

**BRISC****BIOLOGICAL RECORDING IN SCOTLAND****Issue No 68 January 2008**

ISSN 0966-1964

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If we look at the historical records we find that since records began we have interesting strandings up the Forth e.g. a narwhal at Alloa in the 17th century. False killers stranded in 1935 at Dunbar, St Andrews, Carnoustie and Montrose, orca in St Andrews in 1941, and a seventy-three foot fin whale at the Bell Rock in 1918.

The industrial whaling of the 20th century reduced the numbers of great whales drastically and very few were seen from 1950 to 1990. Whaling was stopped in 1966 and since then there has been a slow increase in numbers and sightings are now becoming more frequent but still rare.



A minke whale in the Firth of Forth watched by three guillemots (to the right) @ Ian Cumming

The whales we can expect to see more frequently are the rorquals, i.e. fin whales, humpback, and minke whales. Their prey species are shoaling fish, like herring, sprats, sparring and sand-eels. The shape of the Firth, with its wide mouth and gradual narrowing, concentrates the fish as they go westward, so there is a chance that these whales could be seen from the foreshore at Edinburgh (I have seen a minke surface off Granton from the plane coming in to land at Edinburgh airport). Single humpback whales have been seen most years since 1997, often in the area of Inchkeith island and usually in February and March. A fin whale was seen from Aberdeen in 1997, but in 2007 they were seen blowing from Fife Ness and off Dunbar. They may become more common in the future.

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Cetacean in or around the Firth of Forth

Ian Cumming

You will probably be aware, as I am, of the recent publicity given to whales in this area following the report from the Green Party of ninety-four whales of various species seen in 2007 in the Firth of Forth and of the recent visit of orcas to the Queensferry area.

Is this a recent phenomenon? Has it anything to do with climate change? What is the true situation?



CHAIR'S COLUMN

By the time you read this we will be well into 2008, and I hope you all had an enjoyable and maybe a relaxing break over Christmas and the New Year and are now suitably refreshed to tackle all that comes up in 2008.

From BRISC's perspective we probably have not been visibly very active over the last six months, but there has been quite a lot going on behind the scenes, directed at our efforts to raise finance to continue the Wildlife Counts Project and to take forward our longer term Business Plan. I am sorry to say that at this immediate moment this has been without as much success as we would have wished for on either project.

The Wildlife Counts Project has been a resounding success under the Chairmanship of Craig Macadam and the Management of John McFarlane, the latter having taken forward the work started by Claire McSorley. However, as in so many cases, the ability to obtain repeat aid for continuing a project is very difficult. Understandably, supporting organisations hope that worthwhile projects will become self supporting or will find alternative ways of continuing; in our case we have not been successful on the former and are working on the latter.

John McFarlane has been able to establish a really strong nucleus of new recorders, and our hope is, even if BRISC is not directly involved, that we can find some organisation who can continue to support and take forward the concept of the project on a wider scale. I rather feel that this is perhaps the right way for BRISC to operate; we quite often identify a gap in the biological recording scene and can act as the catalyst to start things moving but then need to hand them onto someone else to expand once we have demonstrated their advantages.

On the development of the Business Plan we have found the advancement to be exceedingly slow. The ideas presented within it have received very positive responses but, whilst different organisations will support different projects, they have not been able to support the whole concept that BRISC is putting forward, the most important of which is the appointment of a Project Manager to master-mind the whole programme. As Chairman, I am reluctant to support too many individual projects without having a paid overall co-ordinator. We do not have adequate numbers to run a series of projects at the same time, and I am also certain that your Chairman is not prepared to become a full time un-paid co-ordinator.

How we progress will be on the agenda for the next Committee Meeting. Our last Committee Meeting had to be cancelled as we would not have been able to field a quorum, and I want to be able to update you all at our AGM and Conference on the 29 March in Kingussie with our views on how to progress matters.

On Membership matters, Duncan Davidson has produced a Report further on in this Newsletter on the Membership Questionnaire that he sent round. The numbers of responses are not as good as we had hoped for, and he explores possible reasons for this. I would urge you to read his report and, hopefully, those who need to, to respond thereafter.

With very best wishes for 2008.

Patrick Milne Home



Editorial

Please note that notice of this year's AGM and annual conference will be sent out separately with the annual report and booking form to reach you before the end of January. However, do reserve **Saturday 29 March** for the event

which will take place at lovely Kingussie. A summary of the programme can be found on p.16. Please also note that arrangements for staying overnight have been made at a substantial discount. Details will be on the booking form.

For all those who use the 'Recorder' software, the great news is that DEFRA has given £25,000 of funding to JNCC in order to enhance 'Recorder 6' with the specific aim of "increasing the efficiency of Local Records Centres". How I wish the Scottish Executive would take such an interest in LRCs!

BRISC has for some time been hoping to put a list of current surveys on our website with details of how to become involved, and this is still the intention. In the meantime, can I remind readers of two important new atlas surveys? Fieldwork for the new 2007-2011 Bird Atlas started in November and details of how to contribute can be found at www.birdatlas.net, while fieldwork for the new UK Odonata Atlas will start this coming spring. See Jonathan Willet's article on the subject in the July issue of *Recorder News* (no 66) or visit the Dragonfly Society's website at www.dragonflysoc.org.uk. Then of course there is also the new National Amphibian and Reptile Survey (NARRS) – see last year's results or sign up at www.narrs.org.uk/ and not to forget Butterfly Conservation's National Moth Recording Scheme. For information visit www.mothscount.org/site/

BRISC continues to be involved with *The Scotsman's* Wildlife Watch, by accepting all the submissions and providing a summary of these, which is then printed in the newspaper as part of its publicity for the next Wildlife Watch. All records are subsequently forwarded to the appropriate LRCs, for them to make further contacts. It is primarily an awareness-raising exercise, and many of the records submitted are of common species like robins and grey squirrels, while some are plainly mistakes, so the person in question has to be contacted and gently put right. An agreement has now been reached, so that before publishing questionable observations the editor will contact either BRISC or the SWT. As I am not an expert in all taxa, I shall have to lean heavily on expert members of BRISC. The information on skills gathered by the Membership Questionnaire will be a great help, and I would like to urge everyone who has not done so yet to make the effort to reply.

The Scotsman will from now on make a contribution to BRISC of £200 for each article provided.

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Minke whales are the most common rorqual and can be seen mostly in the summer and autumn but occasionally in March. Minkes are occasionally seen from the boat to the Isle of May and have been known to go above the Forth Road Bridge. The numbers can be as many as five, seen on summer days, but 2006 was a poorer year with fewer sightings.

Sperm whales, pilot whales and beaked whales are occasionally stranded, but they are deep water whales and should not be on the continental shelf. When they come into the area they often get into trouble on the shelving beaches and strand, so it is better that they keep to deeper water. The increased number of sperm whales stranding in recent years is probably an indication of greater numbers of these whales since whaling stopped.

Why are more whales being seen? Many people now have good binoculars or telescopes and are looking out for seabirds passing and are noticing the occasional whale blowing. That is one reason for the increased sightings but may not be the main one



Bottle-nosed dolphins – the dolphin most frequently seen in the Firth of Forth –
@ Ian Cumming

In 1992 a large school of bottlenose dolphins (60+) came south from the Moray Firth and spent the summer round the Fife coast. They have returned every year since and some are present every month of the year. They are big (12ft), dark with a big dorsal fin and are often close to the shore and easy to see. Sometimes they are very active, leaping and splashing but at other times they lie motionless or move very slowly. Whales are very difficult to identify, and I think these large dolphins may account for many of the recent sightings.

Orca sightings have become more frequent in recent years. On 31 January 1994 three orcas were playing in a tide race by the Forth Rail Bridge. On 31 January 2007 the same thing was happening. In August 2006 a group was seen from Fife Ness. On 10 December 2006 a fishing boat passed three orcas off Anstruther. “The dorsal fin of the male was the height of a man”, said the fisherman.

We have over 1000 grey seal pups born on the Isle of May in October – November each year, and the orcas are known to feed on seals. It is possible that the sight of ‘man-size fins’ could become a regular feature of our wildlife in this area.

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Environmental History on the Isle of May

Chris Smout

In an archaeological report about to be published by Heather James and Peter Yeoman on excavations at St Ethernan’s Monastery on the Isle of May, there is fascinating information on the environmental remains recovered.

Birds formed an important part of the monks’ diet. The great auk, for example, appears to have been caught for food sporadically during the middle ages – a total of eight or nine bone fragments were recovered from different levels. On the other hand very few puffin remains were found, though this is now the commonest breeding bird. Eider duck were eaten throughout, and gulls were plentiful as they are today (they were not numerous in the 19th century). Cormorants and shags were killed in fair numbers until the 16th – 18th centuries, when the successors to the monks ate increasing numbers of auks, especially guillemots. Fulmars were not present.

Seals, porpoises and rabbits were eaten, the last having been introduced for food and skins in the fourteenth century. The genetics of such in isolated rabbit population would be worth preserving from the zealous enemies of ‘alien species’. Rat bones were found at one point: luckily for the birds that species died out.

There is as would be expected also much evidence of many species of fish and shellfish in the diet.

The most interesting botanical find is that the island was lightly wooded before the monks arrived, with birch, willow and alder – to be noted by any who would restrict the Isle of May Bird Observatory Trust from planting bushes to shelter migrant birds. The monks cultivated various medicinal herbs, some of which survive today, like the rabbits as a memorial to their occupation, I myself recall seeing henbane in full flower near the excavations, perhaps from seed that had lain buried since the middle ages.

Scottish Natural Heritage should be reading this report before it finalises its next management plan for the May.

The report will be published as a *Tayside and Fife Archaeological Journal* monograph.

Chris Smout

WHAT’S SPECIAL ABOUT ASSYNT? A PROGRESS REPORT.

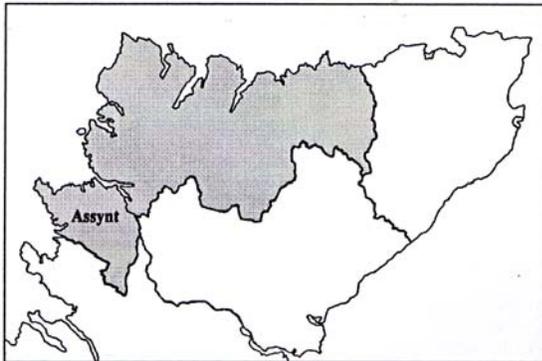
Ian M. Evans

Previous articles in this series have described the landscape and wildlife of some fascinating parts of Scotland. It would be possible to do the same for Assynt, an ancient parish on the western seaboard of Sutherland, but I would like to take a slightly different tack. Assynt has been the setting for a fair amount of biological recording in recent years and this article looks at what has been achieved in a relatively ‘remote’ area, the sources of our knowledge, and if there are lessons to be learned from our experience.

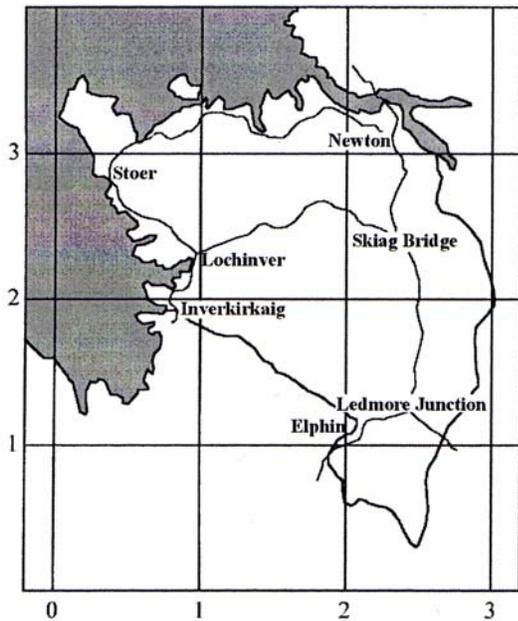
The huge gaps in that knowledge are a gentle correction, perhaps, to the unspoken assumption that we have sufficient information to hand about local biodiversity to plan confidently

for its future. They are also a reminder of the need to train up another generation of recorders.

The parish of Assynt stretches some 40km from its north-west corner at the Point of Stoer to its south-east corner in the little-visited Cromalt Hills. It has an area of 475km² (187 square miles), spread over parts of at least 164 tetrads (2x2km²), located in thirteen 10km squares. No part of the parish is more than 10km from roads as the crow flies, but access to its most remote corners can involve walks of rather more than 20km. It is bounded by the waters of The Minch to west and north, lochs and watercourses to the south, and by a rampart of hills to the east, rising to 987m (3238ft) at Conival, its only Munro.



Location of Assynt with Sutherland in northern Scotland
From *Flora of Assynt*



Assynt: 10km square boundaries and major roads
from *Flora of Assynt*

The underlying geology ranges from Moine Schists in the extreme south-east, through the tortured diversity of the Moine Thrust Zone in the east, with limestone, quartzites and igneous inclusions, to the isolated Torridonian hills of Quinag, Canisp and Suilven, capped with quartzite in places. These hills sit on a basement layer of Lewisian gneiss, stretching to the west and sliced by overlapping series of basic and ultra-basic dykes; the Torridonian re-appears on the Stoer peninsula. The ice-eroded topography of

the gneiss, in particular, is studded with lochs, of which 680 are shown on the 1:50,000 O.S. map. Glacial till and peat cover much of the bedrock.



Loch na Barrach and other lochs at 300m. on the north side of Suilven
from *Flora of Assynt*

The parish has a resident population of just over 1000, located mainly in Lochinver and a string of crofting townships around the coast, with a few other settlements on the inland limestone corridor. The Assynt Field Club, founded in 1986, has a mailing list of about 180 persons, two-thirds resident and the rest regular visitors to the area. Although the resident population has always had some interest in wildlife, usually economic, the presence of those who might call themselves 'naturalists' is a relatively recent phenomenon. There is only one full-time professional naturalist in the parish, the Highland Council Ranger, and little of his time can be devoted to biological recording as such.

The 'higher' plants are a convenient starting point for our overview, since Assynt is the subject of a recent Flora (Evans, Evans and Rothero, 2002), based on survey work at tetrad level, the first time this had been attempted in Highland. The introductory chapters cover the geology, climate, landscape history and vegetation of the parish. These are followed by species accounts, with tetrad maps, for 694 taxa of ferns and flowering plants. There are historic records, dating back to 1767, of many of the taxa, and of a further 71 not recorded recently, giving a total of 765 in all. The distribution maps are based on some 30,676 modern records, gathered by a two-person team over four holidays and eight full seasons of their 'retirement'. The Flora contains some 133 taxa additional to those recorded for Assynt in John Anthony's *Flora of Sutherland* (1976), and has added considerably to the previously recorded number of sites for such specialities of the area as pyramidal bugle *Ajuga pyramidalis*.

The Flora also contains a substantial section on the **bryophytes** of the parish, by Gordon Rothero, a regular visitor from Argyll since 1992, when he organised a local field meeting for the British Bryological Society. In short visits about twice a year, over some nine seasons, he recorded from 99 out of the 164 tetrads, often in the company of the two resident botanists. The resultant Assynt database (compiled like the 'higher' plants on Recorder 3.3) contains some 13,600 records of 156 liverwort and 345 moss taxa. Historical data, dating back to the first serious recording in 1899, adds a further 14 liverworts and 20



Wooded boulder scree with bryophyte mats and *Hymenophyllum wilsonii* at Duart, Nedd – from *Flora of Assynt*

The only other plant group for which there are significant numbers of records are the algae, and here a serious local deficiency becomes apparent. There is no readily accessible account of the biodiversity of the marine environment around the extensive coast of Assynt. SNH libraries at Ullapool and Golspie (40 and 70 miles away respectively) hold copies of detailed surveys of the sea-bed communities of the large sea lochs on the northern edge of the parish, and there may well be much more information in other survey reports and the specialised literature.

This glaring gap in accessible information applies to the coastline of the whole of Sutherland. Funding was obtained for a summary of the available sources, but no affordable marine biologist with the time available to prepare it could be located nearer than Edinburgh. One is now resident in Assynt, but replacement funding is not yet in place. The one exception to this general rule is the cetaceans, sightings of which are well-documented locally.



Torridonian cliffs, North side of Stoer peninsula, from Rubh' an Dunain, looking west - from *Flora of Assynt*

The **algae** for which we do have records are just one group of freshwater species, the desmids, a group of both historic and contemporary interest in the lochs of North-West Sutherland. Much of the pioneering work on this group was done in the area in the early part of the 20th century and more recently David Williamson from Leicestershire has published a

desmid flora of Assynt (Williamson, 1996). It is based on his own collections on a handful of visits, supplemented by samples from more distant lochs obtained by the local botanists. He lists 1200 determinations of 291 taxa and illustrates, in exquisite detail, 151 of them.

So far as **fungi** are concerned, Assynt is fortunate enough to have a resident mycologist, John Blunt, who moved up from Leicestershire to croft over twenty-five years ago. His particular expertise is in the Ascomycetes, although he has extended the scope of his interests to include the Basidiomycetes. He has recently completed computerising his records for inclusion in the national database and the current tally for Assynt is 2857 records of 1072 species. Nearly half the species have been found within walking distance of Nedd, the small crofting township in which he lives. He emphasises that his records represent only a small proportion of those taxa likely to be present, out of about 13,000 found so far in the British Isles as a whole. However, his data represents a substantial commitment of time and effort by an amateur mycologist working, until recently in his spare time, some 300 miles away from the nearest relevant expertise, in Edinburgh. He has also had to make, over the years, a major investment in the microscope equipment, chemicals and specialised literature, which pursuit of this interest requires. Other mycological interest in Assynt has been confined to occasional field meetings by the British Mycological Society and visiting enthusiasts.

Lichens are also well recorded in Assynt, almost entirely by visitors to the parish. Tony Fletcher, a senior member of the British Lichen Society, also hailing from Leicestershire, has paid a number of visits over the last 15 years. Others have looked at specific aspects of our lichen flora, for instance in 2004, when a field meeting of the BLS concentrated on the Inchnadamph limestone area. An Assynt checklist is planned, when time permits. Since a competent lichenologist can record over 200 species in a day's fieldwork, the tally for the parish is likely to be a substantial proportion of the 1800 species found in the British Isles, perhaps 40%? The area is known to be significant for members of the *Lobarion* community characteristic of Atlantic woodlands and has one species of montane siliceous boulders, *Aspicilia melanaspis*, found only at one other site in the British Isles.

Our knowledge of the other kingdoms of organisms in Assynt is as patchy as might be expected. The only information I have so far come across relating to the huge and life-sustaining kingdom of **bacteria** are oblique references to the cyanobacteria that partner the fungi in some of our local lichens, though there may be more information in specialised sources.

Protists are another huge kingdom, favourites of the Victorian microscopists. Bruce Ing, the national specialist in one group, the slime moulds or **myxomycetes**, is hoping to move up to near Ullapool shortly, and already has records of the group from the Assynt area, as he does of many groups of fungi, so we shall look forward to his contributions. The only casual records that come to mind are of the huge colonial ciliate

Ophridium, coloured pale green by an algal partner, which occurs in local burns. A quick squint down a compound microscope at a sample of water from almost any freshwater habitat will reveal how much microscopical biodiversity we are overlooking in both this and the animal kingdom (see for instance *Wildlife of Rogart* 2007, pp.73-75).

Of a large range of invertebrate animal groups, other than arthropods, we can only say that they certainly occur in Assynt, but little or nothing is known of their precise identity or distribution. Most are inhabitants, like many protists, of freshwater habitats. Examples are **sponges, hydroids, platyhelminthes, nematodes, rotifers, gastrotrichs and tardigrades**. Occasionally, examples of such overlooked groups are brought to our notice, such as the writhing mass of horsehair worms *Gordius* sp. (a **nematomorph**) that appeared recently in a posthole on a neighbour's croft. **Annelids** such as the earthworms are a key element of our soil and freshwater fauna, but for neither them nor the leeches do we have more than a handful of records.

You might say, so what? The bias, at least in the popular wildlife media, towards higher plants, insects and vertebrates, is understandable. However, I think we may be selling disastrously short most of the incredible and, more important, *essential* biodiversity of the living systems that sustain us.

Now to the 'arthropods', where we redeem ourselves to some extent. Amongst the chelicerates, the five species of land crustaceans, i.e. **woodlice**, that occur in Assynt are reasonably well-mapped, owing to the 'omnium gatherum' habits of one resident naturalist, spurred on by a mapping scheme promoted by the Highland Biological Recording Group. **Spiders** would be better served if the same individual collated and computerised all of the records that he has gathered since moving to the area some 16 years ago (but see Evans, 2005). There are records of the commoner and readily identifiable **harvestmen**, but this information requires supplementing by systematic fieldwork. Of the other arachnids, the only reliable records of **mites** are of the gall-forming species, the subject of current work on a Highland checklist of all galls by three members of the HBRG. **Ticks** are ubiquitous and a considerable pest to the roving naturalist in Assynt, as elsewhere in the Highlands. *Ixodes ricinus* is the likely offender in most cases, although I am not sure whether anyone has put a specific name to them. There is, however, one definite record, of the bat tick *Argus verpertilionis* from a pipistrelle (Evans, 2006).

Moving on to the mandibulates ('myriapods' and insects), for almost all records of **centipedes and millipedes** we are grateful to three individuals who have either collected in Assynt or identified material collected here by others, notably Gordon Corbet of Fife. There are records of perhaps a dozen species, but again these require collating.

Local records of insect orders are either feast or famine. We have **silverfish** and **springtails**, but who knows which species? Some genera of **mayflies, stoneflies and caddisflies** are well-known to local and visiting anglers. They are also collected and identified, mainly to the same taxonomic

level, as indicators of water quality, by the ecologists employed by SEPA (see what can be made of their records in *Wildlife of Rogart*, pp.53-55). The same applies to a range of other freshwater groups, but there appear to be few records from Assynt identified to species level.



The black darter *Sympetrum danae* is widespread

Dragonflies are a happy exception, since they are regularly noted by members of the local Field Club. Records of our ten local species have been forwarded in the past to the Scottish Recorder, although there is some catching up to be done.

Grasshoppers and crickets are not a problem, since we only appear to have two species, the meadow grasshopper *Chorthippus parallelus* and the common ground-hopper *Tetrix undulata*. The former is very widespread and there are just two records of the latter. Again, however, the records require digging out of one individual's field notebooks. **Earwigs** will not detain us long, since there is only one species locally and that was mapped for an HBRG survey in 2000 (Evans, 2001).

Our records of **bugs** are almost all from one source, sorties into Assynt by Stephen Moran of Inverness, the Scottish coordinator for Heteroptera, although there may be a few of aquatic species by another visiting expert. The local records just require collating. **Bark/booklice** and **thrips** both occur, but there are no specific records to my knowledge, although a new national recording scheme for the former group may stimulate interest. We have recent records of 10 species of **fleas**, including the northernmost record in the British Isles for *Ischnopsyllus octatenus*, found on pipistrelle bats, thanks to a little local collecting and the veteran expertise of the 'king' of British flea studies, Bob George, in far-away Bournemouth. **Lacewings** and other neuropterans are another of Stephen Moran's interests and there are, thanks to him, a few records, mainly of species that have found their way into houses.

From famine to feast again with the butterflies and moths. Records of **butterflies** have been gathered systematically for over a decade by members of the local Field Club and submitted to those responsible for recording in the Highland area and so, for once, we are reasonably up-to-date in our recording, witness the distribution maps in Stewart, Barbour and Moran (1998) and more recent national atlases. We have a score of regularly occurring species, including the Large Heath, which is widespread in moorland areas, an increasing number of sightings of the once scarce Scotch Argus and the very recent additions of Peacock and Orange-tip.

Moths highlight a local problem that surely also afflicts other areas? Some 10,000 records exist, in diary form, from regular moth-trapping at one site in the parish for over a decade, and the tally, with the help of experts like Mark Young at Aberdeen on the pugs and micros, is probably more than 300 species. Recently, more members of the Field Club have started trapping. There is also a good scatter of records of day-flying moths, such as the argent and sable, from elsewhere in the parish, and of noteworthy larger species such as the hawk-moths. MapMate is in place to collate the records, but how to find the time?

Back to relative famine in the remaining three huge orders of insects, flies, hymenopterans and beetles. Recent recording of **flies** in the Highland area as a whole, other than by visitors to special areas such as the Caledonian pinewoods, is almost all down to three individuals, in particular Philip Entwistle of Spinningdale. Excursions to previously unvisited areas have resulted in records of national interest; see for instance Entwistle (2007). Assynt has featured occasionally in their peregrinations, and we do therefore have some recent records. Gall-midges are an honourable exception to the general rule, as the gall wasps and other gall formers.



The once scarce Scotch Argus



The scarce *Bombus monticola* or Bilberry Bumblebee

Amongst the **hymenopterans**, bumblebees have been well-served throughout the Highland area, by the efforts of two individuals, Murdo Macdonald and the late Gill Nisbet (2006). Now that Murdo has turned his attention to ants, and with a little local help, we should have a handle on their distribution in Assynt within a few seasons. There are some records of social wasps and the commonest of the mining bees, *Collectes succinctus*, but the huge diversity of other solitary bees and wasps, parasitic groups and sawflies, is as yet virtually unexplored.

Beetles are a life's work in their own right, but certain groups are approachable, with good keys and recent atlases to spur on the enthusiast. One of our local naturalists has dabbled in some these groups, such as ground beetles, longhorns and dung beetles, for nearly thirty years, with an occasional forays, greatly daring, into others. However he needs cloning, so that he can devote himself, for a year or two, to sorting out what he has found in Assynt (and elsewhere) with no other distractions, other than occasional trips to the nearest comprehensive collections, at Edinburgh. Two local Nationally Scarce ground beetles illustrate the potential of the area, the large *Carabus clatratus*, found on moorland, and *Nebria nivalis*, on mountain tops.

The last group of invertebrates to consider, **land and freshwater molluscs**, is somewhat frustrating. I have been attempting recently to compile an annotated checklist of those recorded from Sutherland as a whole. There are records of some 90 species from that wider area, including a reasonable number from Assynt, especially the limestone, but access to the historical literature has required a lot of favours from conchologists elsewhere in the British Isles, for which I am very grateful. Additionally, the detailed records maintained by the Conchological Society are, I understand, tucked away in files in London, with no officer of the Society at present able to facilitate access to them. Interestingly, Sutherland has only ever boasted one native-borne conchologist, William Baillie of Brora, and that was over a century ago.

Lastly, the vertebrates, and here we have an *embarrass des richesses*, though access to the information is not all straightforward. There would be no lack of records of half of our sparse **freshwater fish** fauna, salmon, trout and arctic charr, if one had the time to go and talk to fishermen, local or visiting. Introduced minnows are well-mapped by the West Sutherland Fisheries Trust, and there is a project underway to investigate our declining eel population. The one remaining species, three-spined stickleback, might present more difficulties.

Well-localised records of our three local **amphibians**, frog, toad and palmate newt, exist in abundance, but for the most part they are lurking in Field Club files and in the diaries and logs of the peripatetic naturalist already mentioned. Another case for cloning? Assynt has at least one lochan where breeding toads have been counted in four figures and we suspect that there are many more such, given the number of lochs in which toad tadpoles have been found.

Local sources have produced many records of our three **reptiles**, common lizard, slow-worm and adder. The last seems to exist in low density in widely scattered localities, perhaps because of centuries of muirburn. We are fairly up-to-date so far as manuscript records are concerned, but the more recent ones require computerising. The recent national initiative may help get this done.

Bird records are a problem of a different order. The Assynt Field Club has run, for many years, a garden bird recording scheme, which members seem reluctant to drop. Several Breeding Bird Survey plots have been monitored for over a decade, and there is now enthusiastic take-up of the new BTO Atlas surveys. The Club published in 1998 an annotated checklist, *Birds of Assynt*, which is on its third edition and has sold over 1000 copies. It contains short notes on the local status of 210 species, of which half may be called regular breeders, and is backed up by voluminous files of further information, from both local people and visitors. However, the local avifauna is continually changing; barn owls, for example, have recently returned to the parish after an absence of a century or more. The checklist is in need of a complete makeover, and records should by now be held on computer. But where to find the man-power to bring the benefits of 21st century technology to all this information, particularly since

we recently lost, to a post at Glencoe, one of the two most dedicated bird-watchers in the parish?

Finally, to the **mammals**. Cetaceans have already been mentioned; the range of species recorded locally was recently supplemented by the stranding of a freshly dead adult fin whale, at 20m the largest animal most of us are likely to see in a lifetime. For a change, all but the last couple of years' records have been computerised, as a contribution to the Mammal Atlas currently under preparation by HBRG. Of 4006 records entered locally into Recorder 3.3, some 3000 are probably from Assynt, product of the assiduous noting of sightings and road casualties by Field Club members, supplemented by work with bat detectors, and on droppings, other signs, and remains in pellets, scats and cans. These are all available, courtesy of the HBRG, on the NBN. Currently known to occur in Assynt are 26 species, including two seals and three bats. Badgers are on the march, hedgehogs in retreat and three species appear to have become locally extinct during the 20th century, house mouse, long-eared bat and polecat.

I must confess, incidentally, that being beyond the reach of broadband, I have not checked the availability of information about groups other than mammals on the NBN, mostly because I suspect I know where most of the records are stashed, in non-electronic format!

Are there, then, any useful general conclusions to draw from this quick trawl of the information available on Assynt's 'wildlife'? There is the value of an **active field club**, with one or two 'naturalists-in-residence', to act as a focus for local interest. We must record our indebtedness to **specialists**, from all over the British Isles, who have been prepared to spend time in the area or otherwise give us the benefit of their expertise. However, it is dismaying to reflect how many of them are approaching retirement or have retired, and also that they are, for the most part, the product of a bygone age in natural history apprenticeship. Are they being replaced? We are reminded of huge **gaps** in taxonomic coverage, which are duplicated across the Highlands and probably much of Scotland. These gaps are most conspicuous in the marine and freshwater environments and in all but the most popular groups of land invertebrates. Even where information exists, much of it still requires **collation and computerisation**. There is the handicap of the **remoteness** of sources of expertise, specialist literature (other than in personal libraries) and reference collections. This predicament will be exacerbated in Highland if the predicted loss of the specialist natural history post at Inverness Museum takes place. The Museum was formerly the hub of biological recording in Highland, but its role in this regard has been weakened by the lack of any significant funding, so far, for the setting-up of a biological record centre for the enormous area it serves, leaving this role to be shouldered by a voluntary body, the HBRG.

Finally, for the naturalists active in such remote areas, the sheer **volume** of some of the information sources listed above poses an interesting dilemma. Should they concentrate on

keyboarding the information, in order to produce definitive accounts of a small number of the more popular groups, or would a synoptic overview, warts and all, such as has been outlined above, be a more worthwhile project? Comments, on a postcard, please, to

Ian M Evens, Calltuinn, Nedd, Drumbeig by Lairg, Sutherland, IV27 4NN.

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Bad an Diòboirich, looking south-east towards Quinag. 18th century sheiling with clearance cairns, and a reminder of winter conditions on the hills from *Flora of Assynt*

Bumblebees, BRISC, and the Bumblebee Conservation Trust (BBCT)



Bumblebees are among the most endearing and familiar of garden insects. The sound and sight of bees droning methodically from flower to flower is a quintessential part of a summer's day. Sadly, changes to the farmed countryside in the last 60 years have not been kind to our bumblebees.

The number of species that can be found in most of lowland Britain has roughly halved since 1950. Three of the UK's 25

species have gone extinct and seven are BAP-listed. Unless we act quickly further extinctions are likely.

In response to this, the Bumblebee Conservation Trust (BBCT) was formed in 2006, with the aim, as the name suggests, of halting and reversing declines in our bumblebees. This is obviously a pretty tall order for a tiny organisation. We cannot afford to buy and manage substantial areas of land, so our main approach is through outreach: if we can persuade the UK's gardeners to garden in a more wildlife-friendly way, and grow a few wildflowers, this could have a huge positive impact, since gardens cover over 1 million hectares, a larger area than all the UK's nature reserves combined. Our membership has grown rapidly to >2,000, many of whom are keen gardeners. Our newsletter is packed with ideas for how to garden for bumblebees, and so far we have distributed over 6,000 packs of wildflower seeds to our members. Similarly, we are trying to encourage farmers to consider signing up for suitable agri-environment schemes. To reach the gardeners and farmers of the future, we have created an education pack about bumblebees for primary schools, which has already gone out to 200 schools and has been very well received. To show farmers what can be achieved, we teamed up with RSPB to plant an 8 ha wildflower meadow at Vane Farm, Kinross, and the results so far have been truly spectacular (see picture).



Vane Farm Bumblebee Meadow, sown with our tailor-made bumblebee wildflower mix in May 2007.

Identifying and recording bumblebees

If we are to conserve our bees we need to know where they are. There is a shortage of people able and willing to record bumblebees, and hence there are big gaps in our distribution maps. We run several training sessions each year to try to get more people involved in recording bees. We also launched two novel recording schemes in 2007. In BEEWATCH, we asked members of the public to email us digital pictures of bees from their garden, together with a postcode and date. We identify the bees and let the sender know what they have seen. This has been enormously successful and so far we have received >5,000 records. We also teamed up with BTO to add bumblebees to their Garden Birdwatch scheme, so that now their 16,000 members can record what bees they see in the garden online. Records are returned annually so as yet we have no idea what response this produced.

All bumblebee records collected by us are shared with the Bees, Wasps and Ants Recording Society (BWARS), who act as a central repository for all bee records. Records collected by any other body, such as BRISC, are also sent to BWARS, who collate them. All their records are then lodged with the National Biodiversity Network who provide an online database so that current and past distributions of any UK organism can be viewed very easily by any interested party.

This might all sound a bit complicated but the end result is that BBCT, BRISC and BWARS are all working together to promote recording and conservation of bumblebees. With our combined efforts we should soon have much improved maps of bumblebee distributions that will help us devise the best strategies for their conservation.

Dave Goulson

If you want to find out more about bumblebees and what you can do to help their plight, contact the Bumblebee Conservation Trust, www.bumblebeeconservationtrust.co.uk, School of Biological & Environmental Sciences, University of Stirling, Stirling, FK9 4LA. If you do not feel confident to identify bumblebees yourself but would like to send us digital photographs of bumblebees (with location and date), please send them to beewatch@bumblebeeconservationtrust.co.uk.



The tree bumblebee, *Bombus hypnorum* is the UK's newest bumblebee species having invaded from France in 2001. It may arrive in Scotland soon and we would be very keen to hear from anyone that thinks they have seen one.

BRISC WILDLIFE COUNTS PROJECT- A Very Big Thank You

John McFarlane

The BRISC Wildlife Counts project has successfully completed its final year with over 610 keen volunteers participating in the 2 year project, including 350 participants at the 24 hour BioBlitz event. This equates to 673.5 volunteer days filled by the Wildlife Counts Project. Bravo!! The project aimed to help create awareness of local biodiversity and the importance of biological recording by providing FREE workshops delivered throughout the year in Stirling, Falkirk and North Lanarkshire. And it looks like Mission Accomplished!!



Data Input at BioBlitz © Graham Burns

The project has been successful on many levels. It not only created awareness of biodiversity and in particular biological recording but it allowed an eclectic mix of wonderfully passionate volunteers to get out and about, enjoying their wildlife in their 'local patch'. Participants from every walk of life enjoyed the relaxed and friendly atmosphere and the experts who delivered enthralling workshops, added their



A caterpillar in a Hawthorn Bush!! © John McFarlane

own brand of 'va va voom' to the day, making the events a huge success. One thing did stick out more than most was the cake and biscuits!!

On a more serious note, the highlights of the project included records for many rare and under-recorded species including white-tailed sea-eagle, narrow-bordered 5-spot burnet moth (*Zygaena lonicerae* subsp. *Latomarginata*), greater butterfly orchids, breeding pairs of nuthatch, small copper butterflies, blackcaps, humming-bird hawkmoth, and blue shield-bug (*Zicrona caerulea*). This wealth of biodiversity is now being

appreciated by many more volunteers thanks to the Wildlife Counts Project.

BRISC would like to thank everyone who gave their time freely as volunteers and in particular the key volunteers and experts who assisted the project officers during the project. A special big thank-you must go to BTCV who hosted the project and provided guidance and support to both project officers. The management team has done a fantastic job in steering the project, driving it forward to achieve its goals.



Kick-sampling for Invertebrates @ John McFarlane

The Wildlife Counts Project was funded by the Heritage Lottery Fund, Scottish Natural Heritage, BTCV, Falkirk Environmental Trust, Stirling Council, Falkirk Council and North Lanarkshire Council. Their kind generosity has enabled the good folk of Central Scotland to appreciate and better understand their biodiversity. Thank you for your contributions to the project.

It is hoped that the Wildlife Counts Project will continue its support of volunteers who want to establish themselves as biological recorders. BRISC have handed over the project to BTCV and I am optimistic that BTCV will drive the project forward, expanding the geographical range of the project and establishing biological recording as key activity within local GREENSPACE areas.

Finally, the project officers, Claire Mc Sorley and John Mc Farlane, would like to thank everyone who assisted in the delivery of the project. We could not have done it without you. Thank you for your forward thinking, passion, enthusiasm and kindness during the past two years and hopefully we will continue to work towards a common goal.

Details of the project can be found at <http://www.brisc.org.uk/wcounts.php>

Details of the BRISC BioBlitz event can be found at <http://www.bbc.co.uk/scotland/player/?item=4453291>
<http://www.brisc.org.uk/bioblitz07.php>

The Wildlife Counts Project has been supported by



THE MEMBERSHIP QUESTIONNAIRE

Duncan Davidson

At the 2006 AGM, Claire McSorley presented a report on the first year of our Wildlife Counts Project. During the presentation a member expressed surprise that he had not been consulted on a particular issue, because being an expert in that field, he would have been willing and able to lend advice and assistance. After only very little thought, I am quite sure that the reason consultation with individual members had not taken place was quite simple: in general, we do not know what our members know! Taking that a step further, none of our members knows what any of his or her fellow members know, nor even who these fellow members are.

That is the background that led to the generation of the very basic questionnaire that was circulated with the last edition of *BRISC Recorder News*. My intention was that names and agreed contact details would be put onto our website and also published in *BRISC Recorder News*. This would mean that all members, and not just the committee, would have access to the information, and this would hopefully lead to increased correspondence between members, as well as showing who was best placed to provide advice in particular areas.

Since the questionnaire was issued, there has been continuing debate within the committee about how the results should be published, with some disquiet regarding data protection issues. When we contacted the Information Commissioner's Office (ICO), who advise on compliance with the Data Protection Act, their key advice was that "...as long as your members have given permission for their details to be on your website and in your newsletter, you are being compliant with the Data Protection principles." However, there was still some concern on two points:

- I had stated the intention to publish names if no other information was forthcoming; this appears to be at odds with the advice from the ICO, since no actual permission would have been given.
- Even though members had given permission for details to be published on the website, some might not be fully aware of all the risks and implications, and it was our duty to offer additional protection.

It has been decided therefore that we will not, in the meantime, publish any member details on the website nor in the newsletter. We will however send a printed list round all the members, showing the agreed details of those who responded to the questionnaire.

Of the 134 questionnaires sent out, 59 were returned. In the hope that those not returned were because of concerns over publication and privacy, and that these concerns will have been alleviated by the above decision, I will extend the deadline for return until the end of March, and look forward to receiving some of the 75 missing forms in the very near future! If you have not received a questionnaire or have mislaid the original, please let me know and I will gladly send one with a stamped addressed envelope for its return.

Meantime, here is a summary of the results so far:

| Groups | Beginner | Moderate experience | Expert | Willing to act as consultant |
|-----------------------|----------|---------------------|--------|------------------------------|
| Birds | 8 | 21 | 4 | 8 |
| Fish | 8 | 9 | 0 | 0 |
| Mammals | 6 | 20 | 3 | 5 |
| Insects | 11 | 15 | 3 | 8 |
| Other Inverts | 11 | 8 | 1 | 3 |
| Higher plants | 10 | 20 | 2 | 6 |
| Lower plants | 14 | 11 | 0 | 2 |
| Reptiles & amphibians | 8 | 15 | 1 | 0 |

Many of you were more specific about your interests, and stated specific orders or families, and there was a fantastic array of other skills listed, including biological recording theory, GIS expertise, environmental education, photography, phenology and many others. There really is a wealth of expertise and experience within our membership and we should all be taking advantage of it.

LRC PAGE

Relationships with Local Records Centres

Duncan Davidson

I have just completed my second season as Butterfly Conservation's East Scotland Branch butterfly recorder. I was asked if I would take on the post when the previous incumbent moved out of the branch area. "Of course I'll do it" I said; my first selfish thought was that I would get immediate inside information about the best places to see Hairstreaks and

Fritillaries and other interesting species and that apart from that all I'd have to do would be to send a spreadsheet on to HQ every year. How difficult could it be?

I had indeed very little to do during the early part of that first summer, and only a few records came trickling in on the standard Butterfly Conservation (BC) record forms. These were digitised and loaded into Mapmate quickly and easily. Then things became rather more challenging, with what seemed like hundreds of forms arriving almost simultaneously towards the end of the summer. I soon realised that there was a lot of careful painstaking work required. Every location had to be checked against the grid reference to make sure firstly that it was within the Branch area and also that the location name and grid reference were coincident. On top of that, every individual record had to be checked against historical records so I could be satisfied that there was precedent for the species being there, or that there were at least colonies sensibly nearby. Any discrepancies or anomalies had to be checked with the recorder, and if necessary with a local expert, if I could find one. In some cases, I was motivated to visit the site the following year to see things for myself! In addition to the standard forms I also received many records by e-mail, in narrative letter format and even verbally. All had to be checked in the same manner.

That more or less describes the bread and butter duties that I had taken on, but there is another important source of records that I am only just beginning to get to grips with. I was, of course, aware of the existence of Local Records Centres and the important functions that they perform and I had rather assumed that I could get all the butterfly records that they had been sent by the public, and I would in return give them all the records that I had received in their particular area. Simple. However, I am finding that my relationship with LRCs must by necessity be much more complex than this. The issues that have to be considered include the following, but the more discussion I have, the more questions are raised and the fewer answers are found.

Duplication

- LRCs load their datasets onto NBN Gateway. BC also loads the butterfly data onto NBN Gateway. Assuming data is shared, there will be duplicate records on the gateway. Does this matter?
- Some individual recorders currently send their records to me and also to the appropriate LRC. If I subsequently exchange data with the LRCs, it might not be obvious which records are already duplicated, and so submissions to NBN could be doubly duplicated. How much work should the LRC or I do to capture these?

Owner expectations

- LRCs will, in general, load datasets onto NBN Gateway at full resolution and with all metadata visible or available, as agreed with their recorders. The records that I collate are sent to a central BC dataset which is then uploaded with specific access parameters across the whole of the country, with no additional or more detailed

access availability. If only BC loads the shared data, then LRCs might not be fulfilling their duty to their recorders. If only the LRCs load the shared data, then how should HQ get my data for their wonderful atlases or for conservation analyses? Should BC take the data from NBN Gateway (but only for my areas)? Should I submit my records as normal, but BC remove them from their central dataset prior to upload?

Gaps

- To overcome the owner expectation issue above, it might be pragmatic for me and LRCs to ignore each other and we could process our own datasets independently. This would still lead to NBN Gateway duplications if recorders send data to both of us, and would also result in both datasets being incomplete. This is probably the least satisfactory solution.

Data exchange formats and traceability

- LRCs generally use Recorder, I think, whereas I use Mapmate. It should be possible to exchange data electronically but there will always be some level of file manipulation with the attendant risk of errors.
- Assuming exchanges take place, and at some future date a record is found to require amendment, it would help if each record was uniquely identified to aid simple filtering and change. Should this unique identification extend to the central BC dataset as well, and how can that be achieved?

These and the other issues that continue to appear cannot be unique to Butterfly Conservation, nor to me. With a little thought, none of the points raised should be insurmountable, but so far I have had only very limited discussions with a selection of LRCs. However, I cannot yet see further than local agreements; how to couch any agreement to include 'central' Butterfly Conservation and by extension every LRC is beyond my ken. I can't help wondering how other national schemes or their local representatives interact with LRCs, and should love to hear more about their relationships.

Perhaps I should invest £30 in the NBN publication "Biodiversity Information Management Systems". Although designed to give practical guidance to LRCs, the topic "Designing models to manage the flow of data between LRCs, recorders and others involved in managing data" sounds just what I am looking for!

New Manager for SBBRC

Ian Carle has been appointed Manager of Scottish Borders Biological Records Centre. Ian started with SBBRC at the end of September and can be contacted by email at carle@scotborders.gov.uk. The latest issue 'Winter 2007/08' of the SBBRC excellent and informative newsletter is now also available in PDF format at <http://www.scotborders.gov.uk/outabout/visit/harestanes/3301.html> then click on 'download' in the second line to view.

BOOK REVIEWS

Maitland, P.S. (2007). *Scotland's Freshwater Fish: Ecology, Conservation & Folklore*. Trafford Publishing, BC, Canada. Pbk ISBN 1-4251-1064-9. £11.00+pp.

Fish are the most successful vertebrates on earth: there are more species of fish than all amphibians, reptiles, birds and mammals put together and it falls to all of us who claim to have an interest in natural history to learn about our fishy cousins, whether or not we have an interest in angling. This brilliant book will satisfy every need to know about fish in Scotland and will fill every gap in knowledge about fish and freshwater ecology amongst the BRISC membership. It will become a classic in natural history literature; an unparalleled summation of a lifetime's research by this modest man.

Over 400 pages long, the book is divided into three parts: a central part about three-quarters of the total length, describing native and introduced species in Scotland and two other parts, an Introduction and Conclusions, making up the remaining quarter. Part 1 includes fish behaviour and ecology, freshwater habitats in Scotland's lochs and rivers, ponds and burns; fish distribution and the several ways fish can be caught, from rod to explosives. (Slight surprise here, there should have been more about haaf net fishing on the Nith and the part played by the 'priest'.) Because many freshwater habitats are isolated from other freshwaters, there is an important question as to how they become colonised by fish and the chapter on fish distribution tells the various ways this happens, from transfer by humans, connections across watersheds at times of flood, transfer by birds (controversial but true) and transfer by waterspouts. Amazingly there is plenty of reliable evidence of small fish and amphibians being lifted into the sky and dropped onto surprised citizens by waterspouts. There is a thought-provoking section about whether fish suffer pain and the unpleasant consequences for fish of using them as live bait. This practice has now been stopped but not from concern about pain but because the use of live bait has resulted in seriously disastrous introductions, such as the Ruffe in Loch Lomond.

Part 2 comprises individual descriptions of the 42 species of fish in Scotland. As well as the author's beautiful line drawings of each species and sections on the growth, food, predators, reproduction and conservation, each species description includes a 10km² dot distribution map. This book is the first time these maps have been published as a result of the author's work in compiling a computer database called SCOTFISH. For these maps alone this book should be a 'must have' in every biological record centre in Scotland.

Part 3, headed "The Issues", begins with a summary of waters which are or were important for fish because of the rarity of the species which have been recorded in them – the threats to freshwater habitats (from pollution, land use change, overfishing, fishfarming and introductions on purpose or by mistake); about the relation between fish and people (with plenty of interesting suggestions about how to help people learn more about fish); and a very important chapter on fishery management which summarises present

fishery arrangements; also the Hunter, Nickson and WWF reports. The chapter concludes with describing events in recent years to create a Freshwater Fisheries Forum for Scotland currently focused on achieving a nationwide fish and fishing management structure for Scotland.

Throughout, the text is enlivened by extracts in verse and prose from an astonishing array of writers which the author has collected over a lifetime's reading. There are also numerous 'vignette' illustrations of fish and fishy activities. Readers will find different parts of particular interest. For me, I have especially enjoyed the chapters on the three species of lamprey and the several references to that brilliantly coloured species, the Arctic Char (15 varieties or 15 species according to expert splitters or lumpers) which I first heard about in biogeography lectures by Charles Elton over 50 years ago. That so much has been discovered in the last half century now brought together in this excellent book is a great tribute to fish scientists everywhere and to the author's dedication as a scientist and communicator.

NB: This book is not available in bookshops. It must be ordered on line at: Trafford.com/06-2823.

Thomas Huxley

Merryweather, J. (2007) *The Fern Guide*. 3rd Edition. Field Studies Council. 96pp, 8 pages of photographs. Pbk ISBN 978 1 85153 288 5 £7.50.

The Fern Guide is part of the FSC's AIDGAP excellent series which provides accessible keys for a wide range of plants and animals. This Key covers ferns, clubmosses, quillworts and horsetails. I have used all three editions with many students and with reasonably careful reading it has proved easy to use. This edition has small changes in the text and more colour photographs, considerably enhancing the already very useful content. It is a simple key using as little specialised language as possible. Even by following through the sequence in the key much will be learnt about the range of frond shapes, and there is a short glossary at the beginning with some general information. There are also occasional comparisons with other plants that are not ferns, but might be confused, and the differences are given. The key is intended to be used in the field and only a hand lens is needed to gain the full benefit. The main changes are in a fuller treatment of the *Dryopteris affinis* aggregate. These apomictic ferns have recently been divided into at three species, and clear photographs show the frond shape, pinnae and indusia, which help in their determination. There are also photographs of a range of types of sori, all the buckler ferns, the two commoner shield ferns, and two filmy ferns. I would certainly recommend that every naturalist should have a copy.

A fold-out chart 'A key to common ferns' has also been produced by the FSC and the same author in 2005 (£2.50). This only deals with the commoner ferns, has a very short key and coloured drawings of single fronds against an appropriate background. It is also an attractive production and might well spark off an enthusiasm, which can be extended by use of the full key.

For the real enthusiast, James Merryweather has produced a CD Rom with numerous detailed photographs of all the British species which costs £15. This can be obtained via his website www.merryweather.me.uk

Heather McHaffie

Dudley, S., Dudley, C. & Mackay, A. (2007). *Watching British Dragonflies*. Subbuteo Natural History Books. Pbk. ISBN 978-1-905268-04-7. £27.50

This book is the most recent addition to the growing library of Odonata field guides. It is only the second site guide for this order of insects to have been published in the UK. The previous site guide, *Butterflies and Dragonflies: a site guide* by Hill & Twist, went out of print soon after it was published in 1998. I was eagerly awaiting this book and was delighted to receive a copy to review.

The authors do point out that this is not primarily an identification guide and other guides such as Steve Brooks's *Field Guide to Dragonflies and Damselflies of Great Britain and Ireland*, with illustrations by Richard Lewington, or Smallshire & Swash's *Britain's Dragonflies*, do this in more depth. However, it was interesting to see a birder's eye for detail being reflected in some of the features being identified in the species guide. I shall be looking with interest at Highland darters to see if the yellow stripe on their leg is only on the femur. The book does say the stripe is on the tibia but illustrates the stripe on the upper not lower leg. The illustrations are clear and there are useful plates of males and females together alongside other similar species. An important mistake which I spotted in the variable damselfly (*Coenagrion pulchellum*) illustration was the lack of detail (pointed out in the text) on the thoracic exoskeletal plate called the pronotum, this is **the** key identifying feature that separates this species from other blue damselflies, so a key omission.

The book is divided into several sections; a quick guide, a species guide, a site guide (with maps) and a gazetteer of sites. The sites do predominate in England, although there are 10 in Scotland and 7 in Wales out of a total of 94. Poor Northern Ireland does not get any sites with a map, only those mentioned in the gazetteer; this seems to short change this country and point to a lack of research.

I would have found the site index easier to follow if it had been divided into the countries where they are found rather than all the sites added together and alphabetised. Colour coding for English counties would also make sites there easier to find. The pages with the site maps do not have a number on them corresponding to the numbers assigned them on the UK map at the start of this section. I did find that I had to look at the site number, then the page number it was on, and then the page with the site map, rather than flicking through the pages to find the site number. This seems a minor quibble but the numbering does seem to make things a little more difficult than they need to be.

My knowledge of dragonfly sites does not really go south of the border, so in that respect this book will be very useful, as

there is a good selection of sites all over England to visit. In Scotland sites near Loch Maree-side, Glen Affric, Speyside and Galloway were highlighted. There were some omissions that I found striking though, the Culbin Forest was not mentioned at all, and the Black Lochs near Oban was only mentioned in the Gazetteer of sites. The Black Lochs is one of the few sites in Scotland (the only?) where you can find beautiful demoiselle, downy emerald, northern emerald, hairy dragonfly and variable damselfly, though admittedly not all at the same time of year.

Whilst thinking about the review of this book the whole issue of identifying sites rattled around in my head. I personally would be reluctant to publish sites that firstly cannot take a great deal of trampling and secondly that I had not asked the landowner if they were happy for the sites to be identified. I know that the RSPB will not be happy with some of the Abernethy sites identified, as they are looking to keep folk to paths or on sites with boardwalks. I would be much happier if sites that were publicised were suitable for public access, had boardwalks, there was some kind of interpretation available and were part of a network all over the country – sounds like a job for Buglife!

To be fair, the authors do identify increased observer interest in some sites being an issue and outline a code of conduct used by birdwatchers with some Odonata specific advice. Their intention of promoting a wider and better understanding of our countryside and wildlife is laudable.

This book is especially for someone who is keen to see dragonflies in England and who does not know many sites there to visit. For those who are only interested in Scottish sites then it would be better to buy the Steve Brooks & Richard Lewington book, as it mentions all the sites in its regional guide. If you already have that book, then you might want to wait for the latest New Naturalist Book by Philip Corbett and Steve Brooks on Dragonflies due in February 2008.

Jonathan Willet

Evans, M. & Edmondson, R. (2007). *A Photographic Guide to the Grasshoppers & Crickets of Britain and Ireland*. Wild Guide UK. 183 pages. Pbk ISBN 978-0-9549506-1-3 £21.95 (including p+p).

With the development of digital cameras there has been a real breakthrough in the quality of macro-photographs available with considerable advances being made in insect portraits. Nowadays the ease of checking photographs in the field means that shot after shot can be taken until a good one has been captured. This book is an excellent example of what can be achieved, as it is crammed with photographs of all of the British species alive and in close-up.

Altogether there are accounts of 13 bush crickets, 4 crickets, 3 ground-hoppers and 13 grasshoppers plus another 7 species which are living in greenhouses or are casual introductions. Each species has a page, or more, of description including how to identify it, similar species, song, adult period, habitat, life cycle, distribution and hints on how to find it. Following the text are superb close-up photographs of the species

ranging in number from five to a massive thirty-two (the very widespread meadow grasshopper, *Chorthippus parallelus*), showing male, female, nymphs and colour variations.

Just to make identification easy there are a very comprehensive photographic keys to the families and to the species within each family. To try out the keys I was lucky enough to find a male of the common green grasshopper, *Omocestus viridulus*, in Ayrshire in late October. For the grasshopper family it was a matter of looking through the pictures using the shape and colouration of the keels on the thorax to find the species and then confirming the identification using the other relevant features pictured. For my specimen it worked quite well although I did have to go to the main species account to make sure I understood exactly what was meant by 'no costal bulge'. However, with so few members of the order it is easy to get to the species and even easier to make sure you have the identification right.

The Orthoptera order is very much a southern group and Scotland really only has four grasshoppers and a ground-hopper which are common and widespread. The mild climate of Dumfries and Galloway allows three species of bush crickets to thrive and there are a few other mysterious records of mole crickets and the oak bush cricket from elsewhere. It might be that the lesser mottled grasshopper, *Stenobothrus stigmaticus*, only found in the Isle of Man, might in fact also occur on a remote coastal headland in south-west Scotland. However, from the comprehensive general account of the species at the beginning of this book it is obvious that global warming is affecting this group with three species new to Britain found so far this century and several others clearly spreading rapidly northwards. We should be, the authors suggest, looking out for the first records of the long-winged conehead, *Conocephalus discolor*, in Scotland sometime soon!

This small group of medium to large insects clearly lend themselves to being identified through photographs and these two, very enthusiastic, authors have made the very most of the method. Their book is excellent and inspiring although they admit that if you really want to know more about behaviour or wish to hear the grasshoppers' songs you will have to look elsewhere. I feel that although the layout and presentation of the book was a bit clumsy it made no difference to using it. Even the inside front cover shows photographs of the species life sized giving you an quick understanding of what your specimen might be before you had even opened the book properly. I have no hesitation in recommending this as the best book on the subject by far.

Alastair Sommerville

If readers have any information about coming events relating to biological recording, please send these to our website manager, Andy Wakelin (see below), so that they can be put on our website, and also to Mandy Henshall at m.henshall@nbn.org.uk for her to put them on the NBN website training section to be accessed at <http://www.nbnintranet.org.uk/training/default.aspx>

Future Events:

A Visit to the Natural History Collections of the National Museum of Scotland, housed at Granton, Edinburgh, is being arranged for BRISC. Full details of the visit will be included with the notice of the AGM and booking form for BRISC's Annual Conference, all of which will be mailed out before the end of January.

A Hoverfly Identification Course with Roger Morris and Stuart Ball at Glasgow University.

The course will take place over two Saturdays; the first, in the early spring, will focus on collecting hoverflies and creating a voucher collection; the second day will be later in the year and will centre around identification of the specimens you have collected. Full details when available will be available on BRISC's website and will also be emailed out to those members whose email addresses BRISC has access to.

Saturday 29 March - BRISC 2008 Conference & AGM - at Duke of Gordon Hotel, Kingussie.

Conference talks will be biased towards interests within the Cairngorms National Park. Speakers will be Dick Balharry (keynote), Stephen Corcoran (Cairngorms Biodiversity Officer), Glenn Roberts (NESBReC), Chris Ellis (RBGE), and Murdo Macdonald (HBRG). Site visits are planned for the Saturday afternoon and, if there is adequate demand, further visits are planned for Sunday 30th March.

The event is being generously sponsored by the Cairngorms National Park Authority, and as a result the AGM & Conference day costs should be similar to 2007 at £18.

In addition we have been able to arrange, for delegates, special accommodation rates at The Duke of Gordon Hotel, and these will be further reduced by the CNPA Grant to approximately £46 per person per night for BB. Subject to demand we may be able to include dinner on both nights within a special rate. *This is fantastic value* and it is hoped that many of you will be able to take up the opportunity of spending one or two nights in the wonderful setting of the Cairngorms.

Full details will be posted to all Members by the end of January.

Non BRISC Members attending the Conference will also qualify for the lower rates.

Current passwords to the Members Only webpages are

| | |
|----------|----------|
| Username | whales |
| Password | dolphins |

Deadline for the April issue of BRISC Recorder News is 15 March. All material to anne-marie@smout.org (Please note changed email address!) or by post to Chesterhill, Shore Road, Anstruther, Fife KY10 3DZ or Tel 01333 31033