



Scottish Invertebrate News

Volume 4 Issue 1

April 2013



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Bumper batch of bugs discovered on Highland Estate

Biodiversity surveys in 2012 at Trees for Life's Dundreggan Estate in Glen Moriston, near Loch Ness revealed eight new invertebrate species never recorded before in the UK.

It also brought the total number of species recorded on this woodland site to over 2,800.



Juniper aphids (*Cinara smolandiae*) on juniper
© Alan Watson Featherstone

Newly discovered species include the sawfly *Nematus pravus*, the Juniper aphid (*Cinara smolandiae*), two species of aphid parasitoids *Ephedrus helleni* and *Praon cavariellae*, three species of fungus gnats *Brevicornu parafennicum*, *Mycomya disa* and *Sceptonia longisetosa*, and the mite (*Ceratozetella thienemanni*).

Another key observation was the first European record of a biting midge in the genus *Atrichopogon* feeding on a cranefly (*Helius longirostris*).

The rich variety of life at Dundreggan highlights the vital importance of conservation work, and of protecting

and enhancing habitats across the Highlands.

The discoveries not only demonstrate that the estate is a special site for biological diversity – they also reveal that there is still much to learn about Scotland's biodiversity.

Alan Watson Featherstone, *Trees for Life*



Scottish Invertebrate discoveries

A few interesting Scottish beetle finds

Below are a few interesting beetle sightings that I have recorded in Scotland during 2012.

On the 4th of May, while investigating dead wood in a disused industrial site in the village of Bowling, near Glasgow, (NS437736), two pupae were discovered and taken home. A few days later both pupated as the click beetle, *Denticollis linearis* (Linnaeus, 1758)

Though *Denticollis linearis* is common in England and Wales it appears to be scarce in Scotland. The second of my interesting findings is the rove beetle, *Scaphidium quadrimaculatum* (Olivier, 1790). This was also found in dead wood at the same site as mentioned above on the 2nd May. Though this beetle is fairly widespread in England and Wales it has been determined as “a very rare and localised species in Scotland” by Alex Ramsey who wrote an article on said beetle in the *Coleopterist* (Vol.8 Pt 2, p91).

The third and last beetle is the most interesting; a



Thick-legged flower beetle (*Oncomera femoralis*)
© Roger Key

Thick-legged flower beetle (*Oncomera femoralis*) was found, of all places on the window sill of my house in June 2012. It is possible it



had ventured over from woodland that is only some 30 metres from my house. I had also ‘sugared’ the side of my shed a few nights previously so this may have been a factor for its appearance on my window sill. I have since searched said woodland for the beetle but to no avail. *O. femoralis* is a Notable B species and this record is the first published record of this beetle for Scotland in nearly eighty years. This was verified

by Graham Rotheray at the National Museums Collection Centre in Edinburgh on checking the Scottish Insect Records Index (SIRI). The other record was published in the *Annals of Scottish Natural History* in 1935. The recorder was A.R. Waterston and he found it in 1934 at Abbey Craig, Stirling.

I would like to thank everyone that helped with information on the above-mentioned beetles.

Chris Sullivan

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New Longhorn beetle for West Lothian

When out visiting a cleared area of conifer plantation about 6 miles south east of West Calder (NT065592) on the 20th of June 2012, I collected a Long horn beetle (Family Cerambycidae) that I hadn't seen before. As is typical with this family I found it feeding on Hogweed (*Heracleum spondylium*).

I identified the beetle as the Nationally Scarce Notable A species the Three-banded



Three-banded longhorn (*Judolia sexmaculata*)
© Chris Sullivan

longhorn beetle (*Judolia sexmaculata*). This was later

confirmed by Martin Rejzek who also commented that it was the first example of this species he had seen in 12 years.

This record is considerably further south than those shown in Twinn and Harding's Provisional atlas of longhorn beetles (1999).

The NBN Gateway (2012) shows only one record for England (that has since been

confirmed as wrong) and one record for Wales.

Chris Sullivan

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Scottish Invertebrate discoveries

Bee beetles lose ground

The distinctive Bee beetle (*Trichius fasciatus*) has been described as a real Highland and Welsh speciality. According to the Highland Biological Recording Group this beetle has recently had a poor season. Despite this there appear to have been a number of observations in low ground in Badenoch and Strathspey.



Bee beetle (*Trichius fasciatus*) © Hayley Wiswell

July is a good month for searching for this endearingly furry bumble bee mimic as records recently collated by the Highland Biological Recording Group indicate.

Since the establishment of the Cairngorms National Park some areas supporting this beetle have been lost to development, including recently, a site near St Vincent's hospital in Kingussie. A disused tree nursery at Nethybridge near Dell Wood National Nature Reserve that hosts the

species is now less acutely threatened with development. This old tree nursery site has been found to support a high invertebrate interest with



some notable and UK BAP priority species, including exceptional numbers of the fly *Conops quadrifasciatus* that has larvae that are endoparasites of bees.

While the adult Bee beetle is found on flowers such as thistles, the larval stages depend on dead wood. This is the case for many invertebrates including large and striking beetles such as stag beetles and longhorn beetles.

Gus Jones, *Badenoch & Strathspey Conservation Group*

The Cairngorms are an amazing hotspot for biodiversity, but species such as the Freshwater pearl mussel, Narrow-headed ant, Red squirrel and Capercaillie are under threat from development. Please help protect this important area by donating to the Safe guard the Cairngorms Appeal <http://www.safeguardthecairngorms.org.uk/>.

Groundhopper hotspot in Strathspey

The Slender groundhopper (*Tetrix subulata*) has a UK distribution concentrated in the South East of England. So it was a surprise to find this groundhopper in the Cairngorms in 2008 (reported in *British Wildlife* 2008 20, 2). This first find in the Cairngorms National park was at the edge of woodland threatened by development at Boat of Garten. In 2010 a lowland heath site with a large population of groundhoppers was discovered near the proposed new town of An Camas Mor.

The identification of the groundhoppers at this site has been complicated by the

discovery of a rare macropterous

Common groundhopper (*Tetrix undulata* f. *macroptera*) © GusJones



(long-winged) form of the Common groundhopper (*Tetrix undulata* f. *macroptera*) in the Cairngorms. This form is very similar to the Slender groundhopper, and further research is required to confirm the presence of *T. subulata* at the site. It may be that other populations of Slender groundhopper have been overlooked, but Strathspey is currently the only location for this species in the north.

This macropterous form of Common groundhopper is very rare in England, but appears frequently in Strathspey.

An illustrated identification guide to the groundhoppers of Badenoch and Strathspey is available: <http://www.bscg.org.uk/media/groundhoppers-of-badenoch-and-strathspey.pdf>. Send any records to the Orthoptera Recording Scheme: www.orthoptera.org.uk

Gus Jones, *Badenoch and Strathspey Conservation Group*



Scottish Invertebrate discoveries

Flames in the deep!



Flame shells (*Limaria hians*) © Calum Duncan

A Marine Scotland survey of Loch Alsh, between Skye and the mainland in 2012 has discovered what may be the world's largest colony of Flame Shells (*Limaria hians*). The survey was carried out for Marine Scotland by researchers at Heriot-Watt University who were investigating potential new Marine Protected Areas (MPAs).

Flame shells are named for their spectacular bright orange tentacles that emerge when feeding. The huge reef of Flame shells in Loch Alsh covers

an area of approximately 75 hectares and is thought to contain at least 100 million Flame shells. This is the biggest of 8 known Flame shell sites in Scottish waters.



Flame shells group together on the sea bed, binding together gravel and other shells to create a living reef that can support hundreds of other species.

The discovery highlights how little we actually know and understand about our coastal waters and the diversity of marine species living just off shore. By identifying these pristine habitats and creating a network of protected marine areas, it may be possible to reverse or at least buffer some of the damage caused by destructive practices such as trawling and over fishing.

Scott Shanks, *Buglife*



Ringlet © Claudia Watts
(*Aphantopus hyperantus*)

Scottish Entomologists Gathering update

The 2012 Scottish Entomologists' Gathering (SEG) was held in Fife (13th-15th July) and attracted 25 invertebrate enthusiasts for a fun weekend of bug-hunting, exploration, socialising and swapping field-craft tips.

Everyone has been busy over the winter finishing the identification of specimens or extracting records from their notebooks, and I can reveal that an impressive 322 invertebrate species were recorded during the weekend (604 records). The most commonly recorded species was the Ringlet (*Aphantopus hyperantus*), followed by Early bumblebee (*Bombus pratorum*) and the Common carder bumblebee (*Bombus pascuorum*).



Ruby-tailed wasp (*Chrysis ignata*)
© Steven Falk

Scottish record of the host-specific parasitoid wasp *Scolomus borealis*, that emerged from a caterpillar of the Blackberry skeletoniser moth (*Schreckensteinia festaliella*).

Two beautiful Ruby-tailed wasps *Chrysis ignata* (s.s) and *Pseudomalus auratus* were some of the loveliest finds in the dunes of Tentsmuir Forest NNR.

The 2013 SEG will meet at Dundonnell in Wester Ross (just south of Ullapool) on the 28th-30th of June. Accommodation places are limited, but free camping and facilities have kindly been offered

by Dundonnell Estate, who are keen to gather more records from the varied habitats of the Estate. If you would like to join us for the weekend please do get in touch.

Scott Shanks, *Buglife*

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Among the many varied finds ranging from plant gall mites through to hoverflies was the first



Volunteering & surveys

Volunteer for Bumblebees!



Red-tailed bumblebee (*Bombus lapidarius*)
© Tessa Bramall

Bumblebees are a very important group of pollinating insects that contribute to the pollination of important food crops as well as our beautiful wildflowers. You can learn more about these precious pollinators by joining either of these two national monitoring schemes run by the Bumblebee Conservation Trust.

BeeWatch is a great way to contribute to bumblebee recording without any prior identification experience. Simply upload your digital photographs to the website: <http://homepages.abdn.ac.uk/wpn003/beewatch/>, along with information about where and when the photo was taken, and experts will get back to you with the correct identification, and some facts

Scottish Speckled wood postcard survey

Have you seen a Speckled Wood butterfly (*Pararge aegeria*) in Scotland?

The Speckled Wood has a fascinating distribution in Scotland. In the past it must have occurred over most of Scotland, but then declined leaving 'refuges' around the Moray Firth and the west coast. It is now expanding from these refuges, with additional colonisers arriving from England and even Northern Ireland!

The main unoccupied area at present is the centre of Scotland, but Speckled Woods are now moving in from the west, southeast, southwest, and from the north! The adult butterflies emerge in the spring and can be seen in sunny glades in woodland,



about that particular species. There is even an interactive guide to help you learn how to identify bumblebees for yourself.



BeeWalk is an important survey that monitors the abundance of bumblebees on an annual basis. Surveyors volunteer to establish 1-2km length transects and survey these on a monthly basis between March and October. We really need more people from around the country, particularly the North and West of Scotland, to take part. So no matter where you are, please register your interest by emailing beewalk@bumblebeeconservation.org

If you haven't surveyed before and are not quite sure where to start, then please join us for a **BeeWalk Training Day**. These free day-long workshops will cover bumblebee ecology, identification and instruction on how to establish a transect and conduct a BeeWalk survey. Places will be limited to 15 to 20 participants and booking is essential.

Please book your place by sending an email with 'Training Workshop' and the appropriate city in the subject line

to beewalk@bumblebeeconservation.org.

Please check our events calendar for updates <http://bumblebeeconservation.org/get-involved/events-calendar/>

Sat 15 June Jedburgh

Sun 16 June Glasgow

Sat 22 June Edinburgh

Sun 07 July Inverness

Sat 27 July Sutherland/Caithness

Elaine O'Mahony, *Bumblebee Conservation Trust*



Have you seen a Speckled Wood butterfly?

Speckled Wood (*Pararge aegeria*) © Peter Eeles

as their name suggests. There are at least two broods a year, so adults can be seen right through the summer until September.

Shona Grieg, *Butterfly Conservation*

Four-Spotted Chasers and Blue tails: engaging people in biological recording

Summer 2012 presented The Conservation Volunteers (TCV), Scotland, with an opportunity to fill some of the data gaps in the new Dragonfly National Atlas, due to be published in 2013. This task was organised as part of my year as a trainee with The Conservation Volunteers (TCV) Natural Communities Programme, supported by the Heritage Lottery Fund. The programme's aim is to increase community engagement skills in the environmental sector by giving training and practical experience to people in encouraging many different communities to join in with environmental activities. A key part of my role is to support and mentor individuals who want to become more active biological data recorders or participate in new recording activities.



Volunteers searching for larvae and exuviae at Flanders Moss © John McFarlane

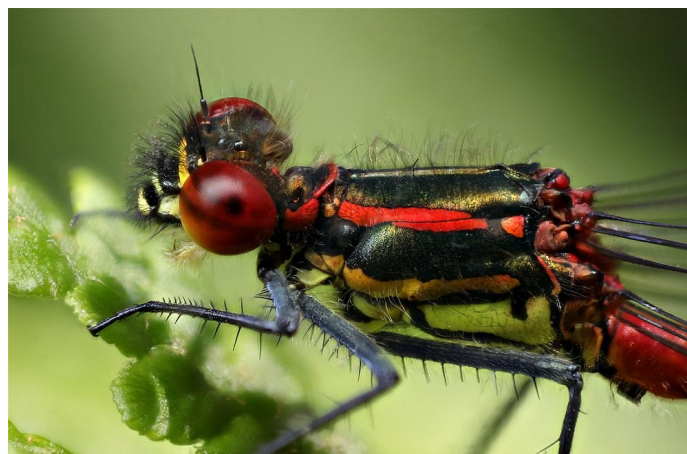
In early 2012, two 10km squares in the Stirlingshire area had either no dragonfly records since 2000 or no records, ever. This seemed an ideal chance to train up a team of volunteer recorders, so TCV organised a two day Odonata identification training workshop in May 2012. The Odonata Survey Team consisted of 11 enthusiastic and dedicated people from all walks of life across Scotland. Training covered identification (adult, larval and exuviae), survey techniques and a field trip. In addition, team members were asked to follow up with field survey days on pre-determined sites, arranged and supported by TCV

For our field trip, we visited Flanders Moss in Stirling, where we fine-tuned our identification skills and surveyed adult and larva Odonata. We didn't have to travel far to see Odonata on the wing. We stopped at a small pond, where volunteers caught Four-spotted Chaser dragonflies



(*Libellula quadrimaculata*), Common Blue (*Enallagma cyathigerum*) and Blue-tailed (*Ischnura elegans*) damselflies, Large red damselflies (*Pyrrhosoma nymphula*), Emerald

(*Lestes sponsa*) and Azure (*Coenagrion puella*) damselflies. As well as adults on the wing, we sampled the pond and came across a variety of larvae and exuviae.



Large red damselfly (*Pyrrhosoma nymphula*) © Iain Lawrie

The volunteers had a great time learning about Odonata as well as building up their confidence to go out and survey sites in Stirling that have no records. We succeeded in this ambitious project with the help of dedicated volunteers. Without them we wouldn't have been able to gather the valuable data which will be sent to the British Dragonfly Society to help ensure that the UK Dragonfly Atlas is as up to date as possible when it is published in 2013.

For further information about the Natural Communities Programme contact Anthony Morrow a.morrow@tcv.org.uk Tel: 01786 476183

Amanda Joaquin, TCV Natural Communities Trainee



Volunteers identifying exuviae © John McFarlane

The Garden Moth Scheme 2012

The Garden Moth Scheme (GMS) runs from early March to early November with people recording the numbers of around 260 species of the more common moths in their gardens once a week throughout this period. Further information on the findings of the GMS for the whole of the UK and Ireland, both current and historical, is available in the form of annual reports and quarterly newsletters, which can be found in the Downloads section of the web-site: <http://www.gardenmoths.org.uk>.

Butterfly Conservation's report "The State of Britain's Larger Moths" in 2006, and its 2013 update, indicate that a lot of previously common moths are declining across Britain as a whole, but particularly in the southern half of the country. The Garden Moth Scheme (GMS) was set up to try to find out what's happening to our common garden moths, and welcomes recorders from all parts of the United Kingdom and Ireland, greatly adding to the value of the scheme as a long-term dataset.

The main aim of the GMS is to coordinate records to get standardised data which can be used for future study. The more people that take part, the more useful the data. Scientists at Birmingham University have already used the GMS data to analyse the effect of trap and bulb type on moth catches, recently publishing a paper on this in a peer-reviewed journal with more in the pipeline on factors affecting our moth populations.

It will probably come as no surprise that of the most commonly-used equipment, a Robinson Trap with a mercury vapour (MV) bulb will maximise your moth catch, an MV Skinner comes a close second, and using a Heath Trap or an actinic light in your Robinson or Skinner will reduce the number of both individuals and species caught. This research is based on records returned by 314 GMS participants in 2010, gathering over half a million moth records over a very wide geographical area.

Scottish recorders returned 24 sets of results for the GMS in 2012, up from 21 in 2011. Members counted 22,435

individual moths of 228 species at an average of 934.8 per garden over 790 trapping events (ideally everyone traps once a week for 36 weeks –

inevitably some weeks are missed, but these are kept to a minimum), and not including any 'extra' species encountered that are not on the monitored list of common moths. Compliance was excellent overall, with three people managing to return records for all 36 weeks, with an average of 32.9 across Scotland. Moth numbers were well down on 2011: the average per garden showing a decrease of 26.5%, although the same number of species were recorded.

Large Yellow Underwing (*Noctua pronuba*) recovered from a poor 2011 to displace Dark Arches (*Apamea monoglypha*) as the commonest moth overall, although still not quite as abundant as in 2010.

The general feeling was that 2012 was a poor year for our garden moths, with every member recording

at least one week when none of the target species were seen. Numbers were low particularly in spring and autumn, and this is shown in the declines seen in several of the commonest species – Common Quaker (*Orthosia cerasi*), Clouded Drab (*Orthosia incerta*), Hebrew Character (*Orthosia gothica*), Chestnut (*Conistra vaccinii*) and Yellow-line Quaker (*Agrochola macilenta*) all experienced big drops in abundance. The yellow underwings all had a better year in 2012, as did several of the other summer species – Beautiful Golden Y (*Autographa pulchrina*) and Clouded-bordered Brindle (*Apamea crenata*) in particular. This trend is repeated in other species not numerous enough to appear in any of the top 20 charts; summer species fared better in 2012 than those that fly at other times of the year.

The GMS in Scotland continues to grow, and I am hopeful that at least 30 people will manage to complete the 2013 season. The more the merrier though, so if you may be interested in taking part in the future, please get in touch; the value of the scheme grows alongside the membership.

Heather Young, *GMS coordinator, Scotland*
heather.young@tiscali.co.uk



Elephant hawkmoth (*Deilephila elpenor*) © Roger Key



Volunteering & surveys

Muirton's Buzzing



Wild flowers at Muirton © Suzanne Bairner

Muirton's Buzzing is an exciting new project in the north of Perth which will create habitat for pollinating insects in an area of stalled space. Buglife will be working with the Tayside Biodiversity Partnership and Perth and Kinross Council during this year-long project which is funded through the Landfill Communities Fund SITA Tayside Biodiversity Action Fund.

The project site in Muirton is currently designated as an area of stalled space. The site has

Join the Scottish oil beetle hunt

Oil beetles are incredible insects with a fascinating lifecycle closely tied to the fates of solitary bees and flower-rich meadows. Three species are known from Scotland including the Violet oil beetle (*Meloe violaceus*), the Black oil beetle (*Meloe proscarabaeus*) and the very rare Short-necked oil beetle (*Meloe brevicollis*) which is only known from three sites in the British Isles including the Isle of Coll in the Inner Hebrides of Scotland! Adults are active from March through to early July. Find out how to identify them with the new Scottish oil beetle ID guide: [http://](http://www.buglife.org.uk/Resources/Buglife/Documents/Scottish%20Oil%20beetle%20hunt.pdf)

www.buglife.org.uk/Resources/Buglife/Documents/Scottish%20Oil%20beetle%20hunt.pdf



previously been cleared for the development of housing, but due to the economic downturn development of the site has been delayed. This project will create temporary greenspace with a colourful and species-rich wildflower meadow that will provide a vital food source for pollinating insects as well as providing important habitat for other wildlife.



So far at the project site, sub-soil has been spread across the area and a diverse wildflower seed mix which is of local origin has been planted. The seed mix includes the annuals Corn marigold (*Glebionis segetum*) and Field forget me not (*Myosotis arvensis*), the biennials Wild carrot (*Daucus carota*) and Vipers bugloss (*Echium vulgare*) and the perennials Common knapweed (*Centaurea nigra*) and Field scabious (*Knautia arvensis*) as well as many other species.

Several pollinating insects have already been recorded feeding on wildflowers from the seed mix including Small tortoiseshell butterfly (*Aglais urticae*), Marmalade hoverfly (*Episyrphus balteatus*), Buff tailed bumblebee (*Bombus terrestris*), Common carder bee (*Bombus pascuorum*) and Common wasp (*Vespula vulgaris*).

This project has improved the appearance of the local area within Muirton by adding colour and life providing a healthier environment for local people.

The project will also involve the local community in creating wildlife havens within the surrounding areas of the project site in Muirton.

Suzanne Bairner, *Buglife*

If you find an oil beetle please let us know by filling in the online recording form on the Buglife website: <http://www.buglife.org.uk/getinvolved/surveys/Oil+Beetle+Hunt/>. and if possible send a close-up photograph of your oil beetle too. Scott Shanks, *Buglife*

Join the Scottish oil beetle hunt



This year we are searching for these fascinating but threatened beetles, and we need your help...



Conserving the small things that run the world

Scottish Oil beetle ID guide

Volunteering & surveys

Glasgow's Buzzing pollinator survey 2012

Glasgow's Buzzing aims to transform mown grassland in several of the parks across the city into colourful wildflower meadows. Through the creation of new meadows and enhancement of meadows that have previously been created in the parks this project will provide habitat for invertebrates, especially pollinating insects.

Annual pollinator surveys are being undertaken as part of the Glasgow's Buzzing project. These surveys will record the different pollinating insects using the meadows to show how important the park meadows are for wildlife. A total of 53 species were recorded during pollinator surveys in year 1 (2011) and 57 species in year 2 (2012).

In 2012 the surveys at Linn Park to the south of



Leaf beetle (*Galaruca tanacetii*) in Linn Park
© Suzanne Bairner

Glasgow yielded some interesting results. The Blue-winged olive mayfly (*Serratella ignita*) was



recorded resting within the wildflower meadow, this species probably breeds within the White Cart water that passes through Linn Park. Species recorded at Linn Park include: The flower beetle *Oedemera virescens* was recording feeding on Autumnal hawkbit (*Leontodon autumnalis*) and a female conopid fly *Conops quadrifasciatus* was collected from the wildflower meadow. Adults of these flies drink nectar, but the larvae are endoparasites (develop inside) of bumblebees. Several adults of the leaf beetle *Galaruca tanacetii* were recorded on Common knapweed. Within this group there were several gravid females that had abdomens heavily swollen with eggs (see photo).

A female Patchwork leafcutter bee (*Megachile centuncularis*) was also collected from this park.

Fingers crossed for further interesting results during pollinator surveys in 2013!

Suzanne Bairner, *Buglife*

Bugs, blooms and local conservation action



Paul Gunn, Buglife's new Parks & Pollinators Natural Communities Apprentice © Suzanne

Hello all, I'm Paul Gunn the new TCV Natural Communities apprentice working as Parks and Pollinators Officer for Buglife in Stirling. Over the next 12 months I will be working with the communities of Stirling and Glasgow to get them involved in their local greenspace and some of Buglife's projects too.

I have come to Buglife having been a volunteer for many different organisations ranging from North Lanarkshire Council to an Iguana research station on Utila, Honduras, which has given me a broad background in working with communities through conservation work.

The main focus of my year will be the 'Glasgow's Buzzing' project, which is centred round creating and enhancing wildflower meadows in Glasgow's parks to help bolster pollinator numbers. A particularly important task when you take into account that a massive 80% of all plants are dependent on insects for pollination. No pressure!

Hopefully through this work I can help to enhance the parks, their biodiversity and the passion for conservation in the communities that get involved. It is a great project and a promising opportunity for a budding conservationist to be part of – an opportunity I don't intend to squander. 2013, lets be having you!

Paul Gunn, *TCV Natural Communities Apprentice*



Ash die-back and the impact on Scottish invertebrates

Ash is a significant tree for about 92 species of invertebrates, 59 of them on living trees and the remainder are saprophagous (living in decaying wood or dead timber and roots).

Live ash is the sole foodplant for around 34 species of invertebrate (4 gall mites and 26 insects including moths such as The Coronet (*Craniophora ligustri*) and Centre-barred sallow (*Atethmia centrago*), beetles, true bugs and flies). An additional 13 insect species can use ash and a few other plant species (mainly privet). However, in many areas, particularly in Scotland, privet is of insufficient quantity to support viable populations of these species.



The Coronet (*Craniophora ligustri*) © Philp Jewess

Ash is one of the most important trees for saprophagous faunas with 2 species dependent on ash and another 21 species where ash is particularly significant. Where ash is a prominent tree at district level, it may be key to maintaining a richness of biodiversity if other trees in suitable state are insufficient or absent.

Ash is the main host tree for the Cramp ball fungus (*Daldinia concentrica*) within which 6 species of beetles breed, the majority are totally dependent on this fungus, which can be very scarce and normally insufficient or absent on other trees.

It would appear typical that many ash-feeding species occur in low population levels, implying that large stands of trees are required in order to maintain viable insect populations. At landscape scale, hedgerow ash



trees are of value to invertebrates.

In woodland, ash comes into leaf late, and so allows light through to



support a rich ground flora and provides a soft leaf litter that decays easily. These ecological characteristic are helpful to a rich woodland floor and soil fauna.

If infected ash woodlands are to be replanted with other tree species, there could be significant effects on both ground flora and associated invertebrate fauna. Sycamore has been mentioned as a potential replacement for ash, as its bark chemistry is similar and may support similar lichen species, however, Sycamore has a very dense canopy, which will cut out light essential for ash woodland ground flora. Sycamore seedlings also spread rapidly and take over small clearings and glades that are important for sun-light loving pollinator species found in and around woodlands. Replacing ash with oak or beech would have a significant effect on leaf litter invertebrates, as the leaves of these species take longer to break down. In parts of Scotland with aspen present, allowing aspen suckers to take over from ash would actually be of great benefit to biodiversity.

Since ash dieback disease affects saplings through to mature trees, control currently seems impractical. The key strategy must be to allow resistant trees to survive and reveal their presence; hopefully this will include some moderately large populations of ash.



Centre-barred sallow (*Atethmia centrago*) © Ian Kimber.

Alan Stubbs & Scott Shanks, *Buglife*

The Medicinal leech—one of Scotland's rarest

Several old records exist for the Medicinal leech (*Hirudo medicinalis*) in places as far apart as Sutherland, Lismore, Strathearn, Muthill, Menteith and Fife. However, intensive surveys by Dr Peter Maitland in the late 1990's confirmed only two sites (Islay and Oban), and did not locate any 'new' sites for this species.



Medicinal leech (*Hirudo medicinalis*) fully contracted © Paul Kirkland.

In 2012 the Islay and Oban lochs were re-surveyed, together with two lochs on Lismore that had records from 1968. The survey consisted of searching stones and 'splash sampling' which involves mimicking wallowing cattle and watching for leeches swimming towards the cause of the disturbance. Adult leeches were confirmed at the Oban and Islay sites, and in addition, an egg cocoon was found at the latter location. Sadly no Medicinal leeches were found on Lismore.

At Lismore, as well as at the Oban and Islay sites there were many Horse leeches (*Haemopsis sanguisuga*). The Horse leech is superficially similar to the medicinal leech and can grow to the same size, but is a dark green/yellow colour, whereas the medicinal leeches are orange/brown with bright orange stripes along their sides.



Underside of Medicinal leech showing orange stripes © Paul Kirkland.

Despite its name, the Horse leech cannot penetrate the skin of mammals and feeds primarily on invertebrates, although it will scavenge on dead amphibians.



Although commonly associated with mammalian blood, the Medicinal leech may be more dependent on good amphibian populations. For instance, a survey of 33 occupied Cumbrian lakes found that amphibians were sometimes the only food supply, and two-thirds of the lakes had high amphibian numbers.

In the Romney grazing marshes analysis of medicinal leech gut contents showed that they fed mostly on amphibians, and it has even been stated that amphibians are crucial for the survival of juvenile leeches.

Thus, as Peter Maitland has suggested, searching for medicinal leeches at amphibian spawning time could be a useful survey method, taking care not to confuse medicinal leeches with the far more widespread horse leech.



Cocoons of Horse leech (*Haemopsis sanguisuga*) (top) and Medicinal leech (bottom). Squares are 5 mm x 5 mm © Paul Kirkland.

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www.kirklandecology.co.uk

The decline of the Medicinal leech in the UK may have been tied to the popularity of phlebotomy (bloodletting) as a remedy for various illnesses. In the 1800s millions of leeches were still being traded in Europe and exported to America each year. By the early 20th century the species was considered extinct in many countries. Medicinal leeches are back in the doctor's kit bag once more, being used to prevent blood clots forming during complex microsurgery procedures.



Invertebrate identification workshops



Have you always wanted to know more about bees, dragonflies, spiders or earthworms? This year, a bumper number of invertebrate identification workshops are taking place across Scotland. These are open to all, but places are limited so please get in touch for further information and to book a place. Booking is essential for all workshops.

Date	Identification workshop	Cost	Location	Further Information
26th April	Bugs for Beginners: surveying techniques	£12	Stirling	scott.shanks@buglife.org.uk
27th April	Introduction to dragonflies & damselflies	£50	Stirling	scotland-training@tcv.org.uk
9th May	Introduction to dragonflies & damselflies	Free	Glasgow	suzanne.bairner@buglife.org.uk
24th May	Life in a burn - freshwater macro-invertebrates	£50	Dollar glen	scotland-training@tcv.org.uk
28th May	Introduction to caddisfly larvae	Free	Glasgow	suzanne.bairner@buglife.org.uk
TBA May	Introduction to woodlice (postponed from March)	£8	Glasgow	scott.shanks@buglife.org.uk
8th June	Introduction to solitary bees	£20	Stirling	scott.shanks@buglife.org.uk
26th June	Introduction to Invertebrates: Bugs on your doorstep (with BES)	Free	Stirling	scott.shanks@buglife.org.uk
3rd July	Introduction to butterflies	£50	Stirling	scotland-training@tcv.org.uk
6th August	Introduction to invertebrates	Free	Stirling	emilie.wadsworth@csft.org.uk
13th August	Introduction to spiders	£50	Stirling	scotland-training@tcv.org.uk
14th August	Introduction to harvestmen	£50	Stirling	scotland-training@tcv.org.uk
23rd August	Introduction to pseudoscorpions	£50	Stirling	scotland-training@tcv.org.uk
TBA May	Introduction to earthworms	£7.50*	Stirling	scott.shanks@buglife.org.uk
3rd Sept	Introduction to hoverflies	£50	Stirling	scotland-training@tcv.org.uk
5th Sept	Introduction to beetles (with CSFT)	Free	Stirling	suzanne.bairner@buglife.org.uk
9th Sept	Introduction to craneflies (with NESBReC)	Free	Aberdeen	scott.shanks@buglife.org.uk
11-12th Sept	Introduction to craneflies (with HBRG)	Free	Inverness	scott.shanks@buglife.org.uk

Get back to nature with the Scottish Birdfair

Did you know dragonflies lead a double-life? Come and hear from the famous, Ruary Mackenzie Dodds, and find out about these mysterious creatures and why he is truly a "Dragonfly Geek".

For the little ones, find out what life is like when you are the size of a bug, build a hanging bamboo house for your garden neighbours, or go pond dipping and find out what's lurking in the deep. They can also express their love of the tiny animals by creating unique and colourful butterfly pictures to take away. Each day there will be a wide range of colourful and informative talks, walks and workshops that will take you into the wonderful world of these magnificent creatures.



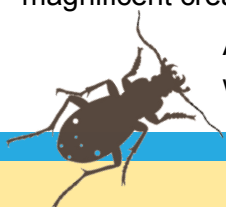
Close encounters at the Scottish Bird Fair 2012
© Zhul Bhatia

exhibitors to keep you busy. Check out all the latest wildlife-related technology, optics, clothing, holidays, art, and literature while sampling some of the fine local produce. If you feel like you won't be able to fit everything into one day, camping will be available on site.

The Scottish Birdfair gathers avid birders, adventurers, wildlife admirers, science enthusiasts, families and anyone who likes a weekend outdoors, all within the beautiful grounds of Hopetoun House – it really does have something for everyone. For more information or to buy tickets visit

As well as talks, walks and workshops, there will be over 100

www.scottishbirdfair.org.uk.
Una Dosen, RSPB



Scottish Invertebrate Events- Spring & Summer

From the beginner to the expert, there are events for everyone! This section pulls together many invertebrate events into a single calendar.

If you have an event you would like to publicise in Scottish Invertebrate News please send the details to scott.shanks@buglife.org.uk.

Date	Event	Cost	Location	Further Information
26th April	Bug walk at Fallin Bing project	Free	Fallin, Stirlingshire	Suzanne.bairner@buglife.org.uk
2nd May	Habitat creation & wildflower planting day	Free	Muirton, Perth	Suzanne.bairner@buglife.org.uk
18th May	Oil beetle walk round the Green Cut / Dunrod Hill SSSI.	Free	Greenock, Inverclyde	Scott.shanks@buglife.org.uk
16th May	Habitat creation & wildflower planting day	Free	Fallin, Stirlingshire	Suzanne.bairner@buglife.org.uk
20-25th May	Identifying Freshwater Invertebrates	£350	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/
24-27th May	Entomology for Anglers	£210	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/
15th June	Aberdeen Entomological club summer outing: Windy Hills SSSI, Woodhead near Fyvie	Free	Fyvie, Aberdeenshire	Jenni.stockan@hutton.ac.uk
24th June	Habitat creation & scrub removal day	Free	Fallin, Stirlingshire	Suzanne.bairner@buglife.org.uk
28th—30th June	Scottish Entomologists' Gathering weekend	Free	Dundonnell, Wester Ross	Scott.shanks@buglife.org.uk
28th June – 1st July	Spiders: An Introduction to their identification	£210	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/
5th July	Evening Glow worm walk/ moth night at Doon Hill & Fairy Knowe SSSI, Aberfoyle.	Free	Aberfoyle, Stirlingshire	Scott.shanks@buglife.org.uk
10th July	Bugwalk at Linn Park	Free	Linn Park, Glasgow	Paul.gunn@buglife.org.uk
23rd July	Bugwalk at Hogganfield Park	Free	Hogganfield Park, Glasgow	Paul.gunn@buglife.org.uk
17th-24th August	Highland Butterflies and Moths	£490	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/
19th– 24th August	Invertebrate Surveying techniques	£280	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/
27-30th September	Harvestman Spider Identification & Ecology	£210	Kindrogan, Perthshire	http://www.field-studies-council.org/kindrogan/

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: Scott Shanks (Editor) Scott.shanks@buglife.org.uk



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www.scottishinvertebrates.org.uk



Scottish Natural Heritage
All of nature for all of Scotland

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