

Biodiversity News

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Issue 59

Autumn Edition



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Please note that the views expressed in Biodiversity News are the views of the contributors and do not necessarily reflect the views of the UK Biodiversity Partnership or the organisations they represent.



Welcome, Croeso, Fáilte... to Issue 58 of Biodiversity News!

My name is Alistair Wheeler and I am the most recent in a long line of editors of Biodiversity News. Firstly I would like to thank my predecessor Gauri Kangai who left lots of useful hints and tips which really helped me hit the ground running with this project. I would also like to extend my immense gratitude to all those who took the time to send in all the fascinating articles and photos, without these contributions Biodiversity News would not be possible.

The recent months have, as always, been a hive of activity for biodiversity. In this edition there are articles containing the latest projects and news items surrounding many biodiversity and environmental issues including handling of invasive species, landscape scale projects and the work of local volunteering groups. There is a great set of up coming events for the whole family to be enjoyed, particularly with the holidays just round the corner. It is also incredibly enthusing to see the large range of people who sent in submissions from large non-government organisations to smaller charity groups, researches and small businesses. Particularly in projects which are aiming to engage the younger generation like in the articles "*Biodiversity Games*" or "*Bringing Glasgow's Nature to Light!*"

As far as the layout of the Newsletter is concerned it is virtually unchanged. However those of you who regularly read the UK BAP section will notice this is now the "*UK Framework Update*" to reflect recent changes. I have also added a short Photographs section at the end of the newsletter which not only contains some runner up entrants to the front page photo competition but also a few photographs which didn't quite make it into the other sections.

Speaking of photographs congratulations are in order to Graham Megson for his winning entry to the front cover photo competition. His fungal photo really stands out and looks great as the front cover to this Autumn edition. (Photograph © Graham Megson)

I hope you enjoy reading the articles as much as I did when receiving them and any feedback is always welcomed.

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Click on the boxes to see previous issues this past year

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£20m HLF investment in 13 distinctive landscapes across UK

From the Heritage Lottery Fund

The Heritage Lottery Fund (HLF) has announced 13 earmarked first-round passes totalling £20m made through its Landscape Partnership (LP) programme. This investment will help conserve some of the UK's most diverse and locally distinctive landscapes by supporting schemes that provide long-term social, economic and environmental benefits for rural areas.

HLF's LP programme – which has been running for eight years - is the most significant grant scheme available for landscape-scale projects and is at the cutting edge of delivery. HLF has to date invested a total of £132m in 83 different areas, helping forge new partnerships between public and community bodies and ensuring people are better equipped to tackle the needs of their local landscapes in a co-ordinated and practical way. Alongside essential conservation work to the built heritage and a wide range of training opportunities which enable people to learn new skills, the projects also help protect valuable habitats and enhance local biodiversity.

The 13 landscapes receiving HLF support today include: Cambridgeshire's Ouse Washes; the UK's highest mountain, Ben Nevis; the much-visited Dartmoor National Park; the floodplain of the Tame Valley; and the Dearne Valley in the Pennine foothills, one of the 12 Nature Improvement Areas selected in response to the recommendations of the Natural Environment White Paper.

Dame Jenny Abramsky, Chair of HLF, said:

“The Heritage Lottery Fund's Landscape Partnerships are helping change the way people think about and care for some of the UK's most spectacular scenery. We're very proud of this groundbreaking funding programme - the first and only one of its kind - and we plan to continue to build on its achievements in the coming years.

“The power of landscapes at both a physical and a creative level should not be underestimated. Many people have become disconnected from the natural world, particularly those of us living in urban areas, so these partnerships are designed to conserve, celebrate and share the importance of landscapes in all their magnificent diversity.”





[48 Local Nature Partnerships begin their work](#)

From Mary Jeavans at Defra

In [Issue 56 of Biodiversity News](#) we gave you an introduction to Local Nature Partnerships. Since then we have had applications for LNP status from partnerships from right across England. Following a rigorous assessment process, Ministers have announced 48 LNPs. Making the announcement during the summer, Richard Benyon said:

“The vision, energy and commitment displayed in these applications was wonderful. Really diverse partners, many coming together for the first time, to work across geographic boundaries and administrative borders, and finding innovative ways of pooling and sharing limited local resources. And all this driven by the ambition to not only safeguard nature, but to recognise its importance to economic growth and the wellbeing of communities.”

The LNPs are all different, focussing on the particular needs and challenges of their local area. Some with large urban populations are focussing on improving green infrastructure for the health and wellbeing of local people where as some of the more rural areas where the environment plays a big role in the local economy are making close links with their Local Enterprise Partnerships. Here is what’s being said in local areas about their new LNP:

“The Cornwall and Isles of Scilly Environment Partnership will now be working with a wide range of partners to help achieve economic and social gain through environmental improvement.” Steve Double, Cornwall Council’s portfolio holder for environment, waste management and shared services,

“Formation of the Partnership signals wide recognition that the natural environment not only plays an important part in our quality of life in Norfolk and Suffolk, but is also vital to our economies. At a time when populations are rising and there is more pressure for jobs and economic growth, the Local Nature Partnership will be a powerful advocate for the natural world, and at the same time help us to make the most of the opportunities that can go hand in hand with a healthy natural environment.” Derrick Murphy, Leader of Norfolk County Council,

“This is all about the whole being greater than the sum of its parts. By working together with local people and across businesses, governments and charities, we can achieve so much more. For too long the environment movement has lacked a unifying voice, or has not got its message across clearly and loudly in wider debates about development and future change. We’ve been overwhelmed by the support of our partners, and warmly welcome new partners to get involved!” Tom Wild, Director of South Yorkshire Forest,

A [full list and contact details for all the LNPs](#) and further information about the role of LNPs can be found on the [Defra website](#)





Barcode project puts Wales Number 1 in the world

Dr Tim Rich at Welsh National Herbarium

Wales has become the first country in the world to DNA barcode all its flowering plants. This scientific breakthrough opens up huge potential for the future of plant conservation and human health. The work to make Wales No 1 in the world was carried out at the National Botanic Garden in collaboration with Amgueddfa Cymru-National Museum Wales and project partners from various universities. The Barcode Wales project, led by the National Botanic Garden's Head of Conservation and Research Dr Natasha de Vere, has created a reference database of DNA barcodes based on the 1143 native flowering plants and conifers of Wales, assembling over 5700 DNA barcodes. Plants can now be identified from pollen grains, fragments of seed or roots, wood, dung, stomach contents or environmental samples collected from the air, soil or water.



Barcode collecting © NBGW

Dr de Vere explained the importance of the project:

“Wales is now in the unique position of being able to identify plant species from materials which in the past would have been incredibly difficult or impossible. Through the Barcode Wales project, we have created a powerful platform for a broad range of research from biodiversity conservation to human health”. Dr Tim Rich said: “We have taken DNA samples from thousands of specimens in the National Museum's collections. This technique opens up a whole new set of uses for our collections.”

DNA barcodes are short sequences of DNA which are unique to each species and can be used to identify plant species from tiny fragments of plant material. They have a whole range of applications from conserving rare species to developing new drugs. The Welsh flora DNA barcodes are freely available on the Barcode of Life Database (BOLD) for use by researchers throughout the world. The creation of this DNA barcode library is reported in the journal PLoS ONE <http://dx.plos.org/10.1371/journal.pone.0037945>

The National Botanic Garden receives funding from the Welsh Government for its scientific research and educational work promoting science-based activities. Housing Regeneration and Heritage Minister, Huw Lewis said: “I am delighted the Garden has achieved a significant world first. Welsh Government funding is helping the Garden provide the people of Wales with an institution dedicated to biodiversity and sustainability and it has now put Wales on the world stage in plant sciences research. Congratulations to Natasha and her team.”

Professor John Harries, Chief Scientific Adviser for Wales, congratulated the team responsible for this achievement: “This is a really significant project that will help highlight and promote the expertise in Wales. The Garden is gaining a strong international reputation as a centre for plant sciences research, and is playing a key role in supporting and training the next generation of plant scientists, which is great news for Wales.”



Barcode project puts Wales Number 1 in the world continued

Dr de Vere paid tribute to Garden staff and volunteers, Dr Tim Rich of the National Museum Wales and the project partners Aberystwyth University, Glamorgan University, University of the West of England, the Botanical Society of the British Isles, and High Performance Computing (HPC) Wales.

Barcodes and the battle against disease

The National Botanic Garden of Wales is already collaborating with partners throughout the UK on DNA barcoding applications. PhD student Jenny Hawkins is working on a joint project between the Garden and the School of Pharmacy and Pharmaceutical Sciences at Cardiff University to DNA barcode honey for drug discovery. Jenny has collected honey from throughout the UK and is testing its ability to kill the hospital acquired infections, MRSA and *Clostridium difficile*, she will then DNA barcode the honey to find out what plants the bees visited to make it. Jenny said: "We know some of the medicinal properties of honey come from the plants the bees visit. By DNA barcoding the honey, we are looking for links between honey with good medicinal properties and particular plant species. If we find it, we might be able to make a super honey by allowing bees to forage on plants that provide high antibacterial properties."

Barcodes and the fate of pollinators

DNA barcoding may also be able to help in the crisis facing our pollinators. Dr de Vere is working with PhD student Andrew Lucas from the Swansea Ecology Research Team (SERT) at Swansea University to investigate the role that hoverflies play in pollination. Andrew says: "Hoverflies play a key role in pollination but we know very little about their behaviour. My research will collect hoverflies and find out where they go by DNA barcoding the pollen carried on their bodies. We are interested in how hoverflies move through the landscape and the importance of habitat quality." This work builds on a project with Aberystwyth University that examined bee pollination within species rich grasslands.

Barcoding the rest of the UK

The Barcode Wales team is now joining forces with more partners to DNA barcode the rest of the UK native and alien flora. The National Botanic Garden of Wales, Amgueddfa Cymru and University of Glamorgan are joining teams from the Royal Botanic Garden Edinburgh led by Prof Pete Hollingsworth and Imperial College and Royal Botanic Gardens Kew led by Prof Vincent Savolainen.





Millions of moss 'beads' airlifted to restore Peak District and South Pennine moors

From Louise Turner at Moors for the Future

The Moors for the Future Partnership is airlifting 150 million 'beads' of Sphagnum moss to help bring life back to the Peak District and South Pennine moors (started 24-25 September).



Airlifting the Sphagnum © Moors For the Future Partnership

MoorLIFE, one of the largest conservation projects in the UK, is reintroducing this key peat-forming moss in a huge landscape-scale operation covering 2400 acres (980 hectares) across the hills of Northern England.

In the first operation of its kind, Sphagnum gel beads known as BeadaMoss™ will be airlifted by helicopter in five-litre tubs, starting on Black Hill in the Peak District National Park. This pioneering work, developed through the Sphagnum Propagation Project and funded by the Co-operative Foundation and Natural England, started with an original small source of local Sphagnum which was grown-on and multiplied in the laboratory and finally placed in special gel beads. Each tiny bead, the size of a small fingernail, contains several small strands of moss. The gel helps to weigh down the moss and aid application on the moors as well as provide a vital food source and protection from the harsh climate. The aim is for the moss to grow out of the bead and begin to colonise the moors and bring the moors back to a healthy and sustainable condition once more. This production technique requires only a small

amount of local source Sphagnum.

A large-scale landscape conservation solution is needed to combat the large-scale devastation caused by 150 years of industrial pollution and wildfires on the moors. This has resulted in an insufficient local source of Sphagnum and no vegetation, just barren black expanses. Previous conservation works by the Moors for the Future team means that where you once would have seen bare eroding peat on Black Hill, now there is a new healthy layer of grasses and moorland plants. The Sphagnum beads will be spread by hand onto re-vegetated areas by staff, volunteers, Peak District National Park rangers and a local contractor to act as a key element in the formation of new peat. Peat is the biggest single store of carbon in the UK, helping climate change adaptation.



Black Hill before airlifting © Moors For the Future Partnership



Millions of moss 'beads' airlifted to restore Peak District and South Pennine moors continued

Matt Buckler, conservation works manager for the Moors for the Future Partnership said: "All our works to date have been about stabilising the ground until peat-forming vegetation can develop. Sphagnum is the building block that created and sustains our peatland moorlands and so this project is probably the most important landscape-scale delivery phase of works ever in UK moorland restoration."



Black Hill after airlifting © Moors For the Future Partnership

Jim Dixon, chief executive of the Peak District National Park Authority, confirmed the importance of re-introducing Sphagnum: "This pioneering work and its vast scale is an amazing achievement and milestone in the project and the partnership's history. Its importance is far reaching - not only will it benefit communities and wildlife in the National Park but also across the South Pennines and Europe."

"I would like to extend my thanks to all staff and partners involved for their continued hard work, commitment and belief in this pioneering approach to return our valuable moorlands back to a healthy and sustainable condition ."

Lord Smith, chairman of the Environment Agency, who has visited Black Hill to see past conservation works by the team and is a key partner of the MoorLIFE project, endorsed this vital work: "The re-introduction of Sphagnum moss - in this truly innovative project - will add still further to the remarkable success of the Moors for the Future programme. Restoring the peat cover for the Peak District moorlands has huge conservation, environmental and climate change benefits."

Healthy peat moors:

Provide a unique habitat for a wide range of wildlife.

Absorb and store carbon – peat is the single biggest store of carbon in the UK, storing the equivalent of 20 years of all UK CO2 emissions and keeping it out of the atmosphere.

Provide good quality drinking water – 70% of our drinking water comes from these landscapes.

Damaged peat erodes into the reservoirs so that water companies have to spend more money cleaning the water for consumption.

Potentially help reduce the risk of flooding.

MoorLIFE is a £5.5 million, EU Life+ project. Its aim is to protect active blanket bog by conserving bare and eroding peat in the South Pennines Special Area of Conservation (SAC) and Special Protection Area (SPA). It is co-funded by the European Union's Life+ Programme and delivered by the Moors for the Future Partnership. Partners in the MoorLIFE Project include the Environment Agency, Natural England, National Trust, Peak District National Park Authority, United Utilities and Yorkshire Water.





Condemnation as golden eagle found shot

From Louise Smith at RSPB Scotland

RSPB Scotland has condemned the shooting of a golden eagle, found barely alive, by a walker in Dumfriesshire.

The bird was discovered on Saturday 6th October on a grouse moor near Wanlockhead, close to the Southern Upland Way. However, it is not clear precisely where the shooting occurred. The eagle, an adult male, was recovered by Scottish SPCA inspectors and is undergoing treatment at its new rehabilitation centre near Alloa.

Examination by vets showed shotgun pellets had caused injuries to the tail muscles and one wing. The bird also had extensive feather damage, suggesting it had been floundering on the ground for some time and had not been able to feed. It is too early to tell whether the bird will recover. Stuart Housden, Director RSPB Scotland commented “With one golden eagle already found poisoned this year, and a second bird the apparent victim of an illegal trap, this is yet another appalling incident. Whoever pulled the trigger must have deliberately targeted one of our most iconic birds, with lethal intentions.

“Whoever it was has access to a shotgun, and the confidence to use it in this area. Much has been made of an apparent recent decline in the illegal poisoning of Scotland’s birds of prey, but this, and other recent criminal incidents, show that efforts to stamp out the illegal persecution of strictly protected wildlife have a considerable way to go.”

€2.5 million project to tackle alien invaders!

From Su Waldron

A new project will bring together experts from across a large area spanning southern England, northern France, Belgium and the Netherlands to look at new ways of managing invasive non-native species (INS). With a total budget of 2.5 million Euros, the RINSE project (Reducing the Impact of Non-native Species in Europe) will share practical expertise amongst partners and seek to improve general awareness of the threats posed by INS.

An invasive non-native (or 'alien') species is any non-native animal or plant that has the ability to spread causing damage to the environment, the economy, our health and the way we live. Many of these impacts are caused as INS upset the natural balance within an ecosystem. INS can cause this disruption by outcompeting native species (by growing faster or being more aggressive), by being a vector for an exotic disease, through genetic impacts or by directly preying and grazing native species which have no defence against the new threat. Ecological and economic damage caused by INS is thought to cost £1.4 trillion per year on a global scale.



€2.5 million project to tackle alien invaders! continued

INS are widespread in the RINSE project area and continue to be introduced in a wide variety of ways including via the horticultural and pet trade, commercial shipping and tourism. Insufficient information about the distribution and spread of INS has historically made it difficult to prioritise and target action, leading to ad-hoc control efforts. Furthermore, insufficient sharing of information about INS across countries has led to some duplication of effort. Poor general awareness of the threats posed by INS means that some are still available commercially, or are released into the wild.

RINSE will work across borders to share best practice and adopt strategic approaches to tackle invasive non-native species. Amongst other activities, RINSE will audit the distribution of INS as well as making predictions about species that could become a threat in the future. It will also carry out field trials of new methods to control some of the most concerning INS found in the area.

The project will develop new methods to record INS, including an “App”, which will allow anyone with a Smartphone to record invasive species. Results from field trials will be made widely available to help with future control efforts.

You can read more about the RINSE project here:
www.rinse-europe.eu

and download a leaflet about the project here:
http://www.rinse-europe.eu/assets/__files/rinse-leaflet_english.pdf





Increasing food web biodiversity can enhance biocontrol in orchards

From Dr Andrew Cuthbertson

Insect and weed management are integral parts of a sustainable orchard production system. Sustainable production involves maintaining productivity, healthy ecosystem function and environmental quality. Biological diversity may contribute to ecosystem balance and sustainability through partial overlap of functional niches among plant and insect populations. Current pest management practices in apple orchards tend to reduce biological diversity due to the usage of broad spectrum chemical pesticides. A major side-effect of this is the production of a less diverse ecosystem. There is a reduction or elimination of the natural ecosystem services derived from beneficial organisms that suppress both insect and weed pests. A major challenge facing fruit growers in regards to sustainable orchard management is being able to suppress pest populations and enhance beneficial insect populations while maintaining high functional biodiversity to take greater advantage of natural ecosystem services.

Ecosystem services, such as pest suppression, can be regarded as emergent properties of the ecosystem. They are of benefit to the agro-ecosystem and to the greater environment as a whole. Emergent properties are not the result of any one component of the system but rather the result of the interaction of all the components working together. The emergent properties, therefore, cannot be adequately studied with the typical reductionist style of research characteristic of modern agricultural sciences. Emergent properties are best studied at a holistic level, taking into consideration all biotic and abiotic components of the ecosystem. Examples of ecosystem services that are provided by a healthy, diverse system are filtering of air and water; wildlife habitat; alternate resources for natural enemies; system level resistance to insects, weeds and diseases; nutrient cycling; and aesthetic, recreational or other socially important services.

Sustainable insect and weed management are interdependent. There are many areas in which management at one trophic level has an impact on other trophic levels. With a high arthropod biodiversity, there are many herbivores that may be able to help sustain a balanced plant community where aggressive weeds are selected against and, in return, plant biodiversity can provide food and habitat for a diverse range of arthropods.

For example, an ecologically managed ecosystem has a diverse community of carabids (Figure 1). Carabids are important predators of insect pests but are also important seed predators. A functionally diverse carabid community may be able to help balance the seed bank and help maintain a diverse plant community not dominated by a few weed species.

Biodiversity in the plant community also has a beneficial effect on many arthropods. Plants provide shelter and help modify the microclimate so that it is more conducive to carabid foraging and reproduction (Cuthbertson and McAdam, Biodiversity News, 31: 17-18). Weed management that relies solely on long-term use of herbicides may have detrimental effects on biodiversity, the orchard soil, beneficial insect populations, and fruit tree replants. Orchard management that emphasizes reduced use of synthetic herbicides has limited options, but mulches, flammings, weed-eating geese, and natural product herbicides are possible alternatives.



Figure 1. Common carabid: *Pterostichus melanarius*. © Dr Roy Anderson



Increasing food web biodiversity can enhance biocontrol in orchards continued

Many fruit growers have kept sheep within the confines of their orchards. This has both advantages and disadvantages on the ecosystem as a whole (Cuthbertson AGS, Biodiversity News, 42: 8). Composted poultry litter as a mulch has been used to suppress weeds in orchards in the USA, although long-term weed control was not obtained with a single mulch application.

With increasing biodiversity within the ecosystem there is also a great need to ensure correct identification between pest and beneficial species. In many cases beneficial species' are being incorrectly identified, and actively sprayed against. One such recent example is that of the Whirli-gig mite *Anystis baccarum* (Figure 2) (Cuthbertson, AGS, Biodiversity News, 30: 29). Consultation with a number of both English and Northern Irish apple growers revealed that some had encountered this beneficial mite species, but mis-identified it as the pest fruit tree red spider mite, *Panonychus ulmi* and actively sprayed against it (Cuthbertson and Murchie, Biodiversity News, 34: 16). In doing so, they not only removed a natural pest control agent which predated *P. ulmi* in their orchards but they also risked their health applying unnecessary chemicals and wasted money on the applications. The knock-on effect of the unnecessary chemical applications on the entire biodiversity food web is incalculable.



Figure 2. Beneficial mite *Anystis baccarum* attacking Collembola prey. © Dr Andrew G S Cuthbertson

Therefore, in the bid to gain a more environmentally sustainable apple production system within the UK, much consideration must be given to alternative means of pest control and to encouraging increasing biodiversity within the ecosystem.





Bovey's barbastelle bats

From Kay Haw at Woodland Trust

The barbastelle bat, *Barbastella barbastellus*, is regarded as one of the rarest species of bat in Europe. Over the past century their populations have undergone severe declines. The British population, estimated in 1995 to be a total of 5,000 individuals, is sparsely spread across southern England and Wales. Their global IUCN status (2001) is Vulnerable. In the UK they have their own Biodiversity Action Plan, are protected under Schedule 5 of the Wildlife and Countryside Act (1981) as amended and by the Conservation (Natural Habitats &c.) Regulations (1994), and they are a European Protected Species (EPS).

The habitat preference of the barbastelle is wooded river valleys, but they will occasionally use meadows and areas of human occupation. They mainly roost in trees; under loose tree bark or in small cracks in summer, and in large hollow trees during the winter months. These niches are mainly found in ancient complex woodland, but this is becoming an increasingly rare resource as development and clearance continue to destroy our priceless natural heritage.



Split fissure roost © James Mason

Intense woodland management can also have a detrimental effect, especially if trees suitable for roosting are removed, or if the wood itself is opened up too much. Barbastelles forage in dark understory in the early evening, until light levels drop enough for them to fly out into the open without risking predation. This can give them up to two hours extra foraging time per night. Reduction in prey, due to pesticide use, and habitat simplification by fertilisers and overgrazing, is also thought to have contributed to their decline.

The Bovey Valley Woods complex is a 86.33 hectare mixture of ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS), riverine habitats and old meadows. They sit in the valley of the River Bovey, along the south-east edge of Dartmoor National Park.

Through its Biodiversity Action Plan, Dartmoor National Park established a woodland bats working group, to ascertain the importance of woods to bats. It believes many bats made greater use of the woodland areas than the surrounding open moor. Surveys were conducted and bats, including barbastelles were found in several local woods, including the Bovey Valley.

PAWS restoration work started in Bovey Valley Woods and a harvesting map was created. Halo thinning was carried out around remnant broadleaf trees; gradually creating space and increasing light levels around the trees to ensure their survival.

In 2006, a survey by Frank Greenway failed to record the Bechstein's bats he sought, but it did catch a number of barbastelle bats. In 2007/8 a barbastelles in the landscape project was funded by SITA and the study was carried out by then PhD student Matt Zeale.



Bovey's barbastelle bats continued

In woodland, the bats were caught along tracks and rides using mist nets and harp traps. Those in known tree roosts were captured with hand nets. The nets and traps were set up before the bats emerged in the evening to forage and remained there for six hours, or until all the bats had left the tree roosts. Trapping sites were selected by assessing the habitat structure of the woodland and using previous survey data.

After capture and condition assessment, the caught female barbastelles were fitted with light radio-transmitter tags (Pip3, 0.35g). These weigh on average 4.4 per cent of an individual's total body mass. A small section of fur was clipped and the tag attached on the dorsal side between the scapulae using Skin Bond (biodegradable glue); these have a life expectancy of two weeks. Pregnant females and juveniles were excluded from this, so as not to cause them difficulties. All tagged bats were also fitted with rings to enable future identification.



Barbastelle bats © Richard Knott

Continuous tracking was used to monitor and locate the bats following release, for an average of 2.53 nights per bat. The tracking signal was followed, by foot and car, and an approximation of the bats flight path was recorded. The signal type showed whether the bat was stationary or foraging.

The tracking information and habitat data, taken from aerial photographs, showed barbastelle bats have a clear and significant preference for foraging in riparian vegetation, followed by broadleaf woodland and then unimproved grassland. Open water was the least selected habitat – suggesting the importance of this has previously been over-estimated – but these areas do support riparian vegetation.

However, bats may only favour riparian areas for foraging because a large percentage of the remaining undisturbed ancient woodland is located in hard to manage locations, such as steep valley sides. These are difficult to farm or clear. The areas have become self-thinning and therefore contain a good quantity of dead and dying wood, which make good roosting opportunities.

The study showed barbastelle bats have a strong preference for roosting under flaky bark, in cavities and cracks, and most frequently in broadleaf trees. Roost trees were most often found in ancient, unmanaged woodland, and in oaks, *Quercus* sp. Roost trees were also found to be taller than other trees, and old or dead.

The foraging distances for individuals was varied. But two of the tracked bats demonstrated very large ranging behaviour (bat 190: 17.03 km, bat 260: 20.38 km). This may, in part, be due to the availability of productive foraging habitat and competition between individuals. This is a landscape scale species, roosting in woodland but ranging widely. They are a good indicator of a healthy landscape and their overall decline suggests the need for more woods and trees.



Bovey's barbastelle bats continued

The real question is, did PAWS restoration save the roosts in the trees or did it improve conditions for them during haloing operations? Hopes are that another study will shed some light on this question. A Woodland Trust guide, [*The conservation and restoration of plantations on ancient woodland sites: A guide for woodland owners and managers*](#), offers further information.

While there is a general call for increased management of our woods, and this will benefit some species, consideration must also be taken for those species that require more undisturbed habitat and old trees. Due to the good management practices followed by this project there was no need to apply for an EPS licence.

Amphibians in Drains Project Report summary

From Daniele Muir

Introduction:

In 2010 Perth & Kinross Council Countryside Ranger Service officially started the Amphibians in Drains Project across Perth and Kinross. For a number of years prior to this, observations made by Rangers and Tayside Contracts staff undertaking routine drain maintenance suggested a significant number of roadside gullypots contained trapped amphibians. These were mainly toads (*Bufo bufo*) but also frogs (*Rana temporaria*), and the occasional palmate newt (*Triturus helveticus*) - along with numerous small mammals. Roadside gullypots can act as pitfall traps when animals fall through the grid at road level, especially over periods of mass movement such as during the breeding season and when animals disperse to find hibernation sites. Once trapped it is unlikely that the animals will be able to escape or survive for any length of time.

It was identified that a more robust study to ascertain the scale of the problem was required. Gullypot surveys were carried out across eastern Perth & Kinross in 2010 and 2011 with the following aims:

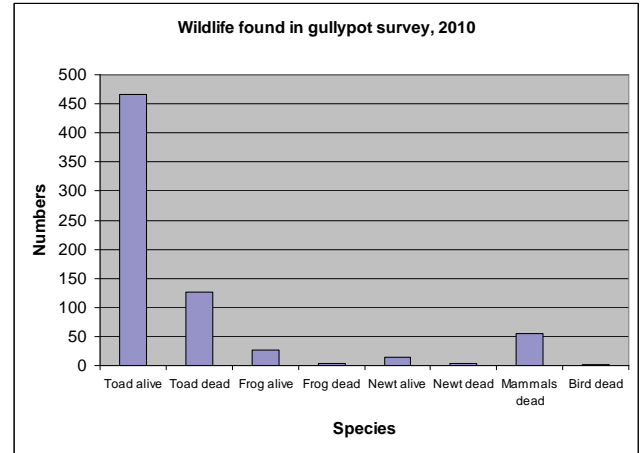
- To estimate the number of gullypots that may be affected across central and eastern Perthshire.
- To estimate the number of amphibians & mammals that may be trapped.
- To record species of amphibian & mammals affected.



Amphibians in Drains Project Report summary continued

Results:

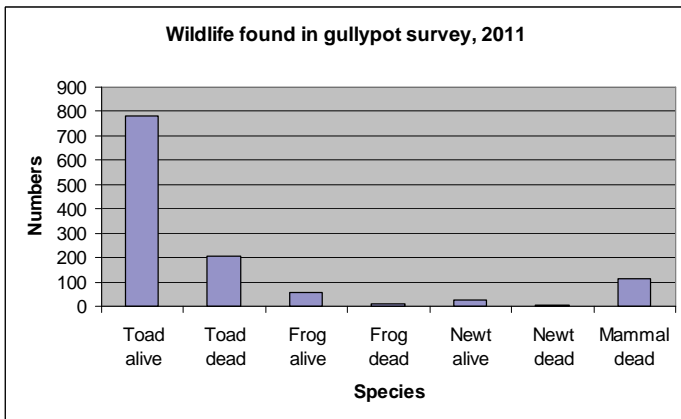
- In 2010 three hundred and twenty two gullypots were checked, with 69% containing wildlife – 641 amphibians, 56 mammals and 1 bird were found. These numbers are relatively low compared to 2011 as the data from spring and early summer surveys was lost due to equipment failure. Species breakdown is as follows (see graph 1):



Graph 1

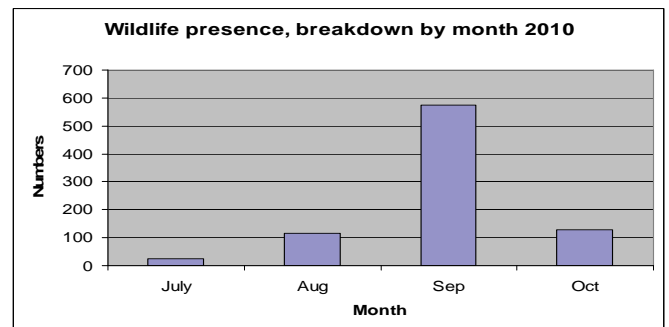
The majority of mammals found were voles, with mice and shrews being found in smaller numbers.

- In 2011 six hundred and thirty six gullypots were checked, with 63% containing wildlife – 1087 amphibians and 114 mammals being found. Species break down is as follows (see graph 2):

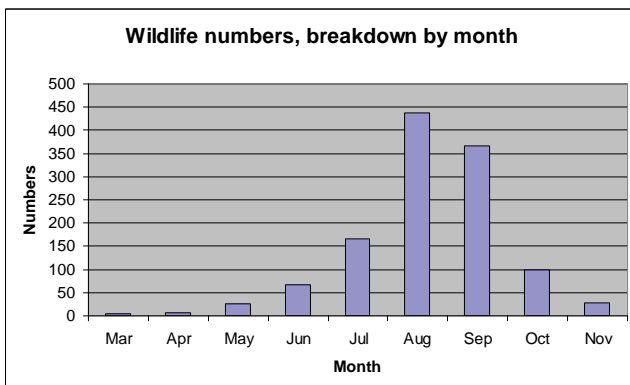


Graph 2

The majority of animals were found in August and September (see graph 3 and 4). Young amphibians will be leaving their breeding ponds in the summer and, along with adults, disperse to their hibernation sites in autumn.



Graph 3



Graph 4

The same migration route can be used for many years and these are frequently found in woodland. The majority of toads should be hibernating by November across Perth and Kinross.

It is surprising that more animals were not found in spring, when amphibians migrate to their breeding sites. Similar numbers to those found in August and September would have been expected.

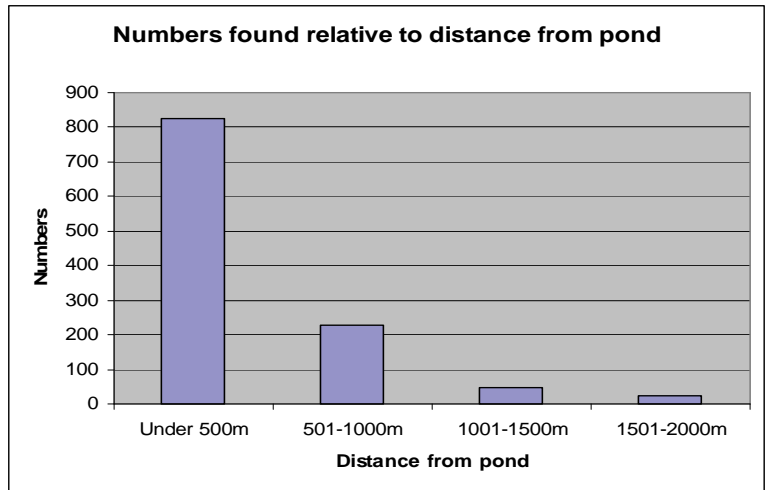


Amphibians in Drains Project Report summary continued

These initial findings would suggest gullypots could have a significant impact on local populations of amphibians, as well as small mammals. The majority of amphibians were found in gullypots under 500m from a breeding pond in 2011 (see graph 5).

Future plans:

The survey will continue in 2012 to obtain further data. The Ranger Service has obtained SITA funding to purchase a number of ACO wildlife kerbs to replace the standard kerbs at a pilot site in Elm Drive, Blairgowrie. This is a new road close to a pond where there is data from 2010 & 2011 to enable comparison of before and after figures.



Graph 5

Wildlife kerbs contain a recess which allows wildlife to follow the lower edge of the kerb and bypass the gullypot. A study by the Vale of Glamorgan Pond Survey at Roose in 2006 showed that moving the gullypot 10cm away from the kerb led to 80% fewer great crested newts falling into the gullypots by allowing the animals to bypass the danger zone.



Wild life curb © ACO

If the wildlife kerbs are shown to be successful, Perth and Kinross Council Roads Section is interested in using them in suitable locations across Perth and Kinross in future.





Apple pollination: the need for honey bees

From Dr Andrew Cuthbertson

Honey bees are one of the most talked about invertebrates within the UK. They continue to raise public interest. Due to the ease by which honey bees are transported, they have become the primary insect pollinator used in agriculture. Honey bees, due to pollination services, are responsible for the provision of up to one third of the food people eat. In these days of agri-business and corporate farms, both our diet and the UK horticultural economic livelihood are dependent upon the pollination services provided by honey bees. The apple tree is one of the most cultivated plants in the entire world with more than 7,500 known cultivars. The wild ancestral apple, *Malus sieversii*, is indigenous to the Tien Shan Mountains that border China and Kazakhstan. This is also part of the native range of the western honey bee, *Apis mellifera*.



Apple blossom in full flower.
© Dr Andrew G S Cuthbertson

The value of apples in the UK has been estimated at over £115 million per year. Pollination is the transfer of a plant's male reproductive cells (pollen) to the female reproductive structures of a flower (stigma). As honey bees collect nectar and pollen from many flowering plants they are very effective pollinators. Apple flowers cannot self pollinate and therefore require cross pollination. This means they not only require a pollinator like the honey bee, but they also require a polliniser (which could be either an apple or crabapple variety that produces viable and compatible pollen). Honey bees are very important pollinators of apples in the UK (Cuthbertson and Marris, *Biodiversity News*, 52: 16-17).



The honey bee collecting nectar from the blossom.
© Dr Andrew G S Cuthbertson

There are many different factors that can result in poor pollination of apple trees. If the pollinator (bee) population is too small, the 'pollination threshold' will not be reached and there will be a lack of viable pollen transferred to receptive flowers. Good weather during flower bloom is also critical for optimal pollination. Honey bees tend to visit flowers in the morning. Any disturbance of early visitation times due to weather, spray schedules, mowing, or other management practices within the orchard may significantly affect the pollination efforts of honey bees and other pollinators. The presence of pollen sources or compatible polliniser varieties is crucial for the successful pollination of apple flowers.

In order for complete fertilisation to occur after pollination, 6-7 ovules must be fertilized by a sufficient number of pollen grains. If this threshold is not met, the results can be morphological and physical deformities in the fruit, a decrease in yield, smaller fruit size, and a reduction in the calcium content of the fruit (which can subsequently lead to storage problems). Moreover, if adequate fertilisation is not achieved, the fruit may not remain on the tree until harvest.



Apple pollination: the need for honey bees continued

There are steps a grower can take when renting hives for pollination in order to ensure adequate pollination by honey bees. Colony strength is very important to ensure sufficient pollination. When the lid is removed from a beehive housing a strong colony, the bees should spill out - due to the large number of adult bees within the hive. Also, each frame should have sufficient amounts of brood and young larvae to guarantee an adequate future foraging population. To maximise their effectiveness as pollinators, it is important to consider when bees should be moved into the orchard. Moving hives into a crop during the night is less stressful on the bees, because they are not flying and the temperatures are generally cooler. To maximise the likelihood that the bees will forage on the apple flowers, and thus transfer pollen, it is a good idea to move hives into the apple orchard after roughly 5-10% of the apple flowers have blossomed. Removing weed species and other non-target plants is also important; this avoids competition for the target crop.

The efficient use of honey bees for apple pollination can result in an increase in both fruit quantity and quality. In fact, many apple growers complain that honey bees can set too much fruit and therefore the crop must be thinned. While a heavy crop can be thinned, a light crop cannot be increased after the pollination period has ended. In the end, proper bee pollination will ensure adequate seed formation and reduce the incidence of deformed apples, which in turn results in a better crop for the grower.

Things can only get wetter at Denmark Farm!

From Dr Angie Polkey at Denmark Farm Conservation Centre

The capacity of natural processes to renew and clean water is amazing. Soil filters water on its way to wells and springs. Plants and microorganisms act as a biological purifier. At Denmark Farm Conservation Centre, we are harnessing these natural attributes to create a Wetland Ecosystem Treatment (WET) System, in anticipation of increased sewerage loads when our new guest eco-accommodation is completed.

A WET System has specially designed and constructed ponds and earth banks, densely planted with wetland trees and marginal plants. As wastewater flows through, it is both purified by microbiological action and transpired by growing plants. In the process, a beautiful, species-rich wildlife habitat is created, including a willow resource that can be used for basketry, hurdles, garden features or fuel, depending on the coppice cycle.



Denmark Farm WET System before planting up © Biologic Design

Additionally, a WET System requires minimal imports of resources - the site's soil (rather than quarried gravel) filters the wastewater, fossil fuels are only consumed during construction and there is no ongoing electricity use. In fact, the whole process increases in efficiency over time, as new soil builds up and root systems extend - both of which also increase carbon dioxide storage as biomass, whereas conventional treatment systems need regular maintenance and energy inputs.



'Disconnected children' mean nature is at risk continued

'Without the opportunity and encouragement to get outdoors and connect with nature, children are missing out on so many benefits that previous generations have enjoyed, and it's putting the future of our wildlife and natural environment at risk.'

The new approach explores children's empathy for creatures, responsibility for nature, enjoyment of nature experiences and sense of 'oneness' with nature. The RSPB is calling for the Coalition Government to adopt this as their official indicator for whether their efforts to improve connection to nature are having an impact.



Children looking at bugs in jars © Eleanor Bentall

Evidence shows that the proportion of children playing out in natural spaces has dropped by as much as 75 per cent over the last thirty to forty years. This is despite the proven positive effects that contact with the natural World has on children's physical and mental health, personal and social development, and even academic achievements and life chances. If the decline in connection continues the consequences for wildlife and people could be catastrophic, as children who don't value and respect nature when they're young are less likely to see the importance of protecting the natural environment when they're older.

Rachel Bragg has been leading the work at the University of Essex. She says; 'It's vital that we understand how a child's experience of nature influences their feelings of connection to the natural world as this will affect future behaviour towards the environment. The study we've developed with the RSPB will help us measure this connection and will give us the first baseline data for children in the UK.'

Mike Clarke continues; 'Children's lack of contact with nature is a serious problem, but it isn't an unsolvable one. If the Government, parents, schools, the RSPB, and other like-minded people and organisations all work together we can make real changes in the relationship between young people and nature, for the benefit of both.'

Check your own family's level of connection to nature and find out more at www.rspb.org.uk/getoutdoors





Creating rare wildflower meadow habitat on an Oxfordshire quarry

From Debra Royal at Nature After Minerals

Hanson UK and Nature After Minerals (NAM) - a partnership between RSPB and Natural England - have been working to enhance the biodiversity of a former gravel pit in Oxfordshire, using the harvested hay from one wildflower-rich site to help create rare, threatened wildflower meadow habitat on another.

As part of a 25 year Section 106 agreement with Oxfordshire County Council for extended-aftercare, Hanson UK has recently been working to restore 25 hectares of former sand and gravel pits at Cassington Quarry near Oxford, creating valuable reedbed and pond habitat to attract species such as water vole, bittern and reed warbler. Overall, the restored pit complex of more than 133 hectares includes a number of lakes, wet grassland margins and native broadleaved woodland plantations.



© Nature After Minerals (NAM)

However, as the site also lies within 500 metres of two Sites of Special Scientific Interest - Cassington Meadows and Pixey and Yarnton Meads - Hanson has capitalised on an opportunity to extend and re-connect this vital habitat within the wider Oxfordshire landscape by taking a green hay cut with its rich source of wildflower seeds from the existing meadows and spreading it onto the newly-restored area.

Andy Duncan, Hanson's Principal Landscape Manager, said: "Conserving local genetic integrity is an important part of biodiversity conservation. Spreading green hay from a locally-collected seed bank source helps maintain and protect local indigenous species and safeguards the future of the adjacent historic meadows.

"Even though we were under no obligation to undertake this wildflower seeding, we felt it was a great opportunity to enhance our lake margin restoration and the green hay strewing methodology was more appropriate than commercially bought-in wildflower seed, given the sensitive location close to existing internationally-important habitat."

It is hoped that this year's late summer hay cut will target some later-flowering species such as common knapweed, devils bit scabious, lady's bedstraw, meadowsweet and yellow rattle to help enhance the biodiversity of the site. The intention is to return to Yarnton Meads at the optimum time next July, to cut and collect the grasses and species which flower earlier in the summer.

Carolyn Jewell, NAM Programme Manager, who helped supervise the work, said: "Hanson's work at this site in Oxfordshire is a prime example of what can be achieved for wildlife and the natural world on worked-out quarries.

"Sites like this can go on to provide an essential refuge for endangered plants, mammals, reptiles, invertebrates and birds, and it is hoped that eventually, they will provide local communities with the opportunity to re-connect with nature and take refuge from the hurly-burly of daily life."

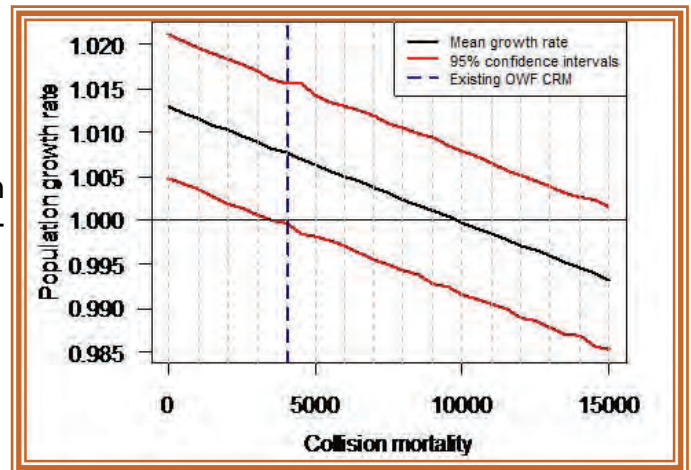


Gannet Population Viability Analysis (PVA), WWT Consulting Ltd

From Marie Banks at WWT Consulting

Over 50% of the world's breeding population of Northern Gannet *Morus bassanus* is found at sites in the United Kingdom. WWT Consulting has been conducting aerial surveys for marine waterbirds, including gannets, for nearly 20 years, initially with surveyors in planes and more recently with high definition cameras in partnership with HiDef Aerial Surveying Ltd. The data collection has largely been funded by offshore renewable energy developments, primarily to inform their planning applications.

This year, we've conducted a desk study in partnership with Dr Mark Trinder (formerly employed by RPS, now MacArthur Green) and Professor Bob Furness from MacArthur Green. The project, funded by The Crown Estate through the Strategic Ornithological Support Services (SOSS) programme of bird research projects for offshore wind, assessed the potential impact of collisions with windfarms on populations of gannets. The aim of the project was to provide an improved understanding and clarity on the potential impact of offshore wind on gannet populations. The study started with collation of data on the biology of gannets, such as survival rates and reproductive success. A population model developed from these demographic data generated outputs which closely matched the recent observed population trend, and was thus considered reliable for generating future predictions.



Gannet population growth rate in relation to additional mortality from offshore windfarms © WWT Consulting

The effect of 'harvesting', i.e. loss of organisms from a population, in this case loss of gannets through collision with windfarm turbines, was simulated using the model. This allowed a prediction to be made of the change in the likelihood of the population decreasing in relation to change in the level of annual additional harvest. To provide context to the simulated harvesting levels, the recently developed offshore Collision Risk Modelling (CRM; Band 2011) was used to generate estimates of collision mortality for all existing and consented UK offshore windfarms. Gannet density estimates for this calculation were provided by developers in their Environmental Statements or, where unavailable, from the most relevant alternative survey data sources available. Data from our aerial surveys, together with tracking and marking studies, were used to assign this mortality to adults and juvenile gannets and to individual colonies. An avoidance rate of 98% was assumed in the CRM, based on current Scottish Natural Heritage (SNH) guidance. This is considered to be a precautionary level and is used for those species where more specific rates have not yet been collected. Outputs were also calculated for higher avoidance rates (99%, 99.5% and 99.9%) which have been found in studies of some other species.



Gannet Population Viability Analysis (PVA), WWT Consulting Ltd continued

The study concluded that the presently growing UK gannet population would continue to increase overall until harvesting levels exceeded around 10,000 birds per year. At this level, 50% of model simulations showed declines over 25 years. At the lower harvesting level of approximately 3,500 birds, 5% of simulations showed a population decline. At present, CRM for current and consented offshore windfarms generated an estimated annual mortality of 2,603 adult and 1,056 immature gannets (assuming an avoidance rate of 98%). This mortality is not expected to be evenly distributed among colonies with some, such as Bass Rock, expected to be more sensitive to mortality from current and proposed windfarms due to their proximity to windfarm development areas.



Gannet colony and individual © WWT Consulting

For further information about the study, please contact Gareth Bradbury, Senior Consultant, WWT Consulting Ltd: info@wwtconsulting.co.uk or 01453 891222

Himalayan Balsam Invades

This article comprises of two submissions the first on this page from John bark and the second, shorter addition, over the page from Gethin Davies.

Volunteers conquer Himalayas

From John Bark at The Conservation Volunteers

The Himalayan Balsam (*Impatiens glandulifera*) is a beautiful but pernicious invasive species which likes soft muddy bank sides. Spread by explosive dispersal, it can drive out native plants and lead to river bank erosion when it dies in autumn. This summer, local people across England have beaten back the alien invader with the help of leading charity for reclaiming green spaces, The Conservation Volunteers.



Himalayan Balsam Invades continued

Wensum, Norfolk



© Amelia Macfarlane

In spite of pre-Olympics monsoon weather, volunteers managed to defeat the most recent crop of Himalayan Balsam on the banks of the Wensum, a SSSI chalk river which flows through Norwich. “We normally start in May,” says Debbie Murray, Project Officer for The Conservation Volunteers’ Norwich mid-week group “but this year we were pulling in wellies in July!” To their great satisfaction, this year’s activity showed that persistence pays off. “We have been pulling up Himalayan Balsam every summer since 2009, and this year I estimate we’ve seen a 30% reduction in growth.” The volunteers hope to be back next year to push home their advantage with the continued support of Norwich City Council. “This 2,500m length of the river between Hellesden and Sycamore Crescent is close to the city, but it is full of the most gorgeous dragonflies and damselflies. Everyone loves coming here to enjoy the place and get a terrific buzz from making a really visible improvement to the local environment!”

Monk’s Brook, Hampshire

A three-year battle has begun near Chandler’s Ford in Hampshire to remove Himalayan Balsam from the catchment area of Monk’s Brook, a tributary of the river Itchen. During the summer, The Conservation Volunteers led 12 Balsam removal sessions. The majority were open to local volunteers, while two were employee days for RBS and Enterprises Mouchel staff. “The volunteers left 300 bin bags stuffed with Balsam which the local council’s Street-Scene department took away for green waste composting,” says The Conservation Volunteers Project Officer, Kate Fuller. “We have also set up training courses so that local volunteers and community groups can gain the skills and confidence to lead activities in future, enabling the project to become sustainable.” The work was carried out as part of Eastleigh Biodiversity Partnership’s Monk’s Brook and River Itchen Invasive Non-Native Species Project, which is managed by Eastleigh Borough Council and funded by DEFRA. The overall plan is to work strategically, progressing downstream from Chandler’s Ford through Eastleigh to Southampton.



© Kate Fuller, The Conservation Volunteers



Himalayan Balsam Invades continued

Join in, feel good

The Conservation Volunteers support thousands of local people on projects like this every year. With your help, we can do even more to support communities to reclaim green places.

Wensum Project: to find out more contact Debbie Murray d.murray@tcv.org.uk

Monk's Brook Project: to find out more contact Kate Fuller k.fuller@tcv.org.uk

To find out about The Conservation Volunteers in your area check out www.tcv.org.uk or contact us at information@tcv.org.uk.

From Gethin Davies

Volunteers at Snowdonia National Park

Over the past 3 years, Snowdonia National Park Wardens at Llyn Tegid, Bala have been working alongside local voluntary groups tackling the growing problem of Himalayan balsam spread in the local area. Llyn Tegid forms part of the River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid Special Area of Conservation (SAC) and the Llyn Tegid Site of Special Scientific Interest (SSSI) and has seen a massive increase in the spread of Himalayan balsam over the last decade, resulting in detrimental impacts on native streamside habitat. Having originally surveyed and mapped the distribution of the plant back in 2010, SNP Wardens Alun Jones and Bill Taylor have spent the past 2 summers working with local volunteers in clearing the species from the lake and surrounding tributaries. To date, over 700 bags of Himalayan balsam has been collected, resulting in the clearance of an estimated 10km of rivers and stream side corridors. Plans are now being put in place on further work programmes for 2013 aiming at continuing the great progress that's already been achieved at Llyn Tegid over the last 3 years.



© Snowdonia National Park





Traditional practice of horse-logging comes to the Faughan Valley

From Kaye Coates

A magnificent mare was the centre of attention at Muff Glen Forest, a Forest Service woodland just outside Eglinton in County Londonderry. The gentle giant - a rare Suffolk Punch - showed-off her timber hauling skills as part of a demonstration organised by the Faughan Valley Landscape Partnership Scheme.

Horse-logging is a traditional practice of removing felled timber from woodland using horses. This method is an alternative to using purpose-built machinery. It's easy on the eye and, in some cases, can be more environmentally sensitive. The technique was demonstrated by Noel and Stephen Donaghy of Total Tree Care, with the help of their mighty assistant 'Imogen'.



Imogen, a rare Suffolk Punch mare, prepares to show-off her timber hauling skills at Muff Glen Forest, near Eglinton. © Press Eye

With funding from the Heritage Lottery Fund's Landscape Partnerships, the Faughan Valley project aims to restore and enhance the Valley's diverse natural and built heritage. Delivered by partners Derry City Council, the Rural Area Partnership in Derry (RAPID) and the Woodland Trust, the spotlight is currently on the natural landscape and the restoration of Planted Ancient Woodland Sites.

Michael Topping, the project officer, explains: "Ancient semi-natural woodland - that's the small fragmented remnants of woodland that once covered most of the country - is a scarce resource. Most ancient semi-natural woodland was converted into farmland before 1830. However some areas were converted into commercial forest plantations during the 20th century and these are known as 'Plantations on Ancient Woodland Sites'."

According to the Woodland Trust, the gradual and careful restoration of ancient woods planted with non-native conifers is vital for unique communities of plants and animals that are currently clinging to life. The selective thinning of conifers provides light and room for any surviving broadleaf trees and also reduces the impact of heavy shading on the woodland floor.

Michael continues: "Our project offers comprehensive advice and funding to help landowners in the Faughan Valley restore those sites, as near as possible, to their former glory. And today we're actually demonstrating the removal of felled conifers, including Western Hemlock, using good old-fashioned horse power."



Traditional practice of horse-logging comes to the Faughan Valley continued

“Forest Service are to be acknowledged for their work in both restoring ancient woodland sites and protecting the features such as ancient trees that make these areas so special, and we appreciate the opportunity provided by them to demonstrate some restoration techniques to private landowners.” Imogen’s performance was followed by an Invasive Species Workshop, intended to raise landowners’ awareness of the harmful effects of, and the need to eradicate, species such as Japanese Knotweed, Rhododendron and Himalayan Balsam.

For advice and details of funding available to restore Planted Ancient Woodland Sites contact Michael Topping on michael@rapidni.com or telephone 028 7133 7498. To find out more about invasive species contact Lisa McMenamin on the same number or email lisa@rapidni.com

The BASC/SITA Trust South Somerset & West Dorset Water vole Project

From BASC

In May 2010, Biodiversity News featured a report under the heading, ‘Shooters play a lead role in conservation?’. It described the BASC project to control mink and protect the water vole populations on the Somerset Levels, which was started back in 2003.

Led by BASC volunteers, wildfowling clubs, and shoot syndicates, we were quickly joined by RSPB, fishery owners, County Wildlife Trusts, and National Nature Reserve staff and helpers. The trapping and monitoring area stretched from Gordano on the Bristol Channel to Martock in the south, and to date over 600 mink have been trapped and disposed of.



Pam Marshall-Ball (Rookmarsh Ecology) describing raft deployment at a training day near Beaminster

The result of this effort has been quite dramatic – wildfowl and waterside birds have had a respite from mink predation, and water voles have made a great come-back, re-occupying areas where they have been extinct for several decades

The Somerset Environmental Record Centre (SERC) conducted a detailed survey in 2009, and the results showed a dramatic increase and spread of the water vole population and highlighted the

difference that habitat management and mink control can make.

Building on this, last November BASC launched a three-year project, funded by the SITA Trust, to extend the action upstream through the headwaters of the River Parrett and on southwards down the Brit and other West Dorset streams to the south coast.



The BASC/SITA Trust South Somerset & West Dorset Water vole Project continued

Now, at the completion of the first year, and despite the severe flooding in spring and a dubious summer, the South Somerset & West Dorset Water vole Project (SSWDWVP) has achieved its four initial targets:

- Conduct a water vole survey in the upper Parrett catchment. To date more than 30 sites in the main river and headwaters have been surveyed using the *Water vole Handbook* protocols, and the presence of colonies have been recorded for the first time in a number of these. In addition, watercourses with potential for vole-friendly habitat improvement have been noted for future reference.
- Recruit and train a volunteer team to deploy and monitor mink rafts both as a monitoring tool to detect riparian mammal species, and, if necessary, trap and dispose of any mink within the Parrett catchment. By the end of March the team, which included BASC members, angling clubs, and landowners, had deployed rafts from Langport upstream to Crewkerne, and the first mink was captured in early April.
- Continue to roll the survey southwards to the Brit catchment in West Dorset. This took place in August with surveys on the main river from the coast upstream to Beaminster, and on the Simene, one of the major tributaries. The results confirmed existing water vole records and also provided new data of a healthy population along the length of the Simene Brook. Unfortunately, rainfall has postponed the planned surveys on the Mangerton and Asker, but sites have been selected and will be visited when conditions allow.

As with the Parrett catchment, two Mink and Water Vole events were held at Beaminster in August and September in order to recruit a local team of volunteers for raft monitoring and trapping. By the end of September rafts had been deployed at approximately 1km intervals along the main river and on the Simene.

Throughout all these activities, BASC is working closely with Dorset Wildlife Trust and the Westcountry Rivers Trust, and we are delighted that staff and volunteers from both organisations attended and supported the training events, and are now monitoring rafts as part of the project. The coming year will see further survey work along the Bride and the south-flowing streams west of Bridport, and the strengthening of the monitoring network within all these catchments. The future looks good for the water voles in the project area.





Shy cricket makes a return to moss

From Alan Wright at the Wildlife Trust

One of Manchester's rarest species, the bog bush cricket, has been spotted on land ravaged by peat extraction.

The bog bush cricket was rediscovered on the edge of Little Woolden Moss after a 30-year period when no one had noticed this inconspicuous cricket chirping away in the undergrowth.

This is an unexpected boost for the Wildlife Trust for Lancashire, Manchester and North Merseyside after last month's purchase of Little Woolden Moss was finalised.

At the moment the moss is a bare and barren peat extraction site, with a few small areas of vegetation where the bog bush cricket is clinging on to life. As

part of a £1.9 m Heritage Lottery Funded programme the Wildlife Trust will be restoring this 107 ha site creating a wetland wonderland for wildlife. This will benefit not only the bog bush cricket but the local community who will be able to visit the site and take an active part in helping to restore the site.



Bog Bush Cricket © Alan Wright



Bog Bush Cricket © Alan Wright

Mossland Project Manager Dr Chris Miller, who made the discovery, said: "It's absolutely amazing given how disturbed the site is that the bog bush cricket has managed to cling on in this area over the past 30 years. The restoration of the moss will massively increase where the cricket can live."

Sara Hilton, Head of the Heritage Lottery Fund North West, welcomed the discovery: "This is a fantastic discovery on the site and is merit to the importance of ensuring the protection of our biodiversity. The management and preservation of this site will ensure that this wildlife haven will be protected for present and future generations."

The cricket is not the only exciting wildlife on the moss, with sightings of brown hare, roe deer tracks and many species of birds, butterflies and

dragonflies increasing.

The cricket has been also been seen on another Wildlife Trust site at Winmarleigh Moss, near Garstang, but it is not been recorded anywhere else in the record, recently.





Biodiversity Games in Newtownabbey continued

And the fun continued with the planting of wildflowers in Mossley Park to entice our flying insects, insects such as butterflies and bees are pollinators and are important for life ecosystems services.

Fairview Primary School got their feet wet investigating and recording the invertebrates found in the Six Mile Water at Ballyclare. Investigating invertebrates in freshwater tells us a lot about the water quality. The children from Fairview Primary School found lots of different invertebrates using scientific technics such as kick sampling.

And the recording continued - but some of our wildlife only comes out at night so 1st Whitehouse Scout Group took part in an overnight camp on Carnmoney Hill. As well as the practicalities of setting up camp and "Leave no Trace" skills the group recorded 4 species of moth, Badger and Fox footprints, Soprano pipistrelle bat and many Common Frogs leaping through the camp!

Communities at both Burnside and Glengormley were next to take part in the recording games. Burnside River Side walk was the location for a bug blitz although rain kept sightings low. Lilian Bland Park hosted the 'Bug Run' where 30 families took part in a fast paced Bug Hunt finding a wide range of flying and creeping insects!

Newtownabbey Way was the next location to receive some attention during a weeklong eco-summer scheme. Children and adults from both Whiteabbey Community Group and Monkstown Community Association took part in butterfly hunts, river studies, bird watching as well as making bird and butterfly feeders to attract some wildlife into the participant's own garden. After spending the week looking for native wildlife, the final day introduced the children to some non-native species including a Mexican Corn Snake, Tropical Tree Frog, and a baby South East Asian Spectacled Owl called Ralph!



Six mile river study © Freddie Parkinson

Bringing Glasgow's Nature to Light!

Helen Simmons, Glasgow City Council.

This summer a project called 'Wild for Art' was run by The Conservation Volunteers Natural Communities Trainee at Robroyston Local Nature Reserve in Glasgow. It consisted of a range of environmental art and nature activities, to engage teenagers of the Fusion Youth Club, in the Barmulloch area of Glasgow, with biodiversity. The project was funded by CSV Action Earth and activities included biological recording, and light graffiti (graffiti art using torch light) depicting animals or thoughts about the reserve. From experience and proven literature, using a creative approach to engage teenagers with nature and the environment can be very effective.



Bringing Glasgow's Nature to Light! Continued

The aims of the project were to:

- Increase an interest in biological recording.
- Raise the local profile of the site.
- Gain new volunteers onto the reserve to do conservation activities.
- Raise awareness for biodiversity with a group that the council have previously found hard to engage.

The group had some great recordings including; Blue-tailed and Common Blue Damselflies, Buff-tailed Bumblebees and Carder Bumblebee, a range of Butterflies and Moths and Wetland Birds. Some of the teenagers didn't even know that these animals lived on the reserve and a few did not even know about the reserve despite their youth club sitting on its doorstep.

They also made ten bird boxes and three bat boxes, planted 40 wildflowers and made some interesting art work to be proud of. The project was a real success and the club are carrying on this interest by painting a mural inside the youth club about nature on the reserve. The mural will no doubt continue to promote Robroyston Local Nature Reserve to the community.



© Helen Simmons



© Helen Simmons

Feedback from this project suggests that the project has enabled the youth club to bring about sustainable change in an attitude towards the reserve and nature and to further local young peoples learning and development, through doing similar projects in the future.

The Natural Communities Trainee has also been busy working with a group of children in a deprived part of the city. Through exploring and discovering nature on two very urban, but biodiverse sites, she is leading them through their John Muir Discovery Award whilst enabling children to gain knowledge and understanding about their surrounding environment.

Glasgow City Council is continually working to protect and enhance its biodiversity and increase awareness and understanding within the city's communities. The lessons learned from the two projects will help inform a proposed Community Action Plan for biodiversity, as part of the forthcoming Natural Environmental Strategy for Glasgow.



Volunteers get their reward

From Alan Wright at The Wildlife Trust

The majority of Britons take it for granted that they can wander onto a nature reserve close to their home to inhale fresh air and relax alongside the wonderful wildlife.

But these natural beauty spots would not exist without the tireless efforts of volunteers in every part of the country.

More than 30,000 volunteers work on a regular basis for the Wildlife Trusts, 18,000 for the RSPB and hundreds for the Wildfowl and Wetlands Trust, throughout the UK.

Volunteers generally take their reward from the fact that they have done a good job and improved their own local nature reserve and habitats for a multitude of wildlife.



Mayor Wigan and all the winners © Alan Wright

Most of them prefer to stay out of the spotlight but, in Wigan, volunteers were given their place in the sun during the Greenheart awards at St Peter's Pavilion in Hindley.

Greenheart is a project which links Wigan's green parks and nature reserves, which have taken over from hundreds of years of industry. Dark, satanic mills, pits and mining subsidence have vanished to be replaced by areas of natural beauty including the spectacular Wigan, Abram and Pennington flashes.

And much work takes place on smaller reserves around the town and surrounding areas like Hindley, Ince and Orrell.

All the award nominees and winners give up their valuable time to improve habitats for wildlife and the community. It is a passion and they feel that they are making a difference and almost making the reserves "their own" part of the community of which they are justifiably proud.

Overall Greenheart Award and Greeneheart Community Award winners were Low Hall Nature Reserve in Hindley. Chairman of the Friends of Low Hall Geoff Barrett said: "The group has achieved a great deal over the past five years to make this site accessible to all. Most of the volunteers are retired and this gives us an interest. When we walk round Low Hall and see so many of the public of all ages enjoying the site, that was hardly used five years ago, we know we are going in the right direction and the group is achieving its goals."



Volunteers get their reward continued

Many volunteers see their work as giving something back to their community and the pride in living in those areas is obvious. Denise Ryder joined Borsdane Wood friends group, in Hindley, three years ago having spent many happy hours there as a child. She said: "I wanted to be involved with the local community in improving wildlife habitat and to be fully involved in the protection of the woods for future generations."

Other winners carried out traditional volunteer roles – Friend of Greenheart was Vic Greenwood of the Three Sisters group, the Chair’s award went to Beryl Blackhall of Friends of Amberswood and Growth in the Community won a Community Project of the Year award – but there was one group with a difference. Lucky Hens Rescue also won a community project award.



Volunteers at Borsdane © Alan Wright

Lucky Hens have rescued more than 6,240

ex-caged hens, rehoming them as pets to local communities. They have helped 600 families to become self sufficient by encouraging people to grow in their own garden. And founder Alison Thorpe burst into tears at the awards ceremony when she described how the group has also



Volunteer at Wigan Flashes © Alan Wright

helped volunteers to find employment after learning work skills under their care. The Greenheart Regional Park stretches from Leigh all the way up to Haigh Hall, and includes parks, woodlands, wetlands, canals and green spaces. Greenheart partners are Wigan Council, the Wildlife Trust for Lancashire, Manchester and North Merseyside, Groundwork, British Waterways, Leigh Sports Village, Red Rose Forest and Wigan Leisure and Culture Trust. You can find more details at www.visitgreenheart.com.

Anyone wishing to learn more about volunteering can contact their local Wildlife Trust, where there are a variety of

opportunities both outdoor and indoor – or go to <http://www.wildlifetrusts.org/discover-learn/volunteering>. Volunteering not only benefits nature but gives opportunities for health, work experience and making new friends.





Autumn

Local & Regional

Summery of South Lanarkshire Biodiversity Partnership Conference

From Siân Williams at South Lanarkshire Council

The South Lanarkshire Biodiversity Partnership hosted its second conference on September 26th at Hamilton Park Racecourse.

This year the theme was *Windfarms and Minerals: Exploring benefits for biodiversity and communities in South Lanarkshire*. The conference brought together delegates from a range of backgrounds and disciplines including windfarm and mineral site operators, ecological consultants, representatives from NGOs, government agencies and representatives from local community groups.

Due to its geography and landscape, South Lanarkshire is home to some of the largest windfarms in Europe and supports a number of opencast coal and other mineral extraction sites.

Although they can sometimes be controversial, many windfarms can bring opportunities for biodiversity. The development and implementation of habitat management plans (HMPs) has brought large areas of land under positive management for biodiversity and gives us a unique opportunity to implement ecosystem restoration and management at a landscape scale.

Current estimates suggest that around 10% of the land area of South Lanarkshire falls within the development footprint of windfarms, representing a huge opportunity to deliver integrated land management and biodiversity objectives at a scale that has previously been unachievable.

Mineral restoration plans offer another avenue to secure gains for biodiversity when on-site operations are complete. The morning session of the conference focussed on habitat management planning, and how HMPs can be used to deliver landscape scale conservation benefits.

Simon Rennie, Chief Executive of the Central Scotland Forest Trust and Head of the Central Scotland Green Network Support Unit, opened the event. Chairing the session he said: "South Lanarkshire is rich in natural resources and we have a great opportunity to secure the delivery of multiple benefits through the implementation of habitat management plans. Linking habitat management across a number of sites will also help to deliver the CSGN and its long term objective to transform the network area into a place where the environment adds value to the economy and where people's lives are enriched by its quality".



Summery of South Lanarkshire Biodiversity Partnership

Conference continued

Simon Thorp, the Director of Scotland's Moorland Forum then gave a national perspective on windfarms and habitat management before Dr Andy Tharme from Scottish Borders Council outlined the award winning work being carried out in the Borders in relation to biodiversity off-setting. Peter Robson from Scottish Power Renewables and John Derbyshire from JDC Ecology then outlined habitat management planning on windfarm and mineral extraction sites. The final presentation of the session was given by Gwen McCracken and Siân Williams from South Lanarkshire Council, who jointly outlined the Council's perspective on HMPs from a planning and biodiversity point of view.

The afternoon session took a community focussed approach, discussing funding sources and community action. Chaired by Chris Waltho from South Lanarkshire Council, delegates heard presentations from Emilie Wadsworth from CSFT and Kenny Lean, Economic Development Officer at South Lanarkshire Council. Maureen Potter from the Friends of Langlands Moss outlined the work that the group has been able to deliver by accessing Renewable Energy Fund money. Richard King from Atmos Consulting gave the final presentation of the day, covering a community-led renewable energy project in Castlemilk. Delegates then had the opportunity to attend a funding fair. Representatives from the Council, Scottish Natural Heritage and the South Lanarkshire Biodiversity Partnership were available to provide advice on funding and on ways to integrate biodiversity into project plans.

The conference was very well attended and provided an excellent opportunity for networking and sharing good practice. The Biodiversity Partnership hopes that by bringing people together opportunities for connectivity between sites will have been identified, enabling integrated land management and true delivery of landscape scale conservation across South Lanarkshire.





Snakes alive! London's lizards mapped.

From Sophie Hilton at Amphibian and Reptile Conservation

London's *first* Amphibian and Reptile Atlas underlines the need for more information on the whereabouts of London's species and the vital role of the public in helping to secure a future for these threatened species.

The first 'London Amphibian and Reptile Atlas' was launched by Amphibian and Reptile Conservation (ARC) and gives insight on how these species are distributed across our capital city.

For the first time ever, the whereabouts of London's amphibians and reptiles can now be made publicly accessible to all.

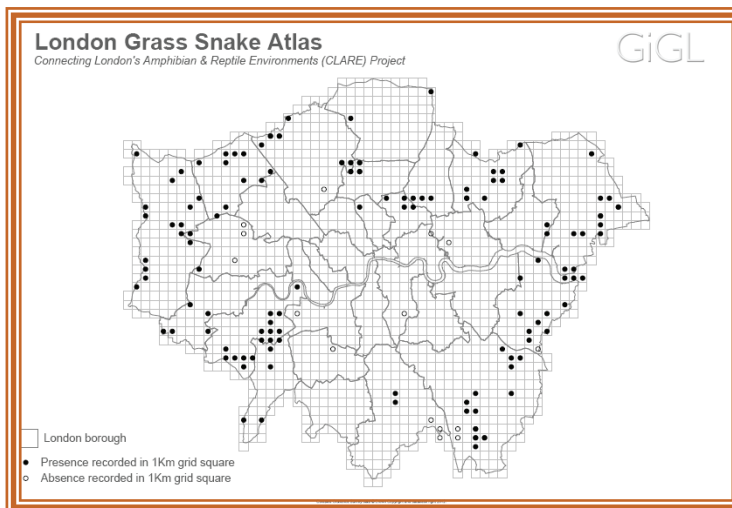
The atlas is the first comprehensive map-based view of London's native amphibian and reptile species. It provides information on the preferred habitat of each species found in the capital and exhibits, also for the first time, maps showing suitable habitat within Greater London.

Sophie Hinton, CLARE Project Officer says:

"It is only once we know where London's amphibians and reptiles are living that we can then identify thriving or vulnerable areas, including 'hot spots', their last remaining strongholds and the key areas to their conservation. With this in mind, the 'London Amphibian and Reptile Atlas' provides the first steps towards targeted conservation efforts for the species and ensuring their survival in the capital.



Slow-worm, a legless lizard, native to the UK and London's most common reptile - Mill Hill Old Railway Reserve, London © Mathew Frith



This is just the start. There are still lots of gaps in the information we have managed to collect over the last year. We need a London-wide, long-term effort in wildlife recording in order to produce an atlas which accurately represents the distribution of these species. Even recording a sighting as 'common' as the common frog will make a huge difference."

The atlas is the result of the CLARE (Connecting London's Amphibian and Reptile Environments) Project run by ARC in collaboration with London Wildlife Trust, GiGL (Greenspace Information for Greater London),

London Amphibian and Reptile Group (LARG) and funded by Heritage Lottery Fund.



Snakes alive! London's lizards mapped. continued

The Atlas is hosted online by GiGL www.gigl.org.uk, London's Environmental Record Centre. It will be updated on an annual basis as new records are anticipated to come in throughout the year.

Threats to amphibians and reptiles

Amphibian and reptile populations in Britain have declined significantly during the last century due to the direct loss of habitat. With their limited ability to move long distances, London's fragmented urban environment makes it even more difficult for these animals to move between any remaining areas of populations are threatened and thought to be in decline.



suitable habitat. As a result, many London

There is a huge lack of available information on the whereabouts of amphibians and reptiles across Greater London and so opportunities to safeguard them are often missed, simply through not knowing the animals are there or how best to manage their remaining habitat.

More information is needed – the public can help

There are still numerous sites and areas within Greater London for which we have either no information or very out of date information on where amphibians and reptiles are living. Without this information, amphibians and reptiles will continue to face the same threats in the capital.

Contribute your amphibian and reptile sightings to London's Amphibian and Reptile Atlas and help conserve the frogs, toads, newts, lizards and snakes that all call the capital their home.

Fill in the record form by following the link to the CLARE Record form at www.arc-trust.org/CLARE or via the 'Submit records' tab on www.gigl.org.uk

Visit London's Amphibian and Reptile Atlas www.gigl.org.uk and see if your area has any amphibians and reptiles recorded in it. **Can you help fill in the gaps?**





UK Framework Update

Autumn

UK Biodiversity Framework Update

Emma Durham at JNCC on behalf of the UK Biodiversity framework

Firstly, please note the change in title of this section from 'UK BAP update' to 'UK Biodiversity Framework update', since the publication of the 'UK Post-2010 Biodiversity Framework' in July this year. The legacy of valuable work undertaken by the UK BAP is still of huge importance and relevance, but with the introduction of devolution and the creation of country-level strategies and targets, the UK BAP partnership no longer operates. Other reasons for this change include a revised direction for nature conservation, towards an approach which aims to consider the management of the environment as a whole, and to acknowledge and take into account the value of nature in decision-making. This is world-wide and has influenced, for example, the Convention on Biological Diversity's 'Strategic Plan for Biodiversity 2011–2020' and its 20 'Aichi Targets' and the new EU Biodiversity Strategy.

The UK Post-2010 Framework has been endorsed by the environment ministers of the four countries of the UK, and outlines how the work of the four countries and the UK will contribute to achieving the Aichi targets, by identifying the activities required to complement the country biodiversity strategies in attaining these targets.

At a UK level, work is now underway to prepare for the eleventh Conference of the Parties (COP11) of the CBD, to be held in Hyderabad, India, 8–19 October 2012. The meeting will be aiming to maintain and reinforce the progress made in the implementation of the 'Strategic Plan for Biodiversity 2011–2020' and the Aichi Targets, including the establishment of national targets, and the updating of national strategies and action plans. In the UK, quite considerable progress has been made – not only do we have the new UK Framework, signed and endorsed by the four countries, but work towards updated country-level biodiversity strategies and targets is also underway. A new strategy for England ('Biodiversity 2020') and a Natural Environment White Paper, which are aligned to the CBD's strategic plan, are in implementation, and in Scotland, Northern Ireland and Wales similar developments are underway.

An important focus of the meeting will be on ways to mobilise resources for biodiversity across the world. There will also be discussions on invasive alien species, habitat restoration, and protected areas, and a parallel meeting on progress in the conservation of biodiversity on islands around the world. Defra and JNCC will be sending several delegates to represent the UK. The meetings are hard work for all those involved, but the benefits to biodiversity at the end of all the discussions and negotiations are certainly worth it.

More information can be found in the links below:

UK Post-2010 Biodiversity Framework: <http://jncc.defra.gov.uk/page-6189>

CBD Aichi Targets: <http://www.cbd.int/sp/targets/>

EU Biodiversity Strategy: <http://ec.europa.eu/environment/nature/biodiversity/policy/>

England Biodiversity Strategy (Biodiversity 2020): <http://www.defra.gov.uk/publications/2011/08/19/pb13583-biodiversity-strategy-2020/>

Natural Environment White Paper (NEWP): <http://www.defra.gov.uk/environment/natural/whitepaper/>

A consultation on the 2020 Challenge for Scotland's biodiversity: <http://www.scotland.gov.uk/Publications/2012/07/5241>

A Living Wales: <http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/?lang=en>



Wood Wise – woodland management for protected species

From the Woodland Trust

The latest issue focuses on protected species (Barbastelle bats, dormice, red squirrels, Scottish wildcats, great crested newts and stag beetles) and the management requirements to benefit their populations. It looks at their legal protection and best practice case studies from a range of organisations.

<http://www.scribd.com/doc/104854733/Wood-Wise-Summer-2012>

Woodland Trust **Wood Wise** Summer 2012

Protected species – introduction

Protected species legislation can seem like a real headache for busy site managers, but it plays a crucial role in ensuring the conservation of some of our most vulnerable species. Global biodiversity is suffering from human-induced development, industrialisation and the over exploitation of natural resources. Extinction rates are alarmingly high; numerous species have already succumbed. But in many countries there are policies and efforts in place to help support and benefit some of our most vulnerable wildlife.

Several threatened UK species are legally protected, either at national level under Schedule 5 of the Wildlife and Countryside Act 1981 (WCA), or European level under Schedule 2 of the Conservation of Habitats and Species Regulations 2010. Woodland species protected nationally include stag beetles and red squirrels, whereas European Protected Species (EPS) native to the UK include all bats, great crested newts and Scottish wildcats.

Under the WCA it is an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5; in Scotland it is an offence to intentionally or recklessly kill, etc. It also prohibits interference with places used for shelter or protection, and the intentional disturbance of animals occupying such places. The WCA also prohibits certain methods of killing, injuring, or taking wild animals'.

For EPS it is an offence to:

- Deliberately capture or kill a wild animal of an EPS.
- Deliberately disturb any such animal, including disturbance likely to impair their ability to survive, breed or reproduce; hibernate or migrate (if relevant to the species). The same applies if the animal is rearing or otherwise caring for its young.
- Deliberately take or destroy the eggs of such an animal.
- Damage or destroy a breeding site or resting place of such an animal.
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of an EPS, or any part of, or anything derived from, such an animal.

These apply to all stages of the life of the animals involved'.

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© Woodland Trust





A generation reviled for letting wildlife and climate change slip through our hands?

From Olly Watts

The Earth's wildlife and natural systems show significant change from climate change already occurring across our planet, in a report published by the RSPB with Natural England and WWF-UK.

Furthermore, the degree of climate change likely from the lack of concerted global action on greenhouse gas reduction points towards a future with much of life on Earth as we know it today becoming imperiled or lost.

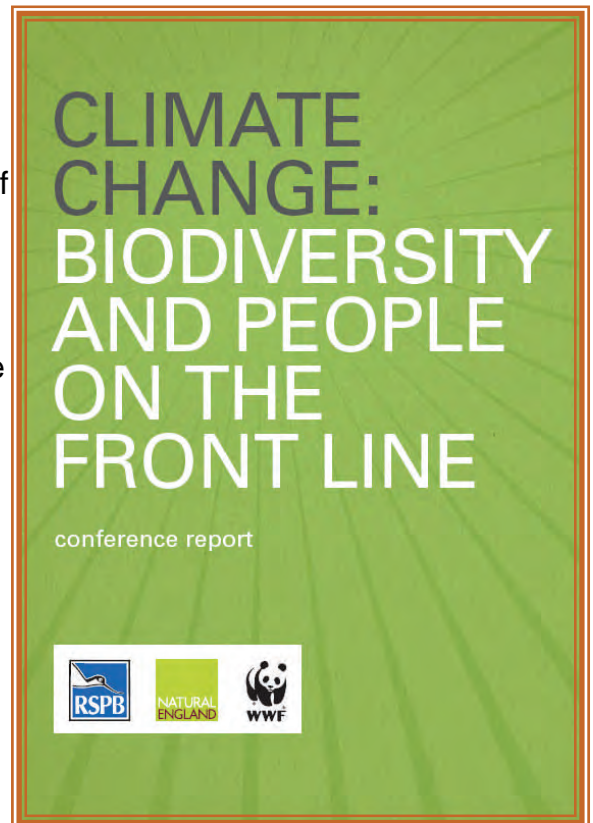
Climate Change: Biodiversity and People on the Front Line is a quick-read summary of a conference organised by the three conservation organisations at the Royal Society. It looks at impacts of climate change on ecosystems, marine life, tropical forests and polar regions, and has an update on climate change science from the Met Office.

It also assesses the links between climate, ecosystems and people, and looks to the future, with one scientist warning that if we don't take the action needed to reduce greenhouse gas emissions and biodiversity loss now, 'we will end up being reviled as the generation that failed to act, that let nature die, even when we knew broadly what would happen'.

Professor Sir Robert Watson, Chief Scientific Adviser at Defra, echoes the need for action in a one-page foreword, which includes a call for wider recognition of these issues, and to put halting dangerous climate change at the heart of our policies and practice.

So it's a timely read, to remind our political leaders just what's at stake for wildlife and for people, if we fail to take the climate challenge seriously.

Climate Change: Biodiversity and People on the Front Line is available by download from the websites of the organisers, the RSPB, Natural England and WWF-UK http://www.rspb.org.uk/Images/climatechangeconferencereport_tcm9-317417.pdf



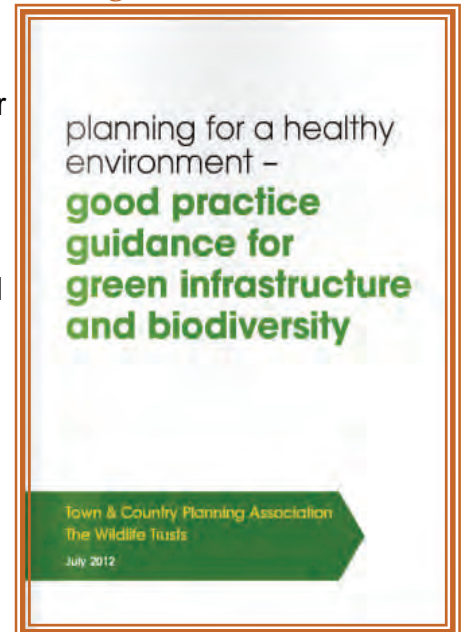


Good practice guidance for green infrastructure

From The Wildlife Trusts

Planning for a healthy environment: good practice guidance for green infrastructure and biodiversity

This guidance is intended to help local planning practitioners deliver positive practical solutions when planning for the future – solutions that protect and enhance the natural environment and provide quality of life benefits through the delivery of well-planned Green Infrastructure (GI). It has been designed to offer advice on how GI and wildlife can be protected, enhanced and restored through Local Plan policies and development management decisions, working within the context of the National Planning Policy Framework. A direct link can be found here: <http://www.wildlifetrusts.org/planning>



© The Wildlife Trusts



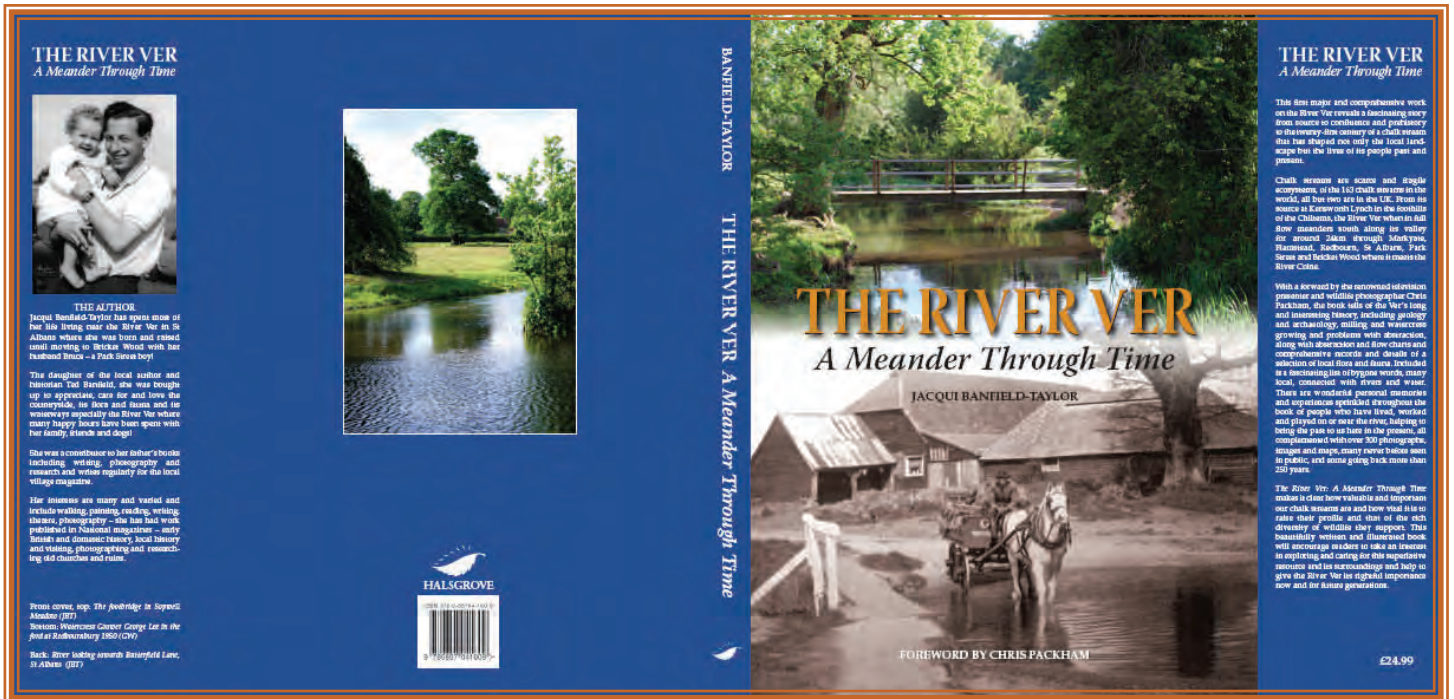
© The Wildlife trusts



The River Ver, A Meander Through Time

From Jacqui Banfield-Taylor

The River Ver A Meander Through Time, the first major and comprehensive book on the history of one of these chalk streams forwarded by the photographer, author and wildlife presenter Chris Packham. The Ver has its source at Kensworth in Beds and flows (when it is rarely in full flow) for 24km through the Hertfordshire villages and towns of Markyate, Flamstead, Redbourn, St Albans and Park Street joining the Colne at Bricket Wood.



© Jacqui Banfield-Taylor

As well as the history of the river, the book also includes chapters on archaeology, geology, flora and fauna, a list of bygone words, many local connected with rivers and water along with abstraction and flow charts complimented with over 350 images more than half never seen and/or published before and the memories of people who have worked, played and lived by the river are sprinkled throughout the text. My husband and I have always lived near various parts of the river and he is a volunteer bailiff for the Ver Valley Society of which my father was a founder member. *The River Ver, A Meander through Time*, makes it clear just how valuable, rare and important our chalk streams are and how vital it is to raise their profile and that of the rich diversity of wildlife they support together with the crucial need to save that most essential of commodities – water, not just in times of drought but every day, to make careful use of water and make saving this precious commodity a way of life.

Signed copies of the book are available for £24.99 in the first instance by emailing riverver@btinternet.com or phoning 07792 588892.



Edible And Tasty Spaces (EATS) Seminar, Fife

Wednesday 5th December 2012
2pm to 4pm, Inverkeithing Civic Centre

Want to inject life into your high street, show how easy it is to grow fruit and vegetables and reduce carbon?

This seminar will explain the growing use of fruit and vegetables in unfenced public spaces, and hopefully inspire more communities in Fife and Scotland to create EATS.

Speakers:

David Crighton, Stirling Council - Edible Borders

Kevin O'Kane, Fife Council - Kirkcaldy EATS

Ea O'Neill, Greenspace Scotland - Pioneer Growing Communities

Dr Jackie Hyland, NHS Fife - Urban gardening Assessment, Toronto

Video of Pam Warhurst talking about Incredible Edible Todmorden

Event details

2 to 4pm, Inverkeithing Civic Centre

10 Queen Street, Inverkeithing

Fife, KY11 1PA

Event free - **Booking is essential - Booking deadline 21st November**

Email [Kevin O'Kane](mailto:Kevin.O'Kane@fife.gov.uk) or phone 07789 044955

More information about EATS [here](#)

This event is being organised by Fife Council - please contact them direct for information and booking.

Mapping ecosystem services

Monday 26 November, 2012. Sheffield Town Hall, Reception Room B.

Mapping ecosystems services is a key area of innovation under an ecosystems approach. In principle, the process of mapping ecosystem services allows decision makers to express how those services are delivered in particular places. It can also be a useful way for communities to visualise and explore how resources are managed in particular localities. However, it can appear to be a complicated 'technical' process. This event will help participants explore what is involved in mapping ecosystem services. They will have the chance to:

- learn from some examples of how it is done
- identify opportunities that it presents
- understand limitations and challenges to be resolved

The day is being co-hosted by the Ecosystems Knowledge Network and Durham Wildlife Trust. The speakers will be Chloe Bellamy, Ecosystem Services Mapping Officer and Dr Jonathan Winn, from Durham Wildlife Trust; Dr Tim Pagella, University of Bangor and Wales Environment Research Hub; and Tom Butlin, GIS Co-ordinator at the Mersey Forest. There will be an interactive session in the afternoon.



Lowland Derbyshire Biodiversity Forum

I am very pleased to announce that details of this year's Lowland Derbyshire Biodiversity Forum are now available.

Date: **Saturday 17th November 2012 10am – 4pm**

Location: County Hall, Matlock (easy reach of main bus routes and Matlock train station)

Cost: **FREE** (but places must be booked via the booking form and **by 8th November**)

Theme: **Get the message across** (Communication and education)

Through talks, displays and interactive workshops, our event will look at a number of imaginative ways being used to encourage others to appreciate and respect nature, or to become active volunteers or members of local groups.

Our guest speaker will be **Gordon MacLellan (aka Creeping Toad)**, a Buxton-based story teller who has been involved in many environmental-themed celebration activities around the world. The event will use the Biodiversity Action in Schools Project as a case study to show how local schools have been learning about taking action for wildlife on their patch.

As in past years, this is expected to be a popular event, so it is recommended that you book your place without delay. If you are from a group or organisation and wish to bring a display along for the event, please add this information to your booking form.

Lowland Derbyshire Biodiversity Partnership Forum 2012

Get the message across!

17th November 2012
County Hall, Matlock

A programme of talks, workshops and displays showing how you can get the message about biodiversity across to a variety of different audiences in fun and imaginative ways.

This event is generously supported by Derbyshire County Council.

Conference Twitter hashtag: #LDBAP





The Role and Future of EIA

Will EIA still be used in 2050 and if so what will it look like?

29th Nov 2012, SOAS, London

A CIWEM - Ramboll Event

The Environmental Impact Assessment process has been in existence for over 30 years. It has grown into a significant business for some, a challenge for others like developers and land owners, and a point of focus for many who wish to oppose a scheme. Its value is now being questioned. The aim of the conference will draw together these differing points of view and seek to identify good practice from across Europe and elsewhere, review process and identify ways in which EIA can perhaps be adapted to remain fit for purpose going forward in the 21st Century.

For more details see www.ciwem.org/events/events-calendar/2012/nov/29/the-role-and-future-of-eia

Water & Environment 2013: CIWEM's Annual Conference

10th – 11th April 2013, The Royal Geographical Society, London

In 2013 the CIWEM Annual Conference will take a different direction with a new venue - The Royal Geographical Society - and a new approach to the speaker programme.

The conference programme will have one stream of offered and invited papers, plus inspiring keynote speakers, covering the practical reality of sustainably delivering water and environmental management. We will be building on the successes of previous events to make this the must attend event for the water and environment sector.

We are seeking ideas and offers of papers on topics including (but not exclusively):

- Water management - water resources, water quality, wastewater management, integrated water resource management
- Flooding, urban drainage, surface water management, and the integration of water and flood management
- Environment sector policy, legislation and regulation, the political process, influencing Government "direction"
- Case Studies - European/International - global exemplars of brilliant and inspiring practice
- The environment sector in times of austerity, investment and innovation; the opportunities and challenges of greening the economy
- Integration and partnership working
- Climate change and sustainability; mitigation and adaptation, global water security and interactions with energy, food and carbon
- Valuing the environment and ecosystem goods and services

This conference is looking for speakers to inspire and demonstrate ideas and innovations that will enable us to achieve a greener and more sustainable future.

For more details see <http://www.ciwem.org/events/annual-conference.aspx>





CIWEM's Environmental Photographer of the Year

The **Environmental Photographer of the Year** competition is an international showcase for the very best in environmental photography and video. Honouring amateurs and professionals of all ages, it provides an opportunity for photographers to share images of environmental and social issues with international audiences, and to enhance our understanding of the causes, consequences and solutions to climate change and social inequality.

Selected from an open submission process, the competition culminates with an exhibition in London that displays an outstanding collection of environmental, social and natural photographs. Entries are judged on impact, composition, originality and technical ability and previous entries have examined issues such as innovation, sustainable development, biodiversity, poverty, climate change, human rights, culture, natural disasters and population growth.

The Chartered Institution of Water and Environmental Management (**CIWEM**) are delighted this year to announce a major partner for the competition, **Atkins**, one of the world's leading engineering and design consultancies. **Nick Reeves OBE, Executive Director of CIWEM** says: *"CIWEM is delighted to be working with Atkins on the development of the Environmental Photographer of the Year Competition. With Atkins support and global reach the Institution can build on the success it has already achieved and carry important and exciting visual stories on the environment to a much bigger world-wide audience."*

Nick Roberts, Director Water & Environment Atkins comments:

"The powerful imagery generated by this global competition shows the durability and fragility of the world in which we live, and affirms the complex issues we face as a society. We are proud to be associated with this competition and to work with CIWEM to develop its reach and impact in the future."

The selection panel for the 2012 competition will include Nick Reeves OBE, *Executive Director CIWEM* and Nick Roberts, *Director Water & Environment Atkins* and award winning documentary photographer, Adam Hinton. During the exhibition the following prizes will be awarded:

Environmental Photographer of the Year £5000
Young Environmental Photographer of the Year (Under 18) £1000

Environmental Video of the Year £1000

HOW TO ENTER:

Open to all photographers, professional and amateur alike, the competition encourages entries that are contemporary, creative, resonant, original and beautiful. Entry is £5 for the first image plus £1 per image up to a maximum of 10. Entry for registered students is free.

DEADLINE FOR ENTRIES: 31 December 2012, by 5pm GMT

For further details and to enter online: www.epoty.org

For all enquiries, please contact the competition administrators, Parker Harris:

E. EPOTY@parkerharris.co.uk

T. 01372 462190



© CIWEM



Arrival of the fittest

From Victoria Seyforth at WWT

Experience something magical this winter with a stunning WWT wildlife spectacle

This is the time of year when hundreds of thousands of geese and swans return from their Arctic breeding grounds to spend the winter in the UK, many of them at WWT centres, making it a perfect time to visit.

Over the coming weeks, visitors can witness amazing wildlife spectacles such as thousands of whooper swans flying into WWT Welney, some 18,000 pink-footed geese at WWT Martin Mere, and watch out for the returning Bewick's swans at WWT Slimbridge, each of whom is named and individually recognised by their own unique bill pattern.

Enjoy the stunning spectacle of many thousands of barnacle geese at WWT Caerlaverock or see almost the entire population of light-bellied brent geese feeding on Strangford Lough by WWT Castle Espie. There's something to fascinate, inform or inspire whatever your age. With every centre offering the chance to experience stunning scenery, breathtaking views, and face to face encounters with the world's most dramatic and rare birds.

Learn more about the migrating ducks, geese and swans who have travelled many thousands of miles to spend the winter at some centres at one of the expert WWT warden's talks and feeds.

From Wednesday 24 October, WWT Martin Mere offer daily swan feeds which take place at 3 and 3.30pm, where up to 2000 Whooper swans are fed creating a stunning swan spectacular.

From Saturday 27 October at WWT Welney, visitors can watch the breathtaking swan feeds from the observatory, every day at 3.30pm and from Thursday 1 November, on Thursdays to Sundays at 6.30pm, once all the swans have returned to the reserve to roost, watch the warden feeding hundreds of them on the main lagoon illuminated by floodlights. Witness the swans settling down for the night in their family groups as they begin to roost in our Floodlit swan feeds, which are an unforgettable experience.

From Saturday 3 November WWT Slimbridge start daily wild bird feeds at 4pm where you can watch from the comfort of the heated observatory and hear our warden's commentary as he feeds the thousands of wintering wild birds and hundreds of Bewick's swans that have flown all the way from arctic Russia to be here.

All of these events are included in the admission price. Slimbridge also offer floodlit swan feeds and a floodlit swan supper for an extra cost.

Check the website for days and times for all events. Each centre has excellent restaurants and gift shops and all have disabled facilities including manual wheelchairs and electric buggies for hire.





Putting the Buzz into Local Biodiversity: Tayside's Community Action for Wildlife Seminar

Saturday, 1st December 2012 'Putting the Buzz into Local Biodiversity: Tayside's Community Action for Wildlife Seminar': Battleby Conference Centre, By Perth.

This is an opportunity to hear and meet community groups directly involved in land and nature conservation across Tayside, as well as enjoy a wonderful photographic montage from 2020VISION: the UK's most ambitious nature photography project ever staged - and the best way, so far, to explain what ecosystems are and why we need them! With the lead up to the Tayside Biodiversity Action Plan's review in 2013, the packed programme will offer an opportunity to find out what's happening locally and how to help shape future projects. The Programme and Booking Form can be downloaded via the "What's On" section of www.taysidebiodiversity.co.uk. Please book as early as possible via AllanLC@angus.gov.uk.



CAN YOU HELP PUT the Buzz into Local Biodiversity?

PLEASE JOIN US

On SATURDAY, 1st DECEMBER 2012:
Battleby Centre, By Perth

for the Tayside 'Community Action for Wildlife' Seminar

Guest speakers: Roseanna Cunningham MSP, & Polly Pullar, author/broadcaster
2020VISION - a stunning film on 'Big Ideas to Rebuild our Natural Home'
Community Action: Local Projects by Local People
Putting the Buzz into Local Biodiversity Workshops - we welcome your ideas for 2013
-----EVERYONE WELCOME-----
The programme and booking form can be downloaded from www.taysidebiodiversity.co.uk
or leave your details on Tel. 01738 473373 or e-mail AllanLC@angus.gov.uk



Tayside Biodiversity Partnership
BIODIVERSITY
Partnership for the Future

2012-2015
United Nations Sustainable Development Goals

SCOTTISH NATURAL HERITAGE
NSRF

Angus Council
Angus Council

We are very grateful to the seminar's supporters (listed here), in particular Scottish Natural Heritage

© Tayside Biodiversity





I felt it a shame that there are so many brilliant photographs sent in to the Biodiversity News team that don't get included in the final newsletter due to lack of space or because they were entered for the front cover competition and didn't quite win. So in this short section there will be a few extra photographs which hopefully you will all enjoy as much as I did.



An entry for the Front Page competition, "Autumn Ladies Tresses" © Graham Megson



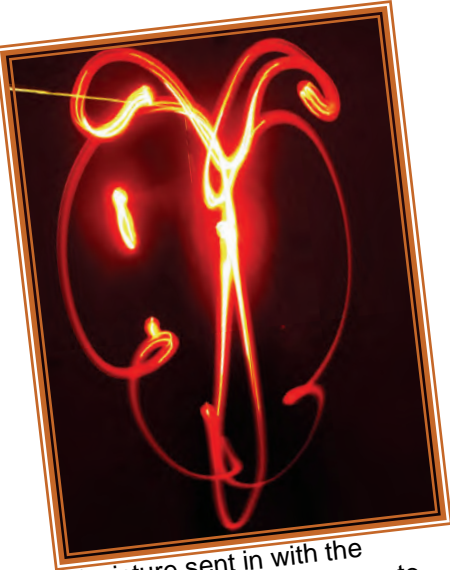
A site in Somerset showing contrast between the vast (temporary) blot on the landscape, alongside the plant life on the periphery. Work is already being carried out to re-introduce mixed wildflowers on the worked-out terraces. © NAM



This was an accompanying photo to the River Ver Publication this is a section of the river in Redbournbury © Jacqui Banfield-Taylor



"Meeting a duck at Kirkless." A photo that accompanied the Greenheart volunteers day. © Alan Wright



A picture sent in with the Bringing Glasgow's Nature to Light! © Helen Simmons



Imogen, a rare Suffolk Punch mare, shows-off her timber hauling skills at Muff Glen Forest, near Eglinton. The horse-logging demonstration is part of the Faughan Valley Landscape Partnership Scheme, which aims to restore and enhance the Valley's diverse natural and built heritage. © Press Eye



This is a photo of Rosie Irwin, involved with the Biodiversity Games, talking to the pond dipping participants of Mossley Mill



A contender for the front cover, simply called "Dead Mans Fingers", this interesting photo of xylaria polymorpha is an example of the huge variety of UK Fungi © Faith Moulin



Sent in with the "Millions of moss 'beads' airlifted" article. This is a picture of the sphagnum beads in the gel to be distributed © Moors For the Future Partnership