

Biodiversity News

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Issue 60

Winter Edition



*If you would like to receive Biodiversity News via email,
or know of somebody who would, please contact us at
biodiversitynews@defra.gsi.gov.uk*



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Winter

Editorial

Welcome, Croeso, Fáilte... to Issue 60 of Biodiversity News

In this edition there is something for everyone, ranging from information on obtaining grants to updates from projects both large and small, innovative plans for community engagement and even the discovery of two exceedingly rare species! There are several pieces for organisations and the public to engage in whether it is attending one of the lectures on offer or trying out one of the new online tools or websites described in this edition. With many articles about new projects, many at landscape scale, coming to fruition it is hard not to be excited about the future of UK biodiversity.

I would once again like to thank all those who contributed articles to this edition, as is frequently said Biodiversity News is sustained by the committed readership who wish to share their developments. Not only is the work going on inspiring but I also find I learn something new reading each article.

I would also like to take the opportunity thank all those who sent in photographs for the front cover competition. We received a huge number of amazing photographs so making the final decision was a very hard task, however in the end we settled on this brilliant picture of a duck at Larkrise Community Farm, Trowbridge snapped by Ashley Wicks. So congratulations Ashley, the photo really shows that midwinter is not quite as bleak as the old carol would suggest. To see some of the other entries head to the back of the newsletter. In fact for those who value the more visual side of the newsletter once again the entire issue is full of high calibre photographs of landscapes, flora and fauna.

In terms of updates for readers, following our survey last year, we are currently reviewing Biodiversity News with a view to establishing how best to communicate biodiversity issues and updates. We aim to let you know the outcome of that process in the following edition. Secondly due to time constraints this year it is likely that only one more edition is going to be published before the autumn edition. I apologise for the unexpected change of schedule.

Finally, I hope you enjoy reading the articles as much as I did and that you find them interesting and useful. If you have any feedback feel free to get in contact as it is always valued.

Best wishes

Alistair Wheeler

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Click on the boxes to see previous issues this past year

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Rare and spectacular spider find in 150 year-old tombs!

London Wildlife Trust

A large, rare spider has been recorded for the first time in London - deep in tombs at Highgate Cemetery.

As part of the Wild London Inclusive London project, staff at London Wildlife Trust have been working with the staff and local community of Highgate Cemetery since last summer.

During a bat survey in December, Trust staff came across a population of large spiders in the vaults of the Egyptian Avenue at the Cemetery.



Egyptian Corridor © Tony Canning

Interestingly, these orb weavers are the species *Meta bourneti*, the rarer of two species of *Meta* (Britain's largest orb weavers). The identity of the spider was confirmed by Edward Milner, Spider Recorder at the London Natural History Society - and it is the very first record of the species in London!



Meta bourneti © Tony Canning

Meta bourneti is particularly fascinating because, due to its origins as a cave-dweller (also known as a cave spider), it requires total darkness. Even an outdoor night time environment is too bright for it, so the spiders never leave the tombs.

A sealed vault, on the other hand, provides a perfect breeding ground. Most of these vaults - walk-in tombs designed to house around four coffins - have not been opened for several years.

And, because the structures date from the late 1830s, it's quite possible the spiders discovered have lived in the tombs for at least 150 years without being detected!

The find is made even more exciting by the spider's large size. Most new spider records are for tiny species, but *Meta bourneti* measures over 30mm in diameter with leg-span included.

In addition, the size of the population at Highgate Cemetery is substantial: A very rough initial estimate puts the number of adults at as many as a hundred. More research will now be carried out.

Tony Canning, London Wildlife Trust Community Outreach Officer for Camden and lead on the project, commented: "The discovery of this important spider population in the heart of London shows just how valuable cemeteries such as Highgate can be in providing refuges for wildlife."





My Environment website

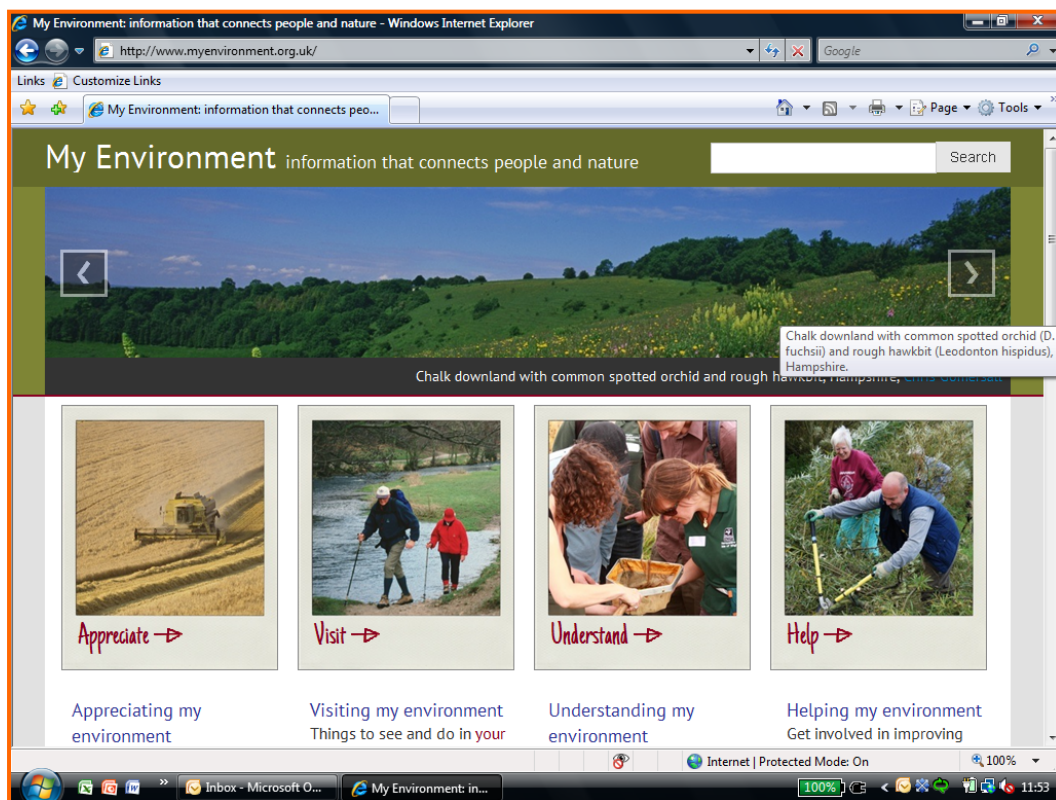
Natural England

Finding and making sense of environmental information on the Web can be very difficult especially for people who don't work in the environment sector. To help with this Natural England working in conjunction with the Environment Agency has launched a prototype [My Environment](#) web service, that will be based on and driven by user feedback.

Defra's Natural Environment White Paper promised to connect people with nature through better access to on-line environmental information by developing a new My Environment web portal to bring together web-based information on the natural environment. This will allow people to find out about the environment in their local community, learn how they can play their part in creating a better environment and find out how they can benefit from connecting with nature.

The consultation for the Natural Environment White Paper highlighted how difficult it can be for the public to find and make sense of environmental information on the Web. The new My Environment service will be developed to help solve this, for example, by advising people on how to upload their own data to supplement that collected by government, meeting a request that came up in responses to the consultation for the White Paper. Defra have worked in partnership with Natural England and Environment Agency in developing an inexpensive sign posting prototype and are now seeking feedback from the public to inform future development. The public have an ever increasing appetite for better information about their environment, and this website will help put the power in their hands to satisfy this appetite.

The initial phase of this project was launched on 21st December 2012 as a prototype that will be developed in the light of user feedback.





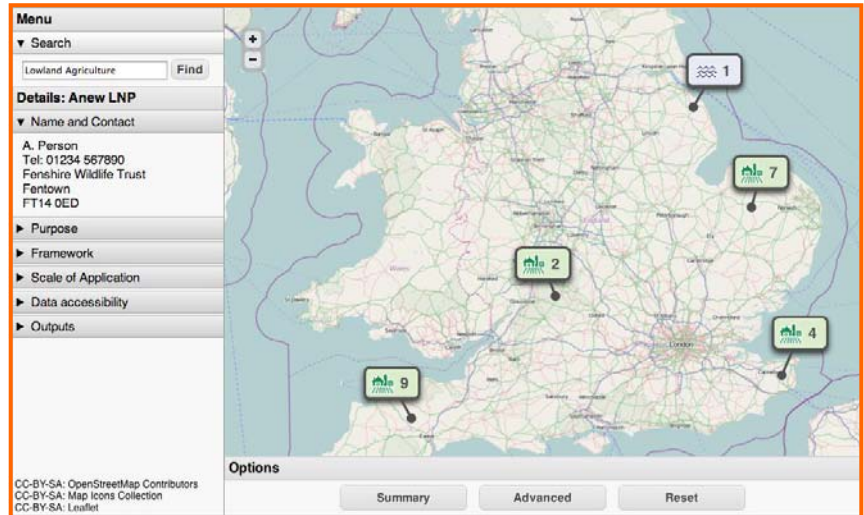
New online resource of ecosystem service mapping projects

Natural England

The NERC Biodiversity and Ecosystem Services (BESS) Directorate has launched an online survey to find out more about what is being done to map the ecosystem services on which we all depend.

With funding from Natural England, the project will develop a searchable online resource to provide, for the first time, a single gateway to the plethora of ecosystem service mapping activities being carried out across England.

Ecosystem service mapping is a rapidly-expanding area, but it poses significant technical and practical challenges. The online resource will bring together information on mapping initiatives throughout England, including which services are being mapped, the spatial scales at which mapping is taking place and how the various mapping projects are being used. The compilation of this information in a single, searchable site will help decision-makers understand how different ecosystem services are delivered across a landscape and contribute to strategic national and local environmental planning, including the development of Nature Improvement Areas and Local Nature Partnerships.



If you are involved in an ecosystem service mapping project in England, you can get involved in the survey through the following link: http://www.envsurvey.com/map/mapping_surveylogin.html The resource will only be as good as the information supplied, so if you know of anyone else involved in mapping ecosystem services, please pass on this link or ask them to contact Dr Zoë Austin at the University of York (zoe.austin@york.ac.uk).



The Ecosystems Knowledge Network

Society of Biology

The Ecosystems Knowledge Network is a resource for anyone wanting to share knowledge or learn about the practical benefits of an ecosystems approach to both people and nature. It is sponsored by Defra. The Network now involves more than 700 people from all sectors with interests in the management of land and marine areas throughout the UK. The Winter 2012/Spring 2013 issue of Ecosystems News, the Network newsletter is available at www.ekn.defra.gov.uk Among the Network's recent events are:

- A workshop on mapping ecosystem services in November 2012. This event, which was run jointly with Durham Wildlife Trust, provided participants with an overview of some of the latest



mapping tools being developed. They were able to explore opportunities that the process and outputs of ecosystem services mapping provide. A report and recordings of the presentations are available at <http://ekn.defra.gov.uk/events/past/mapping-sheffield>

- A webinar, also in November 2012, to explore how the natural environment can deliver health benefits for people. The Mersey Forest and Liverpool Primary Care Trust, Dudley Primary Care Trust's Healthy Towns Initiative and the Forestry Commission Scotland's Branching Out Project all gave presentations on how they are helping to deliver targeted health benefits by improving access to green spaces. A recording of the webinar is available at:

<http://ekn.defra.gov.uk/about/events/past/health/>

In 2013, the Ecosystems Knowledge Network will hold a series of events to help members explore the theme of valuing ecosystem services. To find out more, join the Network for free at

www.ekn.defra.gov.uk



[Information on gaining HLF Catalyst Capacity Building grants](#)

HLF

HLF would like to make everyone aware of these new opportunities for funding below. You will see we are keen to target the natural heritage sector. Any queries please feel free to contact our Catalyst Programme Manager directly as below:

Angela Wilson
Programmes & Partnerships Manager
Heritage Lottery Fund
7 Holbein Place
London SW1W 8NR
Phone: 020 7591 6006
Email: angelaw@hlf.org.uk
Website: www.hlf.org.uk

All of these opportunities are part of the Catalyst programme, which aims to encourage more private giving to heritage, and to build the capacity and skills of heritage organisations to fundraise from private donors, corporate sources, trusts and foundations.

Catalyst: Endowments
Grants of £500,000 or £1m

Open now

In this round of Catalyst: Endowments, there is a total of £7.5million available



You can apply for a Catalyst: Endowments grant of either £500,000 or £1 million, to be matched £1:£1 by private donations you raise.

Applications under this initiative are expected to achieve both of the following outcomes: with our investment, heritage will be better managed, and, your organisation will be more resilient.

Organisations from the landscape and natural heritage sectors are particularly encouraged to apply.

To be eligible to apply, your organisation must either be a current or past HLF grant recipient

Catalyst heritage: building fundraising capacity - grants of £3000 to £10,000.

This is a £2million grants initiative for heritage organisations who can apply for funding to support activities that will bring them sustainable financial benefits through access to new sources of private funding, such as individual or corporate donors, trusts and foundations. This will open for applications on 4 February 2013.

Further information is available on our website – see www.hlf.org.uk/Catalyst





It's a Gruffalo!!

East Dunbartonshire Council



© Martin Lupton

large standing monolith for biodiversity purposes only, but then the Neighbourhood Services Strategy Team had an idea and contracted a superb chainsaw carver to create a Gruffalo. Iain Chalmers from Chainsaw Creations has transformed the huge standing trunk of the Beech into an incredible Gruffalo wood carving. He also carved a log seat out of another section of the Beech to create a fantasia of woodland creatures including a most realistic fox pouncing on a startled rabbit. Children visiting this carving can imagine whether the rabbit will escape down a nearby rabbit hole to where its bunny pal is already hiding.

There are now a number of wood carvings arranged around Kilmardinny Loch encouraging visitors to walk around the Loch and then view the Gruffalo with its huge yellow eyes, white tusks and claws. Although the Gruffalo might look fierce the Gruffalo's child sits sheltered below its huge body. Visitors, if they look carefully, will also find the fox who lives at the base of the tree.

Eventually this wood carving will slowly rot allowing for a variety of biodiversity opportunities. In the meantime many people will be encouraged to bring their children to meet the Gruffalo and hopefully many of the real life wild residents of Kilmardinny Loch.

East Dunbartonshire Council wishes to thank the author of the Gruffalo, Julia Donaldson for kindly agreeing to the creation of this wood carving.

Encouraging people to visit East Dunbartonshire Council's Open Spaces is high on the Council agenda and how better to do this than make a Gruffalo.

The location for this imposing wood carving is Kilmardinny Loch, Local Nature Reserve, Bearsden where a two hundred year old Beech tree was felled due to an infestation of *Kretzschmaria deusta* fungus, also known as Brittle Cinder Fungus or Carbon Cushion Fungus. Initially the intention was to leave a



© Martin Lupton



Staines Moor – More wildlife than you might think

WWT Consulting

Mike Shackshaft of WWT Consulting explains best practice survey work conducted to monitor this SSSI

Throughout 2012 WWT Consulting has been working closely with Spelthorne Borough Council to carry out ecological surveys and provide expert wetland habitat advice for Staines Moor SSSI. Located adjacent to the M25 and Heathrow Airport, Staines Moor is a large SSSI with over 510 hectares of reservoir, lowland grassland and riparian habitat. Staines Moor SSSI contains the largest areas of alluvial meadows in Surrey, and supports a rich and varied flora, and the surveys were largely concentrated within this habitat.



How many invertebrates can you spot? © WWT Consulting

During the spring and early summer, surveys of breeding birds were carried out along with an Extended Phase 1 habitat and vegetation survey. Further work was then carried out in August and September with programs of terrestrial and aquatic invertebrate surveys. Further invertebrate surveys are planned for spring/summer 2013.

Spelthorne Borough Council commissioned the surveys to update existing datasets and to identify areas of the site that may be suitable for habitat restoration or creation. Reviewing all data sets and existing conditions prior to the implementation of restoration plans is highly recommended and the approach taken by Spelthorne Borough Council is strongly advised.

During the bird surveys a number of notable species were recorded, including seven species from the red Birds of Conservation Concern (BOCC) list and eighteen from the amber BOCC list. This included Cuckoo, Lapwing, Skylark and Barn Owl.



Collecting invertebrate samples © WWT Consulting

The habitat surveys revealed that the site supports very good examples of neutral semi-improved grassland, marshy grassland and swamp while the River Colne, running through the site, contains some well established stands of marginal, emergent, floating and submerged aquatic plants.

Preliminary results from the invertebrate surveys have shown that the site contains some excellent habitat both for aquatic and terrestrial species, in particular in the northern end of the site where there are established ponds that support a diverse range of species and terrestrial micro habitats that support a host of



different species and species groups.

Staines Moor SSSI has good public access with a number of public footpaths crossing the site. It is well used by the local community for walking, bird watching and exercising and offers visitors the opportunity to escape urban areas and explore a large green space without travelling beyond the M25. With continued monitoring and careful decision making the site can continue to feature some excellent wetland habitats and species and provide an exciting place for local people to use and enjoy.



Newt at Staines Moor © WWT Consulting

info@wwtconsulting.co.uk
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Frankenwee die: Haringey's Natural Experiment!

The Conservation Volunteers

'I say! I say! What do you get if you cross Japanese knotweed with Russian vine?'
'Six months in jail?'

Wrong! The correct answer is 'Haringey Knotweed', a naturally-occurring hybrid first discovered in the wild in 1986 by David Bevan at Railway Fields in North London, now home to The Conservation Volunteers' new Green Hub for reclaiming local spaces. The plant was formally described as recently as 2001 (J. P. Bailey in *Watsonia* 23: 539-541 2001).

Haringey Knotweed (*Idosiphon fraxinoides*), is, thankfully, not what you might fear given its parentage. Non-invasive and extremely rare, it is largely confined in the UK to this one spot in North London.



Haringey Knotweed keeps a low profile in winter at Railway Fields © John Bark

Its home is unusual too. Railway Fields Local Nature Reserve is a quiet green oasis which developed from a disused railway goods yard in a deprived area of Haringey. It is now a two acre mosaic of mixed woodland, scrub meadow and pond, separated from the North London Railways line by a fence. Owned by Haringey Borough Council, it is managed by The Conservation Volunteers with the support of The Friends of Railway Fields, an active group of local volunteers. 60 species of birds and 21 types of butterfly have been seen here.



Winter

Features

Railway Fields is primarily an educational reserve where 1,500 primary school children a year enjoy learning about local wildlife in the open air. It boasts a Green Flag for environmental quality and its many common species are easy for kids to recognise. The Conservation Volunteers also run London-wide training events here, including the charity's 'Big Green Weekend' in October 2012, supported by Stavros Niarchos Foundation. In 60 places across Europe and the UK, people were invited to 'join in, feel good' at a range of fun environmental activities. Here they improved the wildflower meadow, built a "bug skyscraper", constructed a willow-dome and took part in a wildlife photography workshop.



Inside... peace © John Bark

The reserve's 'soil' has large remnants of coal dust and chalk as a result of its former existence as a goods yard. The main track is made of granite setts and a concrete strip borders the railway. Yet much of the current habitat diversity is a consequence of this industrial heritage. The Haringey Knotweed, for example, probably only became established due to the combination of limited competition on railway ballast and the urban heat island effect, which protected its seeds from frost. This 'Frankenweedie' is in fact an important lesson for future generations in the true value of waste land.



Outside, Green Lanes, London NW © John Bark

Join in, feel good. Help The Conservation Volunteers reclaim green spaces. Go online to tcv.org.uk, or send a donation to TCV, Railway Fields Nature Reserve, 281 Green Lanes, London N4 1ES.

£10 can support one child to explore and learn about nature.

£20 can provide tools for a new conservation volunteer.

Contacts at Railway Fields Nature Reserve: Email m.bury@tcv.org.uk or m.hogan@tcv.org.uk.

Tel 020 8348 6005. There's also a Friends of Railway Fields who help with conservation and put on events. Email friendsofrailwayfields@gmail.com



The Big Green Weekend Photo: © Ioana Mischie





Butterfly survival blueprint unveiled

Dr Sam Ellis

Over the past decade Butterfly Conservation has shifted much of its effort to conserve our most threatened species from a focus on single sites to targeting networks of sites across a landscape. This new approach was a response to scientific studies of how butterfly populations behaved in our



Small Blue © Nigel Jarman

fragmented countryside. Researchers found that populations on different sites were not completely independent and movement of butterflies between them occurred. So if a population became extinct on one site then providing there was another population nearby then that site may be recolonised. As long as there are as many colonisations as extinctions, then overall the butterfly could be said to be stable at the landscape-scale.

The purpose of landscape-scale conservation is still to maintain populations by improving the quality of habitat by clearing scrub, coppicing woodland or grazing grassland. But, we try to do that across several sites,

and may give a higher priority to a site at the centre of a network than one on the periphery. We also aim to improve connectivity within a landscape, making it easier for butterflies to find new or restored sites, by felling a strategically located plantation which is a barrier to dispersal or sowing a flower-rich field margin. For woodland butterflies, ride-widening can be especially beneficial in landscape-scale conservation, not only improving connectivity but providing breeding habitat in its own right.

Last December Butterfly Conservation published a report drawing together our experience gained from delivering conservation at a landscape-scale. The report describes 12 case studies from around the UK, including project delivery mechanisms, funding sources, land management changes and the impact on target species. We believe this report is groundbreaking because this is the first time a wildlife organisation has been able to produce evidence that landscape-scale conservation really works. A number of common themes emerge from these case studies; lessons which we believe are applicable to conserving all wildlife.

Landscape-scale projects are nearly always implemented on land Butterfly Conservation does not own and therefore a skilled project officer is essential, firstly to inform owners of the value of their land for wildlife and secondly, to provide the specialist advice to ensure sites are managed to maximise their potential. This is most successfully achieved where project officers can build up long-term relationships with landowners, contractors, volunteers, partner organisations and local community groups who help deliver the work on the ground.

Our most threatened butterflies and moths nearly all have specialised requirements which can only be met in quite specific habitats. Many of our rarer woodland butterflies are only found in open, sunny clearings and rides and do not easily find new habitat within a wooded landscape. So it is imperative that management such as coppicing or ride-widening is targeted in the right places, to give a species the best chance of colonising the new habitat.

Thanks to our amazing volunteers and dedicated staff, Butterfly Conservation has one of the most



effective wildlife monitoring systems in the world - essential to monitor the effectiveness of landscape-scale projects. We can undertake surveys across landscapes and map where colonies are found, calculating how many new colonies have been established or how much new habitat has been colonised. We can also measure changes in abundance, through transects and timed counts, within a landscape and compare that to national trends. All vital as we need to know that the conservation work we do is effective.

Butterflies and moths respond to conservation management rapidly. Even within a three-year project significant changes can occur. In Warwickshire the number of Small Blue colonies increased from three to eight in three years and some colonisations took place in the same year as management. Work targeted at one species can also benefit others using the same habitat, and not just other butterflies and moths.

Landscape-scale projects are not short-term fixes and need proper funding. In our experience at least £100,000 is needed and three years is the minimum timeframe. Costs for land management vary enormously depending on habitat and degree of restoration needed. Leave encroaching scrub on a Duke of Burgundy site for another 10 years and the cost of removing it will be much greater - action now is cheaper than later. Key sources of funding have been the Landfill Communities Fund and the Heritage Lottery Fund, with agri-environment and woodland grant schemes both an important delivery mechanism and a means of sustaining the project benefits. In some cases our projects have helped revitalise rural businesses by restoring woodlands to enable woodfuel enterprises to be established.



Small Blue breeding habitat at an active quarry in Warwickshire © Jane Ellis

All our landscape-scale work is delivered in partnership, in some cases with as many as 15 different organisations involved in a single project. When you add in all the landowners, volunteers and community groups, it amounts to a huge number of people working together with a shared vision of how that landscape should look in the future.

We believe we now have a blueprint for survival, not just for our most threatened butterflies and moths but also for wildlife.

The report can be downloaded from the website www.butterfly-conservation.org/landscape.





Woodland management for newts

Woodland Trust



Great Crested Newts © The Woodland trust

The great crested newt, *Triturus cristatus*, is Britain's largest newt and can grow up to 17cm (the females tend to be longer than the males). It is also Britain's most threatened newt. In Europe they are listed in Appendix II of the Bern Convention, Annexes II and IV of the EC Habitats Directive, and are a European Protected Species (EPS). In the UK they are listed in the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation Regulations 1994, and have their own Biodiversity Action Plan. This means it is protected at all stages of life, even as an egg.

Great crested newts are also known as warty newts because of their black/brown warty

skin. They have bright orange undersides with irregular black blotchy markings. During the breeding season the males develop an impressive jagged crest along their backs, and a silver streak along their tails. At all other times of year the males and females look very similar, but females always have a visible orange line on their tails. They feed on a variety of invertebrates, such as insects and worms, while their tadpoles eat aquatic insect larvae and water fleas. Great crested newts favour medium-large, shallow ponds (they only need to be 50cm deep) with submerged vegetation and a neutral pH (although this is hard to control). The newts use plants to hide in and protect their eggs by folding them up in the leaves of plants or pond detritus. Great crested newt breeding season is around April-May. They will leave their ponds in August and September, and hibernate between October and February in dense undergrowth, beneath timber, log piles, turf and rocks, among tree roots or underground in mammal burrows.

One of the main threats to the survival of the great crested newt in the UK is the widespread loss of breeding ponds. There are several reasons for this: intensification of agriculture, water table reduction, infilling for development, neglect, fish stocking, and waste disposal. But they also use terrestrial habitats, and the degradation, loss and fragmentation of these habitats is having massive negatives consequences on the species. Pollution and the toxic effects of agrochemicals that leach into ponds have also been linked to great crested newt decline. Pond Conservation has produced guidance on creating new wildlife ponds in woodland. Woods are particularly good places to locate ponds because their waters are often clean, certainly compared with many other terrestrial habitats. Trees filter out pollutants and buffer ponds and other water bodies within them from



Gorse Covert Mound © The Woodland Trust



contaminated water, such as the run-off from farms. Ponds containing great crested newts should not be de-silted unless absolutely necessary, for example for health and safety reasons.

Woodland ponds are not only important for newts; at least 30 BAP pond species, as well as Red Data Book and Nationally Scarce species, inhabit woodland ponds. They also provide important drinking water for birds and bats. They support a wide variety of invertebrates, such as dragonflies, which in turn feed other woodland species. A number of scarce plants can also be found in woodland ponds. Both ponds and terrestrial habitats are used for foraging. The diverse understorey found in much deciduous/mixed woodland provides great opportunities for foraging, but the usually poor understorey of coniferous woods is less suitable for great crested newts. The needles of conifer trees can also acidify water. Populations of great crested newts have a greater chance of survival and opportunities for growth if they inhabit areas with landscape-scale clusters of ponds connected by suitable terrestrial habitat.

This newt species can travel up to 0.5km from ponds, so it is important to consider both the aquatic and terrestrial habitat. Creating log/brush piles around the ponds provides places for newts to secrete themselves and hibernate. Management around ponds must be carefully planned to minimise the risk of disturbance and other negative impacts. For example, there should be a presumption against amenity style mowing within 500m of the pond. When managing land where great crested newts are in the vicinity you should take a precautionary approach and consult with the appropriate EPS licensing authority. Failure to do so could result in a fine.

The Woodland Trust has a number of high-quality great crested newt sites. At Dutton Park, Cheshire, seasonal pools have been created by making scrapes in the ground. These provide the shallow conditions great crested newts favour, have no fish to predate upon the eggs/tadpoles, and contain vegetation for folding around newt eggs. They also provide connectivity with other ponds in the area. Great crested newt colonies are known to be within 500m of the Trust's new flagship Diamond Wood in Leicestershire, once the site of an old open cast mine. A lake was created here prior to the Trust obtaining it. It has graded shallow edges but currently no vegetation, but with maturity it may provide good newt habitat. In future, additional wetland work such as providing scrapes and ditches adjacent to the lake will provide further habitat and connectivity.

Gorse Covert Mounds is an urban fringe wood around Warrington. It is located alongside Risley Moss Local Nature Reserve. Both sites are good for great crested newts. Although an urban site, Gorse Covert Mounds is managed sensitively and at low intensity. This shows habitat and ability to range are important factors for great crested newt conservation.

The relevant EPS licensing authority should be informed of any work in or around great crested newt habitat, and a licence applied for if appropriate.





Nurturing healthy soil – a true lesson in biodiversity

Learning through Landscape

As the Fruit-full Schools project almost comes to the end of its third year, 50 secondary schools and 150 primary schools are now host to apple orchards varying from 5 trees to 50. Until this point the focus on the biodiversity value of orchards has mainly looked at the birds that will enjoy the cover, the lichens and mosses that will colonise the branches and the insects we'd like to attract to devour potential pests. In this project we are championing organic growing methods; those that honour the balance and resilience of healthy ecosystems and seek to nurture them. We have become precariously dependent on fossil fuels, not least for our food production, where pesticides, synthetic fertilizers, high levels of mechanization and air miles have all become the norm – at the cost of grave threats to the biosphere. Teaching children about the other options of food production in a world of dwindling resources and rising emissions could be one of the most important lessons they receive. This can begin by changing their perception of soil, that it is far more than an inert medium that inconveniently clings to our clothes and shoes as 'dirt' to the behest of angry parents! Organic growing helps us to show that soil is the stuff of life, the very basis of our food chain. I often start a fruit tree planting session with the amazing fact that 'in this one handful of soil there are more living things than there are people in the whole world!' The change their attitude towards soil from this point is tangible. Growing organic top fruit successfully depends on healthy soil. It requires a team effort where we work alongside a multitude of allies; from microscopic fungi to nematodes to shredder arthropods. Nurturing the soil and its inhabitants can mean the difference between our fruit trees thriving or simply surviving. It is the vast array of microscopic bacteria and fungi and the herds of protozoa and nematodes that graze upon them that are responsible for the break down of matter into forms from which plant roots can absorb nutrition. These microscopic organisms are in turn consumed by larger organisms – the arthropods that move through the soil, as do the annelids, collectively playing their role in creating good soil structure. This is the soil food web.

Observation is a key tool in this move towards an approach that seeks to work alongside nature and not against her. By observing the conditions of the ancestral habitat of our apple trees, in this case the wild fruit forests of the Tien Shan Mountains of Kyrgyzstan, we can begin to try to create a soil type that mimics that of the forest. This is forest-edge ecology, where the soil is dominated by fungi, unlike the bacterially-dominated grass monoculture that we typically plant into. By using bulky, woody mulch, we not only begin to build soil from the top down, improving city soil which can be of poor quality, but we can create fungal dominance which will encourage beneficial, mutualistic, mycorrhizal relationships. Mycorrhizal



Hands © Learning through Landscape



fungi attach themselves to the roots of plants, or even penetrate the cell walls of the roots. In return for the carbohydrate-rich products of photosynthesis, they grow through the soil as strands of hyphae (collectively termed mycelium) in search of nutrients and water that are transported back to the host plant. This has the effect of expanding the root's reach, enabling harder to find nutrients such as Phosphorous to be assimilated more easily, and the roots to share water and nutrients with other plants. Armed with this knowledge, our schools are beginning to experiment with different types of mulch. Some will soon be experimenting with the planting of beneficial guilds around their trees; communities of plants that may benefit the tree through the mining of nutrients from below the root's reach, attracting beneficial predatory insects such as hoverflies and lacewings, deterring pest insects, and fixing atmospheric nitrogen into the soil. Others are creating habitats for earwigs to help counter outbreaks of woolly aphid, and ground beetles in the mulch area that will be ready to devour apple sawfly and codling moth larvae when they emerge from fallen fruit.

Creating a healthy, biodiverse orchard habitat to be managed organically is a true lesson in biodiversity and why it matters. Projects like these bring alive the various and complex interconnections that make up life, and demonstrate that through diversity we have balance and resilience. If today's children are to become future stewards of nature, they must first value her and feel empathy and respect towards her. This can be nurtured in the school grounds using the asset that every school, no matter how big or small, plays host to; the soil beneath our feet.



Let's foster our ecosystem services, not eradicate them

Matt Shardlow

Our native invertebrate populations provide a range of ecosystem services including pollination and pest control. It is in our interest to work with bees, moths, hoverflies, beetles and all the species that provide these benefits, so that life on earth makes effective and synergistic use of limited resources. Doing so will also make it possible for other species to survive and for us to pass on a biologically rich heritage to our children.

In this article, Buglife wishes to highlight the importance of biodiversity and healthy and resilient ecosystems in orchards and to raise concerns about an approach which relies on pollination by Honeybees alone at the expense of other pollinators.

The article 'Apple pollination- the need for honeybees' in orchards (Biodiversity News 59 p19) by Andrew Cuthbertson highlighted an approach used in commercial orchards that we believe could have adverse impacts on biodiversity and ecosystems. The article suggested that Honeybees were important for the successful pollination of apple crops and advised that weed species and other non-target plants should be removed in order to avoid competition for pollination with the apple crop. Such action would result in the removal of biodiversity which is not only economically questionable, but fundamentally contrary to the principle that we should find ways to coexist with other species in functional and healthy ecosystems.

As Andrew Cuthbertson argues in his article on page 12 of the same issue, enriching orchard biodiversity can help with pest control - 'to gain a more environmentally sustainable apple production system within the UK, much consideration must be given to ... encouraging increasing biodiversity', and we would argue that the same principle should also apply to pollination services. The danger of removing wildflowers from orchards and importing domestic Honeybees to replace



wild pollinators threatens the nightmare of North American intensive fruit agriculture. In this system, all wild plants are sprayed out with herbicides and the trees grow in vast, bare arable 'deserts' that are incapable of supporting bumblebees, solitary bees or other pollinators. This sterilised landscape creates a monoculture, which requires vast numbers of domestic honeybee hives to be imported for pollination.

Relying on a single domesticated pollinator is inherently hazardous. Keeping huge numbers of Honeybees and transporting them in articulated lorries creates a high disease risk. When crises, such as colony collapse disorder, hit Honeybees, which they do at regular intervals, then the food supply of humans is jeopardised (Winfree et al. 2007). Complex ecosystems, containing a wide range of wild pollinators, are much more robust than impoverished systems: if disease or other environmental factors reduce the pollination ability of some species, others will compensate. Co-evolution between wild plants and insect pollinators has resulted in many specific relationships that cannot be replaced by Honeybees. Generalist pollinators like Honeybees under-perform as pollinators, evolutionary pressure pushes them towards avoiding becoming pollen contaminated (Westerkamp 1991). In contrast, more specialised pollinators have more to gain by pollinating the plants they visit. Hence, many solitary bees store their pollen in places where it is accessible to the reproductive parts of flowers, while Honeybees carefully pack their pollen into baskets. Honeybee flower visits often do not result in pollination (Winfree et al. 2007).

In terms of apple production specifically, there is plenty of scientific evidence that wild bees are much better pollinators than Honeybees:

Yields after a single visit to an apple blossom were more than five times higher for solitary bees compared to Honeybees (Vicens and Bosch 2000a).

Solitary bees, particularly mining bees (*Andrena* spp.), provide consistently better apple pollination than other insects, including Honeybees (Kendall 1973).

Honeybees are fair-weather pollinators, whereas non-colonial pollinators, with shorter foraging seasons, are active in more adverse conditions (Vicens & Bosch 2000b).

Mason bees (*Osmia* spp.) are also more efficient apple pollinators: 300 females are equivalent to an entire hive of 15,000 Honeybees (Delaplane & Mayer 2000).

Rather than being viewed as weeds and a distraction to Honeybees, wild flowering plants in orchards should be recognised for their aesthetic and practical benefits. By supporting healthy populations of wild pollinators, wild flowers can enhance crop pollination (Carvalho et al. 2011). Moreover, the presence of wild solitary bees can make Honeybees more effective in orchards (Brittain et al. 2013)!

It is profoundly worrying that between 66% and 80% of moth, butterfly, bumblebee, hoverfly and ground beetle species are currently declining. After centuries of apple production, it is appalling that our generation has to try to adapt to the grievous damage inflicted on biodiversity. However, supplementing wild pollinator services with domesticated ones is not the answer.

It is sometimes claimed that Honeybees are responsible for the provision of up to one third of the food people eat, this is not true. Honeybees are just one of thousands of pollinator species and in fact insect pollination is responsible for about a third of our food. Honeybees are probably responsible for less than 10% of UK insect pollination services (S Potts pers comm.). Honeybees are therefore responsible for only about 3% of the food we eat; wild pollinators are still responsible for closer to 30% of the food we eat.

Given the desperate plight of wildlife in the countryside, surely we must hope that orchards can provide a refuge in which wildlife can coexist with agriculture.

We must also reverse the loss of pollinators by restoring the countryside. This can be done by promoting farming that supports wildlife: bringing back wild flowers in the landscape and reducing the toxifying effects of pesticides.

Matt Shardlow and Richard Smith, Buglife – the Invertebrate Conservation Trust

For more on the importance of pollination, the impacts of habitat loss and pesticide use and to find



out how B-Lines can be put into the countryside to restore wildflower habitats and allow wildlife to respond to climate change please go to www.buglife.org.uk.

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Westerkamp, C. (1991) Honey bees are poor pollinators - why? Plant Systematics and Evolution, 177: 71-75.

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Biodiversity in Flood Alleviation

Andrew Higham at Wakefield Council

Following substantial amounts of rainfall in June 2007 Oakenshaw Beck overtopped its banks, flooding 400 homes and businesses in Agbrigg, Wakefield, and inundating two major routes. As a result, Wakefield Metropolitan District Council (WMDC), alongside the Environment Agency, constructed a flood alleviation scheme to provide protection for those affected for up to a 1 in 200

year rainfall event. The scheme consists of a flood embankment, upstream and downstream control structures, a pumping station and a diversion weir to take the flow into two large flood storage ponds. The scheme was constructed on council owned land of approximately 5 hectares bound by Oakenshaw Beck to the west, Barnsley Canal to the east and a railway embankment to the north. Historically the site had formed part of the flood plain but was raised above this level during the early 20th Century when the site was used to dispose of domestic refuse, largely consisting of coal ash. Before the scheme the site contained a small flood storage pond, with the majority of the site comprising grassland with areas of scrub which was used by the local traveller community to graze horses.



The site prior to work showing original pond © Wakefield Council, Land Drainage

Clearly the main purpose of the scheme was to provide future protection to properties previously impacted by flooding. However it was paramount that biodiversity was considered throughout the planning, construction and future management of the site. It was important to protect the habitats and species of greatest nature conservation value present on site, mitigating the loss of any valuable habitat as well as improving and enhancing the overall biodiversity of site.

Ecology surveys carried out during the planning phase in 2008, identified the existing flood storage pond as the main area of interest in terms of flora. The relatively scarce Great Yellow-cress

Rorippa amphibian, in addition to Pond Water-crowfoot *Ranunculus peltatus* and Marsh Yellow-cress *Rorippa palustris* being recorded. The area of grassland and scrub was found to have a relatively diverse flora though this was heavily grazed by horses and rabbits. In terms of fauna, Common Toads, *Bufo bufo*, Common Frogs, *Rana temporaria* and a Smooth Newt, *Lissotriton vulgaris* were found on the site. The birdlife on site was quite diverse with Kingfisher *Alcedo atthis* and Long-tailed Tit *Aegithalos caudatus* observed in addition to more common species. Although not found onsite, records show that Water Voles *Arvicola amphibia* have been found upstream of the site. There are also local records of Grass Snakes *Natrix natrix* in the area



Pond 2 under construction © Wildscapes



although none were found during the survey. Bats were believed to forage in the site too but were not thought to be roosting there.

Works to construct the flood alleviation scheme started on site in April 2011 with the contractors finishing in October of the same year.

Two large flood storage ponds were created which have subsequently been landscaped to provide pond and wetland habitat, for the benefit of wetland plants, amphibians, water vole, grass snake and a diversity of aquatic macroinvertebrates, as well as feeding opportunities for bats.

The first pond is designed to have a permanent water level and has been profiled to provide Water Vole habitat. Plants both favoured by Water Voles and listed on the Natural History Museums postcode plant database as being local to the area were chosen for planting-up. Species included Greater Tussock Sedge *Carex paniculata* and Yellow Flag *Iris pseudacorus* were planted as a food source for Water Voles and Reed-canary Grass *Phalaris arundinacea* to provide cover. In addition the topsoil containing the seed-bank of the plants found in and around the original pond was saved and reinstated around the pond in order to retain the valuable plant community, in particular, the relatively scarce Great Yellow-cress.

The second pond area is designed to have fluctuating water levels, with large drawdown zones, incorporating shallow and deeper pools and some small islands. This area was seeded using seeds collected from other wetland sites managed by WMDC Land Drainage Section to speed up colonisation and ensure local native species colonise.

The remainder and majority of the site has been seeded with a local sourced seed mix containing species of NVC lowland meadow grassland communities MG4 and MG5 to mitigate the grassland which was lost during the construction phase. In time this should provide valuable habitat for invertebrates, especially bees and butterflies.



Tree planting has been carried out on the site to replace the trees which had to be removed prior to the works starting and some 600m of hedge have been planted to provide hedgerow habitat. A hedge was planted around the second pond area in order to minimise disturbance from members of the public and their dogs. The Conservation Volunteers (TCV) carried out the tree planting with assistance from local school children, Agbrigg and Belle Vue Community Centre and the Wakefield Tree Wardens. Native species were selected with the hedges consisting largely of Hawthorn *Crataegus Mongyna* and Blackthorn *Prunus Spinosa*; other tree species included Hazel *Corylus avellana* and Field Maple *Acer campestre*.

Pond 1 - Water vole habitat © Wakefield Council, Land Drainage

Through careful landscaping, seeding and some planting of the flood alleviation scheme, it is hoped

that this site will provide the following UK BAP habitats: ponds, wetlands, hedges and Lowland meadows. A five year management plan is currently being drafted by ecological consultants, Wildscapes, to ensure that the site is managed in way that encourages the development and preservation of a diversity of habitats of conservation value.

The scheme shows how biodiversity can be both protected and enhanced as part of a flood risk reduction scheme.





Winter

Local & Regional

PondNet – monitoring change in England’s ponds with volunteers

Rebecca Williamson, Natural England

Monitoring data is the cornerstone of biodiversity protection in the UK, providing essential information that describes changes in species and habitats. Ponds are one of the least monitored of all freshwater habitats, and there is much concern that changes are currently going undetected. To help provide better information, Natural England and Defra are helping to establish a new type



© Becca Williamson/Pond Conservation

of volunteer surveillance network based on a *habitat* approach that records a *range* of species and environmental data from a fixed network of sites. The aim is to provide statistically robust data that will identify trends in pond quality and pond species, and ultimately help to inform freshwater policy.

PondNet volunteers are allocated one of the project’s random 1km square within 10 miles of their home. Here, they can record a range of pond plants and animals. Environmental data is also gathered to help explain the reasons for changes in biological quality.

The priority is to gather information that will provide number and change data for widespread designated pond species like Great Crested Newt and Tubular Water-dropwort, Priority Ponds (our highest quality ponds), pond plant and animal groups generally, and pond quality. The data will also help to fill knowledge gaps, for example: how does pond management affect biodiversity?

Pond Conservation, in partnership with Amphibian and Reptile Conservation and many other NGOs, are helping to trial the project in three areas: **Cheshire, North & East Yorkshire and South Hampshire**. Training sessions are being run to help volunteers learn new survey methods, and in Cheshire and Hampshire, Pond

Conservation staff will be on hand to support surveyors.

A guide to PondNet, plus recording forms and information sheets about the different survey methods are available online. To find out more about PondNet visit www.pondconservation.co.uk.

To sign up for a survey square contact:

Cheshire: Becca, 07894 036363, bwilliamson@pondconservation.org.uk.

Yorkshire: Penny, 01865 483278, pwilliams@pondconservation.org.uk.

S Hampshire: Naomi, 02380 642992, newald@pondconservation.org.uk.





Winter

Local & Regional

Birds flock back

Phil Dykes, The Wildlife Trust



Pink-Footed Goose

The numbers of birds in the North West over winter means our feathered population is four times the size of summer numbers. Geese, waders and the much-publicised waxwing are visiting the region in their thousands but other regular, colourful and noisy visitors are back in the UK.

Phil Dykes of the Wildlife Trust for Lancashire, Manchester and North Merseyside gives us an insight: There's suddenly more blackbirds about, which might seem surprising, but the fact is that many young birds head over to the UK from mainland Europe to hopefully find easier food supplies to get through the winter. These young birds tend to have darker bills which develop the more familiar bright yellow colour with time.



Black Bird

I've started to hear the distinctive chuckling of another bird related to the blackbird, namely the fieldfare.

They too have flown in from across the water looking for berries, fruit, worms etc. Once you get familiar with that call you will realise how often they are in the locality. The fieldfares are gathering in mixed flocks with another member of the family, redwing. These have a red patch on their side and call with a high pitched 'tseep' as they fly over.

Another close relative of these thrushes is the robin and these too will have been on the move. Our resident birds have been joined by an influx of continental visitors from Europe, but unlike the blackbirds, they are not so readily tolerated by the 'home' birds. Robins are territorial throughout the year, defending their patch for feeding purposes at this time of year. Hence they are likely to be seen chasing off these undesirable visitors.



Fieldfare

Starling numbers are also building up and will result in the fantastic spectacle of gathering in their large flocks at their favourite overnight roosts. Safety is in numbers and the noise they generate as they stream down into the safety of a reed bed is all part of what I would consider to be one of the most impressive bird spectacles that can be seen in this country.



Winter

Local & Regional



Thrush



Robin © Connor Coombes

So what about all the jays that suddenly seem to be making themselves very obvious? It seems that they too have heard about the supposedly bountiful food supplies available over here and are on the move from continental Europe in much bigger numbers than normal. Food is in short supply and they're looking for acorns in our hedgerows.

But given all of this feeding frenzy in the bird world the sight which really sent a chill down my spine was the first skeins of geese going across the sky over my house a few weeks ago. They were calling in a sort of random fashion, up and down the scale, and I knew they were 'pink foot', heading across to the arable fields of West Lancashire. I just love that call and I had to rush out from the kitchen to see them go over. They will be building up in their thousands, having come down from the colder conditions of Greenland and Iceland. I need to plan a trip across the county to check them out.

Then there are all the ducks, there were wigeon in the nearby field this morning, I could go on, but you need to get out and have a look for yourselves.



Jay





Winter

Local & Regional

Invasive non-native species in Cumbria

Rebecca Corrie-Close, South Cumbria Rivers Trust

Invasive non-native species (INNS) are the second greatest threat to biodiversity after habitat loss. Serious strategic measures need to be established in order to prevent further introductions and spread, especially in the county of Cumbria where the freshwater resources (its many tarns, lakes, rivers and becks) are of great ecological and economic significance.

In 2010, the Cumbria Freshwater Invasive Non-Native Species (CFINNS) Initiative was launched (initially funded by Natural England and the Environment Agency) and a strategic approach to control, eradication and biosecurity began. Working with over 70 organisations within the county, the Initiative has gone from strength to strength. Two of the foremost achievements of 2012 are the release of the Cumbria Freshwater Biosecurity Plan and the employment of three INNS Officers.



© CFINNS

Cumbria now has a Freshwater Biosecurity Plan, the first in England and Wales. The Plan describes freshwater biosecurity issues and presents objectives, outputs and actions over five years for the prevention, early detection, control and mitigation of the introduction and spread of selected INNS. Since its launch in January, the Initiative Coordinator has assisted the Cumbria Forum partners and others in the implementation of the Plan. A working document has been prepared to show the progress of the actions over the first year.

This summer, thanks to funding from the Environment Agency, three seasonal INNS Officers were employed. The Officers worked closely with the Initiative and were based with the three Rivers Trusts in Cumbria (West, South and Eden) for an eight month period between February and September.

They led and developed Local Action Groups, organised surveys and monitoring, raised awareness of INNS and biosecurity and developed management strategies and biosecurity plans for each catchment. Importantly, the Officers also identified areas of high biosecurity risk which will require further development and effort in order to prevent new INNS from being introduced to Cumbrian waters.

They achieved so much over the past 8 months that it would be impossible to list all of them here. Therefore, noted down some of the key achievements that could not have happened without them:



Ditch the Hitchers © CFINNS

- Over 73 work-parties organised for Himalayan balsam and American skunk cabbage control



Winter

Local & Regional

- Over 803 volunteers recruited and assisted
- Over 4,383 volunteer hours worked
- Over 40 'Check Clean Dry' interpretation boards displayed
- Over 70 key organisations and key water user groups contacted (including marinas, outdoor education centres, sailing, canoe and yacht clubs, adventure organisations and schools) and made aware of INNS. They now display Check Clean Dry biosecurity material
- 12 adventure organisations implementing biosecurity measures in triathlons and adventure races
- INNS walk over surveys conducted on 14 previously un-surveyed rivers, covering 11 catchments
- Areas of high biosecurity risk identified for priority work in subsequent seasons.

Funds are currently being sought for two subsequent years to continue the delivery of the Cumbria Freshwater Biosecurity Plan and to develop the Local Action Groups, giving a long term legacy from the project. The Initiative is also developing and agreeing Rapid Response Plans for those INNS that are most likely to reach the county.



Denbighshire's Natterjack Toads: Keeping their Heads above Water

Lizzy Webster

We all know that 2012 was one of the wettest years on record. The weather has been disastrous for many species, with rainfall higher and temperatures lower than the long-term average for most of the spring and summer. Heavy rain in June was particularly ill-timed for birds trying to rear their young, with nests flooded and insect food hard to find.

But there's one species in North Wales which has really benefitted from the rain: the natterjack toad. This species is distinguished from the common toad by a yellow stripe down its back and its smaller size. Adult natterjack toads are nocturnal and the males have a loud rasping call that can be heard all over the dunes. It breeds in shallow pools in sand dunes at Gronant Dunes and Talacre Warren SSSI, near Prestatyn. In the latter part of the 20th century the natterjack sadly became extinct in North Wales, but thanks to a re-introduction programme now survives at this site in Denbighshire and Flintshire.

The heavy rain has meant that the natterjacks' breeding ponds have stayed full for longer, so tadpoles have had time to develop into toadlets before the ponds dry up. The conditions were so favourable that the toads spawned twice during the breeding season and tiny toadlets were observed emerging from the ponds in both May and August.



Tiny toadlet that had just emerged from its breeding pond © Lizzy Webster



Winter

Local & Regional

This is in real contrast with 2011 when the lack of rain meant breeding ponds dried up before many tadpoles had chance to fully develop.

The small populations of this charismatic amphibian still need our help to ensure their long-term survival in North Wales. We contribute to an annual monitoring programme and undertake habitat management works on the site to keep the conditions favourable for natterjack toads.

It isn't beneficial to the natterjacks for the breeding pools to be full of water throughout the summer every year, since periodic drying out helps reduced predator numbers – but for this year at least the plentiful water has helped the species reproduce successfully.



Adult natterjack toad found on a night survey at Gronant Dunes © Lizzy Webster



Good News for Local Wildlife

Jonathan Willet

The second Inverness and Nairn Biodiversity Forum took place just before Christmas and highlighted a selection of activities that have taken place in the area to raise the awareness and protect and restore our biodiversity. The event was an opportunity for local wildlife and environment groups to showcase their work. There were six presentations ranging from the Caledonian Canal to the Abriachan Forest Trust.

The speakers highlighted the large number of people involved in biodiversity projects all over Inverness and Nairn. The Highland Council Ranger Service worked with over 2500 people and 99 schools in 2012. The



Around 2500 people decided to 'Go Wild' on the Caledonian Canal on 18th August 2012 © John MacPherson



Winter

Local & Regional

Conservation Volunteers Scotland worked with 48 volunteers, 15 of whom have gone on to employment or further education. Both of these organisations have worked with the Merkinch Local Nature Reserve Group taking forward activities and projects there.



The event was a mix of 'come and try' active sports on canal and towpath and also a chance to find out about wildlife © John MacPherson

Christine Matheson from the Abriachan Forest Trust described the many creative projects they undertake while also managing a productive forest. Learning outdoors in Abriachan has been proved to be a great success and an innovative education programme has developed, such as with pupils who are not able to attend full-time primary or secondary education have benefited from focussed work developed specifically for them in discussion with their teachers.

John Parrott from Coille Alba presented the Lower Ness Invasive Non-native Plants Project, explaining the background to the project and focussing on work in the Glenurquhart catchment and Lower Ness catchment. Work is continuing and a detailed schedule of work is planned for 2013. All this effort is reclaiming the riverbanks and burnsides for native vegetation to colonise. Work started in 2012 by the Findhorn, Nairn and Lossie Fishery Trust on the River Nairn is seeking to do the same.

Trees for Life is committed to restoring the Caledonian forest, particularly focusing on work in Glen Affric and on their Dundreggan Estate. Trees for Life planted its one millionth tree in 2012 and has created 10,000 acres of new Caledonian Forest in the last 20 years. It has pledged to establish one million more trees by planting and natural regeneration within the next five years.

The final presentation was from Stephen Wiseman of the Scottish Waterways Trust presented the Caledonian Canal Environment & Heritage Project. It's highlight was the 'Go wild on the Canal' event, which aimed to reach out to the Caledonian Canal's neighbours in Inverness. Live traditional music, a birds of prey display, face and t-shirt painting, heritage ship tours, bike 'top gear' tests, a climbing wall and good food were all well received by a massive 2500 audience over the six hours of festivities!

Jonathan Willet the job-share Biodiversity Officer for Highland Council said, "National action on biodiversity is taking a bit of time to catch up with all this local activity, but hopefully it will soon and then things will really start to happen on a large scale. There is a huge amount of local activity that we, to a certain extent, take for granted. This amount of activity did not happen twenty or even ten years ago. So this is a very positive message to take out of the event."

The next Inverness and Nairn Biodiversity Forum will be held in November 2013 in Inverness.



Winter

Local & Regional

Jonathan Willet. Highland Council Biodiversity Officer (job-share). 01463 702274 or jonathan.willet@highland.gov.uk. Have a look at our new website www.highlandbiodiversity.com

STOP PRESS: The Easter Ross Biodiversity Group are planning a similar evening to showcase local wildlife-related projects in Dingwall Academy on Wednesday 20 February, from 7-9pm. Contact Janet Bromham on 01463 702274 or janet.bromham@highland.gov.uk for further information.



A new lovebird bringing kisses to the region

Alan Wright, The Wildlife Trust

Romantics are getting excited as mistletoe is spreading into the North West thanks to a tiny bird.



Mistletoe © Zsuzsanna Bird

The blackcap is helping to spread the plant to wooded areas with a recent discovery in Wigan.

The parasitic plant is far more common in the south particularly in orchards where the mistletoe attaches itself to and feeds off host trees. At present there are only six recent records of mistletoe – one at Hesketh Bank in Lancashire, two in Merseyside and three in Greater Manchester.

Lancashire Wildlife Trust Wigan Projects Manager Mark Champion said: “Mistletoe has been increasing its range, it occurs here in Wigan now. It used to be quite localised on

the orchards of Herefordshire and Worcestershire where the climate is warm and moist but both here and on the Continent the range has expanded.”

Mark has done some research into why mistletoe’s range is expanding. He says the work has been carried out “for the sake of all those romantics planning a Christmas kiss under the mistletoe”. He said: “Most birds don’t like the berries of mistletoe because they don’t taste nice for starters and, quite frankly, the berries are full of sticky goo which puts birds right off their lunch.



Mistle thrush © Amy Lewis

“The mistle thrush, strangely, quite likes the berries - after all it is named after the plant so the two species have long had a known affinity. The trouble is that the berries eaten by the mistle thrush pass through the bird’s gut and reappear in a half-digested, gooey deposit which rarely lands in a



Black Cap © Amy Lewis

viable position.

“There is, however, a new kid on the block. Since the 1980s the blackcap has started to winter in the UK. This small bird should migrate south for the winter but a small population from central Germany got lost and confused and they now fly west to winter in Britain.

“It is these birds which carefully tuck the berry apart, thus avoiding the sticky bits and leaving the seed nicely embedded in the trees where it can sprout to continue its semi –parasitical lifestyle.”

Mark said this means seeds are spread and can end up on host trees like apple, lime, hawthorn, poplar, maple and willow. Mistletoe is an easy plant to grow by planting seeds into splits in branches in orchards, however Mark believes the blackcaps will help to carry the seed naturally further into Lancashire in coming years.

And why do Christmas revellers kiss under the mistletoe? Mark said: “Well since pre-Roman times the mistletoe was part of the mystical Celtic druids rites and was considered to be sacred. It is probable that this is the last vestige of a winter fertility rite, and based on the shape of the paired leaves and the seed – I leave that to your imagination!”



[Rare bumblebee spotted close to central London](#)

The Co-operative

A rare bumblebee which has seen its numbers decline rapidly across Southern England in the past 100 years has been spotted in East London as part of a project funded by The Co-operative’s Plan Bee campaign.

The Shrill Carder Bee, *Bombus sylvarum*, one of the UK’s most threatened bumblebees with just six or seven populations in England and Wales, was seen at the Thames Water Crossness sewage works, Thamesmead.

There is a known population in the Thames Gateway area but it is mainly limited to the North Kent and South Essex coast so experts were interested to see this species at a site so close to central London. The bee was spotted by the Bumblebee Conservation Trust who were advising on land management for bumblebees funded by The Co-operative’s Plan Bee campaign.

Chris Shearlock, Sustainable Development Manager at The Co-operative, said: “According to experts, this species has been declining dramatically in the last few decades so this is an important discovery, especially so close to Central London.



“As part of our on-going Plan Bee campaign, we are funding the Bumblebee Conservation Trust to provide advice to landowners on grazing management, scrub clearance and creating flower-rich habitat in order to support rare species of bee so a sighting of this kind shows that the project is really worthwhile.”



Shrill Carder © David and Holly Harries

Sam Page, Conservation Officer at the Bumblebee Conservation Trust who spotted the bee, said: “Two species of bumblebee have become extinct in the UK since the 1940s and several others, including the Shrill Carder are at risk. The last sighting of this species in the area was nearly ten years ago so it is great to see evidence of them surviving here.”

In addition to supporting habitat creation projects, The Co-operative’s Plan Bee campaign, which was launched three years ago, supports research into

the native British honeybee, takes action on pesticide usage and has given away over one million packets of wildflower seeds to provide pollen and nectar for bees and other pollinators. Plan Bee is an integral part of The Co-operative’s Ethical Plan, which was re-launched in February.



Bogged down in Rhyd-ddu

Gethin Davies, Snowdonia National Park Authority

Work is currently on-going to restore an important blanket bog in Rhyd-ddu, Snowdonia.

A famous Welsh poet from the village, Sir T.H. Parry-Williams, refers to the peatland in one of his famous poems, Cynefin. However, years on inappropriate management means that restoration works on the peatland is needed, and the work has been ongoing at the site since September 2012.

The project, financed by the [ERD Fund](#), is aimed at restoring 33 hectares of blanket bog which was previously damaged by intensive drainage and fire. The 700,000m³ peat body remains intact and key species required for peat growth, such as sphagnum, or peat moss can still be found, but its water and plant life needs to be restored.

Initially, Snowdonia National Park officers worked alongside students from Ysgol Dyffryn Nantlle in marking out some of the 12km of ditches at the site in preparation for the arrival of local contractors.

Gethin Davies, Snowdonia National Park Authority’s Ecosystems and Climate Change Officer said,

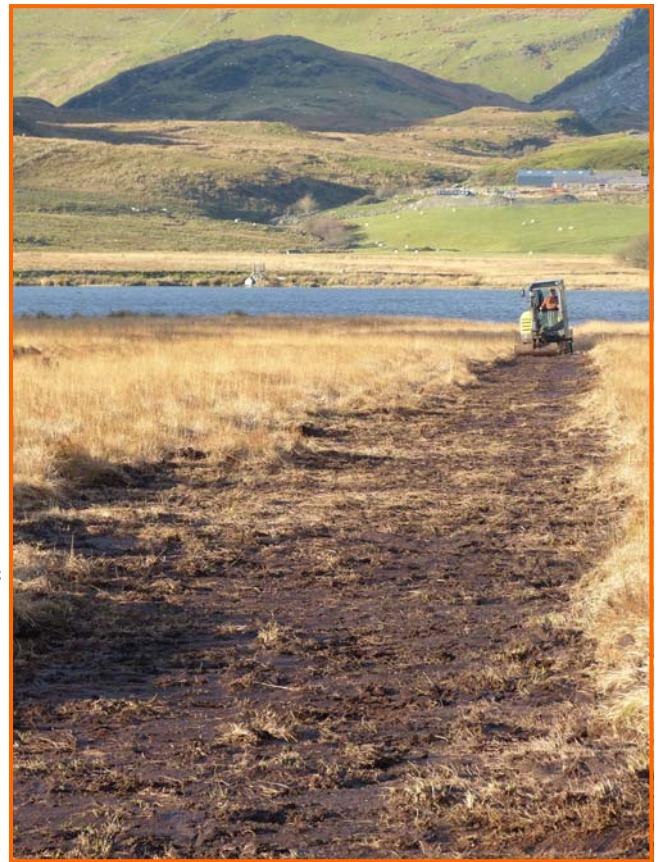
“Pupils from Ysgol Dyffryn Nantlle have now experienced for themselves how ecosystems



work. They have also learnt of the benefits this project will bring to the biodiversity of the area, and that the restoration of the site will increase the peatland's ability to lock up carbon, improving the quality of the water and water retention within the catchment of Afon Gwyrfai at the same time.

Our aim now is to use this project as an example to other land owners in the area and to show the benefits of restoring peatland, which will, in turn, lead to similar projects elsewhere in the future.”

Local contractors were then brought on site to undertake the ditch blocking works, using spoil which was previous left when the ditches were originally opened, into the channels resulting in a complete fill of the trenches. Work was also undertaken on less intensely drained peatland on adjacent farms as part of the project, using a combination of contractors and volunteers, to construct peat dams at intervals along the lengths of the shallower channels. These dams will ensure that the land will remain wet, therefore able to encourage plants such as bog asphodel , sundews and sphagnum to grow, and create habitats suitable for creatures such as dragonflies and toads. The project will be completed by March 2013, with an open day planned for Wales Biodiversity Week in June to allow people to see the site and the work that's been done.



Angharad Harris, marking the ditches at Cors Ffridd Uchaf © Gethin Davies



Footpaths enhanced to help protect moorland habitat

Moors for the Future

A project to renew some 2000 metres of well-loved paths at four major access points to Kinder Scout in the Peak District National Park has just been completed and will help to protect the internationally important moorland habitat from the effects of foot traffic and water. Paths at Grindslow Knoll, Crowden Tower, Ringing Roger and The Nab have been enhanced as part of the Natural England Conservation Plan Project (NECPP).

The project, managed by conservation organisation Moors for the Future Partnership, includes part of the Dark Peak Site of Special Scientific Interest. The Dark Peak moorlands support the full range of breeding birds found in the South Pennines, some of which are represented at their most southerly English locations. The extensive areas of peatland are also home to the full range of blanket bog and soligenous mire mesotopes found in the region, including cotton grasses, crowberry, heather and bilberry.



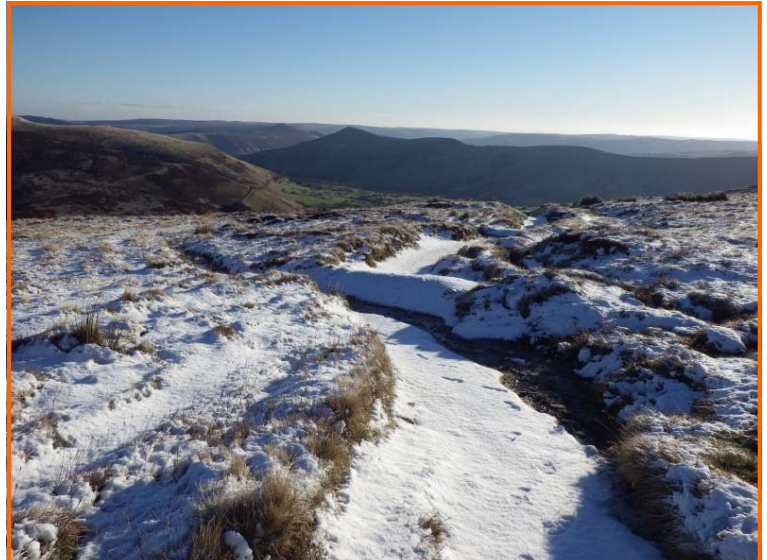
Winter

Local & Regional

Crucial innovations that feature in the works include a range of long-term robust water management devices, such as drainage ditches, water bars and fords. By introducing water bars and angling flagstones, water is diverted across and away from the paths.

Moors for the Future project manager Matt Scott-Campbell is delighted with the outcome:

“The improved footpaths will significantly enhance walkers’ access and enjoyment while protecting much loved landscape and wildlife. We’ve introduced a whole range of solutions to help protect the moorland in the long term, while respecting the spectacular beauty of these locations.”



Grindslow Knoll footpath looking towards the Nab © Moors for the Future

The project was carried out with support from the National Trust and local landowner Tom Noel, who adds:



The Nab © Moors for the Future

“When restoring these popular footpaths, it was vital to take account of the different ways in which the land is used. The needs of the farming community had to be accommodated, as well as those of people accessing the moors for various leisure activities. The significant improvements that have been made will ensure that a range of people can enjoy the moors, while minimising the damage that has been such a serious problem in the past.”

The Natural England Conservation Plans Project is a £2.5 million Environmentally Sensitive Area (ESA) funded initiative which aims to restore habitats of national and European importance and yield improvements that will benefit local communities.





UK Framework Update

Winter

6th Meeting of the UK Biodiversity Indicators Forum – December 2012

JNCC

As has been mentioned in previous editions of Biodiversity News, the UK Biodiversity Indicators suite is undergoing a review, to ensure that the indicators continue to be of relevance to the new international goals and targets of the '*Strategic Plan for Biodiversity 2011–2020*', agreed in October 2010 at the 10th Conference of the Parties of the CBD, and the new European Biodiversity Strategy, published in May 2011. Additionally the review is assessing whether the indicators continue to be based on the most robust and reliable data.

The proposed set of new and revised indicators now totals 24. An annual update of the indicators was published in May 2012, and included some information on the development of the indicators that have not yet been finalised. There is still, however, some considerable work to be undertaken in developing the proposed new indicators, and in updating and revising some of the already existing indicators.

To support the development work, several meetings have been held. Most recently, the 6th meeting of the UK Biodiversity Indicators Forum (BIF6), organised and hosted by the World Conservation Monitoring Centre in Cambridge, was held over two days on 5 and 6 December 2012. This Forum aimed to look at several particular indicators which are in need of revision or development, including habitat connectivity, climate change adaptation, plant genetic resources, ecosystem services, species, and global impacts. Additionally, some consideration was given to UK national reporting requirements, and how the indicators could be used most effectively to contribute to the reporting process.

The Forum resulted in some lively and productive sessions, and helped those involved in developing the indicators to move their thinking forward. Based on the outcomes of the Forum, several papers will be prepared, to provide some recommendations and options for discussion by the Biodiversity Indicators Steering Group (BISG), due to meet in February 2013.

Further development work is anticipated in 2013 and 2014, with perhaps another Forum. Ideally, the indicators suite will be complete over the next two or three years. Additionally, in 2014, the 5th National report to the CBD is due to be published. This report will be considering the progress which is being made towards the international global goals and targets (the 20 'Aichi Biodiversity Targets'), outlined in the '*Strategic Plan for Biodiversity 2011–2020*', and it is envisaged that the indicators will be an important component of the report. Let's hope that the UK Biodiversity indicators suite will be able to provide some positive messages regarding progress in the UK.



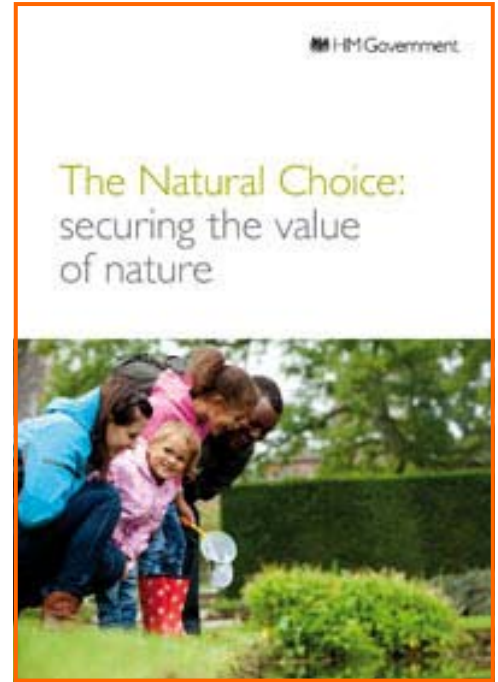


Updates on implementation of the Natural Environment White Paper

Defra

In 2011, the Government published the Natural Environment White Paper which outlined the Government's ambitions for the natural environment, backed up with a programme of practical action. Defra regularly produces an on-line information sheet highlighting recent achievements and progress on implementing these commitments. These *Implementation Updates* are available from the [Defra website](#).

The latest publication was in December 2012 and is available [here](#)



Wood Wise: conservation grazing

The Woodland Trust



The Woodland Trust's latest Wood Wise publication focuses on conservation grazing by a range of species. There are a number of case studies from different organisations to show best practice and share experiences.

Cattle, sheep, goats, ponies and pigs can all be used to graze, browse or root in woodland and open space habitats. If properly managed, these actions can increase the structural diversity of such habitats, improve biodiversity of flora and fauna, restore land, and preserve important archaeology.

The case studies within Wood Wise look at each of these grazers and how their individual attributes can best be used to achieve desired outcomes. Along with work by the Woodland Trust, there are also welcomed contributions from the Neroche Project, Suffolk Wildlife Trust and Wyre Community Land Trust.

Wood Wise issues can be viewed online via this [link](#). If you would like a pdf version please email your request to:

Conservation@woodlandtrust.org.uk



Winter

Publications

Snowdonia Society Magazine

The Society publishes two attractive bilingual colour magazines each year. A Spring edition is published in March and an Autumn edition, which includes our Annual Review, is published in late September. Members receive the latest edition by post.

READ THE LATEST ISSUE ON-LINE [HERE!](#)

See below for issues available on-line and their themes.

The Society magazine contains a wide range of interesting articles of relevance to the National Park including discussions of current issues such as the future of farming in Snowdonia and climate change, the Park's wildlife and history as well as updates on the Society's projects and other activities.

If you have any ideas for future magazine features or would like to make a contribution, please [email us](#).

Snowdonia Society magazines available on-line
[Autumn 2012](#) Access and Conservation
[Spring 2012](#) Outdoor Recreation
[Autumn 2011](#) Biodiversity in Snowdonia

See [Features](#) to read articles from previous magazines and articles about other Snowdonia Society activities.





University of Oxford 5-week online short-courses in Ecological Survey Techniques:

University of Oxford

Taught online over five weeks, each part-time course offers excellent training opportunities for those working full-time or wishing to study at their convenience. The courses will appeal to a variety of students, practitioners and volunteers in conservation wishing to advance their surveying skills and knowledge in ecology. Each course is specialist-led and enables you to share ideas with other students from across the globe.



Damine Fairne surveying birds in Wytham woods © Alan Roffey

Field Techniques for Surveying Birds: 11th February-18th March 2013

This course is tutored by Damien Farine based at the Edward Grey Institute of Field Ornithology, in the Department of Zoology at the University of Oxford.

For full details please visit: www.conted.ox.ac.uk/birds02

Field Techniques for Surveying Fish and Amphibians: 22nd March-26th April 2013

This course is tutored by Dr Jon Shrivess who currently works as a marine biologist and fisheries officer for the States of Jersey Environment Department. Dr Steve Green from Operation Wallacea has contributed to the Amphibian part of the course. Techniques for surveying freshwater and marine fish are covered.

For full details please visit: www.conted.ox.ac.uk/fish02



Red-eyed damselfly © Roger Keys

Field Techniques for Surveying Invertebrates: 29th April-3rd June 2013

This course is tutored by Dr Roger Key, a consultant ecologist who is currently training conservation staff on the island of St. Helena to monitor invasive invertebrate species.

For full details please visit: www.conted.ox.ac.uk/invert03

These courses can be taken with or without academic credit which can count towards future postgraduate study, including the University of Oxford **Postgraduate Certificate in Ecological Survey Techniques** due to commence in **September 2013**.

For full details please visit: www.conted.ox.ac.uk/est01

For further enquiries please contact us on +44 (0)1865 286952 or est@conted.ox.ac.uk



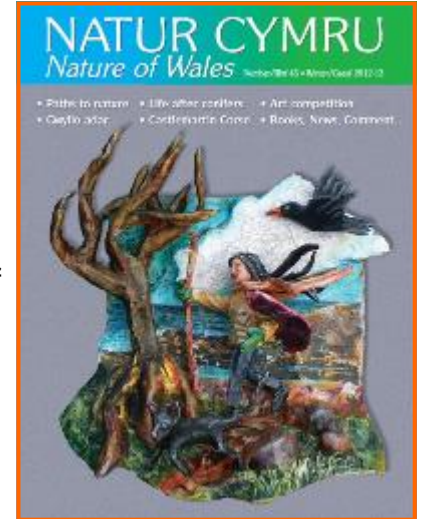


Natur Cymru Inspired by Nature Art Competition

Natur Cymru

Can you paint a wildlife front cover for Natur Cymru? The use of original artwork for the cover of Natur Cymru gives the magazine a distinctive look. More importantly, it portrays what the magazine is striving for: to get below the surface of our relationship with nature, to capture something essential, beyond a photographic reproduction, through the power of imagination.

What we are looking for is a picture with wildlife (animal, plant or anything in between!) in a natural environment that would not be out of place in Wales i.e. not tigers and not just Welsh landscape.



The prizes

1st prize - £250 cash sponsored by [WWF Cymru](#)

2nd prize - £250 voucher towards the cost of a [Plas Tan y Bwlch](#) residential art course

3rd prize - day trip for two to Skomer Island sponsored by the [Wildlife Trust of South and West Wales](#)

4th prize - a £100 voucher for art materials sponsored by [Ken Bromley Art Supplies](#)

Plus of course the winner, and some of the runners up, will be published in *Natur Cymru*.



Dorset RSPB events in March

RSPB Dorset

Wed 13 March 9.30 am-3 pm Hands on with hazel - Garston Wood work party
Fancy doing something a bit different this year? Join one of our regular work parties to help manage the peaceful RSPB Garston Wood. Try coppicing, fence building and loads of other tasks whilst working outdoors with like minded people. Bring a packed lunch. For further information contact: 01929 553360. Free event.

Wed 13 March 10 am-12 noon Wellies and waders at Arne walk
Wrap up warm and join us at RSPB Arne every Wednesday through the colder months to track down the huge array of wildlife the reserve has to offer. Hen and marsh harrier patrol the wetlands hunting the thousands strong flocks of avocet and other waders and wildfowl, fungi grows on the forest floor, male sika stags battle for females who knows what we'll see? For further information contact: 01929 553360. Free event.

Sat 16 March 8.30 am-11 am Spring Song at Arne nature reserve
It's spring and something's in the air. Join us nice and early to track down some of our wildlife that gets going a little earlier than most. We may hear drumming woodpecker, the rare woodlark and the iconic Dartford warbler.
£6 non-members, £3 RSPB members and children free. Booking essential on: 01929 553360.



Wed 20 March 10 am-12 noon Wellies and waders at Arne walk

Wrap up warm and join us at RSPB Arne every Wednesday through the colder months to track down the huge array of wildlife the reserve has to offer. Hen and marsh harrier patrol the wetlands hunting the thousands strong flocks of avocet and other waders and wildfowl, fungi grows on the forest floor, male sika stags battle for females who knows what we'll see? For further information contact: 01929 553360. Free event.

Sun 24 March 9.30 am-3 pm Hands on with hazel - Garston Wood work party

Fancy doing something a bit different this year? Join one of our regular work parties to help manage the peaceful RSPB Garston Wood. Try coppicing, fence building and loads of other tasks whilst working outdoors with like minded people. Bring a packed lunch. For further information contact: 01929 553360. Free event.

Wed 27 March 10 am-12 noon Wellies and waders at Arne walk

Wrap up warm and join us at RSPB Arne every Wednesday through the colder months to track down the huge array of wildlife the reserve has to offer. Hen and marsh harrier patrol the wetlands hunting the thousands strong flocks of avocet and other waders and wildfowl, fungi grows on the forest floor, male sika stags battle for females who knows what we'll see? For further information contact: 01929 553360. Free event.

Sun 31 March 10 am-12 noon Christchurch Winter Bird Boats

Wildlife cruise around Christchurch harbour. Meet at ferry flag on Mundeford Quay. Wrap up warmly as open boat. Booking essential with Mundeford Ferries on 07968 334441. Adults £12, Children (under 13) £6 and RSPB members £10.



Pressures on wildlife – conflicts and ecological debates

Birkbeck Institute of Environment

Wildlife is greatly valued by many of us, but some gives rise to conflicts. Do we all want to see raptors increasing? What about field sports? Can we do anything to stem the inexorable spread of Grey Squirrels at the expense of the native Reds? How best can we halt the spread of TB in cattle, knowing that Badgers carry the disease? Will High Speed Rail cause ecological severance? Most of us would like to see rats controlled, but how far should pest control extend, as far as Feral Pigeons?

Birkbeck Institute of Environment, University of London in conjunction with the Ecology and Conservation Studies Society and the Linnean Society of London Free Public Lecture Series. Including lectures such as 'Trees in trouble: the growing threat from introduced pathogens' and 'Invasive grey squirrels threaten red squirrels: can anything be done?'

Friday evenings at 18:30. Lecture theatre B34, Birkbeck College, Torrington Square, London.

This series promises to be popular, so get there early. For enquiries, e-mail Dave Dawson: ecssoc@gmail.com (tel: 0776 236 4648)



Winter

Photographs

Here are some of the brilliant photographs that didn't quite make the front cover. Hope you enjoy!



© Tamara Morris



Appin, Argyll © Marina Curran-Colthart



Leaping deer © A J Wicks



Winter shot © Stuart Pudney



Ice on burn wood of Cree © Pete Robinson



Near the eastern approach to Striding Edge in the Lake district © Steve Ashby



Roe © Christopher Evans



© Niall Donaghy



View towards Snowdonia from Brynsiencyn ©
Gaynor Ainscough



Roe deer at Star Carr © Tim Burkinshaw



Fly Agaric taken in Kingston upon Thames © Tom
Swinfield