

BIODIVERSITY

NEWS ²⁰¹³



... for all the latest in biodiversity news

| *Issue 62* |

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.



From *the* Editor

My name is Rachel Coombe and I am delighted to announce that I am the latest editor of Biodiversity News. First and foremost, I would like to express a sincere thank you to my predecessor, Alistair Wheeler, whose notes regarding the production of this Newsletter in all of its intricacies have proven highly useful.

Over the course of the past six weeks I have benefited immensely from reading and receiving the latest Biodiversity-related content for this edition. I particularly enjoyed learning about the admirable work of *'Pearls in Perils'* to safeguard the future of the freshwater pearl mussel. Notably, this season's submissions appear to emulate wider biodiversity trends across the UK; the various butterfly and pollinator related photographs we received conceivably reflecting the increased butterfly numbers in the UK this year—encouraging news as highlighted in *'Butterflies Bounce Back'*.

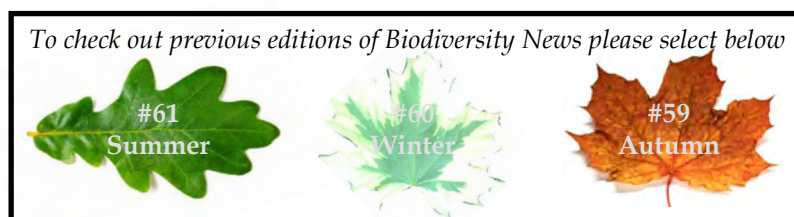
As some of you may notice, I have made several changes to the overall design and layout of the newsletter in the hope of increasing accessibility. I would greatly appreciate any feedback you might have regarding these changes, so please do get in to contact via: biodiversitynews@defra.gsi.gov.uk.

Finally, I would like to extend my gratitude to all those who have contributed to this edition. Your commitment and enthusiasm forms the very backbone of this publication and is of genuine value to its readers; be that in the submission of articles and photographs, or the suggestion of content more generally. Particular congratulations are in order for Ioana Mischie, a member of The Conservation Volunteers, whose striking photograph of a Barn Owl inspires acclaim as winner of the 'Front Cover Competition', and to Jason Reeves, whose photograph of autumn leaves features extensively within the new format of this edition and plays an important part in engendering its seasonal tone.

I hope you enjoy reading this edition as much as I have enjoyed producing it.

Yours faithfully,

Rachel Coombe





EUROPE TAKES ACTION TO COMBAT THE THREAT FROM INVASIVE NON-NATIVE SPECIES

Biodiversity Programme, Defra

In September, the European Commission published its proposals for tackling the threat posed by invasive non-native species in the form of a draft regulation.



Non-native species are those species introduced outside their natural past or present distribution. It is estimated that there are over 12,000 non-native species in Europe, the majority of which pose no significant threat. However, around 10-15% of these species, known as invasive non-native species (or invasive aliens species), will cause significant environmental, economic and social damage. To illustrate, Japanese Knotweed, which was introduced into Great Britain in the 19th century as an ornamental plant, has become widespread across a range of habitats. It causes significant environmental and economic damage, estimated to cost the British economy £166 million per year.

The European Commission's proposals centre on a list of invasive non-native species of most concern to the European Union. For these species, there will be stringent restrictions in place preventing them being imported, transported, sold, used or exchanged, kept or grown, allowed to reproduce or released into the environment.

The proposals also set out a framework for:

a surveillance and early warning system:

- eradication of listed species when they are first detected;
- measures for longer term management of listed species;
- restoration of damaged ecosystems caused by listed species;
- action to address priority pathways by which invasive non-native species spread; and
- provision for individual Member States to take action to address intentional releases of invasive non-native species of particular concern to them.

The list of invasive non-native species of most concern to the European Union will be drawn up in consultation with Member States but will not be finalised until after the regulation comes into force. More information is available from this link - <https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?sectionid=7>

Defra will be leading the negotiations on the draft regulation on behalf of the UK Government. To date, effective collaboration with a range of partner organisations has been fundamental to the delivery of invasive non-native species policy and we aim to build on this during negotiations on the draft regulation. An initial workshop with stakeholder organisations was held in October to explore the regulation and agree a mechanism for stakeholder input into the UK negotiating position.

THE FUTURE OF BIODIVERSITY OFFSETTING

Biodiversity Offsetting Team, Defra

On the 5th of September Defra published a consultation paper on Biodiversity Offsetting, available here: https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting.

What is biodiversity offsetting?

Biodiversity offsetting ensures that when a development damages nature (and this damage cannot be avoided) new, usually bigger or better nature sites will be created. It has been suggested by some commentators that offsetting will create a 'licence to trash' for developers. This simply is not true, offsetting would not replace the need for any development to obtain planning permission and should only be seen as a last resort when efforts to avoid or minimise damage have been exhausted. Offsetting therefore should guarantee there is no net loss from development and supports the Government's ambition to achieve net gain for nature.

What it can offer developers is a simpler and faster way through the planning system. By taking a metric based approach, it can be quicker and more straightforward to agree a development's impacts on nature and can create a ready market to supply compensation for residual damage.

Why is Defra interested in biodiversity offsetting?

Biodiversity offsetting was one of the priority recommendations made in the Ecosystems Market Task Force report, 'Realising Nature's Value', which was published in March 2013. The report proposed a number of new actions, including biodiversity offsetting as a means of tackling biodiversity loss and achieving economic growth. The Task Force, a group of business leaders chaired by Ian Cheshire, Chief Executive Officer of Kingfisher, described biodiversity offsetting as an initiative which would achieve a "net gain for nature". Since this report Owen Paterson has held two summits to get the views of developers, conservation bodies, planning professionals, economists and others. These confirmed the level of interest in the concept and that the success, or failure, of offsetting will depend on the detail of the scheme we adopt.

"Offsetting is an exciting opportunity to look at how we can improve the environment as well as grow the economy."

Owen Paterson

What are the key issues?

Defra recognises that getting the detail right will be critical if we are to ensure offsetting delivers for the environment and the economy. We have been running six pilots since 2012 and we are monitoring and learning from them. We are keen to hear from interested parties in particular on the key issues the consultation paper looks at such as:

- *Should offsetting be voluntary for developers or a requirement?
- *Where and how should offsets be located?
- *Whether it should be a national system and whether there should be any restrictions to what can be offset?
- *Should species be included and if so all species or just some, and how?
- *Who should assess sites and how should offsets be secured and managed?

Defra have set up an online consultation at: <https://www.gov.uk/government/consultations/biodiversity-offsetting-in-england> The consultation will run until 7th November.

DELIVERING **BIODIVERSITY 2020**

Liz Crocker, Biodiversity Team, Defra



Front cover of Biodiversity 2020 report © Defra. To read the full report, follow [Biodiversity 2020](#)

England's biodiversity is unique and special. We need to preserve it for its intrinsic value, but also for its value to society through ecosystems services such as alleviating flooding, regulating our climate and purifying our water. In 2010, Defra published a new biodiversity strategy for England: *Biodiversity 2020 (B2020)* which set out its ambition to halt biodiversity loss by 2020.

B2020 is not miles away from the former UK Biodiversity Action Plan – but signals a step-change as it operates at the landscape-scale in response to the call for bigger, better and joined up areas for wildlife in the landmark *Making Space for Nature* report.

We've made good progress in the last two years - setting up networks of Nature Improvement Areas and [Local Nature Partnerships](#) - which aim to deliver biodiversity benefits at the local level. We have also had direct contributions to B2020 from the extractives and agricultural industries via the National Farmers' Union, Country, Land and Business Association and Mineral Products Association as well as our delivery bodies such as Natural England the Environment Agency, and the Forestry Commission and a variety of NGOs and local conservation groups.

Local knowledge and actions are key to delivering B2020 outcomes; in response to stakeholder feedback we have created a new online resource, our [Biodiversity 2020 Google+ page](#) which contains useful documents and case studies to help inform delivery on the ground. The site contains some of the new materials which we recently released in our B2020 Progress report, which includes an indicative list of priority habitats to inform partners' delivery plans, and a guide to funding sources. We have also posted some useful 'how to.' guides, including how to report your biodiversity achievements via the Biodiversity Action Recording System (BARS2) so you can capture your contribution to B2020. The Google+ page also hopes to be a resource for businesses, showcasing best practise and offering guidance on the contributions that businesses can make. Relevant posts include: 'The economic benefits of Green Infrastructure', '3 easy ways for businesses to get involved' and relevant case studies – so please encourage local businesses to check it out! We are also active on Twitter [@DefraNature](#) which will keep you updated on everything going on.

The opportunities to contribute to B2020 will vary in different areas of the country, so it's up to local groups to identify the most appropriate actions in your area. Your Local Nature Partnerships and local area Natural England team are making sure advice is available to you; including news about what is happening locally. There is a huge amount of good work going on to deliver for biodiversity, but this is a big challenge and we need to do more, let us know what else we can do to support you.

HOT SUMMER *Helps Butterflies Bounce Back*

Butterfly Conservation

Long spells of warm sunny weather in July and August provided a much needed boost for our beleaguered butterflies with four times as many recorded during this year's Big Butterfly Count than in 2012.



©Butterfly Conservation

A record-breaking 46,000 people took part counting more than 830,000 butterflies and day-flying moths across the UK. Washout 2012 was the worst year on record for butterflies and had followed a series of poor summers which had compounded the long-term declines of many UK butterflies. But perfect conditions this summer saw butterflies boom with large numbers recorded across the UK's gardens, parks, school playgrounds and countryside.

Butterfly spotters counted almost twice as many individuals (on average) compared with 2012. The whites did well, with both Large White and Small White numbers up by more than 300%. Small White topped the Big Butterfly Count 2013 chart with the Large White in second place and Peacock a surprise in third. Garden favourite the Small Tortoiseshell recorded its best Big Butterfly Count result yet, coming sixth.

Although the whites were very abundant it was the huge increase in Small Tortoiseshell and Peacock numbers that delighted the butterfly watching public. Both species have declined worryingly in recent years, but the Big Butterfly Count results are very promising, with Small Tortoiseshell numbers up by 388% compared to 2012 and Peacock numbers up by more than 3,500%.

In all, 15 of the 21 Big Butterfly Count species increased in 2013 compared with the previous year, and 12 of these were up by at least 50%. Several species that fared particularly well last year dropped back considerably. Ringlet and Marbled White numbers fell by over 50% and counts of Meadow Brown and Six-spot Burnet moth were also down on 2012. The warm weather has seen an increase of migrants from the Continent with Clouded Yellow, Painted Lady and Silver Y moth seen in impressive numbers. The Long-tailed Blue, a rare migrant from the Continent, has also been reported along the south coast of England, from Devon to Suffolk during August.

Butterfly Conservation Surveys Manager Richard Fox said: "It has been a truly memorable summer for butterflies, a wonderful spectacle for the many thousands of people who've helped with the Big Butterfly Count and a lifeline to the UK's hard pressed butterfly populations.

"It reminds us that butterflies are resilient and will thrive given good weather and suitable habitats. The problem facing UK butterflies is not the notoriously variable weather but the way that humans manage the landscape.

"The record-breaking support for this year's Big Butterfly Count shows the public is concerned about wildlife and willing to do something to help stem their long-term declines."

For the fourth year running, the Big Butterfly Count took place in partnership with Marks & Spencer as part of its Plan A commitment to be the world's most sustainable major retailer by 2015. >

Joanna Lumley, M&S Plan A Ambassador, said: “It is wonderful news this was a record breaking year for the Big Butterfly Count with the highest ever number of people taking part. Butterflies are magical creatures that are crucial to our environment, and this year’s count success shows that by giving up just 15 minutes of our time we can all play our part to help secure their future.”

Mike Barry, M&S Head of Sustainable Business said: “At M&S we want to ensure our business makes a positive contribution to the environment. Supporting the Big Butterfly Count is a perfect way to engage our customers, farmers and employees with the importance of butterflies - we are delighted that so many of them took part in this year’s count and it is great news that four times as many butterflies were recorded this year.”



©Butterfly Conservation

Big Butterfly Count 2013 – Top 10 Species Ranking

| | | |
|-----------|----------------------------|--------------|
| 1 | Small White | 154,438 seen |
| 2 | <i>Large White</i> | 136,944 seen |
| 3 | Peacock | 130,796 seen |
| 4 | <i>Meadow Brown</i> | 88,547 seen |
| 5 | Gatekeeper | 76,935 seen |
| 6 | <i>Small Tortoiseshell</i> | 49,418 seen |
| 7 | Green-veined White | 38,988 seen |
| 8 | <i>Ringlet</i> | 31,206 seen |
| 9 | Six-spot Burnet | 18,681 seen |
| 10 | <i>Comma</i> | 17,230 seen |

Results can be found at www.bigbutterflycount.org

A FUTURE FOR WETLAND WILDLIFE IN THE ALDE-ORE ESTUARY, SUFFOLK

David Mason

The National Trust and the RSPB are working together on part of the Suffolk coast for the benefit of internationally important wildlife, habitats and landscape. The LIFE + Alde-Ore Future for Wildlife project has created new wetland habitat, improved water management and helped reduce damage and disturbance to rare and fragile shingle vegetation. The project, supported by the European Union's LIFE+ Nature programme together with the SITA Trust, Biffaward, the Environment Agency and the Neptune Coastal Campaign, is now in its final year.



©NT/RSPB

National Trust's Orford Ness National Nature Reserve and RSPB Havergate Island NNR already contain large areas of superb wetland habitats. However recent trends have been towards drier periods in spring and early summer and there have been difficulties sustaining adequate water levels on these sites. Managing these levels is important for the species that make their home here. This is the critical period for breeding waders for example. Their new chicks need to be able to feed in the spring and early summer on invertebrates found in shallow water. They also need the moist, bare mud that develops around the edges of pools and ditches as water evaporates. This is so they can penetrate the ground to reach this food source lying below the surface layers.

Following two years of planning and a frantic few months of activity the plans came to life during the winter of 2011-12 and contractors created new water management systems on both reserves. Extensive re-profiling of the lagoons and islands has improved water flow and nesting and feeding areas for birds, as well as reducing cover for predators which feed on the bird's eggs and chicks. Water levels can now be managed to create optimum conditions for wildlife year round. Water quality has improved and fish and invertebrate biomass for feeding waders has increased. By deepening existing scrapes and creating new saline lagoons, pools and ditches on Orford Ness it is now possible to hold water on site for longer. We have created 6 ha of new and improved saline lagoons and scrapes on the coastal grazing marshes and improved connectivity with 2.5 km of new ditches.

During the military and more recent agricultural regimes that governed the site's management for many years, the emphasis was on removing water quickly and efficiently. A system of pumps, ditches and drains was in place to maintain dry conditions in order to allow planes to land and crops to be grown. The emphasis is now on maintaining high water levels to benefit wildlife that like wet grassland, reed beds, mud and open water. ➤



©NT/RSPB

Rather than relying only on rainfall, which has been increasingly scarce, the new system allows the National Trust to maintain optimum water levels throughout the year by bringing in water during dry periods through three new sluices from a tidal creek. As the site is below the level of the surrounding river flooding is also an issue. We are also able to return any surplus water and rainfall to the River Ore through a more efficient pumping system during the winter months. Low bunds and water controls enable us to hold water at different levels in different compartments and the new ditch system links the system together and create a flow of water around the site. Further work has been undertaken this summer to create a network of foot drains which will hopefully increase opportunities for breeding lapwing and redshank.



©NT/RSPB

The improvements on both sites have attracted increased numbers of feeding or breeding waders such as avocet, ruff, black-tailed godwit, lapwing, redshank, curlew and golden plover as well as many wildfowl. Other birds like barn owl, reed bunting, linnet, skylark, herring gulls and little tern have benefited from improved conditions along with marsh harrier, spoonbill and short-eared owl.

Brown Hares graze the verges, harvest mice nest in corridors of longer grass and otter inhabit ditches and banks. The unusual starlet sea anemone is abundant in the saline lagoons.



©NT/RSPB

Salt marsh short-spur ground beetle and brown-banded carder bee and water vole have been found on recent surveys at Orford Ness. Recording of species, biomass, water quality and water levels, undertaken as part of the project, should ensure that the effects of the habitat changes are monitored and management can adjusted.

www.lifealdeore.org



WORKOUT IS GOOD FOR CHOUGHS

John Bark, The Conservation Volunteers

What do a heraldic device and a Highland cow have in common with a healthy workout?

It's the charismatic red-beaked corvid, the Cornish Chough (*Pyrrhocorax pyrrhocorax*). Gracing Cornwall's coat of arms and said to be the reincarnation of King Arthur, its return from extinction is being assisted by The Conservation Volunteers local Green Gym, and a herd of Highland cattle.

Since choughs returned to the Lizard in 2001, their offspring have formed a separate colony on the Penwith Peninsula, where four confirmed pairs have fledged 37 chicks since 2008. Here, once a month, the Green Gym volunteers clear gorse on the cliffs at Chypraze Farm, where earth and scrub cover relics of Cornwall's lost tin industry.



©Tony Blunden

The farm is under a Higher Level Stewardship agreement, part of a landscape scale project along the North cliffs. Conservation partners include the National Trust, Cornwall Wildlife Trust, RSPB and Natural England. With the gorse cleared, the resident herd of highland cattle move in to maintain a mosaic of open, short grassland Choughs can forage for food. The cattle's fibre-rich dung is an excellent source of invertebrates, especially for first-year birds. Bluebells, violets and other wild flowers also flourish across the area, which is awash with foxgloves and bees in summer.



©Jadie Baker

Cornwall Green Gym, funded by HealthPerfect with £45,262 from the Health Lottery, is also doing the volunteers a power of good. Working and learning new skills in beautiful surroundings overlooking the sea and fed with pasties and sausages from the farm's free-range livestock, many are making comebacks of their own. Eve, 64 has volunteered for 9 months. "I exercise doing something really interesting, meet people, see places and learn something new every week. It's fun!" The Gym is

part of Eve's fitness plan and she has lost 4st - in spite of those pasties! ➤

20 years-old with Asperger syndrome, Tomas's experience with people at college was unhappy. "After I left, I only went out to catch the bus for groceries. Since volunteering I feel much better. Now I seek opportunities to be with people and dwell less on my worries. I enjoy making a difference". Tomas has started a Graphics course but joins in when he can.

Lionel, laid off in 2003 at 48, became depressed. He cared for his mother for 6 years until she died. Then his GP referred him to a health trainer who told him about the Green Gym. "I was shutting off from the world but this has improved my outlook. I grew up on a farm, like nature and being outdoors, so it's absolutely brilliant. I'm fitter, more alert, and go out on other days. I've even started to sort out my garden after 10 years!" A keen birder, Lionel enjoys sharing his passion for nature.

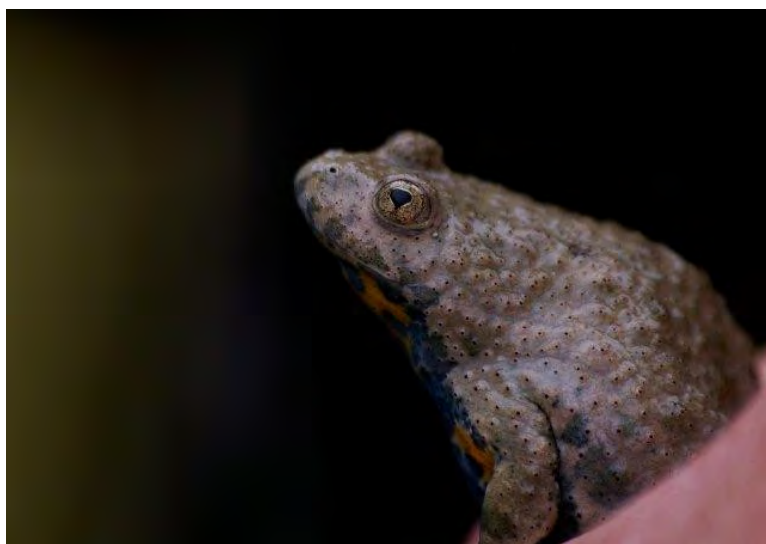


©Jadie Baker

Join in, feel good: Cornwall Green Gym meets on the first Thursday of every month at Chypraze Farm and other sites weekly. Contact j.baker@tcv.org.uk

Restoring Mineral Sites for Biodiversity, People and the Economy

Nature After Minerals



Yellow-bellied toad at Grensmaas Quarry, in the Netherlands ©Nigel Symes (RSPB)

RESTORE is a new project of seven partner organisations (RSPB, Surrey County Council, Provincie Limburg, VLM, IKL, ENCI, ILS) coming together to work for the appropriate and sustainable restoration of mineral sites across North-West Europe.

Thanks to funding from the European Regional Development Fund, through the Interreg IVB NWE programme, the RSPB is acting as the lead within a partnership of organisations working across the UK, Belgium, the Netherlands and Germany. The project encompasses much of the on-going work of the Nature After Minerals (NAM) programme - a partnership between RSPB and Natural England.

RESTORE's objective is to enhance biodiversity delivery and other public benefits from the appropriate restoration of quarries. It will focus on distinct areas of work under four Work Packages (WP):

- ◆ (WP1) **Minerals policy** — developing a best practice guide for North-West Europe
- ◆ (WP2) **Restoration** — the piloting and demonstration of innovative methods
- ◆ (WP3) **Mapping Tool** — highlighting biodiversity resources to inform future minerals planning >

◆ (WP4) **Ecosystem Services** — assessing the 'services', and their value to communities, of different restoration options

The week commencing 23rd September was a key milestone in the project's development. It marked the official launch of the project with a high-profile reception at the Institute of Materials, Minerals & Mining in London, addressed by Catherine Bearder, MEP for South East England, together with the Mineral Products Association's (MPA) Chief Executive, Nigel Jackson and the RSPB's Head of Conservation Policy, Sue Armstrong-Brown. Representatives from across all sectors in and around the minerals industry were in attendance to receive updates on the project's aims and objectives, under all work packages and across all partnership countries.

The following day, RESTORE partner Surrey County Council, hosted the first of a series of seminars which specifically looked to consider the effect of minerals planning policy on the ground and reflect on what more could be done to meet the needs of biodiversity and 2020 targets, across this part of Europe. Speakers included Lester Hicks, Chair of the UK Minerals Forum, Surrey's own Simon Elson, Principal Environmental Enhancement Officer, together with representatives from Surrey and Somerset Wildlife Trusts, Sibelco, Nature After Minerals and planning specialists from the Province of Limburg and Germany.

The week also provided an opportunity for partners to meet and discuss on-going progress on different aspects of the project – whether it be assessment of flood alleviation services at the Grensmaas project next to the River Maas in the Netherlands; further developmental work to safeguard the future of the eagle owl and provide access for local communities at ENCI quarry next to Maastricht, or the final selection of suitable sites to demonstrate evidence of effective and innovative practice in the appropriate and sustainable restoration of mineral sites for biodiversity and local people.

Plans are underway to report on the project's progress at a further gathering and seminar scheduled for the early part of June 2014, in Dortmund. Specific details of the date and venue will be released shortly.



For further information relating to the RESTORE project, contact:

Bea Ayling, RESTORE Project Co-ordinator at bea.ayling@rspb.org.uk

European Eel Citizen Science Programme

Joe Pecorelli

The number of young eels joining the adult populations in UK rivers has crashed in the last 30 years. In response The Zoological Society of London (ZSL) has established a volunteering programme using 'Citizen Scientists' to deliver the conservation of the European eel, explains ZSL's Joe Pecorelli



An elver after its long journey from the Sargasso Sea
©Alexander Zalewski/ZSL

The European eel is an iconic species with a life cycle that encompasses a 10,000 km round trip migration from the Sargasso Sea and back. Since 2008 the eel has been listed as Critically Endangered by the International Union for the Conservation of Nature (IUCN). Statutory measures have been put in place to try to address decline in eel populations including the European Council Regulation No 1100/2007. Within the UK, ZSL has championed eel conservation since 2004 through initially convening meetings drawing together eel specialists to define need and design the necessary action to aid species recovery. In addition, ZSL repeated research of the 1980's to understand levels of eel immigration and confirmed that there was a 90% reduction in recruitment of eels in London.

Today, ZSL works to deliver sustainable management of eel populations at an international level through chairing the IUCN anguillid specialist group; nationally through the Sustainable Eel Group and regionally through the Thames Eel Management Plan Implementation Group. The ZSL Thames elver monitoring programme is the first, largest and most wide ranging in the country. The data produced provides a unique insight into eel recruitment at a national level and is used in both regional and national eel management plans. ZSL field staff have been monitoring the upstream elver migration in four of London's rivers for the last eight years. In 2011, in order to expand the programme, we started to engage the help of volunteer citizen scientists in this research. We have so far trained 284 citizen scientists and this year have been monitoring at 15 sites.

The project endeavours to work with existing volunteer groups that may already be active in a region. The programme currently encompasses 13 partnership organisations. At each monitoring site ZSL's responsibility is to provide risk assessments, monitoring protocols, training, insurance, Environment Agency (EA) licenses, monitoring equipment (including the trap), on-going support and advice. The site partners co-ordinate the trap checking, report faults and ensure the data are uploaded. In partnership we promote the scheme to recruit new volunteers through avenues such as social and print media, universities, colleges, community groups and special interest groups. >



Map showing the 2013 CS sites

During the upstream juvenile eel migration period, April to October, citizen scientists check their eel traps twice a week. The number and size of all trapped eels are recorded and data are uploaded on to the ZSL database. At the end of the monitoring season these data are fed into the EA's Eel Management Plan for the Thames River Basin District and all our volunteers are invited to London Zoo's eel forum to get feedback on the monitoring season. The EA use the data to validate models used for decision making, for the management of the eel stocks and in their statutory reporting to the European Commission. The data also enable the EA to prioritise their investments in river improvement, such as weir removal and fish pass installation to facilitate fish migration.



Eel training on the River Lea with Thames 21 Courtesy © ZSL



Installing an eel pass with our partners, North West Kent Countryside Partnership on the River Darent. © Joe Pecorelli/ZSL

The programme is now entering its next stage. We are moving away from just monitoring, to encourage better stewardship of our rivers, which involves making physical improvements to the river and opening up access to more eel-habitat. In 2013, for example, we have worked with our citizen scientists to build eel passes over weirs that have been highlighted by the monitoring as barriers to migration. It is a very important time for the programme as we progress from data gathering to practical, evidence based, conservation work that improves rivers for eels and consequently others species too.

If you would like to become an eel volunteer and join in this important work, we would love to have you on board. Please contact us on (+44)20 7449 6446 or marineandfreshwater@zsl.org.

Acknowledgements

We would like to thank our project partners: Kingston University, The Wandle Trust, Medway Valley Countryside Partnership, North West Kent Countryside Partnership, The Thames Rivers Restoration Trust, London Wildlife Trust with Friends of The River Crane Environment, Thames 21, The Wildfowl and Wetland Trust and The Thames Anglers Conservancy. The project is kindly funded by the Esmée Fairbairn Foundation and the Environment Agency.

FROM MUSHROOMS TO MARSHES:

creating a diverse wetland habitat from a mushroom farm

WWT Consulting

WWT Consulting has been working with Horsell Common Preservation Society (HCPS) in Surrey to convert a disused mushroom farm into a nature reserve and open space, creating opportunities for native biodiversity to thrive and for people to enjoy it. The site was dominated by a number of large farm buildings and vast expanses of concrete which HCPS wanted to remove and replace with a mixture of wetland habitats that would be open to the public and that could be used by local schools for educational visits.

Starting in 2010, WWT Consulting first carried out a feasibility study of the site and produced a number of concept plans which included wildlife ponds and wetlands, educational facilities such as pond dipping platforms, access for dog walkers and a wetland treatment system to treat waste from the planned offices at the site.



Marginal Planting ©WWT Consulting

Following the demolition of most of the original buildings, bar a small office block that survived and will become the headquarters for HCPS, WWT Consulting was able to produce detailed designs for the site and then worked closely with HCPS and their contractors, Land and Water, to ensure that the landforming and construction on site met the design specifications. Heavy machinery left the site in May 2013 and a day of planting was organised in June with volunteers, WWT Consulting staff and members of the Land and Water team providing the kickstart needed to help plants and habitats establish at the site.

The design has seen over 60% of the site changed from its original purpose into a range of wetland habitats that will hopefully encourage a diverse mix of wildlife to the site. A dog walking area adjacent to the car park links into the local footpath network and the rest of the site is split into three wildlife zones with reducing amounts of disturbance to wildlife. The first area features a short pathway, pond dipping areas and boardwalks for easy access; the second features areas of marsh, ponds and woodland and also overlooks an area of open water; the third area contains a lake, a large area of marsh and wet grassland and also holds the wetland treatment system which will treat waste from the offices and run-off from the car park in a sustainable drainage (SuDS) feature.

HCPS hopes to open the site to the public in 2014 and cannot wait to see how the habitats develop and which species colonise the site. This project has provided a unique opportunity to create habitats on an almost blank canvas and it is hoped that the site will become a haven for wildlife and a place that brings wildlife closer to the public.

WWT Consulting, part of the Wildfowl & Wetlands Trust www.wwtconsulting.co.uk



Broadwalk and habitat under construction © WWT Consulting



'Pearls in Peril' (PIP) is a UK wide project to safeguard the future of the freshwater pearl mussel (FWPM) in Scotland, England and Wales. PIP is funded through the European Commission LIFE Nature programme and by 14 organisations across the UK. The project runs until September 2016.

Fundamental to the project are actions that will restore river habitat to benefit FWPM and salmonids (Atlantic salmon and trout) on which the pearl mussel lifecycle depends; secure the long-term survival of existing populations; and raise awareness of FWPM conservation issues with local, national and international audiences.

On the River Dee in Aberdeenshire, a programme of riparian enhancement has begun, with tree enclosures now in place along the banksides of two tributaries. The aim is to establish areas of wooded buffer strips to create dappled shade, improve the nutrient status of the watercourse and help stabilise banks. All of this will have knock-on benefits for biodiversity, in particular FWPM and Atlantic salmon. This is the start of things to come, as 70 km of river bank will be planted in the next 3.5 years.

A River Watcher has been appointed and is based in Beauly, Highland. The main aim of this post is to combat illegal activities concerning pearl mussels such as pearl fishing and pollution. Working closely with the Police Scotland and the National Wildlife Crime Unit, fisheries trusts and landowners, the River Watcher will collect evidence of suspected crimes and set up river watch schemes. These schemes will inform river users about illegal activities, what to look for and how to report any evidence. The schemes have been well received and a great deal of awareness has been raised. Unfortunately this summer evidence of poaching has been found at a number of sites, with reports of suspected incidents elsewhere.



©Chris Daphne

A ditch blocking programme is being designed by our Welsh Project Officer in collaboration with Natural Resources Wales to combat the high level of silt currently draining into the Afon Eden from a large forestry plantation. Large amounts of silt can suffocate FWPM and result in poor habitat for salmonids. Blocking ditches will prevent the silt draining into the river and will improve the river habitat. ➤



©Jackie Webley

For the first time in England, glochidia (microscopic mussel larvae) have been artificially introduced to their host fish at the River Ehen. Glochidia attach to fish gills where they live and grow for their first few months of life without harming the fish. After approximately 10 months they drop off and bury themselves in the riverbed. This artificial introduction is one of the many actions of the Pearls in Peril Project to aid the recovery of the declining population in the River Ehen. The Ehen is home to the largest population of Freshwater Pearl Mussels in England, but the population is an ageing one.

Our 'Pearls in the Classroom' education programme is also underway, as fisheries trusts have the target of visiting 150 primary schools over the duration of the project. Children aged eight-to-eleven learn about the lifecycle of the FWPM and the threats to its survival, and take part in a range of indoor and outdoor activities. Educational materials will soon be available to all on our website, as well as further details about the project. <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/life-projects/pearls-in-peril/>

Twitter @MoTheMussel



Local and Regional



Recovery Programme to Save Rare Wildflower Launched

The Species Recovery Trust

©Alfred Gay

The Species Recovery Trust has this year launched its 'Saving Dwarf Milkwort' project, which aims to protect one of the most endangered plants in the country. Dwarf or Chalk Milkwort (*Polygala amarella*), as its various names suggest, is a small wildflower found on chalky grasslands. In recent years this plant has experienced a catastrophic decline, with changing agricultural practices driving a number of local extinctions.

One of the last strongholds of the species is in Kent where the plant is now found at only three sites. The 'Saving Dwarf Milkwort' project began with a survey of these sites to discover how many plants remain and to identify any potential threats to future survival. At one of these sites the population continues to decline and this year hit an all-time low of only one plant, a reduction from 17 found last year. Clearly, intervention will be necessary to prevent these vibrant wildflowers from being lost from yet another site. ➤

As part of the project, the Species Recovery Trust therefore plans to work closely with the landowners to try to restore the habitat at this site, to give the plants the best chance of recovery.

The precarious position of the Dwarf Milkwort, however, also demands more radical action and so a major focus of the project will be a reintroduction programme. Seed will be collected next summer from the most robust of the Kent populations and will be propagated at the Millennium Seed Bank at Wakehurst, ready to be reintroduced over the next few years. There are a number of sites in Kent where Dwarf Milkwort became extinct relatively recently, but where conditions have since improved. Hopefully, some of these sites will soon be supporting stable populations of reintroduced Dwarf Milkwort.

Volunteers from the local communities will be trained to monitor these sites, so that we can ensure that the populations remain stable and hopefully expand.

For more information about volunteer roles or about the project, please see the Species Recovery Trust website:

<http://www.speciesrecoverytrust.org.uk/>.



©Suzanne Bairner

Muirton's Buzzing is an exciting project which has created habitat for pollinating insects in an area of stalled space off Dunkeld Road in Muirton, Perth. Buglife are working in partnership with Tayside Biodiversity Partnership and Perth and Kinross Council during the project which is funded through the Landfill Communities Fund SITA Tayside Biodiversity Action Fund.

The meadow was sown in June 2012 with the seed mix 'Get Nectar Rich Quick' from Scotia Seeds who sell wildflower seeds of known local provenance. The wildflower mix includes 23 different annual, biennial and perennial wildflower species. In August 2012, the meadow was alive with colour bringing life to the area providing a healthier environment



©Suzanne Bairner

for local people. The flowers provided a vital food source for a range of pollinating insects including all 6 of the commonly seen bumblebees and the solitary bee *Colletes daviesanus*. >

This summer the meadow has again been in full bloom with perennial wildflowers including Kidney vetch (*Anthyllis vulneraria*) and Red clover (*Trifolium pratense*) and biennials including Vipers bugloss (*Echium vulgare*) and Wild carrot (*Daucus carota*) providing yet again colour to the landscape and foraging habitat for pollinators.

A wildflower planting day on the 2nd of May 2013 with a class of primary 4 pupils from the neighbouring St Francis Primary School, part of North Inch Community Campus, saw 250 plugs planted in 50 minutes! The planting day taught the children how important wildflowers are for pollinators while getting the class outside creating habitat in their local area.



©Suzanne Bairner

The meadow is on an area of land which has previously been cleared for housing but development is currently stalled. The area surrounding the meadow has now become brownfield land.

Open Mosaic Habitat on Previously Developed Land is a UKBAP priority habitat and Buglife held a talk to not only promote the Muirton's Buzzing project but also the importance of brownfield sites to local councillors as well as people from local community groups to attend.

Read more about the project at:

<http://www.buglife.org.uk/conservation/Scotland/Muirtons+Buzzing>

Fairy Shrimps

Hazel Willmott

While carrying out pond surveys for South Gloucestershire Council I was amazed and delighted to find Fairy Shrimps, *Chirocephalus diaphanus* in one of the ponds. At the end of february I was netting a very small dark and murky looking pond completely surrounded by scrub, when to my surprise I caught these beautiful looking little creatures. One was carrying an egg sac.



©Hazel Willmott

The Fairy Shrimp is a beautiful translucent crustacean up to 35mm long, lacking a carapace, and bearing 11 pairs of legs fringed with bristles which propel the animal through the water, usually on its back. The head curves downwards and in males the second pair of antennae are modified claspers for grabbing females during mating. The Fairy Shrimp is considered rather primitive and occurs locally and sporadically in temporary pools, muddy ruts and puddles. It shows a preference for sites that are regularly disturbed by vehicles, livestock or ploughing. It tolerates varying levels of temperature, oxygen levels and water chemistry. It feeds on microscopic animals and organic particles which are either taken from the water with the legs or scraped from the bottom of the pond. It has an extremely fast life cycle and the fairy shrimp eggs are able to survive when the temporary pond dries out. >

They hatch when the pond fills with rain or snow melt and develop rapidly. Mature egg-carrying females may be present within one or two weeks. However some eggs remain dormant so that if conditions deteriorate again some eggs will survive. Fast hatching summer eggs are also produced which enable a rapid build-up of a population to take place during favourable conditions. Fairy Shrimps can only survive in the absence of such predators as fish or carnivorous insect larvae. (Fitter and Manuel 1986). (www.arkive.org/fairy-shrimp/chirocephalus-diaphanus).

Status

The Fairy Shrimp is classified as Vulnerable in the British Red Data Book, fully protected in the U.K. under Schedule 5 of the Wildlife and Countryside Act 1981 and listed as a Species of Conservation Concern under the U.K Biodiversity Action Plan, although it is not a Priority Species.

It is the only Fairy Shrimp in Britain and found in only 100 ponds, now 101! Featured on Royal Mail stamps; Ponds – Freshwater Life 1 (www.royalmail.com/postandgo), this creature has previously only been recorded in Devon, Cornwall, Cambridgeshire, Oxfordshire, New Forest, East Anglia, Wales and parts of Sussex Weald. As far as I am aware it has not been recorded in this area. The Fresh Water Habitats Trust, previously Pond Conservation, is including this pond in their data: 'Important Areas for Ponds'.

I feel privileged to have seen this very beautiful rare animal which has such an ephemeral lifestyle.

Record Breaking Summer for Somerset's Wetland Birds!

Natural England

Celebrations as one of the West Country's premiere wetlands produces a bumper crop of rare birds.

Conservationists in Somerset are celebrating this week with the news that the Avalon Marshes has had its best year ever for breeding birds.

The Avalon Marshes is a huge wetland recreation site to the west of Glastonbury managed by Natural England, Somerset Wildlife Trust (SWT), Hawk and Owl Trust and the RSPB.

Following the first UK nesting great white egrets last year in the marshes, this summer has seen two pairs nest; one again at Natural England's [Shapwick Heath National Nature Reserve](#) (producing two youngsters) and a new pair within the boundary of the RSPB's Ham Wall nature reserve (producing three young).

The RSPB reserve at Ham Wall has also been host to a nesting pair of little bitterns. This is the only known UK breeding location for these remarkably shy and diminutive members of the heron family and this year two young birds successfully fledged.

And, to add to the totals, great bitterns have had yet another amazing year across the Avalon Marshes. On RSPB, SWT and Natural England's land, as many as 33 "booming" males have been heard across the wetlands. This makes the area now one of the UK's hotspots for this rare and remarkable bird.

Alongside the nesting bitterns and egrets, the wetlands have also provided a home for marsh harriers, with four nests producing 13 young.

Simon Clarke, Natural England's Senior Reserve Manager for Shapwick Heath and the Somerset NNRs, said: "This year's breeding success at Aval-

on Marshes is a great example of how strong partnership working can genuinely benefit threatened and vulnerable wildlife species. The partner organisations have all worked closely together to develop this habitat on a landscape scale. And the result is a safe, abundant and well-managed environment that is providing feeding and nesting opportunities for a startling range of wildlife."

Simon Clarke, Natural England's Senior Reserve Manager for Shapwick Heath and the Somerset NNRs, said: "This year's breeding success at Avalon Marshes is a great example of how strong partnership working can genuinely benefit threatened and vulnerable wildlife species. The partner organisations have all worked closely together to develop this habitat on a landscape scale. And the result is a safe, abundant and well-managed environment that is providing feeding and nesting opportunities for a startling range of wildlife."



Great white egret feeding ©akwildlifeimages

It has been an amazing year for heron species. On Shapwick Heath NNR alone, dedicated bittern monitoring by our volunteers indicated the presence of at least seven nests, including on one of the islands there. On a more secluded part of the reserve, we were privileged to have great white egrets breed for the second year in the row, with two chicks being successfully reared. These young snow-white birds with their bright yellow beaks can now be seen on the wader scrape alongside other great white and little egrets – with both species roosting here too. There have been up to 10 great white egrets and up to 96 little egrets recorded entering the night time roost on Shapwick.

Continued >

Ray Summers, RSPB warden for Ham Wall said: “We are all absolutely delighted. Since we took on the land at Ham Wall back in the mid 1990s we’ve been working hard to recreate a pristine wetland. To have all these nesting egrets, bitterns and harriers is a fantastic seal of approval for the work we’ve done, it really demonstrates the quality of the site for wildlife. We are also enormously grateful for the team of dedicated volunteers who have worked hard this summer to protect the birds and keep them safe from disturbance.”

Mark Blake, Reserve Manager for Somerset Wildlife Trust said: “It has been an exciting year on the Avalon Marshes and we are delighted to see marsh harrier breeding at Westhay Moor for the second year. The habitat creation and management being carried out by the partners is going from strength to strength and we look forward to further breeding success in future.”

Chris Sperring MBE, Conservation Officer Hawk and Owl Trust, said: “The Avalon Marshes just get better every year. The success is down to a wonderfully balanced and organised partnership, particularly heartening when we see so many new species establishing, and some old friends like the marsh harrier on the rise as well. The careful management also creates a very human experience, as I found out recently whilst on a footpath with a kingfisher hovering less than 3 metres from me.”

Tony Whitehead speaking for RSPB in the south-west said: “Having all these birds breeding successfully in the Avalon Marshes demonstrates the power of landscape scale nature conservation. If you get the conditions right, the birds will turn up. Wetlands are under pressure the world over, not least, from climate change. To be able to recreate this landscape in Somerset is of huge significance. We know that large, well-managed wetlands can act as centres of establishment for colonising species such as little bittern and be crucial in helping them adapt to our changing climate as is being demonstrated in the Avalon Marshes.”

You can keep up to date with what can be seen on our NNRs by following us on Twitter: <https://mobile.twitter.com/NaturalEngland>



UK Framework

CONSULTATION DRAFT OF *UK Biodiversity Report*

JNCC

Every few years, the UK government reports on its progress towards the aims of the Convention on Biological Diversity (CBD). The next, fifth, report is due in March 2014 and from November to mid January a draft will be available online, for your comments and suggestions. Please look at JNCC's website after 15 November if you want to take part . (<http://jncc.defra.gov.uk/>)



One important section of the report will cover progress against the CBD's twenty Aichi targets, such as those for protected area and habitat loss. A major refresh of the UK biodiversity indicators, in October, will ensure that the report is up to date.

We appreciate comments from stakeholders. The main aim of the consultation is to improve the report by filling any gaps and correcting errors. It also allows us to share our thinking on important issues and hear the views of stakeholders.



Publications

BROWNFIELDS IN THE THAMES GATEWAY

Buglife, The Invertebrate Conservation



Untidy Industries, Basildon © Jamie Robins

Brownfields can support a huge range of species, and are often the only remaining wildlife-rich space in our towns and cities. Wildlife-rich brownfields develop as a result of abandonment and periodic disturbance, combined with low-nutrient soils and introduced substrates. Subsequent changes in hydrology and pH prevent fast growing species dominating. Even small sites can contain mosaics of habitats, essential to the survival of many invertebrates due to modern declines of more natural habitats, such as flower-rich grasslands. Brownfields are becoming increasingly important within ecological networks, providing refuges and linkages to sustain biodiversity.

At least 15 priority species are strongly associated with Thames Gateway brownfields, including the Shril carder bee (*Bombus sylvarum*), Brown-banded carder bee (*Bombus humilis*), Streaked bombardier beetle (*Brachinus sclopeta*) and Distinguished jumping spider (*Sitticus distinguendus*). Thames Gateway brownfields support over 100 Red Data Book and 400 Nationally Scarce species, and a remarkable 74% of the national fauna of bees and wasps (Harvey 2000; Buglife 2008).

However, brownfields are increasingly being targeted for re-development as part of the Thames Gateway regeneration to provide homes and employment. Concerned at these losses, Buglife and Natural collaborated on the 'All of a Buzz in the Thames Gateway' project between 2005 and 2008, mapped over 6,900ha of brownfield and assessed the potential of 450 sites to support rare and scarce invertebrates. The study found that 198 sites (over 40%) showed High or Medium potential for invertebrate biodiversity.



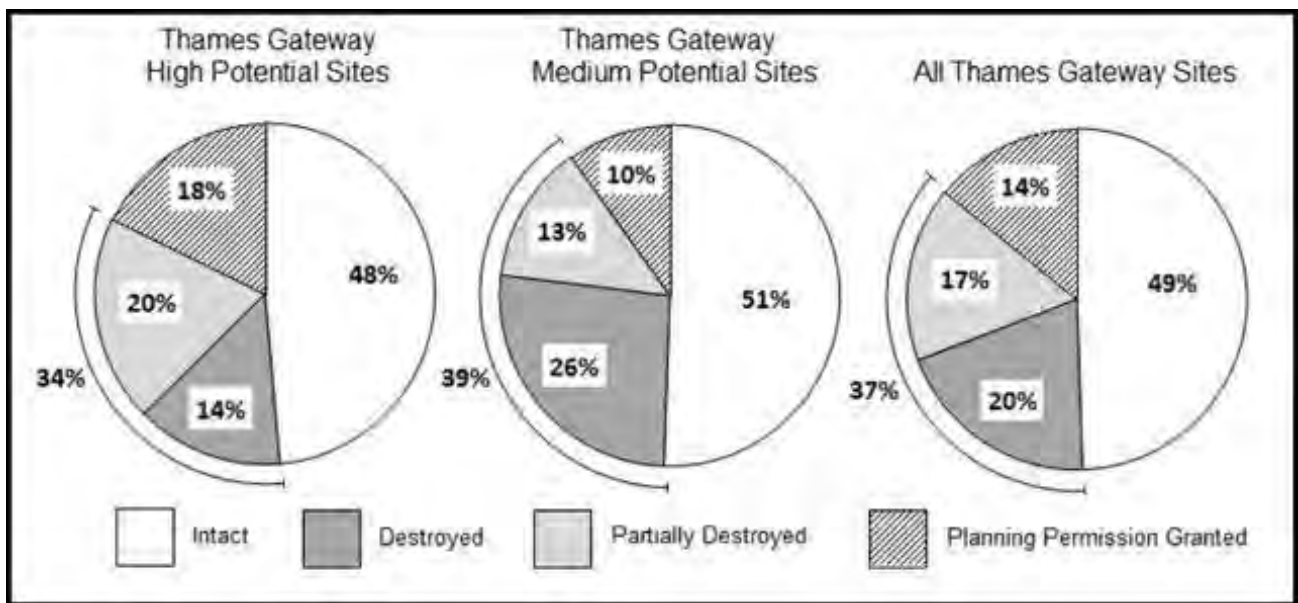
West Thurrock Marshes, Thurrock © Steven Falk

Buglife have since revisited these sites to quantify the rate of loss since their assessment between 2005 and 2007. Using aerial imagery and ground-truthing, the 198 High or Medium potential sites were re-assessed as being intact, partially destroyed, destroyed or having planning permission granted (where interest would be lost). Over a six-year period, over half (51%) of important brownfields within the Thames Gateway had been lost, damaged or were under immediate threat. Of 198 sites revisited, only 98 remain intact and free of immediate threat. London showed the highest rate of development with over two thirds (69%) of sites lost, damaged or with an outstanding planning permission. Ground truthing suggests this is likely to be an under estimate. >

Development and regeneration are undoubtedly resulting in the loss of wildlife-rich brownfields across the Thames Gateway. 100 of the 198 sites identified as being of High or Medium potential for invertebrates between 2005 and 2007 were found to be lost or at immediate risk. The failure to protect over 50% of the sites reviewed demonstrates that there is insufficient protection of high value brownfield sites.

The loss of swathes of high quality habitat is likely to have a significant impact on the rare invertebrates of the Thames Gateway. The loss of varied features and habitats across the landscape runs the risk of rare species being completely lost from the regional and national fauna.

The report highlights that the planning system does not deliver safeguards for brownfield habitats and invertebrates, and calls for greater protection and consideration of their value. The rate of development on brownfields is highly unsustainable, and without change, losses are likely to continue.



Pie charts showing proportions of Thames Gateway sites that are intact, destroyed or with a planning permission granted

The full report is available to download from: www.buglife.org.uk

References

Buglife (2008) *Brownfields: a natural asset. A guide to the sustainable reuse of wildlife-rich brownfield land in the Thames Gateway. A strategic approach to the conservation of brownfield biodiversity in the Thames Gateway.* Buglife, Peterborough. Harvey, P. (2000) The East Thames Corridor: a nationally important invertebrate fauna under threat. *British Wildlife*, 12, 91-98



©Christopher Dingwall of Dunkeld Woods, Perthshire.

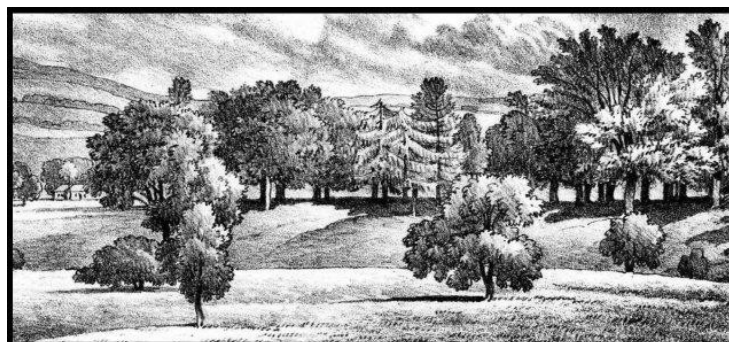
For the protection of the environment through the care, nurture and cultivation of trees

The Perth and Kinross Tree Wardens Network (PKTWN) is currently drawing together contributions from its members and the local community for a forthcoming Bluebell Trails leaflet.

The Network is dedicated to the protection and conservation of the local environment and countryside through the care, nurture and cultivation of trees. Its membership brings together people living in the area keen to volunteer their knowledge and interest in trees.

Perthshire and Kinross-shire have some of the most beautiful bluebell woods in Scotland, including Darroch Wood in Blairgowrie (see attached photograph), and they continue to be of immense value to the area, not just in terms of their ecological value and aesthetic qualities, but also their eco-tourism value as visitors to The Big Tree Country and its environs enjoy the woodland walks as much as the local community.

The bluebell trails project has focused primarily on areas accessible via pathways and roads, and the ultimate aim is to compile a leaflet detailing the many walks and routes of the district, to be launched in early spring 2014. A hard-working team of volunteers within the Network have dedicated their time, knowledge and passion for nature - as well as some gorgeous photographs. Many members of the public have also reached out to us with their own suggestions through the local media.



Whilst the leaflet is being compiled, the Network's Assistant Secretary has created an eye-catching slideshow which can be viewed via the PKTWN's home page at www.perthandkinrosstreewardens.co.uk.

There is still time to contribute to both the forthcoming leaflet and slideshow – contact Kayleigh direct at Ceilidhann42@gmail.com.



Wood Wise – Trees pests and diseases: present and future threats

The Woodland Trust

The summer 2013 issue of Wood Wise looks at tree pests and diseases, with case studies on Asian and citrus longhorn beetles, Chalara ash dieback, emerald ash borer, oak decline, oak processionary moth, oak wilt and *Phytophthora ramorum*. Some are already causing problems in the UK, while others are possible issues for the future.

Threats to the health of UK trees are increasing and each decade seems to bring a new pest or disease that our woods, foresters and scientists must try to combat. Chalara ash dieback is the latest in a long line that includes the devastating Dutch elm disease, which resulted in the death of over 25 million of the UK's elm trees and still persists today. Many others are on the horizon, and we must be vigilant against them invading our shores.

To read current and past issues of Wood Wise follow this [link](#). If you would like a pdf version or would like to be added to the subscription list please email your request to Conservation@woodlandtrust.org.uk



COMMUNICATE 2013: *Stories for Change*

6th and 7th November, Arnolfini, Bristol

Two Days: £250+VAT; **One Day:** £150+VAT; Student bursaries available

Communicate is the UK's leading conference for environmental communicators, bringing together a unique blend of delegates each year for a programme of inspirational plenary sessions, challenging discussions, practical workshops and outstanding networking opportunities.

Communicate 2013: Stories for Change will be an opportunity to think about how we can tell new, more powerful, more resonant stories about our environment that better engage, persuade, and empower our audiences to take action for the natural world. Chaired by **Ed Gillespie (Futerra)**, highlights include:

- *Setting the Scene:* the state of the environment and the state of engagement with **Matt Walpole (UNEP-WCMC)** and **Simon Christmas**
- *Liberating Stories:* what can environmental communicators learn from the latest social science research? With **Ian Christie (University of Surrey)** and **Nathan Oxley (STEPS Centre)**.
- *Local Stories:* engaging communities to tackle environmental issues on their own terms, with **Douglas White (Carnegie UK Trust)**, **Vanessa Jones (Bredhurst Woodland Action Group)** and **Miles Sibley**.
- Creating *Shared Stories* with digital technologies and new methods, featuring **Mike Wilson (Falmouth University)** and **Susan Ballard (LWEC)**
- Practical, skills based workshops including *Stories for News* and *Making Social Media Work* with **BBC Academy**; *The Language of Imagery* with **Nature Picture Library** and behavioural science with **Chris Holmes**.
- The latest case studies from the sector and your chance to share your story in the **Delegate Showcase**

See the latest programme and register now at www.communicatenow.org, follow us on Twitter @communicate2013 or contact ben@bnhc.org.uk for more details.



ECOLOGICAL SURVEY TECHNIQUES PROGRAMME

University Of Oxford

Postgraduate Certificate in Ecological Survey Techniques: applications accepted for September 2014



©Alan Roffey

The University of Oxford flexible part-time PGCert in Ecological Survey Techniques is designed to equip students with the knowledge, understanding and confidence necessary to conduct informed ecological field surveys, and to quantify and analyse data in order to effectively monitor biodiversity and ecosystems.

Drawing from a rich pool of expertise, students benefit from tutor-led online study over one or two years with a week-long face-to-face introductory module in Oxford during September. The qualification is designed with professionals and volunteers in mind, as well as those wishing to make a change in career into the areas of ecology and environmental management.

Students in our current cohort have benefited from Departmental Bursaries towards their fees and a number have received significant contributions from a sponsoring employer.

For full details and how to apply please visit:

www.conted.ox.ac.uk/PGCertEST

Part-time 5-week online short-courses:

Taught online over five weeks, the University of Oxford offers a range of part-time courses providing excellent training skills opportunities. Each course is specialist-led and enables students to share ideas with counterparts across the globe. Topics are covered via guided reading, online activities, and discussion forums. All the reading material is embedded into the course, and students additionally have access to the University's electronic resources and online journals.

Field Techniques for Surveying Mammals and Reptiles: 8th January 2014

It is designed to enable students to gain the skills and knowledge needed to make an informed ecological survey by covering a range of topics including the rationale for making mammal and reptile field surveys, direct and indirect surveying techniques, and designing a sampling strategy or protocol.

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

Continued >

Field Techniques for Surveying Birds: 12th February 2014

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/birds

These courses can be taken with or without academic credit which can count towards future Masters-level study, including the University of Oxford **Postgraduate Certificate in Ecological Survey Techniques**.

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

Butterfly Conservation: Seventh International Symposium: Southampton University, 4-6th April 2014



The Seventh International Symposium will be held at Southampton on the theme: **The ecology and conservation of butterflies and moths**

We invite offers of papers or posters on relevant topics. On-line registration and abstract submission, (*deadline 6th December 2013*) and *further information*, can be found at:

www.butterfly-conservation.org/symposium

The Symposium will include the latest science of butterflies and moths and how science can help to reverse the decline of butterflies and moths, and their habitats. The programme also provides opportunities for Butterfly Conservation members and others to present papers or posters on practical conservation work and contributions will be welcomed. The Symposium will end with a forward look to future challenges, including the impact of climate change.

Keynote speakers include: Prof. Chris Thomas (York Univ, UK), Prof Christer Wiklund (Stockholm Univ, Sweden), Dr Tom Brereton (Butterfly Conservation, UK), Dr Bob Pyle (Naturalist and writer, USA), and Dr Thomas Merckx (Lisbon Univ, Portugal). The proceedings will be published as a special issue of the Journal of Insect Conservation, deadline for paper submission will be Friday 2nd May 2014.

BioBlitz Conference 2013

Bristol, Nov. 7



©BioBlitz

BioBlitzes make an exciting contribution towards helping us understand and map our wildlife and over the past four years the BioBlitz Network has been going from strength to strength, with more members joining every year and events springing up all over the country. Thousands of species have been recorded and hundreds of people have used biological recording as a new way to engage with nature on their doorstep, both in the countryside and within busy cities. Adults and children alike have taken the opportunity to look beyond the streets, cars and people and take a step into their natural habitat to realise that wherever we look we are sure to find nature. At this year's annual National BioBlitz Conference we have the opportunity not only to celebrate our achievements to date, but also to look ahead and question BioBlitz as a whole; to identify its strengths and to think about where we can improve.

This free event will provide a day of challenging workshops and inspiring discussions, looking at the story so far and aiming to discover what else we are able to achieve. This conference will be of specific interest to BioBlitz organisers, volunteers, education and engagement professionals and anyone who may wish to plan or take part in a BioBlitz in the future.

The National BioBlitz Conference will be taking place between 9:00 and 17:30 on Thursday 7th November at the Arnolfini in Bristol. This year's conference is once again running alongside Communicate, the UK's leading conference for environmental communicators. BioBlitz attendees are being offered entry to day one of Communicate, 6th November, at a discounted rate. Registration closes on November 1st.

For more information and to register for your free place at the National BioBlitz Conference 2013 please visit:



©BioBlitz

<http://www.bnhc.org.uk/home/bioblitz/run-your-own/conference.html>

Lost at Sea? The Atlantic Salmon's Ocean Odyssey



© Gilbert van Ryckevorsel

26 November, 2013

6pm, The Royal Society of Edinburgh

Speakers

- Professor Kenneth Whelan, Adjunct Professor, School Of Biology & Environment Science, University College Dublin
- Dr John Armstrong, Head of Marine Scotland Science Freshwater Laboratory, Pitlochry
- Professor Christopher Todd, Professor of Marine Ecology, University of St Andrews

The golden eagle, red deer, red squirrel, otter, harbour seal and Atlantic salmon are iconic images of Scotland's wildlife. The salmon's life cycle and migrations have fascinated mankind for generations, but now something has gone wrong. Salmon are dying at sea; reasons are unclear but rivers all around the North Atlantic have been affected. Recent research has provided fascinating new insights into why salmon are being lost. At this discussion forum the speakers will focus on the challenges, new and old, faced by salmon during their ocean odyssey.

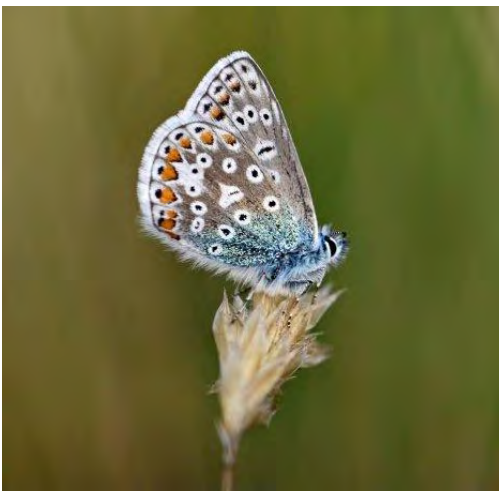
This discussion forum is supported by Scottish Natural Heritage, The Fishmongers' Company, NASCO and Cromarty Firth Fisheries Trust.

Book now for [Lost at Sea? The Atlantic Salmon's Ocean Odyssey](#)



RUNNERS – UP

*Featured below are the brilliant photographs that sadly, due to fierce competition, did not make the front cover.
Enjoy!*



Common Blue, Stargate Ponds
© Stuart Pudney



FC Westonburt Arboretum © Isabel Alonso



Common Carder Bee feeding at Vipers
Bugloss © Suzanne Bairner



© Natalie Loben



Mark Morris, Conservation Advisor at Northumbrian Water, with a large marsh thistle! Teesdale, Co. Durham © Stuart Pudney



Willerby Carr scrapes, excavated on wet grassland near Scarborough, as part of the Cayton and Flixton Carrs Wetland Project © Tim Burkinshaw



Fresh Water Pearl Mussel © Chris Daphne, Pearls in Peril



Autumn Leaves at Shawford Down, Hampshire © Jason M. Reeves