number of the observer. All are useful, and any information is better than none.

Reports so far have included the first British record of a Saddled Sea Bream, the first and second English records of Short-snouted Seahorse, the first Small-scaled Scorpionfish in Britain for over sixty years, and the first Silver Pomfret from inshore waters. In 2000, we collected together 215 reports, covering 78 species of fish from British waters. Particular attention was paid to **Ocean Sunfish** (*Mola mola*) of which we received 51 records for the year, bringing our total to over 300 individuals sighted in such varied locations as Mull and the Thames Estuary. For 2001, the emphasis stayed on Sunfish but we are also particularly keen to monitor the progress of **Triggerfish** (*Balistes capriscus*). We seem to be receiving fewer reports of this species: is this because it is less common or has it become so common that no one reports them? **We need all reports of these species, please.**

We would very much like to increase the reports from anglers who see so much of our fish life. We are not just interested in record fish (though these are of interest); we especially want to record unusual areas, unseasonable occurrence, and unusual behaviour. How far north are Black Sea Bream found? Am I imagining it, or are Red Sea Bream scarce in the South West now? Fish do not have to be caught to be reported. A report of a Basking Shark swimming passed your boat, or a clearly recognisable Lump sucker swimming by in mid-Channel, are useful.

Great, but what do we do with all these data? The NMA acts as a collecting centre for information working closely with the Marine Biological Association and *MarLIN*. We are currently running a database for the Sunfish data, which will be extended to include other species as time allows. All the information received is passed on to the relevant county Biological Records Centres and to the Marine Biological Association, which acts as custodian for the records, as well as Seaquest and other national marine databases. All these systems will soon be linked over the Internet by *MarLIN* into

a national database. It is envisaged that the NMA will manage a **United Kingdom Marine Fish Recording Scheme**, so that every single report we receive will become part of the national picture. The role of the NMA is to be the public face of marine science in Britain, directing material in to the scientific community and passing information out to the public. Occasionally, for conservation or other reasons, records will have to be kept confidential, but this will be exceptional.

Why do we bother? Well, we find it exciting that a 750lb Bluefin Tuna was caught close to Plymouth and hope that others are fascinated as well. However, the real reason is that there is still much to be learnt about British marine life. We need more information so that we have an impartial factual basis from which to tell when changes occur and provide a sound background for further investigations. These data may be able to demonstrate the effects of fishing, pollution or global warming.

**We are totally reliant on our informants, who are adding so much to our knowledge of the sea. So next time you come across something that might be unusual, please get in touch with Doug Herdson, the Information Officer at the National Marine Aquarium (01752 275216/600301), who will be interested to hear from you. We are anxious to hear of any unusual sea life. If we cannot identify your strange-looking specimen, we know the experts who can. We are never bothered by being asked about common species either. We would rather check out 50 common fish than miss one rare one!**

Copy of a report form has been included here and more are available on request. Reports can be faxed through to Doug (01752 600593) or sent by e-mail: [douglas.herdson@national-aquarium.co.uk](mailto:douglas.herdson@national-aquarium.co.uk)

REMINDER - we particularly want reports of:-

Triggerfish  
Sunfish  
Sea Breams  
Scorpionfish  
Shad  
Wreckfish  
Comber  
and anything else unusual!

## NEW ATLAS OF THE BRITISH AND IRISH FLORA

Editors: C.D. Preston, D.A. Pearman and T.D. Dines  
Barbara Sumner

This stupendous publication will be the culmination of the 'Atlas 2000' project. This millennium project has involved collaboration between the Botanical Society of the British Isles (BSBI) and the Centre for Ecology and Hydrology (CEH), under contract to the Department for Environment, Food and Rural Affairs. The aim was to produce a new atlas of all the vascular plant species in Britain and Ireland, using the 10km square as the mapping unit. Since the previous atlas (the BSBI *Atlas of the British Flora*, 1962), many additional records have

accumulated, including data for many alien species which have become widespread in our flora. The Atlas 2000 project set out to gather all these records together in a single database and to add to them the data from four years of fieldwork from 1996 to 1999. Many volunteers contributed to the fieldwork, but the lion's share of the work fell to the BSBI Vice-county Recorders and to Dr. Trevor Dines, the Atlas 2000 Organiser. Dr. Chris Preston and his team (Biological Records Centre, Monks Wood) have compiled the database and the maps. Mr. David Pearman (BSBI) has been active on all fronts. In the New Atlas, 2412 species will be described in text and maps. Introductory chapters will describe developments since the 1962 atlas and show coverage for the New Atlas. Changes in range for each species will be shown by measurements in comparison with the 1962 data. Current status will also be given. There has been much delving into history to decide whether species are native or alien and, if

the latter, whether archaeophytes or neophytes (introduced pre- or post-1500 AD). Accompanying the book will be a CD-ROM consisting of the contents of the book plus maps and briefer text for an extra 942 alien species (as covered by Stace's Flora). The expected publication date is 18 July 2002, and there will be an official launch on 17 July, provisionally arranged for Kew. The probable retail price of the book will be £65, including the CD-ROM (which will not be available separately). There will be a discount for BSBI members and, probably, an offer also for members of other societies. The publisher is Oxford University Press.

Barbara Sumner

[It is rumoured that there may be pre-launch copy on view at the BSBI's AGM at the Royal Botanic Garden Edinburgh on 11 May 2002  
Ed]

### What is Treefest Scotland 2002?

The idea is to organise, in 2002, a year-long programme of events, celebrating Scotland's trees, woods, and forests, and their contribution to Scotland's natural and cultural heritage and economic well-being. In any year, many people organise events in the woods and forests or get involved in activities which promote woods and forests. The intention in 2002 is to co-ordinate all these activities and 'badge' or advertise them to as wide an audience as possible.

#### The objectives of Treefest Scotland 2002 are to

- To raise people's awareness of the range, nature, history, uses and benefits of Scotland's trees, woods and forests.
  - To increase people's use, knowledge, understanding, appreciation and enjoyment of Scotland's trees, woods and forests.
- A broad outline structure for initiating and co-ordinating activities has been set-up: Six regional groups have been organised to cover Scotland. These will meet locally and plan their own events/initiatives/promotions using existing events/contacts/resources wherever possible. These will feed into a National Steering Group, made up of representatives from each regional group plus key partners from other national agencies and organisations, who will in turn co-ordinate actions and resources on a national level including national publicity and promotion.

For further details visit [www.treefestscotland.org.uk](http://www.treefestscotland.org.uk)

Syd House

### THE BILL BRACKENRIDGE MEMORIAL PROJECT Wetland Enhancement at Broadwood, Cumbernauld

Brian Thomson

Work is now progressing well on habitat improvements on raised bog and wetland by Broadwood Loch, on the western outskirts of Cumbernauld.

In his time as Ecologist with the Conservation and Greening Unit of North Lanarkshire Council, Broadwood Loch and its surrounds was a favourite haunt of Bill Brackenridge, and together we planned for further enhancement of its habitats. Indeed, on the day before his untimely death in winter 2000, Bill was out walking the ground at Broadwood drawing up a Phase 1 habitat map, and considering future biodiversity initiatives.

Broadwood Loch was created in the early 1990s by the Cumbernauld Development Corporation as an ambitious amenity scheme, with the open water to act as a backdrop to the new housing at Blackwood, the Broadwood Stadium, and the developing Business Park. In the process, significant bog and grassland habitat was eliminated as large volumes of peat and mineral soil were excavated, and then further habitat lost as this spoil was spread 1.5 to 2m deep over half of the raised bog remaining. This then quickly

developed a coarse vegetation dominated by *Juncus effusus* and *Deschampsia caespitosa*, with only sparse elements of traditional bog vegetation including some *Sphagnum spp* and *Calluna*, having a toe-hold in the area. It is this highly degraded area which has been the main focus of habitat diversification.

This winter, contractors have been working to a plan designed to form a series of larger ponds, smaller pools, ditches and mud-scrapes. The biodiversity objectives of the Project include:

- To create breeding and feeding refuges for Teal, Mallard and Little Grebe,
- To eliminate public access to the shoreline in this area and form pools and mud-scrapes for the significant population of wintering Snipe and nesting waterfowl, including Mute Swan and Great-crested Grebe,
- To create pools and ditches on mineral soil and on peaty soil to diversify breeding Odonata populations. Target species are Four-spotted Chaser (*Libellula quadrimaculata*), Azure Damselfly (*Coenagrion puella*), Emerald Damselfly (*Lestes sponsa*), and Common Hawker Dragonfly (*Aeshna juncea*), all of which have been recorded in suitable habitats in North Lanarkshire,

- Pools and ponds also as habitats for greater amphibian populations. Target species are Common Frogs and Palmate Newts,
- To diversify the vegetation by establishing a fine-grass heath community over the excavated spoil from the larger ponds, and on wetter ground by introducing wetland and waterside plants including Ragged Robin, Yellow Flag Iris, and Purple Loosestrife,
- To introduce specific vegetation which may in the future attract and support breeding butterfly populations. Target species are Marsh Violet for Small Pearl-bordered Fritillary (a North Lanarkshire LBAP priority which used to occur at Broadwood before its habitat was lost by the Loch formation); Cuckoo Flower for Orange-Tip; Sheep's Sorrel for Small Copper; and Birds Foot Trefoil for Common Blue,
- On the adjacent intact raised bog to remove invading birch and pine seedlings, and block drains as and where required.

The pond work is completed, wildflower seed mixes are being sown this month, and volunteer conservation days are being planned for April and May to help plant up the hundreds of potted wildflowers that are now ready.

Then on a day in June the intention is to have an Open Day to launch the Project with a site visit followed by a buffet lunch at Broadwood Stadium. All those who donated to Bills' Memorial Fund, or who help practically, will be invited, and we look forward to meeting you all again.

If anyone would like further details on the Project, or wish to help on one of the wildflower planting days, please contact me at [thomsonb@northlan.gov.uk](mailto:thomsonb@northlan.gov.uk) or by phone on 01236 780636, or Jenny Storey, Ecologist.

Dr Brian Thomson  
Conservation and Greening Manager  
North Lanarkshire Council

## PROCEEDINGS OF THE ANNUAL CONFERENCE AT DUNDEE, 2 MARCH 2002

[Four papers presented at this event are published here and it is hoped to publish the remaining three in the next issue. Ed.]

### HABITAT RECORDING AND MONITORING: THE SCOTTISH COASTAL EXPERIENCE

Stewart Angus

#### Introduction:

Much biological recording to date has concentrated solely on the geographical distribution of species. Such studies can be of great value in detecting changes in distribution with regard to issues such as pollution or climate change, but such information requires a context to enhance its value: that of habitat. Habitat classification is clearly a prerequisite of recording, and there is currently no nationally agreed system; indeed, many habitats are poorly defined and this obstacle must be overcome before any protocols can be set up for recording. These problems are examined in the light of recent experience of Site Condition Monitoring of SSSI in Scotland, and in relation to European legislation.

#### What is a habitat?

In dictionary terms, a habitat is the place in which an organism occurs and with which it interacts, incorporating biotic and abiotic factors. The problems arise when names and systems are applied to these habitats.

Before you ask

***How do I record habitats, ask Why do I want to record these habitats?***

#### How is a habitat identified?

Indicator species or environment? Substrate importance? How are habitats separated – on the ground and on the habitat map (broken lines usually used for transition, solid lines for clear boundary but this leads to problems if GIS used).

#### NCC, SNH and other systems

**1970s:** NCC Phase I/II/III surveys (did not cover N Scotland) (Phase I 90 types)

**1980s:** NCC Habitat surveys of SSSI, Upland Vegetation Survey, ITE Sand dune survey, ITE Woodland Census, ITE Land Classification (1km grid), NCC Saltmarsh Survey of Great Britain

**1990s:** Natura, MLURI Land Cover Scotland 1988 (LCS88, 127 main classes) and National Vegetation Classification (NVC), SSSI Site Condition Monitoring, National Countryside Monitoring Scheme (NCMS), Sand Dune Vegetation Survey of Scotland/Great Britain

**2000s:** National Biodiversity Network, GIS availability, Site Condition Monitoring

#### National vegetation Classification (NVC)

The NVC was designed to classify vegetation types, not habitats, but as a nationally agreed system clearly ecologically linked to habitats, has merits in this respect. This is offset by the high level of skill required and the poor coverage of some habitats by the NVC itself.

#### Problems and issues

Ephemeral habitats (e.g. strandline), mixed and mosaic habitats, linear habitats (difficult to map) vertical habitats (which might also be linear, poorly shown on aerial photographs and maps), 3D habitats such as woodland, important habitats covering small areas (target notes), habitats *change*: separation of natural and unnatural change – where to draw the line?

Photography (fixed point), geo-referencing – can be difficult to fix location (GPS), metadata (information about your information – *very* important). Data storage and retrieval of crucial importance yet often overlooked – your results have to be *easily* available 20 years after the survey (and preferably beyond).

#### Conclusion

Habitat classification, recording and mapping must be based on the reason for the need, and this will determine

methodology. Even NCC/SNH has had difficulties with this, and some sites have several generations of maps. NVC provides detailed, repeatable system that is often already mapped, but some deficiencies, and not at all accessible for the uninitiated. New technology offers great opportunities – GPS greatly aids navigation on site increasing map accuracy. GIS (computerised overlaying of maps and databases) enormously versatile but high skills base and expensive datasets required. In many cases some level of habitat information will already be available from SNH or one of the NGOs

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### **PHOTOGRAPHIC RECORDING OF ECOLOGICAL INFORMATION:**

R.M.M. Crawford

Photographing plants requires colour if detailed and definitive records are to be obtained. Recent advances in the preparation of figures for publication now make possible increased use of colour illustrations even in low-cost publications and it is therefore appropriate to consider what aspects of the environment lend themselves to photographic recording. Photographs can never be a substitute for real data as the information they contain are essentially qualitative and do not lend themselves readily to statistical examination. Nevertheless, photographs can contain important information, particularly with regard to long-term and insidious changes in the environment. In producing a photographic record cognisance also has to be given to the fact that we are recording for the benefit of future generations. We have therefore to record phenomena that can be seen and understood by people who may live in an age with a totally different perspective with regard to environmental interpretation. It is therefore important to distinguish between physical realities and human interpretational concepts. The former are durable while the latter are ephemeral and also invisible to the camera lens. We should not expect future naturalists to have any understanding or even sympathy with current concepts such as plant communities and their classification and every effort should be made to photograph real natural occurrences.

Phenomena that lend themselves to photographic recording are essentially boundaries, where the presence or absence of dominant species modifies the appearance of the landscape. Examples include various coastal zonations, dune and machair formations, treelines, species patterns in bogs, and forest understoreys, grassland invasions by rushes, heaths or trees. Repeated photography shows that in some cases significant alterations can take place in less than a decade while in others the zonations can be remarkably stable. Photographs of machair in Watersay taken by Robert Adam in 1922 reveal a potentially eroding dune front which, when re-photographed 80 years later, showed relatively little change in position due to active cycles of regeneration, thus giving the dunes remarkable powers of homeostasis despite an appearance of habitat fragility (Crawford, 2001). Other areas, however, give clear evidence of change as in the

spread of wet heathlands and the eutrophication of mires as seen in some recent advances of *Glyceria maxima* in dune slack vegetation (Studer-Ehrensberger *et al.*, 1993). Increased paludification can be observed in the more oceanic regions of Scotland (Crawford, 2000) as well as at the tundra-taiga interface in North America to the east of the Hudson Bay and in Russia in the West Siberian Lowlands (Crawford *et al.*, 2002).

A systematic examination of historical photographs containing ecological information continues and previously recorded sites are being re-photographed and examined for stability or change. Eventually it is hoped to produce a comprehensive volume covering key areas in Scotland and possibly neighbouring North Atlantic regions. In the meantime some preliminary findings are available in the publications listed below.

- Crawford, R.M.M. (2000) Ecological hazards of oceanic environments. *New Phytologist*, 147, 257-281.
- Crawford, R.M.M. (2001) Plant community responses to Scotland's changing environment. *Botanical Journal of Scotland*, 53, 77-105.
- Crawford, R.M.M., Jeffree, C.E., & Rees, W.G. (2002) Paludification and forest retreat in northern oceanic environments. *Annals of Botany*, (in press - November).
- Studer-Ehrensberger, K., Studer, C., & Crawford, R.M.M. (1993) Competition at community boundaries: mechanisms of vegetation structure in a dune-slack complex. *Functional Ecology*, 7, 156-168.

R.M.M. Crawford, Plant Science Laboratory, Sir Harold Mitchell Building, St Andrews University, *St Andrews KY 16 AJ*.

### **THE USE OF ENVIRONMENTAL DATASETS HELD AT THE MACAULAY INSTITUTE WITHIN ENVIRONMENTAL STUDIES**

J.H. Gauld

Two of the more important environmental datasets held at the Macaulay Institute are the soils database and the Land Cover for Scotland (LCS88) dataset, both of which play a pivotal role in both research and consultancy work.

The soils database incorporates a range of soils information collected by the Soil Survey of Scotland between 1943 and 1987. Of fundamental importance are the 1:63 360 soil maps which cover most of the arable land in Scotland. The basic mapping unit is the soil series, a grouping of soils developed on a similar type of parent material and with a recognised sequence of soil horizons and uniform characteristics. Soil series are assigned to soil associations according to the type and composition of parent material. Maps at 1:63 360 scale have been created after extensive fieldwork and interpretation of air photographs. A national soil map at 1:250 000 scale has also been published; a series of seven maps with associated soil memoirs. An inventory of soils based on a soil profile described at each 5km intersection (circa 3,200 profiles) and described and analysed at 10km intersections (circa 820 profiles) has also been created and has proved invaluable when a statistical appraisal of soil conditions has been required.

Detailed soil analysis from over 6000 soil profiles sampled over a 40-year period are also used extensively in research work.

The soils database has been interpreted for both environmental and agricultural applications, the most important of which is probably the land capability for agriculture work, which has been used extensively in a planning role. Current work to estimate the carbon stock of Scottish soils has only been achievable with a comprehensive knowledge of soil characteristics, in particular the mapped and analytical data.

The Land Cover of Scotland (LCS88) is a true census of the land cover of Scotland based on a systematic air photograph interpretation of 1:24 000 scale photographs taken in 1987 and 1988. A detailed classification incorporating single features, for example arable land, coniferous woodland and mosaics was created for this exercise and the interpreted data has been digitised to create a fully computerised database which can easily be interrogated to provide both map and statistical information. A validation exercise was undertaken to appraise the interpretation.

Extensive use has been made of the LCS88 database to address a range of environmental issues. 'Look-back' studies in which LCS88 data has been systematically compared with similarly interpreted photographs taken in 1964 and 1946 has been invaluable to assess change within the countryside. Two such studies have been undertaken to date, one in the Cairngorms, the other within the Central Valley of Scotland.

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## **A DRAGONFLY'S WORLD – THEIR NEEDS AND OUR KNOWLEDGE**

Charlotte Murray

**On a global scale, our knowledge about the needs and requirements of dragonflies varies from very little to a comparatively extensive understanding. There are many species that we know nothing about, as there are large areas from which the Odonate fauna is virtually undocumented. By comparison, our general knowledge about the habitat requirements of British Dragonflies is reasonably comprehensive. Species recording and development of distribution maps have enabled us to gain an understanding of the general habitats that most species use and observations made in the field have allowed us to draw some general conclusions about the habitat needs of British Dragonflies. This information is important. If we wish to manage habitats to conserve dragonflies, we need to know about their ecology, biology and habitat needs.**

### **Our Knowledge**

**We are aware of the basic habitat requirements of all British Dragonflies. For habitats to be suitable they must meet the ecological needs of all stages of the life cycle. All British species have aquatic larvae which require unpolluted freshwater. Vegetation plays a pervasive role in the life cycle of a dragonfly and many**

**species prefer waters in which there is abundant growth of aquatic plants. The submerged vegetation supports the larvae whilst emergent vegetation provides emergence supports, resting places and oviposition sites. Adult dragonflies also require places to roost and shelter and as voracious predators they need feeding sites.**

Many of our dragonflies have very catholic tastes and are found in a variety of different wetland habitats. *Ischnura elegans* is probably one of the most versatile species being found in almost any wetland, and exuviae from *Libellula depressa*, which is normally found in well vegetated water bodies, have been found from flooded wheel tracks illustrating the range of acceptable habitats. Often these common species can be pushed into less suitable, suboptimal habitats when there are surplus populations. Dragonflies are generalist predators as adults and nymphs and it is perhaps not surprising that some are so versatile, but it also suggests that, while some habitat features constitute requirements, others are merely preferences.

In comparison, many of our rarer species have very specific habitat requirements and consequently they are restricted by the scarcity of suitable sites. As a result populations are not only isolated, but also become increasingly vulnerable to environmental change. Knowledge about and understanding of the important habitat variables and requirements are vital to allow us to manage habitats effectively for their conservation. For some British species we have gained a more subtle and accurate understanding of their needs, enabling us to manage habitats for them, whilst for others, our knowledge is continuing to improve as research focuses on species ecology. For the remainder, there are many questions that still need to be addressed to help inform and guide effective conservation in the future.

### **Our Lack of Knowledge**

Although we have a good basic understanding of the habitat needs of dragonflies, for most species the fine detail of their habitat requirements, especially in the larval stages is poorly understood. We tend to know more about species that are easy to study and in some cases those that are rare. However, we tend to know less about some species which are difficult to study and record, either because they are elusive or because the places in which they live are hard to study. Furthermore, it is not always possible to make generalisations about the habitat requirements of species that can be applied throughout their range, particularly as many species in Britain are on the edge of their climatic range. Many are restricted to one particular habitat, when in other parts of Europe, where climatic conditions are optimal, they are less fastidious. This has implications for the conservation management of breeding sites. Recording and analysis of habitat variables within a region are likely to be important and will help to guide appropriate management and site restoration.

We possess very little information about the larval requirements of dragonflies. It is difficult to study dragonfly nymphs, particularly as tank studies tend to take a number of years to yield useful results and they are not truly representative of the entire habitat. In the field it is more difficult to see where in an aquatic habitat a species prefers

to hunt or hide or the changes that may occur seasonally, without living underwater ourselves. In general there are still large gaps in our knowledge and the microhabitat requirements are often overlooked.

Little work has been undertaken to assess the ability of dragonflies to disperse and virtually nothing is known about the cues, if any, that allow dragonflies to recognise and select features in the larger landscape. Landscape patterning adjacent to water bodies has been suggested as a cue but further work is required. This could be very important for habitat management on a landscape scale and certainly requires further research, particularly as habitat fragmentation and destruction appears to be an important problem threatening the British Dragonfly fauna.

#### **Case Studies**

Using the White-faced Darter as an example it is possible to illustrate how our knowledge is being used to manage habitats for dragonflies. Studies carried out by naturalists have provided a good insight into the ecology and habitat requirements of the White-faced Darter. Using this information, management has been undertaken at a number of sites in Britain. At Chartley Moss, a National Nature Reserve in Staffordshire, the following techniques have been used to manage the habitat for the White-faced Darter.

1. **Management of the Peatland Vegetation:** - Pine trees have been felled and Birch scrub removed to maintain the open peatland and to prevent successional change and the subsequent drying of the habitat.
2. **Management of the Aquatic Vegetation:** -*Sphagnum* moss will be raked back from time to time to maintain open water in extant bog pools. This is important, as areas of open water are required to elicit egg laying by the female.
3. **Creation of New Pools:** - A number of new pools have been created to provide new breeding sites to encourage the White-faced Darter and to protect it from a possible catastrophe.

#### **Conclusion**

Our basic knowledge about the Needs of the British Dragonfly fauna is good. Beyond this, there is a world that we have entered but do not yet fully understand. For many of the rarer species we must improve our knowledge if their habitat needs are to be met and dragonflies conserved. Recorders can help us to gain this knowledge, especially if people are prepared to provide habitat information on the survey forms, or even take a photograph. Recorders can not only help to answer some of the questions that remain, but can also help to assess how successful management techniques have been, thereby guiding future conservation. Where recorders have a particular interest in a species, their insights can be invaluable. Hopefully in the future, with study and recording, we will gain an even better understanding of the Dragonfly's World.

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## **THE MINUTES OF BRISC AGM, HELD AT DUNDEE UNIVERSITY, 2ND MARCH 2002**

### **1. Apologies**

Apologies were received from Keith Bland, Jeremy Greenwood, Paul Kirkland & Sarah Hawkswell

### **2. Minutes of previous AGM (17/3/01) at Inverness Museum**

These were approved without alteration, proposed by Gordon Corbet, seconded by Thomas Huxley.

### **3. Chair's Report for 2001(Previously circulated with Newsletter)**

AMS highlighted the main points in the report. It was a great pleasure to announce that BRISC had been successful in obtaining funding for a three year post for a Development Officer. This would be covered in more detail under agenda item 7. Work was currently under way regarding a new publication on the Natural History Societies and allied groups in Scotland. The publication, which would be a companion volume to the 'Source Book' (1999) should be available in the Spring of 2002. The Scottish launch of the Millennium Atlas for Butterflies as a combined event with Butterfly Conservation had been a very successful event. It was hoped that there would also be a Scottish launch of the new Botanical Atlas of the British Isles, due to be published in May/June 2002, and details would be published in the next *BRISC Recorder News*. Thomas Huxley congratulated AMS on the high quality of the Newsletter. AMS indicated it was a pleasure to edit and that offer of material for the newsletter, including reviews of books or software, was always most welcome.

Members were asked to complete the SWOT analysis (previously circulated with the January newsletter) which the Committee hoped would prove useful in highlighting key issues for consideration for the next year.

### **4. Membership Secretary's Report**

Membership Secretary, Lesley Brown, gave a breakdown of the current membership. Total members stood at 122 (66 down on 2001)<sup>1</sup> made up of 33 corporate, 83 individual, 10 outside Scotland (and 7 reciprocal)

Members were asked to encourage membership of BRISC wherever possible and to distribute the new coloured leaflets as widely as possible.

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<sup>1</sup> Re-examination of the figures has revealed that the total adds up to 126 and the drop in membership since April 2001 is 40. Still too many, but better than 66 - AMS

## 5. Treasurer's Report (Previously circulated with Newsletter)

The Treasurer, Mark Simmons, stressed the importance of increasing membership, as the subscriptions represent our only regular income and went on production of newsletters and mailing. All projects required grant aid (the new leaflet was grant aided by the Russell Trust, SNH had grant aided the Natural History Society publication and also a Grid Reference Reader, to be widely distributed via LRCs and also included with the next mailing).

MS answered questions from the floor concerning a slight confusion regarding the Balance shown on the accounts. It was a dash, not a minus, which preceded the balance as shown, and although our expenditure had been slightly greater than our income in 2001, our bank account was still healthy (nearly £3000 compared to three years ago when it was only £800).

## 6. Website

The Website Manager, Andy Wakelin, gave a report on the current state of the Website and indicated that it need to be restructured to accommodate the material currently available (notably the bumblebee survey). The change of ISP from PlusNet to Supanames had gone smoothly and should be a considerable saving in costs. Visitor statistics were, on average, 8 per day. Members were encouraged to use the website and make suggestions for further enhancements.

An email forum had been set up for the LRC subgroup, but it was not well used. A discussion forum for Recorder 2000 users could form a useful archive.

## 7. Report on Strategic Document

AMS highlighted the fact that most of the objectives set out in the Strategic Document had been met but four had not been achieved: These were listed in the printed annual report and would be tackled in the coming year:

- The source book to be published on CD – but needed to be updated first
- Guidelines and Good Practice for Recorder 2000 users – this required further discussion
- A Business case for LRCs (foundered due to lack of time (and skills?))
- Marine strategy for BRISC

## 8. Development Officer's post

News of the successful bids to the Esmée Fairburn Trust and to SNH for matching funding was reported to members. Because BRISC has very limited financial resources, the BTCV (British Trust for Conservation Volunteers) will employ the post-holder and provide office accommodation, but direction would come from a small management team made up of BRISC committee members and a BTCV representative. AMS clarified the financial arrangements for this post in answer to questions from the floor: The total grant was about £101,500. Salary £18,500 + pension @9%. Part role of the post would be to look for additional funding for projects.

AMS asked that anyone interested in applying for the post should "register an interest" with the Committee as soon as possible.

## 9. Election of Committee

Three members had left during the year – Alan Cameron, Alison Hannah (& Corrie Cheyne, who had stood in for AH while she was on maternity leave), and Steve Hunt. Mark Simmons had expressed a wish to stand down at last year's AGM, but no new treasurer had come forward. AMS appealed for a volunteer for this important position, and Jon Mercer (Borders BRC) volunteered, proposed by Ross Spalding, seconded by Richard Weddle. Ross Spalding thanked Mark for all his hard work as treasurer over the past 6 years.

Also joining the committee were Julie Bett (Fife Nature), proposed by Mark Simmons, seconded by Gordon Corbet, and David Beaumont (RSPB) who had agreed to be co-opted.

The remaining members of the Committee were elected en-bloc, and AMS thanked all committee members for their commitment and hard work over the year.

## 10. Approval of Auditors

An offer to examine the Accounts was received from Douglas Turner, Drummond, Cook & Macintyre Solicitors. Suggestions for other auditors at a reasonable cost were warmly invited.

## 11. A.O.C.B.

No matters were raised and the meeting closed at 14:15

## IT CORNER

### TWO NEW WEBSITE OF INTEREST:

[www.bto.org/migwatch](http://www.bto.org/migwatch) – started on 1 March 2002 to track the arrival and flow of summer migrants through the country.

[www.nbn.org.uk](http://www.nbn.org.uk) – now takes you to the NBN's completely new site, Of particular interest to readers, apart from the *Recorder 2000* updates, is the recent strategic review of the NBN, carried out by the consultants HEDRA, which can be viewed and downloaded (52pp) from the site – as well as the NBNT's reaction to the review (4pp.) It is a relief to note that the NBNT has rejected the consultant's recommendation to abandon any projects on LRCs and accreditation!

### **Two Recorder 2000 days with Stuart Ball**

- 22 May at Smith Museum & Art Gallery at Dunbarton Road, Stirling
- 23 May at the university of Aberdeen – venue to be confirmed

JNCC has agreed to BRISC's request for Stuart Ball to come up and tell us how R2K really works. We are currently drafting the programme and anyone who would like an input into the topics to be covered should contact Julie Bett or Bob Saville. The choice of two days at different venues was felt to provide more people with the opportunity to attend. People wanting to attend the workshop at Stirling please contact Lesley Brown at [CARSE@CARSEC.freerve.co.uk](mailto:CARSE@CARSEC.freerve.co.uk) or if Aberdeen is the preferred venue, contact Janet Imlach at [Janet.Imlach@aberdeenshire.gov.uk](mailto:Janet.Imlach@aberdeenshire.gov.uk)

### **“ADIT”**

We have received the following email message regarding the 'Adit' software:

'Adit is a small software house specialising in programs for wildlife recording, mapping, species identification, and site management. Our recording software (AditSite) has been in use since 1994, and is currently on version 6. Our map building software (AditMap) has seen recent major improvements, and we are launching AditPlan (site and species management

planning) shortly. If you would like to know more about any of these programs, just visit our website at [www.adit.co.uk](http://www.adit.co.uk)

We have a current special offer price for individual users (recording as a hobby rather than as part of their employment) that includes AditSite, AditMap and AditKey for £51.70 (includes vat and delivery).'

from Paul Griffiths, Technical Director, Adit Limited

[Have any of our readers used this software? If so, would you like to write a review of it for the next issue of *BRISC Recorder News*. We are told it is compatible with NBN standards Ed]

**STOP PRESS: BRISC has just received a CD-ROM ON 'Natural Heritage Futures' from SNH.** Readers will know that the previous issue of *BRISC Recorder News* (no 44) carried an article on Natural Heritage Futures (formerly 'Zones'). It is hoped to include a review of this CD in the next issue. Ed

### **BTO Scotland has new offices & new staff:**

Chris Wernham (senior staff), Andy Wildon (research & surveys), Helen Cameron (admin.)

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## **BOOK REVIEWS**

**Laughton Johnston, J. & Balharry, Dick (2001). *Beinn Eighe, The Mountain Above The Wood*. Birlinn Ltd. for Scottish Natural Heritage. 173 pp. ISBN 1-84158-178-X hbk. £25.00; 1-84158-193-3 pbk. £9.99.**

In 1951 Beinn Eighe in Wester Ross was the first place in Britain to be formally designated as a National Nature Reserve under the National Parks and Access to the Countryside Act of 1949. This book provides a detailed and fascinating account of the reserve's management in the following half century, focussing on a remnant of Caledonian Scots pine forest called the Coille na Glas Leitir. The story involves many of the great conservation personalities of the post-war period, from Professors Tansley and Pearsall, and the early Directors General of the Nature Conservancy, Cyril Diver and E.M.Nicholson, to numerous people in Scotland, such as the first NC Director, Scotland, John Berry, who played such a crucial role in the reserve's acquisition. In many respects, therefore, this book is as much a story about the early years of the Nature Conservancy and debates in its committees, as it is about a particularly splendid piece of Scotland. And in Laughton Johnston, already the author of an excellent account of the management of some National Trust for Scotland properties (*Scotland's Nature in Trust*, 2000, Poyser Natural History, pp 266), and Dick Balharry, one time warden at Beinn Eighe, authorship benefits from skilled ability to sift grain

from chaff amongst voluminous records, combined with lively witness of what actually happened.

The book is therefore well worth buying for three reasons. Firstly, it is a really interesting description of an important NNR, and therefore essential reading for anyone visiting the reserve wanting to understand why it was declared and how it has been looked after over the past fifty years. Secondly, the book describes the considerable discussion, argument, changing policy decisions and management operations in trying to rehabilitate a remnant of Caledonian forest. Thirdly - in a sense an extension of the second reason - the book slots into wider debate and publications about the conservation of woodland habitats, for example George Peterken's *Natural Woodland* (1996, Cambridge University Press, 522 pp.).

In essence, here is a rough summary of a complicated tale. While everyone agreed that the conservation question was how to get more pine trees on the ground so as to ensure that the remnant of the Coille na Glas Leitir had a sustainable future, there was much disagreement about how to achieve this objective. There were two main opposing camps: those who argued for slow, long-term methods of enhanced regeneration and small scale planting and those who wanted to see quick results by large scale planting using standard silvicultural techniques. The story builds to the crucial results of some basic scientific research in the 1980s on regional variation in Scots pine. This showed that the pines of Wester

Ross were of a distinctive race and thus that all planting within the reserve had to be of local provenance. The upshot was that the slow, long-term approach was shown to be the right one and that past work by the quick results fraternity had to be undone.

Woven into the story of the pine woods, there is also an important sub-plot about red deer and the formation of the pioneering Gairloch Conservation Unit. The problem was that, while deer ranged over land having different management objectives, there was no co-operation amongst the land managing bodies. "Everyone had different agendas. The [Forestry] Commission wanted no deer in their plantations at all, the [Nature] Conservancy wanted very few, one estate wanted as much venison as possible, while others were sporting estates wanting a maximum number of stags with large antlers and lots of hinds to produce them" (p.99). How co-operation was achieved in this loggerhead situation, thereby providing a model for others to follow elsewhere in Scotland, is particularly well told.

In the past five years or so, there have been several books about the recent history of conservation in Britain; recent, that is, for those of us who have grey hair. The Beinn Eighe book is a particularly good read because the authors have provided a kind of Wild West story with baddies and goodies; with Donald McVean in a white hat and Beresford-Pierse a black one. However, I suggest that the most important thing for younger readers - and I hope this does not sound pompous - is to keep in mind that all the players were acting roles that were appropriate and sincere in terms of their own particular experiences at the time. The fact that some of them were wrong, even seriously wrong in a few instances, should not lead to retrospective condemnation heaped on their graves. So long as we can learn from past mistakes, even errors have some benefit and the authors have done well to provide a fair and balanced account and to draw from it helpful lessons for the future.

In offering a few concluding remarks, I have to declare an interest. As another regional officer of the original Nature Conservancy, we in South Scotland also thought that we were doing some fairly ground breaking things. Indeed, had I the benefit of Edward Idle and John Mitchell sharing this review (or for that matter most other ROs in Britain), I have little doubt I should hear some loud guffaws at some of the hyperbole about Beinn Eighe being first at this and first at that. Read many of these claims with a pinch of salt. There are other minor things in the early chapters which don't quite seem right but they are mostly trivial. And if there is to be a further edition, please insert the forest plot enclosure numbers into the text. The maps are splendid (except for some letters missing in the name of Loch Clair) but one can not easily identify which enclosure is being described notwithstanding that they have been carefully highlighted and numbered in the maps. There are lots of good photographs; some nice pencil and wash illustrations by John Busby, a glossary of Gaelic place names and a very selective bibliography. The book lacks an index, which is a pity.

Thomas Huxley

**Evans, P.A., Evans, I.M. & Rothero, G.P. (2002). *Flora of Assynt*. Evans & Evans, Calltuinn, Nedd, Drumbeg, Sutherland (IV27 4NN), pp 284. ISBN 0-9541813-0-1 Price £15.00 + £4.00 p.& p (if obtained direct from the authors; e-mail pandievs@aol.com - tel. 01571 833241).**

It is not often a review can begin by stating that the publication under examination sets a new standard. Happily, this is the case with this recent and very welcome *Flora of Assynt*. For too long Scottish Botany has followed the traditions of the dry, classical floras of the past where illustration was considered as merely pandering to the botanically illiterate. The *Flora of Assynt* escapes from these constraints. In this latest Flora we now have a work which uses an abundance of maps and colour illustrations to capture the imagination and increase awareness of floristic riches without neglecting the basic purpose of a local flora in communicating precise information on species distribution and habitat preferences.

Assynt, facing the full exposure of the North Atlantic with its rain-drenched, wind-swept mountains and saturated bogs, presents a challenge to any naturalist. The terrain, and accessibility of this region makes detailed field studies highly demanding in terms of time, energy and logistics. It is therefore all the more remarkable that this volume does not just cover flowering plants, but also includes ferns, mosses and liverworts. Furthermore, species distribution has been recorded in great detail following the decision of the authors in 1988 to survey the area in 2km squares. This precision is very appropriate for Assynt given the complicated and confusing nature of the geology. Those who find complex geological maps difficult to interpret can take much comfort from this Flora, as not only does it include a full page colour Geological Survey map but has also on the facing page a simplified version in monochrome. The reader can thus follow the influence of geology on plant distribution at whatever level of detail is personally appropriate. Nowhere is this more useful than in the various exposures of the rocks of the Moine Thrust 'zone of confusion' which carried the Moine schists northwards over the complex of Cambrian, Torridonian and Lewisian rocks. The locations of the Durness Limestones are also highly relevant. The extent of surface exposure of these calcium rich rocks is sadly limited due to a covering of deep peat over much of the area; nevertheless, they are sufficient to add greatly to botanical diversity as is illustrated by the distribution maps that are given for the occurrence of all the species including bryophytes.

The northern hyper-oceanic oceanic climate of the region is carefully analysed by Peter Kohn and here again, like the geology, Assynt shows how much variation can take place over short distances. At Kerracher, which lies immediately on the southern shore of one of the more northern sea lochs, the winter temperature rarely falls below -3.5C, while inland at Altnaharra, only 80m above sea level, -27C was recorded in the winter of 1995-96. As is carefully pointed out in this chapter, it is not temperature alone that determines the length of the growing season in this hyper-oceanic environment. The excess of precipitation over evaporation and transpiration, means that soils are waterlogged for many months of the year which further reduces the length of the growing season. The cool summers, and relative lack of sunshine results in severe limitations for plant development. Even that hardiest of native

trees, the rowan, does not set seed in many seasons and oak only rarely sets seed. As the author points out, whether or not this will change with climatic warming only time will tell.

A refreshing aspect of the Flora is the avoidance of over-involvement with present-day ecological concepts. The authors throughout the work adhere to recording physical facts: where species grow, past records and current habitat conditions. We are therefore spared having to decipher current mysteries in human ecological codifications (which by nature are ephemeral) such as Plant Life Strategies and National Vegetation Classifications.

In addition to climate and geology, the description of Assynt includes a section on the history of the landscape which is essential reading for a proper understanding of the ecology of this region. Assynt first supported human settlement in the Neolithic with clear evidence of stone-built chambered tombs along the western edge of the limestone outcrops. Curiously, there is no evidence for any permanent human settlement in the Bronze age which coincided in North-West Scotland with a period of climatic deterioration and the growth of peat. Continuous and increasing settlement dates from the arrival of the Celts around 500 B.C., followed during the ensuing 1500 years by Pictish and then Viking Settlements. A well-documented account of the influence on the economy of the region by the Highland Clans, followed by the land-owning families of the 18<sup>th</sup> and 19<sup>th</sup> centuries provides a useful background for understanding more recent changes and their probable effects on the native flora.

The discussion of the vegetation is particularly useful as it highlights the ecology of both the dominant as well as the rarer and botanically more interesting species. The range of habitats from the coast to the mountain tops is considerable and this together with variations in micro-climate and geology creates considerable opportunities for floristic biodiversity. The present survey of flowering plants and ferns recorded a total of 694 species. Examination of the history of recording in Assynt revealed a further 71 taxa. When put in context with the checklist for the whole of the British Flora and allowing for sub and micro-species and hybrids the authors conclude Assynt contains about one fifth of the British flora which is a remarkable number for this cool, northern water-soaked landscape.

Given the hyper-oceanic nature of Assynt it is fortunate that the flora contains an extensive discussion and mapping of the bryophyte flora by G.P. Rothero. This follows the same pattern of treatment as that used for the flowering plants and ferns, discussing the significant species in each of the various habitats as well as providing a history of recording before presenting the results of the present survey which in a database of 13,600 records lists 156 liverwort and 345 moss taxa. Here, as with the flowering plants, individual maps are annotated with numbers of occurrences and habitat type. The volume concludes with a detailed bibliography, a gazetteer, giving the grid references of all places mentioned in the text, and a species index. For good measure, an unbound insert of a colour reproduction of the half-inch Bartholomew map of the area is an invaluable asset for having available wherever it is needed while reading this volume.

The authors are to be congratulated on raising the standard of publication in Scottish Natural History. It is also praiseworthy that the high standard of illustrations and quality of the printed text has been achieved at a remarkably low cost. The quality of production of this present volume should prompt others contemplating publishing contributions to Scottish Natural History to consider what can be achieved. When we compare what is currently available in Scotland with what has already been produced in comparable countries, such as Norway and Sweden with their copiously illustrated regional studies and vegetation atlases, it is apparent that there is still much more that might be done. It must be hoped that the success of this present volume will lead others to follow the example of our Scandinavian neighbours.

R.M.M. Crawford

### Dates for the diary: May – June 2002

- **4-6 May – Bird Survey Techniques Training Course at Kindrogan (£100) contact BTO, The Nunnery, Thetford (01842 750050)**
- **11 May Botanical Society of the British Isles' Annual conference and AGM, at the Royal Botanic Garden, Edinburgh, with special field trips the next day.**
- **20 May – NBN National Schemes & Societies seminar, Battleby – free – contact Trevor James, BRC (see advert at back of this newsletter)**
- **22 May – Recorder 2000 day with Stuart Ball – Smith Art Gallery, Dunbarton Rd, Stirling – free Register interest with Lesley Brown (CARSE) [CARSE@CARSEC.freeserve.co.uk](mailto:CARSE@CARSEC.freeserve.co.uk)**
- **23 May – Recorder 2000 day with Stuart Ball, Aberdeen – free. Register interest with Janet Imlach [Janet.Imlach@aberdeenshire.gov.uk](mailto:Janet.Imlach@aberdeenshire.gov.uk)**
- **6 June – RSPB course on Finches, Larks & Buntings in summer. To be based in Fife. £40 including lunch, teas & coffees. Register interest to Jeremy Roberts, RSPB Scotland, Dunedin House, 25 Ravelston Terrace, EH4 3TP 0131 331 6500 [jeremy.roberts@rspb.org.uk](mailto:jeremy.roberts@rspb.org.uk)**
- **11 June – Managing to be sustainable, a LINK one day conference. Thistle Hotel, Glasgow. Contact LINK 2 Grosvenor House, Shore Road, Perth PH2 8BD email [enquiries@scotlink.org](mailto:enquiries@scotlink.org)**
- **Also advanced notice of Butterfly Conservation's 4<sup>th</sup> International Symposium 5-8 September 2002 at Lancaster University – (see also [www.butterfly-conservation.org](http://www.butterfly-conservation.org))**

**Deadline for next issue of BRISC Recorder News is the June 15 2002.**  
Please send all material (preferably in electronic format) to  
Anne-Marie Smout [amsmout@aol.com](mailto:amsmout@aol.com)  
or by post to Chesterhill, Shore Road,  
Anstruther, Fife KY10 3DZ

## BRISC Committee as by April 2002

Please note that Ann McKillop has been co-opted to the committee since the AGM. It was noted that BRISC had no representation from the West of Scotland, and the co-option of Ann helps to fill this serious gap. AMS

### **Anne-Marie Smout**

#### **Chair, Secretary, Newsletter editor,**

Chesterhill, Shore Road, Anstruther  
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### **Jon Mercer (elected 2002)**

#### **Treasurer**

Scottish Borders BRC, Harestanes Visitor Centre  
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Tel 01835 830306

[j Mercer@scotborders.gov.uk](mailto:j Mercer@scotborders.gov.uk)

### **Lesley Brown (elected 2000, re-elected 2002)**

#### **Membership Secretary**

CARSE, Smith Art Gallery & Museum  
Dumbarton Road, Stirling FK8 2RQ

Tel: 01786 446008,

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### **Andy Wakelin (co-opted 2000)**

#### **Website Manager & computer skills sub-group contact**

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[dave.beaumont@rspb.org.uk](mailto:dave.beaumont@rspb.org.uk)

### **Julie Bett (elected 2002)**

#### **LRC group contact**

Fife Nature, Fife Council, Fife House  
North Street, Glenrothes, Fife KY7 5LT  
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[Julie.Bett@fife.gov.uk](mailto:Julie.Bett@fife.gov.uk)

### **Brian Boag (co-opted 2001, elected 2002)**

#### **Scottish Environment LINK –rep.**

SCRI, Invergowrie, Dundee, DD2 5DA  
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[b.boag@scri.sari.ac.uk](mailto:b.boag@scri.sari.ac.uk)

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### **Bob Saville**

Lothian Wildlife Information Centre,

Room 19, Leith Walk Business Centre, 130 Leith Walk,  
Edinburgh EH6 5DT

Tel/fax 0131 554 6360

[swtlothianrc@cix.co.uk](mailto:swtlothianrc@cix.co.uk)

**Free Gift: - A grid reference reader to all our members!**

With this mailing you will find a small envelope with a free grid reference reader, the size and thickness of a credit card. We hope you will find this useful in helping to read more accurately the grid reference of a site. It comes with two scales, the bigger for the 1:25,000 OS maps and the smaller for the 1:50,000 OS maps. Just place the reader on relevant 1km square, taking care to align the border of the reader's grid with the blue line of the square – and the exact 6 figure reference becomes obvious. Remember to read the 'east-ings' before the 'north-ings'. These grid readers will also be available through your Local Records Centre

BRISC is most grateful to Scottish Natural Heritage for generously financing the production of this reader.

Local Records Centres	Contact as by April 2002	Postal and email Addresses	Telephone
Arran Biological Records Centre	Jane Barker	NTS Brodick Country Park Isle of Arran KA27 8HY	01770-302-462
Ayrshire Biological Records Centre	Gill Smart	c/o SWT, 2 Callendar Rd, Heathfield KA8 9AF <a href="mailto:gillsmart@ayroffice.freereserve.co.uk">gillsmart@ayroffice.freereserve.co.uk</a>	01292-610-529
Central Area Recording System for the Environment (CARSE)	Lesley Brown	Smith Art Gallery & Museum, Dumbarton Road, Stirling <a href="mailto:CARSE@CARSEC.freereserve.co.uk">CARSE@CARSEC.freereserve.co.uk</a>	01786-446-008
Dumfries & Galloway Environmental Records Centre	Jackie Galley	Solway Heritage, Carmont House, The Crichton, Bankhead Road, Dumfries DG1 4ZB <a href="mailto:solwayheritage@solwayheritage.freereserve.co.uk">solwayheritage@solwayheritage.freereserve.co.uk</a> (Jackie Galley)	01387 2237543
Fife Nature	Ross Spalding Julie Bett	Fife House, Glenrothes, Fife KY7 5LT <a href="mailto:Ross.Spalding@fife.gov.uk">Ross.Spalding@fife.gov.uk</a> <a href="mailto:Julie.Bett@fife.gov.uk">Julie.Bett@fife.gov.uk</a>	01592-41-3436 01592-41-3793
Glasgow Biological Records Centre	Richard Sutcliffe Keith Watson	Kelvingrove Museum & Art Gallery, Glasgow G3 8AG <a href="mailto:richard.sutcliffe@cls.glasgow.gov.uk">richard.sutcliffe@cls.glasgow.gov.uk</a>	0141-287-2660 0141-287-2658
Inverness Museum Biological Records Centre	Vacant	Inverness Museum, Castle Wynd, Inverness IV2 3EQ temporary contact David McAllister, Chair of HBRC tel 01862 892302 email <a href="mailto:zawalke@aol.com">zawalke@aol.com</a>	
Islay Wildlife Information Centre	Linda MacLellan	Main Street, Port Charlotte, Islay PA48 9TX <a href="mailto:Lindy@islaywildlife.freereserve.co.uk">Lindy@islaywildlife.freereserve.co.uk</a>	01496-850-288
Lothians Wildlife Information Centre	Bob Saville	Suite 19, Leith Walk Business Centre, 130 Leith Walk, Edinburgh EH6 5DT <a href="mailto:swtlothianrc@cix.co.uk">swtlothianrc@cix.co.uk</a>	0131-554 -6360
NatureBase (Dundee Museum)	Richard Brinklow, David Henderson	Dundee Art Gallery & Museum, Albert Square, Dundee DD1 1DA <a href="mailto:richard.brinklow@dundeecity.gov.uk">richard.brinklow@dundeecity.gov.uk</a>	01382-432 -069
North East Scotland Biological Records Centre	Andrew Ferguson Janet Imrie	Room G64, MacRobert Building, Aberdeen University, King Street, Aberdeen, AB24 5UA <a href="mailto:nesbrec@aberdeenshire.gov.uk">nesbrec@aberdeenshire.gov.uk</a> <a href="mailto:Janet.Imlach@aberdeenshire.gov.uk">Janet.Imlach@aberdeenshire.gov.uk</a>	01224-273-633
North Lanarkshire BRC	Jenny Storey Owen McCann	Conservation and Greening Unit, North Lanarkshire Council, Palacerigg House, Palacerigg Road, Cumbernauld G67 3HU <a href="mailto:storeyj@northlan.gov.uk">storeyj@northlan.gov.uk</a>	01236-780-636
Orkney Biodiversity Records Centre	Sydney Gauld Max Scratchmann	The Orkney Library, Laing Street, Kirkwall, Orkney, KW15 1NW <a href="mailto:Biodiversity@orkney.gov.uk">Biodiversity@orkney.gov.uk</a>	01856 873166
Perth Museum Biological Records Centre	Mark Simmons	Perth Museum, 78 George Street, Perth PH1 5LB <a href="mailto:mjsimmons@pkc.gov.uk">mjsimmons@pkc.gov.uk</a>	01738-632-488
Renfrewshire Biological Information Centre	Vacant	Paisley Museum and Art Gallery, High Street, Paisley PA1 2BA	
Scottish Borders Biological Record Centre	Jon Mercer	Harestanes Visitor Centre, Jedburgh, Scottish Borders, TD8 6UQ <a href="mailto:sbbrc@scotborders.gov.uk">sbbrc@scotborders.gov.uk</a>	01835830-306
Skye Environmental Centre	Gracie Yoxon	Broadford, Isle of Skye IV49 0LA <a href="mailto:Grace@otter.org">Grace@otter.org</a>	01471-822-487
Shetland Biological Records Centre	Paul Harvey	c/o Shetland Amenity Trust, Garthspool, Lerwick, ZE1 0NY <a href="mailto:sbrc@zetnet.co.uk">sbrc@zetnet.co.uk</a>	01595-694-688
South Lanarkshire BRC	Ann McKillop	Chatelherault Country Park, Ferniegair, Hamilton <a href="mailto:ann.mckillop@southlanarkshire.gov.uk">ann.mckillop@southlanarkshire.gov.uk</a>	01698-426-213
<b>Record Centres based on Country Parks</b>			
Almondell Country Park	Ranger Service	Visitor Centre, Broxburn, West Lothian EH52 5PE	01506-882-254
Balmedie Country Park	Ranger Service	Balmedie, Aberdeenshire	?01358-742-396
Bennachie Country Park	Rangers Office	Bennachie Centre, Eassons Car Park, Chapel of Garioch, Inverurie, Aberdeenshire	
Calderglen Country Park	John Hawell	Strathaven Road, East Kilbride G75 0HZ	013552-36644
Crombie Country Park	Scott Morris	Monikie, Broughty Ferry, Tayside DD5 3QL	01241-860-360
Culzean Country Park	Gordon Riddle	Maybole, Ayrshire KA19 8LE	01655-760-269
Haddo Country Park	John Malster	Tarves, Ellon, Aberdeenshire AB4 0ER	01651-851-489
Loch Leven Nature Centre	Kenn Shaw	RSPB Vane Farm, Loch Leven, Kinross KY13 7LX	01577-862-355

**Scottish Mute Swan Census 2002 - list of Local Organisers**

AWB 24/02/2002

Area	Organiser	Address	Telephone	e-mail
<b>Aberdeenshire, (with Kincardine and Deeside)</b>	Alistair Duncan	12 Cairncry Avenue, Aberdeen, AB16 5DS	01224 823 184	<a href="mailto:Alistair@cairncry.freemove.co.uk">Alistair@cairncry.freemove.co.uk</a>
<b>Angus</b>	Ian Hutchison	13 Eddie Avenue, Brechin, Angus, DD9 6YD	01356 624 851	<a href="mailto:ian_ntbg@lineone.net">ian_ntbg@lineone.net</a>
<b>Argyll &amp; Islands</b>	Malcolm Ogilvie	Glencairn, Bruichladdich, Isle of Islay, PA49 7UN	01496 850 218	<a href="mailto:maogilvie@indaal.demon.co.uk">maogilvie@indaal.demon.co.uk</a>
<b>Arran</b>	Audrey Watters	"Sula", Margnaheglish Road, Lamlash, Isle of Arran, KA27 8LE		
<b>Ayrshire</b>	Jim Thomson	Sundrum Smithy, By Ayr, Ayrshire, KA6 6LR	01292 570 351	<a href="mailto:Sundrum@email.msn.com">Sundrum@email.msn.com</a>
<b>Badenoch and Strathspey</b>	Keith Duncan	SNH, Achantoul, Aviemore, Inverness-shire, PH22 1QD		<a href="mailto:KEITH.DUNCAN@snh.gov.uk">KEITH.DUNCAN@snh.gov.uk</a>
<b>Borders</b>	Andrew Bramhall	'Cygnus', 2 Abbotsferry Road, Tweedbank, Galashiels, Borders, TD1 3RX	01896 755 326	<a href="mailto:andrew.t.bramhall@btopenworld.com">andrew.t.bramhall@btopenworld.com</a>
<b>Bute</b>	Ian Hopkins	2 Eden Place, Rothesay, Bute, Strathclyde, PA20 9BS	01700 504042	<a href="mailto:ian@hopkins0079.freemove.co.uk">ian@hopkins0079.freemove.co.uk</a>
<b>Caithness</b>	Stan Laybourne	Old Schoolhouse, Harpsdale, Halkirk, Caithness, KW12 6UN	01847 841 244	<a href="mailto:stanlaybourne@talk21.com">stanlaybourne@talk21.com</a>
<b>Central (including Stirling)</b>	Neil Bielby	56 Ochiltree, Dunblane, Perthshire, FK15 0DF	01786 823 830	<a href="mailto:neil.bielby@ntlworld.com">neil.bielby@ntlworld.com</a>
<b>Clyde (including Glasgow, Renfrew and Lanark)</b>	Jim & Val Wilson	76 Laigh Road, Newton Mearns, Glasgow, G77 5EQ	0141 639 2516	<a href="mailto:jim.val@btinternet.com">jim.val@btinternet.com</a>
<b>Dumfries &amp; Galloway</b>	Alexa Seagrave	WWT Eastpark, Caerlaverock, Dumfries & Galloway DG1 4RS	01387 770 200	<a href="mailto:caerlaaverock@wwt.org.uk">caerlaaverock@wwt.org.uk</a>
<b>Fife &amp; Kinross (with Isle of May)</b>	Allan & Lyndesay Brown	61 Watt's Gardens, Cupar, Fife, KY15 4UG	01334 656 804	<a href="mailto:swans@allanwbrown.co.uk">swans@allanwbrown.co.uk</a>
<b>Harris &amp; Lewis</b>	Chris Reynolds	Reef, Uig, Isle of Lewis,	01851 672 376	
<b>Inverness-shire</b>	Hugh Insley	1 Drummond Place, Inverness, IV2 4JT	01463 230 652	<a href="mailto:hugh.insley@tinyworld.co.uk">hugh.insley@tinyworld.co.uk</a>
<b>Isle of Cumbrae</b>	Rupert Ormond	Bellevue, Marine Parade, Millport, Isle of Cumbrae, KA28 0ED		<a href="mailto:rupert.ormond@millport.gla.ac.uk">rupert.ormond@millport.gla.ac.uk</a>
<b>Lochaber</b>	John Dye	Toad Hall, Dalnabreach, Acharacle, Argyll, PH36 4JX		<a href="mailto:john.dye@virgin.net">john.dye@virgin.net</a>
<b>Lothians</b>	Allan & Lyndesay Brown	61 Watt's Gardens, Cupar, Fife, KY15 4UG	01334 656 804	<a href="mailto:swans@allanwbrown.co.uk">swans@allanwbrown.co.uk</a>
<b>Moray &amp; Nairn</b>	Bob Proctor	91 South Street, Elgin, Grampian, IV30 1JW	01343 548 395	<a href="mailto:bob.proctor@rspb.org.uk">bob.proctor@rspb.org.uk</a>
<b>Orkney</b>	Colin Corse	Garrisdale, Lynn Park, Kirkwall, Orkney	01856 874484	<a href="mailto:colincorse@hotmail.com">colincorse@hotmail.com</a>
<b>Perthshire</b>	Ron Youngman	Blairchroisk Cottage, Ballinluig, Pitlochry, Perthshire, PH9 0NF	01796 482424	<a href="mailto:Blairchroisk@aol.com">Blairchroisk@aol.com</a>
<b>Ross-shire and Sutherland</b>	David Butterfield	1 Calrichie Cottages, Kindeace, Invergordon, Ross-shire, IV18 0LN	01349 854 434	<a href="mailto:dave.birder@freeuk.com">dave.birder@freeuk.com</a>
<b>Rum, Eigg, Canna &amp; Muck</b>	Bob Swann	14 St Vincent Road, Tain, Ross-shire, IV19 1JR	01862 894 329	<a href="mailto:bob.swann@freeuk.com">bob.swann@freeuk.com</a>
<b>Shetland</b>	Paul Harvey	Shetland Biological Records Centre, 22-24 North Road, Lerwick, Shetland, ZE1 0NQ	01595 694 688	<a href="mailto:sbrc@zetnet.co.uk">sbrc@zetnet.co.uk</a>
<b>Uists &amp; Benbecula</b>	Andrew Stevenson	The Old Stores, Bornish, South Uist, HS8 5SA.	01870 620238	<a href="mailto:andrew.stevenson@snh.gov.uk">andrew.stevenson@snh.gov.uk</a>





## Networking Naturalists Seminar:

### “BIOLOGICAL RECORDING IN SCOTLAND”

Battleby Centre, Perth, 20<sup>th</sup> May 2002

#### Programme

#### *A regional framework for biological recording in Scotland?*

Anne-Marie Smout, Biological Recording in Scotland (BRISC)

#### *The need for biological information by the statutory agencies*

Alan MacKirdy, Scottish Natural Heritage

Managing biological information in Scotland: voluntary bodies and local records centres

(speaker tbc)

The work of specialists in recording: recording saproxylic Diptera in Scottish woodlands

Graham Rotheray, National Museums of Scotland

#### *What the National Biodiversity Network has to offer*

(speaker tbc)

Followed by discussion fora focusing on:

- *Developing voluntary capacity*
- *Mobilising information*
- *Priorities for future action*

The meeting will convene at 9.30 a.m. for a 10.00 a.m. start.

A buffet lunch will be provided. The meeting is being sponsored by Scottish Natural Heritage and is free on a first-come, first served basis (capacity 50).

Bookings should be made to:

Trevor James, NBN Development Officer for Schemes & Societies, BRC, CEH Monks Wood, Abbots Ripton, Huntingdon, PE28 2LS.



Scotland

## BRISC DEVELOPMENT OFFICER

Salary: £18,500 + pension

**BRISC is a charity that promotes the effective gathering and use of data in order to understand and conserve Scotland's biodiversity.**

BTCV is the UK's largest practical conservation charity, supporting people from all sections of the community in positive action to improve the environment.

We are looking to recruit a Development Officer to increase participation in recording and monitoring wildlife & wildlife habitats by actively supporting BRISC's network of local groups and volunteers, supporting local Biological Recording Centres, and developing biological recording across Scotland.

Suitable candidates will need to possess an environmental degree and/or have at least two year's experience in a related post. A good understanding of biological recording and an awareness of the National Biodiversity Network are needed, as is the communication and technical skills to develop and support biological recording by groups and volunteers. The post is full-time, for a fixed period of three years, and is funded by the Esmée Fairbairn Foundation and Scottish Natural Heritage. For full details and an application form contact BTCV Scotland at Balallan House, 24 Allan Park, Stirling FK8 2QG, telephone 01786 479697, or E-mail Scotland@btcv.org.uk. The closing date is 3<sup>rd</sup> May 2002.

*BTCV is an Investor in People and is striving to be an Equal Opportunities employer*

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