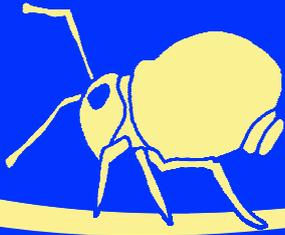


Scottish Invertebrate News

Volume 1
Issue 2

October 2010



The Scottish Invertebrate Conservation Newsletter

www.scottishinvertebrates.org.uk

Welcome!

Welcome to the second issue of *Scottish Invertebrate News*.

It has been a busy summer, but with the field season for most invertebrate groups now drawing to a close, it's time to sit down to identify specimens and reflect on the year.

This newsletter is the perfect place to share your own discoveries and catch up with other projects in Scotland.

While the first issue was a great success, this edition contains a greater variety of articles, covering an even wider taxonomic range with articles from many contributors.

We've had to add more than twice as many pages to meet demand! The newsletter has positively *exploded*!

We hope that this inspires you to get involved in invertebrate conservation!

Inside this issue:

<i>Welcome!</i>	1
<i>Scottish Invertebrate Discoveries</i>	1-7
<i>Action for Scottish Invertebrates Project Updates and Opportunities</i>	8-11
<i>Bob Saville Obituary</i>	12

Scottish Invertebrate Discoveries

Every year new invertebrate discoveries are made in Scotland. From amazing ecology, to records of species new to Scotland or science, this section highlights just a handful of these fascinating discoveries!

Short-necked oil beetle found on Coll!

The Short-necked oil beetle (*Meloe brevicollis*), believed to have become extinct in the UK more than 60 years ago, has been discovered on the RSPB's Coll reserve. This fascinating beetle was first rediscovered in Devon in 2007 and in 2009, Bob Heckford (a lepidopterist from Devon) and Ben Jones (the RSPB warden on Coll) found the species at two sites on the Hebridean island. A team of visiting

entomologists from Glasgow Kelvingrove Museum, the Aquatic Coleoptera Conservation Trust, the University of Glasgow and Darren Mann from the Oxford University Museum of Natural History have confirmed the rare find on these two sites and with the aid of Ben Jones found a further two sites on Coll earlier this year.

More info on page 6!



Short-necked oil beetle (*Meloe brevicollis*) © Tony Oliver

Nicky Redpath
RSPB Scotland



Scotland's rarest ant? (*Myrmica lonae*) © April Nobile / www.antweb.org

Third nest record of Scotland's rarest ant!

A *Myrmica lonae* (a species of red ant) nest has been found near Arisaig – only the third known in Britain! Murdo Macdonald found the nest under a stone on the edge of a south-facing oak woodland in August this year.

Bernhard Seifert established in 2000 that what had previously been regarded as one species of red ant, *Myrmica sabuleti*, was actually a complex of that species and *M. lonae*, citing a specimen of the latter from Loch Maree. In

2008 Richard Lyszkowski collected a queen *M. lonae* at Dundreggan, and the nests were found in the same area by Andrew Jarman in 2009.

M. lonae has different ecology from *M. sabuleti*, being less dependent on warmth and more associated with open woodland. It is probably very scarce, and more likely to be found in Scotland than farther south. Future surveys in suitable habitat in West Scotland will almost certainly reveal more sites, but for the time-being *M. lonae* is a strong candidate for the title of 'Scotland's Rarest Ant'.

Murdo Macdonald
Highland Biological
Recording Group
(HBRG)

Invertebrate Discoveries
Continue on Page 2



Scottish Invertebrate Discoveries Cont.

Rare brackish-water mud snail in Scotland

Mud snails (Hydrobiidae) are small gastropods (1.0-6.0 mm long) which occur in brackish water to open marine habitats.

Hydrobids are common benthic organisms that reside within intertidal and shallow waters and prefer soft substrates.



Mud snail (Hydrobiidae) shells © Melissa Chevalier

These snails are an important link in lagoon food webs providing a vital food source for fish and birds. Often different species co-exist within one habitat and in abundant numbers e.g. *Peringia ulvae*, *Ventrosia ventrosa* and *Hydrobia acuta neglecta*.

Current uncertainty over the identification of hydrobids, particularly *H. acuta neglecta* which is easily confused with other species, renders distribution maps inaccurate. *H. acuta neglecta* has been recorded as present in some lagoonal areas but these records cannot be

verified as no specimens have been collected from these habitats.

Morphological characters such as body size and pigment patterns on the tentacles can be affected by environmental and parasitic factors which challenge identification.

Records indicate that *H. acuta neglecta* is rare but distributed widely in the Outer Hebrides on North and South Uist, while its distribution is restricted elsewhere in Scotland.

Verification of existing records will help confirm the known distribution of this species. It is hoped that improved identification aids will then allow increased recording and greater confidence in identification, providing a clearer picture of the current distribution of this rare snail.

Melissa Chevalier
BTCV Natural Talent Apprentice

New species of water beetle for Scotland!

Surveys undertaken by Buglife on behalf of Froglife have revealed something quite unexpected – a new species for Scotland! *Hygrotus nigrolineatus*, a small diving beetle, was collected by Craig Macadam from a pond

Army worms found in Leadhills, South Lanarkshire!



Leadhills worms (Army worms, Diptera: Sciaridae) © Charlie Clark

Following sightings from local residents, representatives from South Lanarkshire Council's Countryside and Greenspace Service collected larvae from a column of suspected 'army worms' (Diptera: Sciaridae) at Leadhills in July 2010.

Known locally as the 'Leadhills Worms' and 'Oor Nessie', dense columns of the larvae have been reported in a garden run by the Scots Mining Company House Trust in Leadhills for several years. These columns contain thousands of individual larvae.

Army worms are actually larvae of dark-

winged fungus gnats. While a number of species of these gnats occasionally form impressive larval processions – perhaps to avoid overcrowding – it is unknown if this behaviour is more common in the species most famous for it, *Sciara militaris*.

It is believed that the larvae at Leadhills are those of *S. militaris*, which is native to continental Europe but recorded at only a handful of other sites in Scotland. If identification is confirmed, the discovery is potentially of national significance. Larvae have been successfully raised to adults and identification is being undertaken by entomologists at The University of Glasgow, and the results will be published once this is confirmed.

Sian Williams
Biodiversity Officer,
South Lanarkshire Council

at Robroyston LNR and identified by Garth Foster of the Aquatic Coleoptera Conservation Trust. This beetle was first recorded in the UK from East Kent in 1983 and has since expanded its range northwards. Its appearance in a pond in Glasgow is the first record for Scotland.

Craig Macadam
Buglife



Hygrotus nigrolineatus © Lars Iversen

Damselfly and dragonflies take to the air at Flight Pond!

The recent find of a Four-spotted chaser exuvia brings the total number of species of dragonflies and damselflies (Odonata) at the National Trust for Scotland's (NTS) Castle Fraser to ten – exceptional for the north-east of Scotland!

The exuvia was found on a rush by the edge of the aptly named 'Flight Pond' at Castle Fraser, an NTS property in Aberdeenshire. The discovery was made by the NTS Ranger Service on a training day led by local expert and NTS volunteer Juliette Dinning.



Four-spotted chaser (*Libellula quadrimaculata*) exuvia © Juliette Dinning

The rich Odonata community, combined with the pond's wealth of other aquatic invertebrates, has led the Ranger Service to explore the possibility of Local Nature Reserve designation for the site in the future.

Toni Watt
NTS Ranger Service



Four-spotted chaser (*Libellula quadrimaculata*) © Chris Cathrine

Is the Upland summer mayfly in hot water?

The Upland summer mayfly (*Ameletus inopinatus*) is the only arctic-alpine mayfly species found in the UK. It is thought that increasing water temperatures are pushing this species further and further upstream, and even

leading to its loss from some watercourses.

Louis Kitchen (BTCV Natural Talent Apprentice), Willie Yeomans (Clyde River Foundation) and Craig Macadam (Ephemeroptera Recording Scheme) were awarded the Hugh Cary Gilson Award by the Freshwater

Scottish Invertebrate Discoveries Cont.

Scirtid tree-hole beetle—not rare, just overlooked!

Two recent visits to Scotland by Dr Jonty Denton have yielded the second, third and fourth Scottish localities for the tree-hole beetle *Prionocyphon serricornis*. This species is a member of the small Scirtid family, all of which have aquatic larvae and terrestrial adults. Once thought a great rarity, and ancient woodland indicator, it is in fact a widespread species, but the adults are very short lived and elusive. Hence the vast majority of records are of larvae which develop in small pockets of water trapped in holes in trees – especially beech. If you are keen to make some exciting discoveries, as well as new county records,



Prionocyphon serricornis
© Dr Jonty Denton

find a tree-hole, pick up a stick, stir up the leaves and debris and look for the straw coloured larvae (5-12mm long) with long fine antennae (see picture) floating up! You're bound to get the rat-tailed larvae of the hoverfly *Myathropa florea*, but the rot hole beetle might take two or three goes.

Dr Jonty Denton
Scirtid Recording Scheme

Biological Association for their project 'Is the Upland summer mayfly (*Ameletus inopinatus*) in hot water?' Over the summer they have sampled watercourses with historic records of *Ameletus* and have identified the lower altitudinal limit in five key populations.

Surveys this year have shown that the species is no longer found at many of the low altitude sites. Further work is planned over the winter to establish the current distribution of the Upland summer mayfly.

Craig Macadam
Ephemeroptera Recording Scheme



Upland summer mayfly (*Ameletus inopinatus*)
© Stuart Crofts

Scottish Invertebrate Discoveries Cont.

Northern February red stonefly confirmed as Scottish endemic!

Work undertaken by the Riverfly Partnership and Buglife has confirmed that the Northern February red stonefly (*Brachyptera putata*) is a UK endemic species. Specimens of adults were collected from alongside the upper reaches of the River Dee in March and sent to Peter Zwick in Germany – an international expert on stoneflies. Peter compared the specimens to *Brachyptera starmachi*, a species described

from the Carpathians. The comparison showed that *B. putata* is closely related to, but clearly distinct from, *B. starmachi*. The Northern February red is found in clean, fast flowing rivers in the Highlands and has also been recorded from Wales. There have been no recent records from Wales and it looks like this endemic species is now restricted to the Highlands of Scotland.

Craig Macadam
Buglife



Above: Female Northern February red stonefly (*Brachyptera putata*)

Below: Male Northern February red stonefly (*Brachyptera putata*)

Both photos © David Pryce



New site for the rare Scabious mining bee!

It was thought that the rare Scabious mining bee (*Andrena marginata*) had been extinct in Scotland for more than half a century, until Gill Nisbet found one in Boat of Garten in 2002. Jane Bowman then found a strong population in Glen Moriston in 2007 and Gus Jones has subsequently observed single females in a few places in Strathspey.

The bee is restricted to Devil's-bit scabious (*Succisa pratensis*) as a pollen source, and local botanist Margaret Fraser noted a particularly impressive meadow of this plant near Daviot, just south of Inverness. Murdo Macdonald checked this site in September this year, and quickly found almost 20 females collecting



Scabious mining bee (*Andrena marginata*)
© Gus Jones

pollen and provisioning nests. Clearly the area holds a vigorous population, second only to Glen Moriston in importance in Scotland – a fantastic discovery for a species thought so recently to have been extinct in the country!

Murdo Macdonald
HBRG

New species of Scuttle fly (Diptera: Phoridae) from Scotland raises questions over feeding habits.

A new species of Scuttle fly (Diptera: Phoridae) has been described from Scotland by Dr Henry Disney—*Megaselia wigtownensis*. This discovery calls into question the worldwide distribution of *M. picta* to which the specimen had originally been assigned.

Dr Disney has since found *M. wigtownensis* in northern Spain, where a specimen was collected with a pine pollen mass on its proboscis. This is intriguing as phorids are nectar feeders, and male pine cones are not a

nectar source. As pollen has not been recorded in the crop or stomach of any phorids caught visiting flowers, this discovery raises the possibility that some may pierce pollen grains and ingest the contents, or discharge saliva onto grains and ingest the saliva and any nutrients released from the pollen.

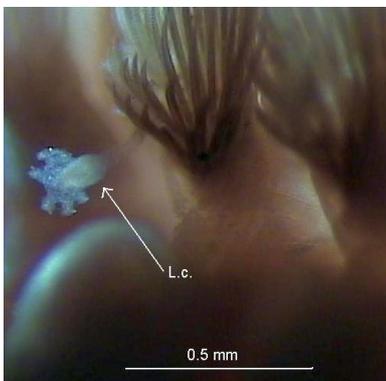
With 1,500 species of *Megaselia* known and probably 10 times as many undescribed, there may still be much to learn!

Chris Cathrine
Buglife

SEPA scaleworm surveys uncover a plethora of marine species new to Scottish waters!

The scaleworms are among the most readily recognisable of polychaete worms and are common in both intertidal and subtidal marine habitats. Over forty species have been recognised from Scottish waters but the distributions of many species are poorly known, partly due to the difficulties in identifying many species, which often requires microscopic examination of the scales, or the chaetae (hairs/spines).

Scaleworms are often observed during environmental monitoring surveys of the seabed carried out by Scottish Environment Protection Agency (SEPA). With the current interest in documenting marine biodiversity, SEPA scientists have undertaken a study to review their finds of scaleworms in recent years, focussing on surveys in the Clyde and Argyll Sea Area. The SEPA scaleworm records include nearly thirty species. Some of these are well known, such as the Occelated scaleworm (*Malmgrenia andreapolis*) with distinctive eye-like scale markings, which frequently lives within the burrows of Anchor sea-cucumbers of the genera *Labidoplax* or *Leptosynapta*. Other species found, such as McIntosh's scaleworm (*Malmgrenia mcintoshi*), with a mottled brown scale pattern, or the Antler scaleworm (*Harmothoe pagenstecheri*) with distinctive ornate antler-like tubercles on its scales, have just been recognised as separate



An entoproct (*Loxosomella compressa*) [arrowed] on chaeta of a scaleworm (*Gattyana cirrhosa*)
© Myles O'Reilly

(*Harmothoe fragilis*) from Loch Ryan represents the first find from Scottish waters.

Scaleworms were also checked for parasitic copepods which attach to the head or body of their host. Four different copepod species were identified. One of these, *Selioides bocqueti*, was recorded for the first time from Scottish waters, on the dorsum of *Gattyana cirrhosa*. Another copepod, *Eurysilenium truncatum*, new to British



seas, was also found on *Gattyana cirrhosa* from the Clyde, and from Shetland. In addition, two species of *Herpyllobius* were found – *H. arcticus* attached to the body of *G. cirrhosa* and *H. polynoes* attached to the head of *Harmothoe antilopes*. A third *Herpyllobius* species (found attached to the head of several *Malmgrenia andreapolis*) appears to differ from any known described form and may represent a species new to science.

The morphology of *Eurysilenium* and *Herpyllobius* copepods is extremely modified comprising a simple ovoid body and a tongue-like portion which inserts through the host's skin into its body cavity. There are no antennae, mouthparts, or legs whatsoever. The only thing that gives away their copepodan nature is a pair of curled egg-sacs (ovisacs) protruding from the posterior end.

In addition to the copepods, the scaleworms were checked for commensal entoproct zooids, which are generally overlooked by ecologists. Although these miniscule polyp-like symbiotic organisms do not benefit the scaleworms they often attach to, neither do they cause harm. The scaleworm *Gattyana cirrhosa* was found to harbour two entoproct species – *Loxosomella compressa* and *L. harmeri* which attach to the chaetae or scales respectively. Another entoproct *Loxosomella glandulifera* was recovered from the tube of the Pocket scaleworm (*Panthalis oerstedii*). None of these entoprocts have previously been recorded from Scottish waters. Indeed, *L. glandulifera* is new even to UK waters!

The new distributional records described above for scaleworms, copepods and entoprocts reflect our limited knowledge of these invertebrate groups. There is still much to be learned about many of our smaller, more obscure, marine creatures. Full details of the study are to be published shortly in the Glasgow Naturalist Journal.

Myles O'Reilly, SEPA

Scottish Invertebrate Discoveries Cont.

Barbut's cuckoo bumblebee found on Orkney!



Barbut's cuckoo bumblebee (*Bombus barbutellus*)
© Bob Dawson

A welcome but unexpected discovery this year was of Barbut's Cuckoo Bumblebee *Bombus barbutellus* in Orkney. Three females

were found by three different observers between 8th and 23rd July on Mainland and Egilsay. This is a scarce species in Scotland and absent from the neighbouring Highland region, though the usual host, *Bombus hortorum*, is a common species. The nearest modern records are of four males in Aberdeenshire between 2002-2007.

Bob Dawson
Bumblebee Conservation Trust

John Crossley
John Crossley Consultancy

Cave spiders in the ruins of Cadzow Castle!

The impressive but harmless Cave spider, *Meta menardi* has been found in the ruins of Cadzow Castle, in Chatelherault Country Park in Hamilton!

Chris Cathrine, a local spider enthusiast, decided to check out rumours of giant black spiders dwelling in the ruins. He was not disappointed! Upon

entering the ruin, he found himself surrounded by the large dark-brown spiders with ping pong ball sized egg sacks hanging from the ceilings. When illuminated by a spotlight, these apparently dull spiders reveal their markings.

Cave spiders are probably under-recorded, due to their secretive habitat.

Chris Cathrine
Buglife



Cave spider (*Meta menardi*)
© Chris Cathrine

Technical Note: Short-necked oil beetle on Coll



Short-necked oil beetle (*Meloe brevicollis*)
© Darren J. Mann

The Short-necked oil beetle (*Meloe brevicollis* Panzer) was, until 2006 believed extinct in the UK. According to the *Review of the scarce and threatened Coleoptera of Great Britain* (Hyman, 1992) it was only known from eleven vice counties, mostly in southern England, and was last recorded at Chailey Common, East Sussex in 1948.

However, in 2006 Bob Heckford found a specimen at Bolt Tail, Devon — a site at which N.H. Joy (1902) had previously recorded the species over one hundred years before. A second modern record emerged in 2009, when a first instar larva (a <2mm long triungulin) was identified from a specimen of the Northern colletes bee (*Colletes floralis*) collected during 2006 at Cahore Dunes, Ireland (Telfer, 2009). In June 2009 Bob Heckford sent pictures to Darren J. Mann for identification of two *Meloe* specimens, one collected by himself at Hogh Bay, Coll, the second collected a few days earlier near Sorisdale by Ben Jones (Coll RSPB Warden). The former was clearly *M. brevicollis*, but, unfortunately the second proved more difficult to accurately identify, since the specimen exhibited unusual colouration and texture. In view of this, the authors planned a trip to assess the status of *M. brevicollis* on Coll and to see if the species was also on neighbouring Tiree.

M. brevicollis was not found on Tiree despite several sites with large populations of the host bee being surveyed, most of which we believe to be of suitable habitat for the beetle. However, future survey work during June and early July will be conducted at sites across the island as there is a good chance that *M. brevicollis* may be overlooked.

Meloe brevicollis

On Coll a total of 39 specimens (including four dead males) were recorded from four sites. The team confirmed a strong population at the original site discovered by Heckford at Hogh Bay, and confirmed the identification of the Sorisdale population as *M. brevicollis*. We also located two further sites. One, Chrossapol Dunes, was discovered by Ben Jones; and the second was chosen based on our 'suitable habitat' theory. It is quite probable that *M. brevicollis* occurs throughout the Island on machair sites with large bee populations. The wide distribution and number of individuals found would indicate that Coll has a thriving *M. brevicollis* population, and if current management of the areas continues, the beetles' future is secure.

Habitat

M. brevicollis has a strong association with sandy heaths, or at the very least with localities with well drained or sandy soils. Although *M. brevicollis* had not previously been recorded from Scotland, its occurrence on such high quality habitat as the machair is not surprising. At all four sites on Coll, *M. brevicollis* was found in association with large breeding aggregates of the Northern colletes (*Colletes floralis*) in areas of high floral diversity, in particular with abundant *Ranunculus* species, which appears to be a preferential host plant for the adult stage. In most cases the beetles were found climbing on or at the bases of large dune hills in sheltered areas.

Darren J. Mann would be happy to receive data on British oil beetles, including photographs of unidentified species. Please take multiple images of specimens, including top and side views to ensure identification is possible.

For more information, go to:

www.buglife.org.uk/conservation/currentprojects/Species+Action/Oil+Beetles

Acknowledgements

The authors would like to thank Bob Heckford and Ben Jones for allowing us to publish their records, and again to Ben Jones for his assistance during our stay on Coll. The team were supported by grants from Lloyd Binns bequest (Glasgow Natural History Society) and SNH.

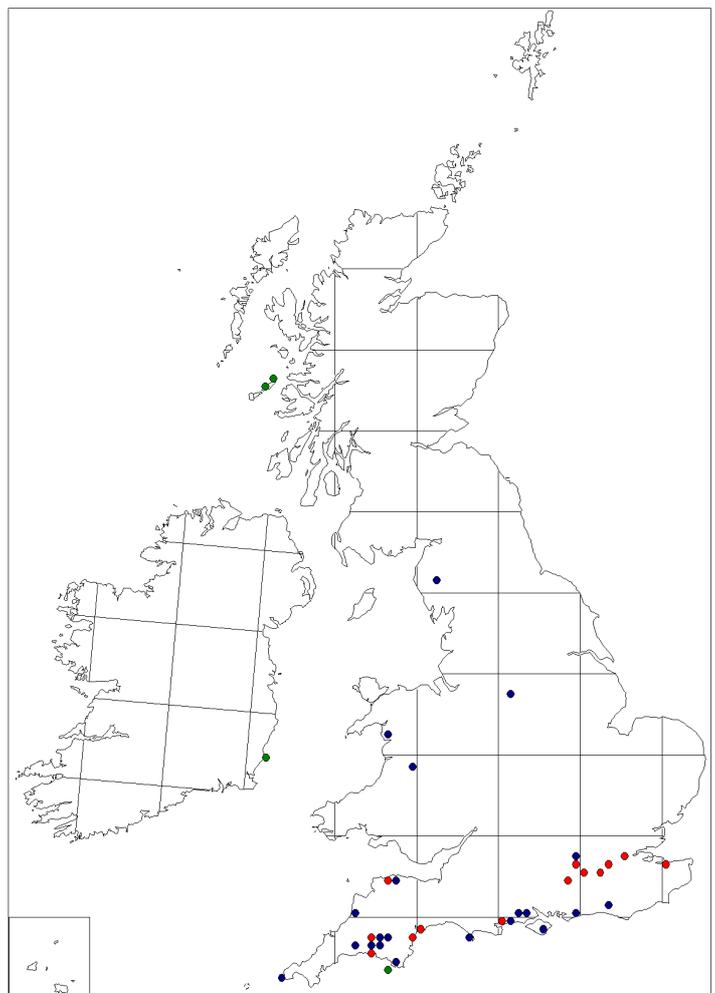
Authors:

Darren J. Mann, *Hope Entomological Collections, Oxford University Museum of Natural History, Parks Road, Oxford, OX1 3PW, darren.mann@oum.ox.ac.uk*

Geoff Hancock, *Hunterian Museum (Zoology), Graham Kerr Building, University of Glasgow, Glasgow G12 8QQ*

Jeanne Robinson, *Kelvingrove Art Gallery & Museum, Argyle St, Glasgow, G3 8AG*

Garth Foster, *The Aquatic Coleoptera Conservation Trust, Eglinton Terrace, Ayr, Ayrshire, KA7 1JJ*



Distribution map showing all known records of *Meloe brevicollis* [Date Classes: Red circles 1800-1899; Blue circles 1900-1999; Green circles 2000-date]

© Darren J. Mann

References

Hyman, P.S. (Revised Parsons, M.S.) 1992. UK Nature Conservation No. 3: *A review of the scarce and threatened Coleoptera of Great Britain part 1*. Joint Nature Conservation Committee, Peterborough.

Joy, N.H. 1902. *Leptinus testaceus*, & c., near Bradford, *Gnorimus nobilis* near Towcester, and *Meloe brevicollis* from South Devon. *Entomologist's Monthly Magazine* 3, 179.

Telfer, M.G. 2009. Seven beetles new to Ireland, seven new to Northern Ireland and other noteworthy discoveries. *The Coleopterist* 18(2), 121-129.

Action for Scottish Invertebrates—Hot Off the Press: Project Updates

The publication of the 'Strategy for Scottish Invertebrate Conservation' was a milestone for invertebrate conservation. Now, we need to implement the Strategy. The following articles will bring you up to date with some of the exciting projects being undertaken in Scotland that contribute towards invertebrate conservation, and the realization of the Strategy.

More information about the Strategy is available at: www.scottishinvertebrates.org.uk

Action for Scottish Invertebrates ID Workshops

If you don't know what invertebrates you have, you can't conserve them. However, if you don't have the skills, how can you record them? A new series of workshops, launched this year, is tackling the invertebrate identification skills gap in Scotland and aim to increase recording of these animals.

Introduction Workshops allow beginners to learn the skills necessary to take their interest forward, while Under-Recorded Species Workshops provide an in-depth look at groups for more experienced invertebrate workers. Two introductory workshops were run in 2010: one at the National Trust for Scotland's Mar Lodge (Aberdeenshire) and one at BTCV Scotland's Balallan House (Stirling). Two focused workshops were also delivered: harvestmen (Opiliones) led by Mike Davidson at Perth Museum, and beetles (Coleoptera) led by Sarah Henshall at Balallan House (Stirling).

The phenomenal response to the workshops has also put paid to the popular misconception that there is a lack of interest in invertebrates. For instance, the beetle workshop booked up in less than one hour!

These workshops not only provide the opportunity to learn new skills, but are great fun as well!

Further workshops will be run in 2011. If you are interested contact scotland@buglife.org.uk

Chris Cathrine
Buglife

PHOTOS: Craig Macadam shows a Golden-ringed dragonfly (*Cordulegaster boltonii*) to Lina-Elvira Back at the Introduction to Invertebrates Workshop at Mar Lodge; Harvestman Workshop field visit in Perth; Abbie Patterson collecting harvestmen; Gwen Potter identifying invertebrates; Mike Davidson leads the harvestman workshop. All photos © Chris Cathrine



Deadwood Habitat Management Workshop

It's important that land managers understand not only how to manage land sympathetically for invertebrates, but also *why* this is essential. The deadwood habitat management workshop run in the Highlands in October is the first in a series that aims to address this.

The RSPB's Forest Lodge and Abernethy Reserve provided the perfect venue for this course, which was led by Graham Rotheray, Principal Curator of Entomology for the National Museums Scotland (NMS) and representative of the Initiative for Scottish Invertebrates (ISI).

Attendees were from diverse backgrounds

ranging from community woodland groups, to smallholders to council rangers who advise on local projects. Following informative presentations by Ross Watson (RSPB) and Graham, the participants spent the afternoon gaining firsthand experience of important deadwood habitats and invertebrates in the field. Grubbing around in deadwood habitats, the participants uncovered a plethora of invertebrates, including flies (Diptera), beetles (Coleoptera), springtails (Collembola), centipedes (Chilopoda) and millipedes (Diplopoda). Close encounters with long-



horn beetles (larvae and adults) were definite highlights!

The workshop was a great success, and another habitat management workshop will be run in 2011. For further information, please contact: scotland@buglife.org.uk

Chris Cathrine
Buglife

Above: Graham Rotheray leads the Deadwood Workshop in the field

Below: Long-horn beetle larva
Both photos © Chris Cathrine



Above: Clais Moss © Scottish Natural Heritage

Below: Cornwall Port © Chris Cathrine



Invertebrate habitat management advice published at:
www.scottishinvertebrates.org.uk

Scotland holds many internationally significant habitats important for invertebrates. For example, Scotland holds 8-13% of the total global area of blanket bog. The country also has many habitats that are unique in the UK, such as summer snowfields on mountain ranges, for which the Cairngorms plateau is important. In addition, invertebrates rely on less obvious habitat niches, such as deadwood in semi-natural woodland.

It is essential that the needs of invertebrates

are considered in management plans.

The first four Habitat Management Advice documents have been published: blanket bogs, lowland raised bogs, coastal vegetated shingle and cereal field margins. The series provides land managers with the tools to consider invertebrates, in the context of the Scotland Rural Development Programme (SRDP) and other funding streams.

Chris Cathrine
Buglife

Action for Scottish Invertebrates—Hot Off the Press: Project Updates Cont.

Farmers in Caithness are sowing the seeds of the future for the Great yellow bumblebee

A new three year project was launched in 2010 to help the Great yellow bumblebee (*Bombus distinguendus*). In partnership with the Caithness Biodiversity Group and Bumblebee Conservation Trust, eleven local farmers have each sown quarter hectare plots of a short-term pollen and nectar mix containing seven species, mainly agricultural legumes. Sowing was carried out in May and June, and the mix will remain *in situ* for three years, with a management payment for cutting back the mix after flowering each year. From next year, the principal red clover component of the mix will be flowering strongly, providing support for spring queens and colony growth.

The annual components of the mix (Phacelia, winter vetch and crimson clover) flowered this summer, but the plots will continue to be monitored in subsequent years by local trained volunteers for the different mix components, arable wildflowers and, of course, bumblebees. The Great yellow bumblebee has been recorded on all but one of the participating farms this year, with a maximum site count of 22 received to date. Most have been seen foraging at Phacelia, crimson clover and common hemp-nettle, but others have been using the red clover of unharvested crops put in under agri-environment schemes. The UK BAP Moss carder bee *Bombus muscorum*, which seems very scarce in lowland Caithness, has also been recorded on the farms this year.

Phyllida Sayles of the Caithness Biodiversity Group has been co-ordinating the volunteers.

“I am delighted that the efforts of all the volunteers have been so well rewarded this season. Everyone is now familiar with seeing the Great yellow bumblebee on their patch; let’s hope the success continues into 2011.”

Bob Dawson, Conservation Officer with the Bumblebee Conservation Trust, was very upbeat about the project:



Great yellow bumblebee (*Bombus distinguendus*) © Simon Wellock

“This project really shows how farmers can help the Great yellow bumblebee on their land, and the volunteers are providing crucial information on bee numbers. The plots, although small, are a real explosion of colour, irresistible to bees. This year we’ve seen a blue haze, studded with crimson and purple. Next year we will see the red, white, yellow and pink of clovers and other legumes coming through. Red clover is a particular favourite. The good spread of small plots such as

these complements existing wildflower-rich areas, and is a very effective way to support the Great yellow bumblebee.”

The work was funded by Highland Council Landfill Communities Fund. Bob Dawson (BBCT) is supported by grants from the Esmée Fairbairn Foundation and Scottish Natural Heritage.

Bob Dawson
Bumblebee Conservation Trust

Our earthworms need your help!

The Earthworm Society of Britain, sponsored by OPAL (Open Air Laboratories), launched in October 2009, with a tough task ahead!

Earthworms are a vitally important ecological group and yet one that we know very little about. There are 27 species recorded in the UK (a number of species introduced several years ago may or may not remain resident in our soils) but we know very little of their distributions. To address this, the society will be running a national survey of earthworms across the whole of the UK, and needs your help!

All the data will be fed into the Society website and will be accessible to all through the NBN Gateway. We hope members of the public and scientists alike will start helping us to gather some real, and very much needed, data on the UK’s earthworms.

To find out more about the Earthworm Society of Britain, go to www.earthwormsoc.org.uk.

Emma Sherlock, Natural History Museum

VOLUNTEERS URGENTLY NEEDED!

Scotland's invertebrates need **your** help!

Many organisations and individuals are involved in delivering the action needed to conserve Scotland's invertebrates. The following projects are just some examples. You can get involved by volunteering with Buglife or other organisations.

For more information about volunteer opportunities contact:

e-mail: scotland@buglife.org.uk

tel: 01786 447 504



Red admiral (*Vanessa atalanta*)
© Lisa Ferguson

Bugs in Gardens launches in Dumfries & Galloway!

Dumfries and Galloway Environmental Resources Centre (DGERC) have recently launched their new two-year project 'Bugs in Gardens'. The project will encourage people to identify and record invertebrates in their gardens and raise awareness of the value of gardens for biodiversity. The Bugs in Gardens project will focus on a few selected species groups which can be easily recognised and are currently under-recorded, such as bumblebees, moths and ladybirds - including the introduced

invasive Harlequin ladybird, for which there are no Dumfries and Galloway records at present.

Free training days and survey cards with handy identification guides will be available to give members of the public the practical skills to identify different species, so even complete beginners can take part.

For more information or to get involved contact Lisa Ferguson at bugsingardens@dgerc.org.uk.

Lisa Ferguson
Dumfries and Galloway Environmental Resources Centre (DGERC)



The BTCV Natural Talent Apprenticeship scheme will be recruiting for another four posts with the final details of all the apprenticeships being posted on the BTCV website by early November. The scheme offers apprentices the opportunity to learn practical skills and about the ecology of our amazing wildlife, including invertebrates.

Recruiting will be carried out in early January with a view to successful candidates being in post by February 2011.

The Apprenticeships are as follows:

- **Lowland Raised Bogs**
- **Caledonian Pinewood Invertebrates**
- **Saltmarsh Habitat Management**
- **Soil Macroinvertebrates**

Full details of past and current apprentices can be found at www2.btcv.org.uk/display/naturaltalent

You can also take the opportunity to check out what our latest recruits are doing by following their Blog at blogs.btcv.org.uk/natural_talent/

John McFarlane

BTCV



In June 2009 the Open University launched the iSpot website (www.ispot.org.uk), a project funded by the National Lottery through OPAL (Open Air Laboratories), a partnership operating in England. The site allows anyone to upload photographs of wildlife and to obtain identification, encouragement and advice from over 6,000 registered users, including highly experienced naturalists.

In its first year of operation, iSpot has helped users identify 25,000 observations of some 2,500 species ranging from lichens to birds.

The scope of the iSpot project has just been extended with the appointment of Biodiversity Mentors in Scotland, Wales and Northern Ireland, funded by the Open University. Mentors will work with local groups to encourage an interest in wildlife amongst the public, and to promote iSpot as a means of developing wildlife knowledge and skills.

If you are involved with a community wildlife group and would like more information on iSpot, or advice on how to develop skills in wildlife observation and identification, contact Murdo Macdonald at murdo.macdonald@open.ac.uk

Murdo Macdonald, *Open University*

Bob Saville 9th February 1952—9th September 2010

Bob Saville was the driving force behind the Wildlife Information Centre and Barkfly Recording Scheme and was a key player in entomology and biological recording in Scotland for many years. He sadly succumbed to long-term illness in September, aged 58. Bob is survived by his wife Val and his son Paul.

I first met Bob in 1997 when he was running the Lothian Wildlife Information Centre in Leith. I had started volunteering at the centre and working with Bob was an inspiration. People will certainly remember Bob for his wide-ranging knowledge of wildlife, but possibly more so for his enthusiasm and his eagerness to encourage others. Bob was experienced in a number of invertebrate groups and wrote guides to the woodlice, grasshoppers and dragonflies of the Lothians so that others could easily identify them. Bob was also instrumental in organising excursions to local wildlife sites, gathering experts together to build up the species lists for these important areas.

Over the years Bob developed a specialist interest in barkflies (Psocoptera). This started as a curiosity; minute insects would consistently appear in samples and not surprisingly Bob wanted to identify them. As barkflies were an under-recorded group it was not long before Bob was making new discoveries and adding large amounts of

information to our knowledge of British Psocoptera. Bob almost discovered a species new to science in Edinburgh. He was picking up a barkfly that wasn't in the British key. This turned out to be *Epicaecilius pilipennis*, a species that had only recently been described from Madeira.

Bob developed novel collecting techniques and would often be seen 'painting' tree trunks with a wallpaper brush. Hoisting barrels of cider vinegar into the tree canopy was another sampling method he tried! As Bob's study of barkflies progressed he began to look more at the ecology and life-history of these species, trying to understand their feeding preferences and habitat requirements. Always keen to share his knowledge, Bob was instrumental in putting the Barkfly Recording Scheme online. The website includes keys and a photo gallery which are invaluable aids for identification, plus links to references and papers, many of which were written by Bob himself.

The success of the Barkfly Recording Scheme and the Wildlife Information Centre, which has expanded to cover the Lothians



Bob Saville shares his knowledge and enthusiasm at Scotland's first Bioblitz in Motherwell (2007)
© Graham Burns

and the Borders, are testament to Bob's energy and dedication. For those who knew Bob his cheerful and infectious enthusiasm for entomology and wildlife recording will be a continued inspiration.

More information about Bob's work can be found at the websites below.

The Wildlife Information Centre:
www.wildlifeinformation.co.uk

National Barkfly Recording Scheme:

www.brc.ac.uk/schemes/barkfly/homepage.htm

Donations to Buglife were kindly received instead of flowers at Bob's funeral. These will be used to fund a project in Bob's memory.

[Duncan Sivell](#)
[Buglife](#)

Credits and Information

If you would like to write an article for [Scottish Invertebrate News](#), suggest a topic to be discussed, or would like any further information, please contact:

[Chris Cathrine \(Editor\)](#)

chris.cathrine@buglife.org.uk

This newsletter is produced as

part of the 'Action for Scottish Invertebrates' project. This project is grant-aided by Scottish Natural Heritage and delivered on behalf of the Initiative for Scottish Invertebrates (ISI) by Buglife – The Invertebrate Conservation Trust.

For more information, visit:

www.scottishinvertebrates.org.uk

ISI
Initiative for
Scottish Invertebrates



Scottish Natural Heritage
All of nature for all of Scotland