

Biodiversity News

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Issue 57

Spring Edition



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www.jncc.gov.uk/ukbap



Spring

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Spring

Editorial

Welcome, Croeso, Fáilte... to Issue 57 of Biodiversity News!

The spring season is well underway, and there has been much to celebrate with the International Day of Biological Diversity already been and gone, that brought a great sweep of activities and hype for all things bio-diverse; the national festivities of the Diamond Jubilee, including a special programme by BBC's *Spring-watch* featuring an overview of UK wildlife over the past 60 years... and finally, hope that summer is almost on the way.

Once again, there has been a great variety of articles on all sorts of topics: landscape-scale initiatives, species findings, a whole suite of projects taking place in communities over and across the UK, and understandably, a lot to do with flowers!

Along with some of your own surveys you've shared with Biodiversity News, we undertook our own survey, 'How useful is Biodiversity News to you?' in the last issue, and we were grateful to everyone who completed it. We are now looking at the results and will report back in the next issue.

In this edition we have some particular publications and events that would be worth scanning over – best practice guidance if you want to set up your own green roof; what *Wildfowl & Wetland* centres are near you for a whole range of summer activities this year, whether with family and friends or not, or an amateur or not... and the excellent opportunity to relive the discussions of *Bristol Natural History Consortium's* 2011 Communicate Conference!

As always, in keeping with the theme of the season, I would like to announce the winner for the front cover photo competition is Katherine Ryan, for her beautifully outstanding *Pulsatilla* in a meadow – or more commonly known as *Pasque flower*, as it blooms in early spring at Easter. To see the other great assortment of photos submitted, please find your way to the back page.

Last, but not at all least, I would like to give my tremendous thanks to all who have contributed to this issue, and for those that continue to support Biodiversity News by your readership and sharing the newsletter, its information and ideas, with others.

As always, I welcome feedback and encourage you to recommend Biodiversity News to anyone who you think will be interested.

I hope you thoroughly enjoy this issue.

Gauri Kangai

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Click on the boxes to see previous issues this past year

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Scotland and Wales' biodiversity strategy developments

From UK Friends Newsletter

Both Scotland and Wales have recently undergone significant developments working towards the revision of their national biodiversity strategies.

Scotland update:

Scottish Natural Heritage has published a [pre-consultation document for the new Scottish Biodiversity Strategy](#), which sets out preliminary targets to halt biodiversity loss and address ecosystem degradation by 2020. Scottish Natural Heritage has also published [Green Networks and People: A Review of Research and Practice in the Analysis and Planning of Multi-functional Green Networks](#). This report examines how a range of data sets and analytical tools can be applied to the development of new approaches to assessing green networks and green infrastructure within the UK, to support planning and management.

Wales update:

The Welsh Government recently published a [Green Paper: Sustaining a Living Wales](#), setting out proposals to introduce an integrated 'ecosystems approach' to managing the environment in Wales. These proposals would mean that the three regulatory regimes in Wales – land-use planning, pollution control and nature conservation – would be integrated and the environment managed as a whole.

The objective is to ensure that decisions effecting the environment can be taken with a better understanding of their impact on ecosystems. The consultation document will lead to substantive changes, and the Welsh Government will be commissioning work to identify opportunities to bring together existing regimes (of regulatory consents that cover a wide range of activities that affect the environment) to allow for single permits or consents. The consultation proposed the introduction of integrated local resource management planning, to bring together existing spatial policies in the environment, including those in renewable energy, flooding, water quality and resources, waste infrastructure, landscape and nature conservation – to resolve any conflict between the different plans and to integrate the outcomes of each more closely.

The Welsh Government aims to scope a national resource management plan in 2013. The consultation also included proposals to simplify the environmental governance with one of the main proposals being to create a new single body bringing together the Countryside Council for Wales and the Wales functions of the Environment Agency and Forestry Commission.

The deadline for consultation responses was 31 May 2012.



Marine Protected Areas

Defra

Special protection for birds at sea

It is over 60 years since the 1949 National Parks Act was passed to create safe havens for wildlife on land, and provide enjoyment for millions of people who visit them. Protection of the marine environment has taken much longer and, while some forms of Marine Protected Areas (MPAs) were introduced during the same period – for some birds, sea habitats, wetlands and Sites of Special Scientific Interest – protection of marine areas is a more recent concept.

'European marine sites' (EMS) is the collective term for Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) that protect important habitats and species of European importance in the marine environment. These sites are designated under two pieces of EU legislation: the Birds Directive and the Habitats Directive which includes marine habitats.

To complement the existing European Marine Sites, the 2009 UK Marine and Coastal Access Act made provisions for a new type of MPA called Marine Conservation Zones (MCZs). Their aim is to ensure that underwater habitats and species flourish, and, in combination with EMS, contribute to a well-managed and ecologically coherent network of MPAs.

All but one species of UK marine birds is subject to the SPA provisions of the Birds Directive and further SPAs are required to be identified to improve protection levels for these birds in the marine environment.

The Joint Nature Conservation Committee (JNCC) has been conducting a programme of survey and associated data analysis of important marine areas used by seabirds and waterbirds. On completion, consideration will be given by Natural England and JNCC to potentially bring forward additional recommendations to extend the seaward boundaries of some inshore SPAs. Work is also underway to analyse whether further important areas used by seabirds and waterbirds can be identified.

After working with JNCC to draw up boundaries, followed by a period of informal dialogue with stakeholders – Natural England will hold a formal consultation on the proposed SPAs. After feedback has been considered, Natural England will then decide whether to recommend these inshore SPAs to Defra for classification. Informal consultation on some SPAs is likely to commence later in 2012, and it is planned that all SPAs for English water will have been identified by the end of 2015.

Steering the English inshore SPA process through for Natural England is project manager Joanna Redgwell. She co-ordinates the work of people drawing up site recommendations, the associated economic impact assessments, stakeholder engagement plans, and JNCC, to deliver the project for the Department for Environment, Food and Rural Affairs (Defra). Joanna explains: "By working with stakeholders and providing timely advice we will enable Government and regulators to establish a well managed Marine Protected Area network covering in excess of 25 per cent of English territorial waters by the end of 2016. There is a lot to do, but we are confident our work will contribute to that target being met."



Marine Conservation Zones

The work towards designating the first tranche of marine conservation zones in the summer of 2013 continues, with the formal advice package from Natural England and the Joint Nature Conservation Committee (JNCC) to Defra due July 2012.

The package, which includes the recommendations from the four regional projects, and the Impact Assessment, will contribute to the evidence Minister Richard Benyon will examine before making decisions on which sites to propose for designation in the public consultation starting in December. The Minister will also have before him the evidence strengthening work commissioned by the Department following receipt of the regional project recommendations and the advice from the Independent Science Advisory Panel.

The consultation, which runs for three months, will include all 127 sites recommended by the regional projects. Some will be proposed for designation in the first tranche in 2013, some will be identified as having potential but needing further work before they are designated at a later date (e.g. after collection of additional survey data to confirm the presence of the species or habitat to be protected) and others may be identified as sites which the Minister is not minded to designate (e.g. due to them being likely to have socio-economic impacts on marine industries that outweigh their potential conservation benefits). Designated sites will be managed by the Marine Management Organisation (MMO), Inshore Fisheries and Conservation Authorities (IFCAs) and others.

The consultation is the ideal opportunity for stakeholders to examine the evidence and make their views known. Many have already been heavily involved in the regional projects which selected the potential sites, we are sure they will want to air their views again, although we hope that many of the compromises hammered out by them will still stand. The Department is also keen on those who have not yet been engaged in the process to get involved and have their say on how they value conserving marine biodiversity and on the likely impacts on sea users.

In recent interviews, the Minister has been keen to stress that marine conservation zones have a real role to play in securing the future of our healthy seas, whilst reassuring fears about the impact their designation will have on traditional, long standing activities enjoyed by local communities. In meeting residents of Blakeney, Mr Benyon said: "I do not want to restrict or prevent things like samphire collecting, wildfowling and dog walking. It is quite the reverse. I want to see more of that. Firstly I will have a chance to review the information given to us, and then local people will be able to have a say. There are many steps to go and I want to reassure people that no decisions have been made".

Defra is continuing to engage with key stakeholders as the process continues and arrangements for the consultation are drawn up. As plans progress, we will inform our stakeholders through meetings and via our website.

For more information, please see: [an interactive map of marine protected areas, including recommended MCZs](#); [Defra website](#); [JNCC website](#); [Natural England website](#).



New disease threat to sweet chestnut trees found in orchards

Forestry Commission

The Forestry Commission and the Food and Environment Research Agency (Fera) are working to eradicate outbreaks of a serious new disease affecting sweet chestnut trees in southern and central England.

Chestnut blight, caused by the fungus *Cryphonectria parasitica* (*C. parasitica*) has been confirmed by Forestry Commission scientists in two small areas of European sweet chestnut (*Castanea sativa*) in orchards in Warwickshire and East Sussex, planted within the past seven years for nut production. They are the first findings of the disease in Britain, although it has spread throughout much of Europe since it was first discovered in Italy in the 1930s. The most obvious symptoms of sweet chestnut blight are wilting and die-back of tree shoots; young trees with this infection normally die back to the root collar, and might re-sprout before becoming re-infected. Other symptoms, such as stem cankers and the presence of fruiting bodies, are described on Forestry Commission's website (below).

Dr John Morgan, Head of the Forestry Commission's Plant Health Service, said: "It is very disappointing to discover this disease has been introduced into these orchards in England. It represents a serious threat to our sweet chestnut woodlands, so we are taking steps to eradicate it before it spreads into woodland trees or other plantations.

"We are working with colleagues in Fera to investigate the source of the two confirmed outbreaks, and will follow up other importations of sweet chestnut trees from the same source. Surveys are being carried out in nearby sweet chestnut woodlands for the disease where these are at risk from infection."

Martin Ward, Head of the Fera Policy Programme, said: "This is a significant finding, the first of its type in the UK. We are working with the Forestry Commission and the devolved plant health authorities in Scotland, Wales and Northern Ireland to follow up certain consignments of sweet chestnut plants which have arrived from the supplying nursery in France.

"There is no reason to believe that diseased plants have been introduced intentionally, and we are liaising with our counterparts in France, where the plants were sourced, to investigate this situation.

"In the meantime we would ask growers to be observant for symptoms of sweet chestnut blight on imported plants, and to report any suspicion to the appropriate authorities. We will be considering whether any changes to the EU requirements on this disease are necessary as a result of this finding, and will pursue this with the European Commission."

The Government recently launched the Tree Health & Plant Biosecurity Action Plan to ensure that the UK's defences against tree pests and diseases are as robust as possible.

Dr David Slawson, who is leading on the stakeholder engagement elements in this plan, added: "Once again this news demonstrates the need for all of us involved in the supply and management of trees and woodland to be constantly vigilant for signs of pests and diseases in our trees, to take the greatest possible care when importing plants from abroad, and to take preventative 'biosecurity' measures when visiting or working in infected woodland."



The UK companies which received the French plants, and the growers of the affected trees, are co-operating with the plant health authorities. Where infection is suspected or has been confirmed, Plant Health Notices are served, requiring uprooting of the trees and burning on site in the effort to eradicate the disease.

A guide to recognising the disease and its symptoms on sweet chestnut is in preparation, and images of the disease symptoms will be available at the website below. Reports of suspected sightings of chestnut blight can be made to the contacts below.

Further information about the disease is available from the Forestry Commission's website at www.forestry.gov.uk/chestnutblight.

Reporting disease symptoms: reports of symptoms in orchards must be made to Fera's Plant Health & Seeds Inspectorate; e-mail: planthealth.info@fera.gsi.gov.uk; tel: 01904 465625; www.fera.defra.gov.uk/plants/plantHealth/whatToDo/cfm.

Although there is no reason to believe that the disease has spread into woodland, reports can be made to the Forestry Commission as follows:

- For places north of the Humber-Mersey line: Tree Health Diagnostic & Advisory Service, Forest Research, Roslin, Midlothian EH25 9SY; e-mail: ddas.nrs@forestry.gsi.gov.uk; tel: 0131 445 2176.
- For places south of the Humber-Mersey line: Tree Health Diagnostic & Advisory Service, Forest Research, Alice Holt Lodge, Wrecclesham, Farnham, Surrey GU10 4LH; e-mail: ddas.ah@forestry.gsi.gov.uk; tel: 01420 22255.

From BCTV to TCV:

BTCV changes to 'The Conservation Volunteers'

The Conservation Volunteers (TCV)



Environment charity BTCV launched a new look and expression of cause on 1 May as part of a drive for greater public recognition and support.

The British Trust for Conservation Volunteers has been reclaiming green places across the UK since 1959. But despite having thousands of volunteers, and high profile supporters such as Sir David Attenborough, the charity is almost unknown to the general public.

From today, it will present itself more simply as The Conservation Volunteers, and will initiate a drive for public awareness of its role as the guardian of green places.

Rita Clifton, Chair of Trustees (and also Chairman of Interbrand), said: "When I joined BTCV a year ago, so many people told me they were frustrated by how little they found BTCV was recognised for the fantastic work it did".

"Like so many organisations in the voluntary sector, we have been affected by cuts in Government grants and income reduction – we need to broaden our funding base and inspire as many people as we can to join in and support our work"

"We have to be clearer in how we express our aims, and clearer in our ask to ensure we are still carrying out amazing work in another 53 years.



“Against the background of the continued loss of green space across the UK, we felt this was an ideal time to clarify our message, raise our voice and reach more people.”

“Our work in communities and with people from right across society has never been more needed – socially, environmentally and from an economic perspective. We exist to help people’s lives, prospects and communities through creating and managing green places together.”

“There is a great, practical, and ‘hands on’ aspect to the organisation and this refresh is about expressing what we do in a more compelling way. The name has been simplified as part of this, in line with a lot of feedback from stakeholders inside and outside the organisation; it also reflects the distinctive heritage and history.

“There has never been a better time for people to ‘join in and feel good’ with the work we do, and it is a privilege to be part of this inspiring organisation”.

Tom Flood CBE, Chief Executive, said: “The Conservation Volunteers are committed to providing communities throughout the UK with the skills, knowledge and support to ensure their local environment is one to be proud of. Our Green Hubs will enable people to join in, have fun and support our work.”

“Through our 53 years’ experience, we have learnt that whilst green places need people, people also need green places.

“Access to good quality green space strengthens community ties, helps to prevent depression and encourages outdoor activity which leads to healthier lifestyles. A well managed and cared for green space can be many things whether it’s a playground, a gym, a classroom or a sanctuary.

“Supporting The Conservation Volunteers is an excellent way to support your local community and help to reclaim green places”.

Centenary year for The Wildlife Trusts welcomes new Chair

The Wildlife Trusts

In April, The Wildlife Trusts appointed its new Chair, René Olivieri; the sixteenth in the conservation organisation’s 100 year history.



On accepting the role, former chair of the Tubney Charitable Trust, René Olivieri, said: “I am delighted to be joining The Wildlife Trusts at this exciting time. It is a movement united behind a shared vision and mission, with a clear direction and purpose.

“The Wildlife Trusts have already put landscape-scale conservation and the marine environment on the map. I look forward to joining the journey to lead the way in promoting nature’s recovery. I am proud to be part of it.”

René Olivieri, new Chair for The Wildlife Trusts
© The Wildlife Trusts

Stephanie Hilborne OBE, Chief Executive of The Wildlife Trusts, said: “René has a very good understanding and



appreciation of our vision and the nature of our organisation. His input over the next five years will be invaluable.”

René Olivieri's nomination and election follows an extensive recruitment process led by a panel of Trustees and President Simon King OBE. His election for the position took place at The Wildlife Trusts' Extraordinary General Meeting on 23 April 2012.



Stephanie Hilborne, The Wildlife Trusts' CEO © Chris Taylor-Photography.com



© The Wildlife Trusts

René joined Oxford-based publisher and book seller, Blackwell, in 1980 and went on to become CEO of all its publishing interests. René stayed on to oversee the transition, following the 2007 merger with John Wiley.

René (57) is married with two children. He speaks several foreign languages including German and Dutch. His interests include nature, riding, tennis, and the performing arts.

For information:

A documentary about The Wildlife Trusts' history has been produced for its centenary. The film is available to see at: <http://www.wildlifetrusts.org/100>.

'Give As You Live'

'Give As You Live' is a fundraising initiative where shoppers can raise money for charity every time they shop online.

Over 2000 popular retailers have partnered with the scheme, including Amazon, the Trainline, John Lewis, Sainsbury's and Boots, agreeing to donate a proportion of the value of sales generated by subscribed shoppers, to over 220,000 UK charities, of which BTO (British Trust for Ornithology) has recently joined. At no additional cost to the shopper, participating charities earn income through their shopping activities.

'Give As You Live' has so far raised more than £2.4 million for causes across the UK.

You can sign up here to support BTO as a 'Give As You Live' shopper, or any other of your favourite causes.

Have your own copy of Biodiversity 2020

Due to popular demand, hard copies of England's Biodiversity Strategy for 2011-2020, 'Biodiversity 2020', are now available. If you or your organisation would like a copy, please email biodiversity@defra.gsi.gov.uk, stating the number of copies you require and providing your contact name, organisation and address.



UK's largest new wetland to be created in Somerset Innovative approach improves flood protection and creates new habitats

Wildfowl & Wetlands Trust (WWT)

Planning permission has been granted to create one of the UK's largest areas of new wildlife habitat on the Steart Peninsula in Somerset.

The Environment Agency and the Wildfowl & Wetlands Trust (WWT) have worked closely with the local community to develop plans for an innovative flood defence and habitat creation project.

Over the next two years 400 hectares of the Steart Peninsula will be turned into wildlife-rich habitats including saltmarsh and freshwater wetland. These internationally important habitats provide vital feeding and breeding grounds for wading birds and wildfowl as well as homes for animals such as water voles and great crested newts.

In addition to boosting wildlife, the scheme will provide better protection for Steart village against flooding from the River Parrett. Stert Drove, the only road linking Steart village with surrounding communities, will also enjoy improved protection.

“This exciting project offers an excellent opportunity to improve flood protection for the people who live and work on the Steart Peninsula while at the same time create internationally important intertidal habitats that will turn this stretch of the Somerset coastline into a haven for wildlife”, said Nick Gupta for the Environment Agency.



Oblique aerial view of Atlantic marsh creation © WWT

Between 300 – 600 hectares of wetland habitat needs to be created in the Severn Estuary over the next 20 years to compensate for the loss of existing saltmarsh and mudflats through rising sea levels and the construction of new coastal flood defences.

The Government has an obligation to meet these targets and could face legal proceedings if it fails to create enough new coastal wetlands. The habitat creation at Steart will go a long way to meeting the target for the Severn Estuary.

“Sea level rise is affecting both wildlife and local communities as it squeezes wetlands along our coast. But thanks to the Environment Agency, we have this opportunity to create a productive and useful landscape that will help us face these challenges and bring benefits for people and wildlife.

“We’re developing a dynamic new approach to land management at Steart and aim to show how it can be



used to create similar wetland habitats elsewhere.” said WWT Chief Executive, Martin Spray.

The Severn Estuary is internationally important for water birds. The project will benefit a number of species including shelduck, dunlin, redshank, avocets and wigeon. Several commercially important fish including sea bass use saltmarsh as nurseries for their young. Historically, the area has been used for arable farming. After conversion it will be used for grazing livestock and remain in productive agriculture.

The Steart Peninsula is already popular with bird watchers and dog walkers. The project will improve access for people with disabilities, horse riders, cyclists and walkers, and provide panoramic viewpoints and wildlife observation hides.

Not only is it one of the largest projects of its kind, but uniquely Steart village is located right within the habitat creation area. The project team was in regular contact with the residents of Steart throughout the consultation period. Local people have been closely involved in planning the project and will continue to be consulted as the scheme progresses.

“We have been included in discussions every step of the way and although this is a habitat creation scheme, some issues are an absolute priority to us – the safety of our homes now and into the future, the access to the village and the preservation of the tranquillity of the peninsula.

“The creation of this threatened habitat is to be welcomed and I look forward eagerly to seeing the results. I hope that when eventually the scheme is up and running other coastal villages facing the same challenges will be reassured by our experience.” said Dick Best from the Steart Residents Group.

Construction of the new habitats and flood defences is due to start in the summer of 2012. The site will be owned by the Environment Agency and managed by the Wildfowl and Wetlands Trust (WWT).



Artist's impression of the freshwater habitats, boardwalk and cycle and bridal access along the Steart Peninsula © WWT



Keeping Rivers Cool Creating riparian shade

Rachel Lenane, *Environment Agency*

Predicting the future is fraught with uncertainty: climate experts have tried to capture some of this uncertainty in a set of likely scenarios for the UK in the UK Climate Projections (UKCP09). The models project that average summer air temperatures will warm by between 2°C and 4°C by the 2050s – compared to the 1961-90 average temperature. Because river temperatures are sensitive to changes in climate, we expect them to rise by a similar amount. It may not seem much but even small changes like this can have a big impact on the health of the wildlife living in freshwaters. For example, brown trout and salmon are particularly vulnerable to increasing temperatures – a rise above 22°C for more than 7 consecutive days can be lethal for brown trout (Elliot & Elliot, 2009).

The Environment Agency is looking at ways of keeping rivers cool and taking action how to prevent, where possible, rivers in England and Wales becoming inhospitable for our freshwater wildlife over the next 60-70 years. Some trout and salmon populations in England and Wales are already under stress from climate change, with some rivers reaching temperatures above the lethal limit for these species in recent hot, dry summers.

Keeping Rivers Cool is a four year (2012-2016) Environment Agency led climate change adaptation project – focussed on using trees to keep rivers cool. We will be working with charitable trusts such as Woodland Trust and the Rivers Trusts to plant trees and put up fencing in the right areas – four pilot catchments have been targeted for the first two years of this project: the Wye, Hampshire Avon, Tyne and Ribble. Funding has been confirmed for 2012-13 and Environment Agency will be encouraging partners to seek additional match funding.



Woody debris pinned to bank of a chalk river, Dorset © *Environment Agency*

Historically, natural river and stream corridors and floodplains across the UK were more densely wooded, with woody debris a common feature in river channels. Much of this tree cover has been lost and many rivers now lack shade. Their banks are prone to erosion or support a narrow line of trees that is vulnerable to grazing by animals. It has been shown that riparian trees,

It has been shown that riparian trees can help reduce local stream temperatures on hot summer days. Summer mean and maximum water temperatures are on average 2-4° lower in shaded versus open rivers. In certain circumstances, other interventions for cooling rivers, for example river restoration, heated effluent control, modified abstraction regimes and water meadow management, may also be beneficial and Environment Agency will be exploring these in the future.

In the mean time, we will be providing riparian shade where they think it will have the greatest benefits for river ecology. Increasing the amount of trees along river banks will also help to provide a natural source of in



-stream woody debris. Woody debris can be beneficial to rivers because it helps to vary the flow and shape of the channel, creating a physical habitat for many species of plants, invertebrates and fish. Accumulated leaf litter is an important food reserve for shredding macro-invertebrates; research in the UK showed 147 invertebrates, some rare, were strongly associated with woody debris. Otters also use accumulations for “resting” sites.

We are aiming for a mosaic of tree cover in the pilot catchments, rather than blanket cover which could have a negative impact on other aspects of river ecology, such as over shadowing water crowfoot. In the planning phase of this project we will take care to avoid planting on areas of exposed riverine sediments, due to the diversity of specialist invertebrates that they support. We will also be looking to plant trees in areas where there will be no adverse impact on the management of flood risk, water resources and other aspects of conservation at the catchment scale. All decisions about planning will be made using expert local knowledge of the area.

Interim guidance on riparian shading is being developed, which will enable riparian managers and owners to follow a consistent approach to creating shade on rivers, with a mixture of tree planting and fencing to promote growth of riparian vegetation. This interim guidance on riparian woodland design will include information on species choice, planting diversity and structure, as well as flood risk.



Part of the JPEG image of vegetation objects derived from LiDAR © Environment Agency

To support the identification of key areas to target to increase riparian shade, we have collected LiDAR (Light Detection And Ranging) data for England and Wales, and used these to produce accurate maps of riparian tree distribution, including where the gaps are.

Where the LiDAR data are available we have also developed ‘shade maps’, using models showing average incoming solar radiation within catchments. The measure of incoming solar radiation indicates the likely amount of shade created by the landscape as well as shading caused by existing vegetation. Both the tree maps and shade maps are intended as guidelines only and decisions made using these will be supported by local site information.

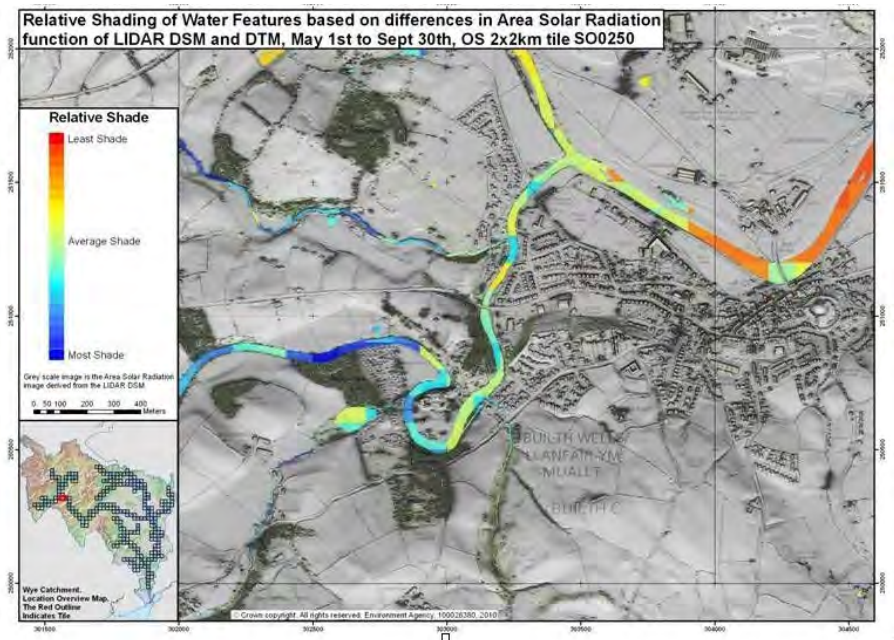
The riparian tree distribution is a national dataset, so we have created a limited number of shade maps for specific catchments and rivers. These include: Wye, Rivers Test & Itchen, Hampshire Avon, Derbyshire Derwent, Tyne, Frome (Dorset), Cherwell (West Thames), Dove (Midlands), Ribble, Shropshire Middle Severn, Kennet & Pang, Wey, Adur & Ouse, River Don, Wear, Tone, Ecclesbourne, River Learn, and Welland.

At present, we haven’t allocated any future budget to produce further maps – we are keen to see how useful these are to currently projects before producing more.



Although there are still some knowledge gaps about the cooling effects of introducing more bank side trees, we cannot ignore the risks of climate change to river conservation. We recognise that riparian shading is not a standalone measure to managing warming in rivers, but it is a low risk reversible action and a good start to keeping rivers cool.

For queries about any of the information here, please contact Rachel Lenane:
Rachel.Lenane@environment-agency.gov.uk.



Example of a 'shade' map produced showing average incoming solar radiation, presented here as relative shade within this catchment
© Environment Agency

Dragonfly Atlas of the UK: Last year of Field Work

Jonathan Willet, *British Dragonfly Society*

Work on the UK Dragonfly Atlas is entering its final field season, lots of new records have been collected and the knowledge of the distribution of the species in Scotland (and the UK) has never been so good. However in Scotland the story isn't quite the same as the rest of the UK. There are still quite a few squares, marked red on the map, that have no records since 2000 or have never been recorded. Some of these are tiny bits of land at the coast whose 10km square is made up mainly of sea and can be discounted; some are in remote areas such as the hinterlands of Rannoch, the Cairngorms and the north and northwest Highlands that are hard to get to. However there are quite a few in Ayrshire, the Borders and Angus that are relatively easy to get to and I would encourage you to get out and have a look if one of these under-recorded squares is near you.

Strangely enough Harris on the Western Isles seems to have had no surveying done at all but I have been in contact with the recorders group there and I am sure that that situation is about to change. There is also a



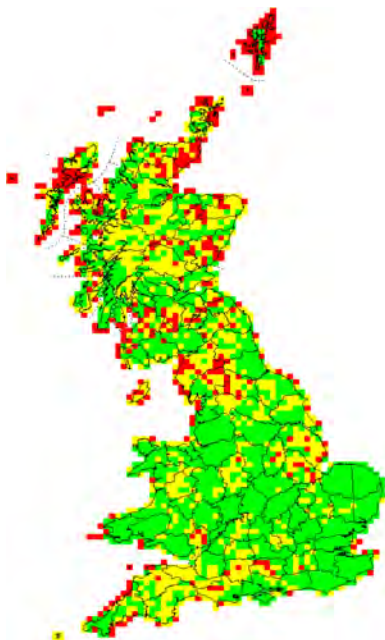
lot of red in Shetland but there is only one breeding species there, the Large Red Damselfly, and it is not certain if it is a regular breeding species but hopefully the surveying done there will be able to tell us.

I have been in touch with the biodiversity officers in the under-recorded area and also any recorders groups there that are giving them the co-ordinates of the squares that haven't been surveyed recently – to pass this information on to the local recording community. The British Dragonfly Society is hopeful that we will be able to colour the map mainly yellow or green by the end of this field season.

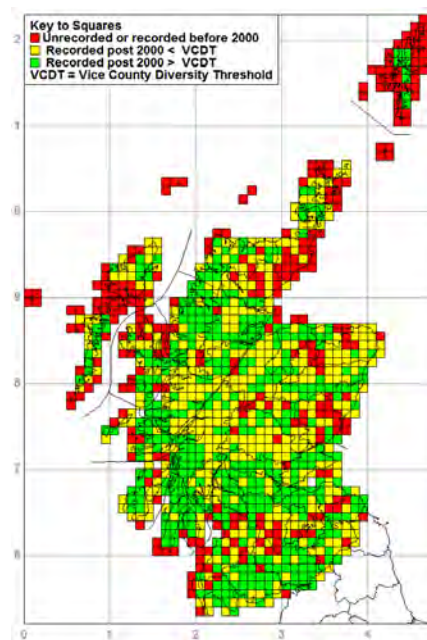
I should explain that the yellow and green squares represent the number of species recorded in that square in comparison with what is expected to be found there. The magic number is known as the Vice-County Diversity Threshold: this is a proportion of all the species that have been recorded in that Vice-County to give an indication of how well recorded a square is. Yellow is under-recorded in terms of species and green represents sufficient recording. Looking at the map, with this in mind, gives an indication of under-recording due to inaccessibility etc, or it could also indicate that a lack of habitat in that square is leading to a low number of species being recorded there.

If you would like more information on the under-recorded 10km squares near you then please do get in touch with me at chair@brisc.org.uk.

To see more maps, please go to the Atlas pages of the British Dragonfly Society: <http://british.dragonflies.org.uk/content/national-dragonfly-atlas>.



Recorded distribution of dragonflies in UK © Natural England



Recorded dragonflies in Scotland – 10km squares © Natural England



Bemisia tabaci – A cryptic species complex

Andrew Cuthbertson, Fera

Whiteflies are important polyphagous pests of several plant species throughout the world feeding on at least 60 different families of plants. They are small insects with piercing-sucking mouth parts in which both immature and adult stages feed on the underside of leaves. The life-cycle of whiteflies includes egg, four nymphal stages and the adult stage. Most species of whiteflies develop from egg to adult within 25-50 days under field conditions and there can be multiple generations per year.

The sweetpotato whitefly, *Bemisia tabaci*, (Figure 1) is one such whitefly that is an important pest of many ornamental and protected horticultural crops worldwide. *Bemisia tabaci* causes damage to crops both directly by phloem feeding and through the excretion of honeydew which can lower the rate of leaf photosynthesis and provide a substrate for fungal infection and indirectly by acting as a vector of more than 100 plant viruses. The first global invasion of *B. tabaci* occurred in the late 1980's. Within the UK, the species has been intercepted annually by UK Plant Health and Seeds Inspectors on imported plant material since 1987. The primary concern is that the whitefly imported on ornamental plants such as poinsettia (*Euphorbia pulcherrima*) can transfer and infect tomatoes with *Tomato yellow leaf curl virus* (TYLCV) and *Tomato yellow leaf curl Sardinia virus* (TYLCSV), both of which are not currently present in the UK. To date, *B. tabaci* and its associated viruses have not become established in the UK, and to this end the UK continues to hold 'Protected Zone' status against this pest, and statutory action aimed at eradication is taken whenever it is found.

The pest status of *B. tabaci* is complicated by the recognition of at least 24 different 'biotypes'. These biotypes cannot be identified by morphological traits, only at the molecular level. The biotypes have very different biological characteristics regarding their invasiveness, ability to develop insecticidal resistance, the pathogens they vector and their host ranges. It is the B (Middle East-Asia Minor 1 species) and Q (Mediterranean species) biotype that are important as they currently represent the most damaging biotypes and hence the greatest threat to UK glasshouse crops. The damaging B biotype is an aggressive coloniser and it is an effective vector of viruses, whereas the Q biotype characteristically shows strong resistance to novel insecticides, so making its control ever more difficult.

Knowledge of which biotype the intercepted whitefly belongs to is an important aspect when developing and implementing control/eradication programmes. To date, both within the UK and around the world, B biotype outbreaks have been successfully controlled with the use of neonicotinoid insecticides. However, the Q biotype is widely considered to evolve stable resistance to neonicotinoid insecticides more rapidly when compared to the B biotype. As a result, Q biotype neonicotinoid resistance is becoming increasingly widespread and problematic.

It is now clear from work undertaken at The Food and Environment Research Agency (Fera) that the Q biotype predominates in *B. tabaci* entering the UK and, as such, control and eradication programmes should

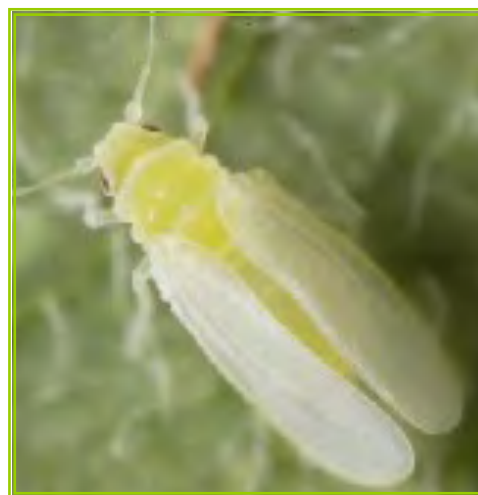


Figure 1.: The invasive whitefly, *Bemisia tabaci*

© Dr Andrew G S Cuthbertson



take this into account. Most importantly, the propensity for Q biotypes to develop strong insecticide resistance very clearly suggests that the current control options available in the UK may not be sufficient to eradicate the pest, particularly in outbreak situations in ornamental nurseries. Furthermore, recent analysis of intercepted whitefly specimens at Fera has indicated that *B. tabaci* of biotypes, other than the B or Q, are also now entering the UK with increasing frequency. Determining their status is also of importance in order to fully understand the consequences of their potential outbreak and establishment. As a result, monitoring for biotype and resistance status of incoming *Bemisia* whiteflies are important facets in ensuring that UK glasshouse horticulture remains free from this highly damaging invasive pest in the future.

For further information concerning integrated pest management strategies for non-indigenous invertebrates please contact: Dr Andrew G. S. Cuthbertson, andrew.cuthbertson@fera.gsi.gov.uk or Michelle Powell, michelle.powell@fera.gsi.gov.uk.

Exotic beetle pest of trees found in Kent

Forestry Commission, Fera

An outbreak of the Asian longhorn beetle (ALB), an exotic beetle pest which could have severe consequences for British trees, has been found in Kent, the Food & Environment Research Agency (Fera) confirmed beginning of April.

This is the first time an outbreak of this pest has been found in the UK, and it is being treated extremely seriously. Fera and the Forestry Commission have been taking urgent steps to try to eradicate the outbreak before it has the chance to spread further afield.

Several larvae of the beetle were found inside a poplar tree during a routine survey by the Forestry Commission at a site in the Paddock Wood area. Scientists from the Commission's Forest Research agency had been monitoring an area around the site where an adult beetle had been found in 2009, and this is the first evidence of tree infestation. It is thought the beetles originated from wood packaging used to import stone from China at an adjacent industrial site.



The beetle is not native to the UK, and poses a serious threat to a wide range of broadleaved trees and shrubs such as maple (including sycamore), elm, horse chestnut, willow, poplar, birch and some fruit trees.

Speaking about action to eradicate the outbreak earlier in April, Martin Ward, Head of Plant Health Policy at Fera, said: "Our plant health inspectors and the Forestry Commission are conducting a survey to determine the extent of this outbreak. They will be contacting all those within the survey area over the next few days and weeks with a view to inspecting all potential host trees for signs of the beetle. In the meantime we would urge members of the public, local businesses and landowners to be on the alert for the beetle and let us know if they find anything."

Asian longhorn beetle ©
Forestry Commission



Adult beetles are large (about 20-40 mm long) and shiny black with variable white markings. Their antennae are particularly distinctive, being much longer than their bodies (up to twice the body length) and are black with white or light blue bands. The larvae of the beetle feed undetected on the inside of the plant, and can kill it or leave it weakened and susceptible to further pest and disease damage.

The most obvious symptoms of ALB damage are the circular adult exit holes, which are about 10 mm in diameter and are generally found in the main trunk and above. The adult beetles usually emerge from these holes between May and October.

Dr John Morgan, Head of the Forestry Commission's Plant Health Service, said: "It's difficult to say exactly what measures will need to be taken until we have completed the initial survey work to determine the extent of the outbreak. However, we will need to remove any trees found to be infested, and it is possible that we will need to remove potential host trees around the original site as a precautionary measure. Eradication measures to treat outbreaks in the US and Italy have resulted in the loss of tens of thousands of mature trees."

Anyone who suspects they have seen an Asian longhorn beetle, or evidence of its presence, should contact the Fera Plant Health Helpline on 0844 248 0071 or email: planthealth.info@fera.gsi.gov.uk.

If possible, the beetle should be caught and placed in a secure container so that an inspector can collect it. The beetles are not harmful to humans, although they should be handled with caution because they can nip the skin.

More-detailed information about ALB can be found on the Forestry Commission's website at www.forestry.gov.uk/asianlonghornbeetle.



Asian longhorn beetle © Forestry Commission

Oil beetle populations in decline

Anne Haplin, Buglife

In 2011, Buglife – The Invertebrate Conservation Trust, in partnership with Natural England, the National Trust and the Oxford University Museum of Natural History, launched the National Oil beetle Survey. The aims of this project were to map the distribution of threatened oil beetles and to draw up guidance on the management requirements (now available on the Buglife website) of the four remaining species of British oil beetles.

Over 750 recorders took part to generate nearly 1500 new records which, combined with historic data collated by the Oxford University Museum of Natural History gave a total of around 3300 records. Using this data, Buglife mapped the distribution of oil beetles and showed that the number of sites where oil beetles



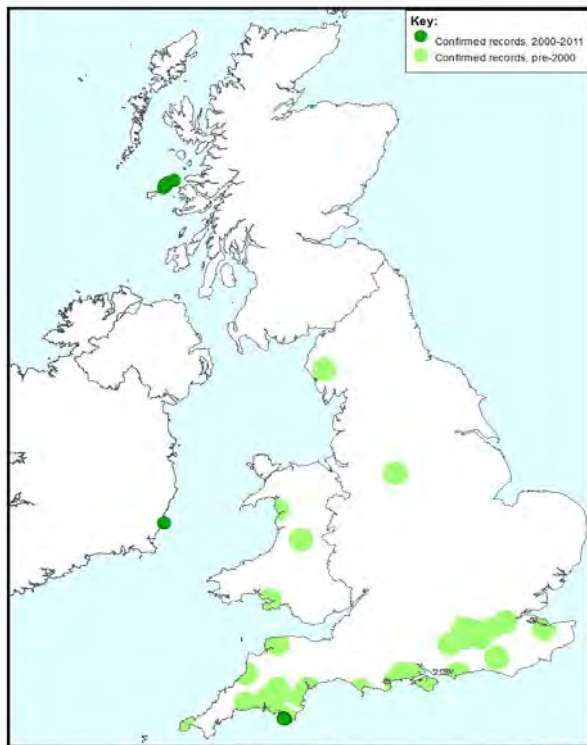
are found have declined in recent years, particularly in the east of England. Both the Black oil beetle (*Meloe proscarabaeus*) and the Violet oil beetle (*Meloe violaceus*) have all but disappeared from East Anglia and south east England. The Black oil beetle also seems to have declined in the north east.

The rarest of Britain's remaining oil beetles, the Short-necked oil beetle (*Meloe brevicollis*), was once feared extinct and was not recorded for over 50 years. In 2006 however, the species was rediscovered in Devon by a local naturalist. A further discovery three years later in Scotland bought the number of sites for this species in the UK to two (there is a third known site in Ireland). Despite the survey effort, these remain as the only known sites for this species in the UK.

Only the Rugged oil beetle (*Meloe rugosus*) appeared to be doing reasonably well with a number of new sites being discovered in Gloucestershire and near the border between England and Wales. Elsewhere however, the species is not faring so well and the population range has shrunk in the far south west and in the east of England. Much of the apparent increase in population range could be due to improved understanding of this elusive species that emerges in autumn and is thought to be nocturnal.



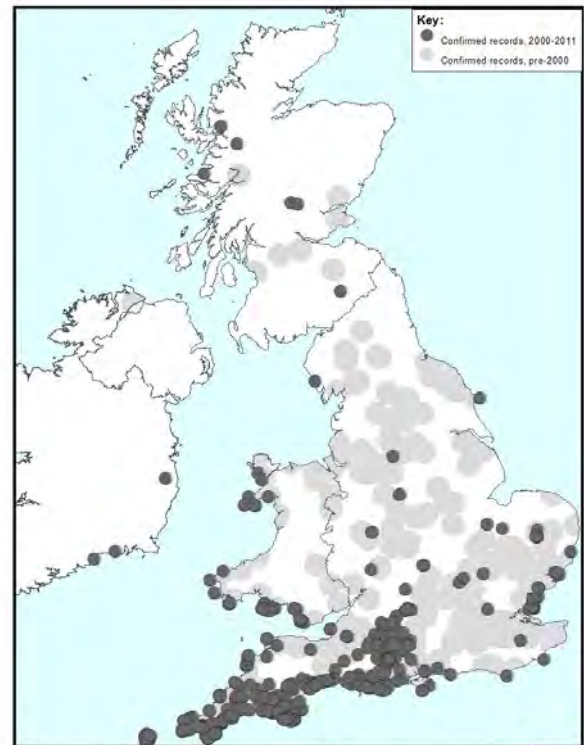
Violet oil beetle
© Anne Haplin, Buglife



Short-necked oil beetle distribution from Historic and 2011 survey data



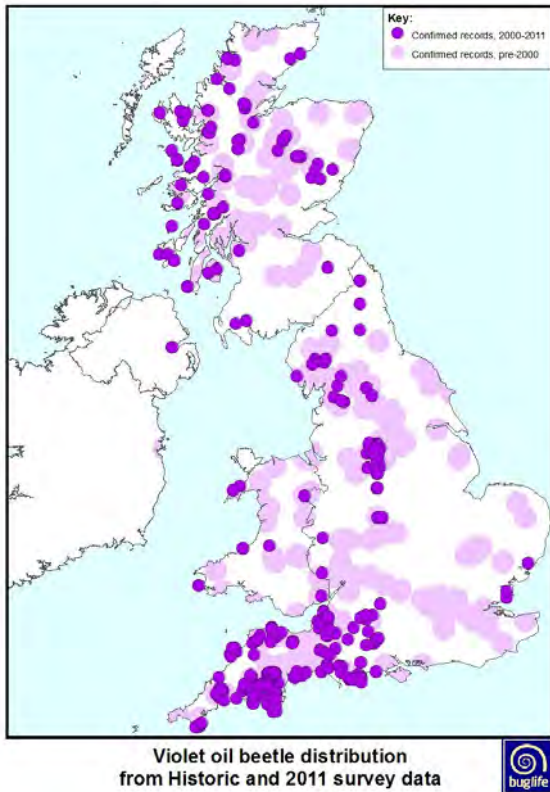
Short-necked (*Meloe brevicollis*), Britain's rarest oil beetle © Buglife



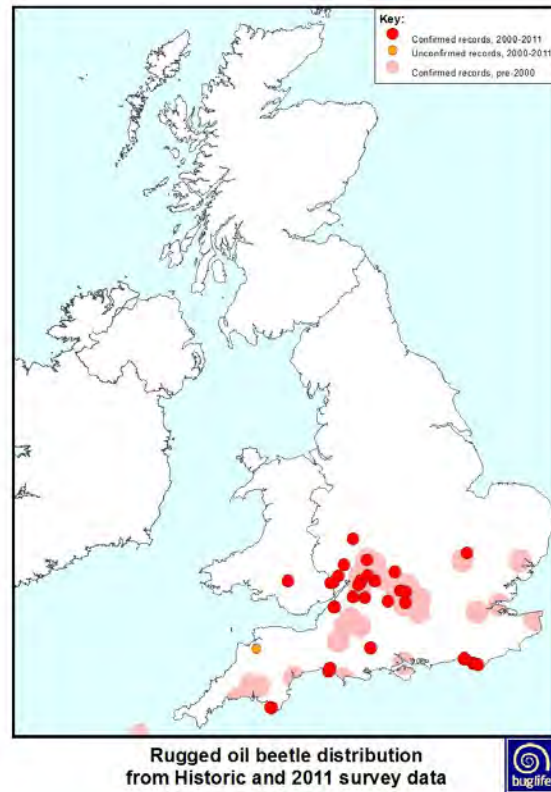
Black oil beetle distribution from Historic and 2011 survey data



Black oil beetle (*Meloe proscarabaeus*), has largely declined in the north © Buglife



Violet oil beetle (*Meloe violaceus*) © Buglife



Rugged oil beetle (*Meloe rugosus*) © Buglife

Oil beetles are most commonly found on flower-rich open habitats such as unimproved grassland, cliff top grasslands, heathland, and moors. Oil beetle larvae, known as triungulins after the three claws on their legs, are nest-parasites of ground-nesting solitary bees and dispersal is during the triungulin stage via host bees. The loss of wildflower-rich habitats, habitat fragmentation, changes to land management and a decline in host bee species have all contributed to the decrease in oil beetle numbers.

To read more on the results of the 2011 survey and for a link to the new management guidance, please visit: <http://www.buglife.org.uk/getinvolved/surveys/Oil+Beetle+Hunt/Oil+Beetle+Hunt+--+Survey+results+2011>, or download the identification guide and join in the national oil beetle hunt at <http://www.buglife.org.uk/getinvolved/surveys/Oil+Beetle+Hunt>.

Record-breaking RSPB Big Garden Birdwatch reveals fall in Scottish starling sightings

RSPB Scotland

A nation-wide survey has raised fresh concerns for one of Scotland's most recognisable garden birds. Famed for their iridescent colouring, squabbling bird-table behaviour and breath-taking murmurations, the starling is often regarded as one of the most commonly spotted garden visitors.



However, its popularity masks a worrying trend as results from the RSPB's annual Big Garden Birdwatch show that over the past decade, sightings have declined by 17% in Scotland. Similarly, a total of 23 out of 31 counties have recorded a decrease in the average number of starlings spotted during the survey since 2002.

A record-breaking 53,000 Scots took part in this year's Big Garden Birdwatch, each spending one hour over the weekend of 28th and 29th January recording the wildlife in their gardens or local parks.

RSPB Scotland compares this information with previous years to identify any long-term trends that may require further scientific investigation.

Keith Morton, Species Policy Officer at RSPB Scotland, said: "It's great to see so many people stepping up for nature by taking part in the Big Garden Birdwatch. The results are an important piece of the jigsaw when monitoring garden bird numbers and a vital tool in flagging up any underlying problems, such as the trend we are seeing with starling numbers.

"The fact this bird ranked third in this year's Big Garden Birdwatch shows that it is still a fairly common garden regular. However, looking back on the results over the years it is clear that where once you may have seen as many as fifteen of these highly sociable birds at any one time, nowadays, in some areas you may see as few as two or three.

"The causes are not well understood and, because many starlings migrate from breeding grounds in Scandinavia and Eastern Europe to winter here then declines may reflect environmental changes elsewhere in Europe. However, UK-wide surveys are revealing declines in our own breeding starling populations too, so it is clear that further work is needed to understand these losses."

For the first time since 2005, the house sparrow claimed the top spot in the 2012 Big Garden Birdwatch in Scotland, with an average of 5.5 birds spotted in 70% of gardens. The chaffinch fell to second place, with the starling, blue tit and blackbird completing the top five.

A total of 592,475 people across the UK counted over nine million birds in this year's Big Garden Birdwatch, with over 70 species were recorded in gardens.

Without a prolonged cold snap this winter, more birds would have survived compared to the last two winters, so it is hoped many birds will have had a better start to the breeding season.

Over 12,700 Scottish school children and teachers also took part in the schools version of the survey, 'Big Schools' Birdwatch.' The UK-wide survey of wildlife in schools introduces thousands of children to the wildlife in their school environment.

530 classes from more than 390 schools were involved, recording the blackbird as the most commonly sighted visitor to school grounds.

For more information about RSPB's Big Garden Birdwatch www.rspb.org.uk/birdwatch.



Jewel in the crown shows its flamboyant side

GWCT (Game and Wildlife Conservation Trust)

It is regarded as one of the jewels in the crown of native British birds and keeping core populations of black grouse strong is vital.

At an early morning 'lek' on May Day, the Game & Wildlife Conservation Trust (GWCT) and the Earn-Tay-Almond Grouse Management Group highlighted the action needed to ensure a prosperous future for the black grouse (*Tetrao tetrix*).

Black grouse were once widespread across the UK but have suffered steady declines and range contractions over many years, with populations falling from an estimated 25,000 displaying males in 1970 to just over 5,000 in 2005 (when a national survey was last conducted). Three-quarters of the UK's population of this red listed species of high conservation concern are in Scotland, with the remainder in northern England and a small number in Wales.

In northern England the black grouse is the only Biodiversity Action Plan species to have met its targets. Surveys by GWCT Scotland, RSPB Scotland, Scottish Natural Heritage, the Forest Estate and dedicated local study groups supported by these bodies are revealing more detail about the Scottish birds. Important populations north of the central belt are stable over the long term, with preliminary counts of cocks in northern Scotland by local groups in 2012 supporting this view.

Ensuring this core population remains healthy is of clear conservation importance. One major change which may affect black grouse is the Scottish Government's policy for 100,000 hectares of new woodland in Scotland over the next 10 years. In northern Perthshire a partnership of Scottish Natural Heritage, Cairngorms National Park Authority and Forestry Commission Scotland is examining how Scottish black grouse use habitats. GWCT scientist, Dr Patrick White, is currently radio-tracking black grouse in highland Perthshire to investigate how they use forests in the landscape. Since August 2009 researchers have fitted 89 birds with radio-collars to record their habitat use patterns, breeding success and survival.

Dr Adam Smith, Director Scotland for Game & Wildlife Conservation Trust, said: "This remarkable species needs a diverse array of habitat including woodlands and moorlands with low levels of predation and disturbance to thrive. Changes in woodland planting could affect deer, crow and fox numbers, alter the risk of grouse colliding with fencing and pose challenges for burning heather moorland. Making sure the publically funded advice and support land managers such as those who make up the Earn-Tay-Almond Grouse Group receive for black grouse populations is appropriate to future conditions throughout Scotland, is a key challenge.

We are pleased this challenge is being picked up by the newly formed Scottish Black Grouse Co-ordination Group, jointly chaired by RSPB Scotland and GWCT Scotland, and supported by Scottish Natural Heritage, Forestry Commission Scotland, Scottish Gamekeeper's Association, and Confor and Scottish Land & Estates."

Liz Smith, Scottish Conservative MSP for Mid Scotland & Fife, said: "I am delighted to support the Game and Wildlife Conservation Trust and to be attending the early morning lek on the Abercairny Estate. The



black grouse is a hugely important game bird and I am very conscious of the hard work that has been undertaken by the Earn-Tay-Almond Grouse Management Group to secure a future for the birds in the key rural communities across Scotland.

“It is very good news indeed that their numbers are increasing and that there will be renewed focus on keeping their population healthy in the face of many environmental challenges. Living in the Strathearn area myself, I have learnt a great deal about the pressures on the surrounding natural habitat and I look forward to hearing more from the Trust in the coming months.”



A black grouse carrying out its enigmatic display on a traditional lek © Margaret Holland

Flower Power needed!

Spring into action and help Plantlife count the UK's wildflowers

Plantlife

Do you know your cowslip from your cow parsley? Or your buttercup from your butterbur? Plantlife are calling on people to put a spring in their step and join the UK's only annual wild flowers survey.

Sue Southway, who is leading Plantlife's *Wildflowers Count* survey (which began end of March), says: “Our survey is really simple and all our volunteers get a free colour guide of the wildflowers included. If you enjoy being outside, whether walking the dog, exercising children, or just for the pure enjoyment of seeing the seasonal changes around you, please get in touch. The survey runs from the first day of spring right through to September and helps us to find out more about the flowers on YOUR doorstep! In the UK, we know lots about the really rare and threatened species but much less about how our more common wildflowers are doing. Last year our survey showed that creeping buttercup and cowslip were among the UK's most com-



mon wildflowers where as stinking iris and alpine lady's mantle were the least recorded. Our wild flowers aren't just gorgeous they are vital to the survival of our wildlife; by tracking them we can see if they are increasing or decreasing in numbers, which, in turn, shows us how healthy our countryside is. You may be surprised by how many you know!"

Just some of the fascinating wild flowers that could be on your doorstep:

Wood anemone

The delicate white stars of wood anemones can carpet the woodland floor in early spring. On warm days they often fill the air with a sharp, musky smell which in ancient times led locals to name the flower "smell foxes", it's also known as the windflower or grandmother's nightcap.



Wood anemone © Plantlife

Meadow buttercup



Meadow buttercup © Plantlife

The glossy gold of buttercup flowers are known to every child; hold them under your chin and see the gold reflected by all those who love butter! In certain meadows buttercups are so dense their colour it's dazzling under the May sunshine. In folklore beggars squeezed the juice from buttercups and applied it to their skin so it looked like blisters and would help them gain sympathy.

Foxglove

The 'pinky-purple' spires of our native foxglove are found on woodland edges, in hedgerows and waysides. The inside of the bells are freckled with darker purple and are often bobbing with bees looking for pollen. Despite its high toxicity, foxgloves became famous for the treatment of heart failure. Its leaves were used to slow the heart beat and help it grow stronger which in turn stimulated the kidneys to clear the body and lungs of excess fluid. However the dosage was critical and if it was a fraction too high it could stop the heart all together!



Foxglove © Plantlife

To take part, simply log on to:

http://www.plantlife.org.uk/things_to_do/wildflowers_count/.

Have the traditional orchards of Wales gone to seed?

Lauren Alexander, PTES (People's Trust for Endangered Species)

Existing data about the amount of traditional orchard habitat in Wales is out-dated and incomplete, and so this year the People's Trust for Endangered Species (PTES) is undertaking the first-ever national survey of traditional orchards in the country. This follows on from their recently completed project to produce an inventory of this UK Biodiversity Action Plan (BAP) Priority Habitat in England, which found that 45% of England's remaining traditional orchards are in poor condition and only 9% are in excellent condition.

Funding from the Countryside Council for Wales (CCW) and the Esmée Fairbairn Foundation is now enabling PTES to undertake a similar project in Wales, which will result in a comprehensive inventory of tradi-



tional orchards in the country. Information on the condition, age, boundaries and management status will be made available on the PTES website as the work progresses, and officially released as a GIS layer by CCW in early 2013 for use by the Traditional Orchard Habitat Action Plan (HAP) group and other BAP groups, conservation organisations, policy makers, Local Authority planners and anyone with an interest in the traditional orchard habitat. This vital resource will help to underpin the conservation of this threatened habitat, as well as raise awareness about the importance of traditional orchards in the ecological landscape.

Traditional orchards are hotspots for biodiversity and support a wide range of wildlife and plants. At least 1800 different species are associated with the habitat, including many species which are rare or scarce such as the noble chafer beetle or mistletoe marble moth. These wildlife refuges are becoming increasingly rare due to the intensification of agriculture, pressure from land development, and economic competition within a global market and our increased reliance on imported fruits. With this loss of habitat we also face losing rare fruit varieties, traditions, customs and knowledge.

Researchers at PTES are currently combing aerial photographs of the three and a half million hectares covering Wales. Traditional orchards can be spotted using the aerial photos as they characteristically consist of a low density of trees set in grassland. They are cultivated using low-intensity methods without pesticides or herbicides, and often grazed. Modern intensive orchards differ in their planting patterns, as the trees tend to be grown in narrow rows with visible lines of herbicide.

The project now needs hundreds of volunteers to verify their findings on the ground, by checking for characteristics of traditional orchards as well as recording the species, age and condition of the fruit trees they find. PTES are also interested in hearing from orchard owners and managers or anyone else with any local orchard knowledge. The help of volunteers and input of local knowledge are essential to ensure that the resulting inventory is as complete and accurate as possible.

Further information on the project can be found on the PTES website www.ptes.org/orchards. If you are interested in becoming a survey volunteer or are an orchard owner please contact Lauren Alexander, Orchard Liaison Officer, on 020 7498 4533 or e-mail lauren.alexander@ptes.org.



© PTES



From Thorn to Orchid

Embedding volunteer action for London's chalk grassland restoration

Petra Sovic Davies, London Wildlife Trust

The chalk downs of London are some of the capital's richest wildlife sites, and are a priority habitat for both the UK and the London Biodiversity Action Plans. Chalk grassland develops on shallow lime-rich soils that are nutrient-poor and free-draining. They support a range of nationally uncommon or scarce wildflowers such as orchids, greater yellow-rattle and Kentish milkwort. Some sites have up to 43 butterfly species, including the nationally rare Small blue and Chalkhill blue.

Chalk grassland was traditionally maintained through livestock grazing but has undergone a significant decline on a national scale in recent decades, dropping by around 80% in the last sixty years. Within London, about 390 hectares of chalk grassland remain. Suburban development and a decline in long-established farming methods mean the habitat is now particularly rare. For many years London Wildlife Trust (the Trust) has been working in successful partnership with the Old Surrey Downs Project (OSDP) to restore chalk grassland sites that fall under our management in Croydon and Bromley.

With the aim to secure a future of chalk grassland nature reserves, we launched From Thorn to Orchid in June 2011, a one year project supported by the Heritage Lottery Fund. The goal of the project was to increase and enhance the involvement of local people



Hutchinson's Bank © Shaun Marriott



Volunteers at Hutchinson's Bank © Petra Sovic Davies

in the conservation of these fantastic green spaces on their doorstep. We are working to achieve this by involving local communities and partners in every aspect of site management; from the start of the management planning process, through joint delivery of conservation activities and the monitoring of our conservation efforts, to undertaking surveys – to assess how wildlife is thriving.

The project kicked off in August 2011 when we organised a series of surveying and monitoring training sessions for volunteers. It was an opportunity for local residents to learn about the delicate balance between natural scrub succession and the grassland restoration process, to discover unique species of



This was followed by a two day workshop in November 2011 that brought together an enthusiastic group of people with many decades of chalk grassland conservation experience between them. The workshop was a great opportunity to bring together substantial local expertise and information about the habitats and species and review the impressive progress that was achieved on the sites during the past three years. It resulted in drafting an ambitious plan for the sites which will require a combined effort and long term dedication of all partners.

Ever since the beginning of the project we have worked hard to widen our network of local volunteers. Through on-site conservation sessions our volunteers developed useful practical skills and understanding of chalk grassland habitat that will enable them to take-up more active roles in future site management, including on-going assessment and monitoring. In conjunction with the Trust's local group we have achieved significant progress in enhancing chalk grassland at Hutchinson's Bank, Chapel Bank and Saltbox Hill. The extensive scrub clearance was followed by conservation grazing delivered by OSDP.

During the winter months we jointly undertook a significant amount of scrub clearance on Hutchinson's Bank and Chapel Bank nature reserves. As a result a whole new paddock is cleared of scrub and ready for introduction of grazing. This was complemented by work done by contractors (funded by Veolia Environment Trust and Biffa Award) on another part of the site, where a large area of mature hawthorn was cleared, at the same time creating scalloped scrub edges that benefit a great number of animals, including butterflies and reptiles. Volunteers who have joined the workdays have not only come from the local area but also from other parts of London and many have had a particular interest in gaining experience of working on London's own chalk grasslands, finding out about a site's history and reviewing progress of the work they have contributed to with such great dedication. With the help of our volunteers a large area of scrub at Saltbox Hill was also cleared to make sure that this beautiful SSSI is restored to a favourable condition.



Volunteers at Saltbox Hill © Shaun Marriott

We plan to establish a monitoring programme that will be carried out by Trust staff, local groups and new volunteers, which will help us to adjust practical conservation work and a grazing regime to benefit chalk grasslands in the most efficient way. We are hoping that the surveys following the extensive clearance work will record increased number of chalky herbs, butterflies and orchids.

Scaling the City

Connecting London's Amphibian and Reptile Environments (CLARE) Project

Sophie Hinton, Amphibian and Reptile Conservation Trust

Reptiles and amphibians have experienced significant declines over the last 65 years across the UK. As with the majority of UK wildlife experiencing population declines, this is primarily attributable to the loss of suitable habitat. However, there is also a lack of understanding in terms of their habitat requirements, their limited dispersal ability and reptiles in particular suffering from persecution.



Identification and survey training © CLARE

Despite this and their unique place in our natural history and their key role in ecosystems, amphibians and reptiles are often overlooked when it comes to charismatic campaigns (except perhaps our friend, the frog). As a result, the threats they face are exacerbated by the extraordinary lack of information we know about their whereabouts and their population status across the UK. This is especially true for London which, despite its urban, fragmented environment, has always been a home for herpetofauna.

London holds some key habitats: chalk grassland, numerous brownfield sites and miles of railway lines, which is all helped by London's microclimate being a few degrees warmer than the surrounding countryside. But this lack of information on herpetofauna distribution in London is hampering opportunities to conserve these species. We are unable to predict the severity of their decline in the Capital or fight for what could be their last remaining strongholds.

To tackle this issue Amphibian and Reptile Conservation (ARC) teamed up with London Wildlife Trust, London Amphibian and Reptile Group (LARG) and Greenspace information for Greater London (GiGL – London's Environmental Record Centre) – to form a partnership project called CLARE (Connecting London's Amphibian and Reptile Environments).

The CLARE project began in June 2011 and is now quickly approaching the end of its one year duration. The project was set up to deliver the targets of the London Biodiversity Action Plan (BAP) for the species:

The CLARE project began in June 2011 and is now quickly approaching the end of its one year duration. The project was set up to deliver the targets of the London Biodiversity Action Plan (BAP) for the species:

- Promote a wider awareness of herpetofauna and their conservation
- Establish a baseline data population set of amphibians and reptiles in Greater London
- Increase the distribution of amphibians and reptiles in Greater London

Another aim of CLARE is to increase the knowledge and therefore the capacity within the capital to deliver herpetofauna conservation in London beyond the project.

Throughout the year we've attended a number of events both small and large scale which allowed us to tackle two of the aims in one go – raising awareness, and gathering data on herpetofauna whereabouts. By bringing live (and wild) displays of some of London's local herpetofauna at our stand (such as slow-worms, smooth newts and grass snakes) it quickly grabbed public attention who were then quick to point out where they'd seen something like it before. The public can so often be overlooked when it comes to gathering data, but with the right draw ins we have managed (and are continuing) to pull in new information on the local populations of amphibians and



CLARE at Thames Festival © CLARE



reptiles in London, whilst also promoting the importance of this information.



Identification and survey training © CLARE

Another key aspect to CLARE has been training (habitat management and identification, survey techniques). By providing opportunities to learn about herpetofauna and their conservation it will secure longer-term gains for herpetofauna in London, beyond the project. Some of those that have attended the training sessions have then been able to set up their own local training session, passing on to an increasing web of knowledge that with any luck will continue to expand well into the future.

Following on from the habitat management training, those who attended were able to put their skills to use throughout the winter on some of London Wildlife Trust's reserves. We all took to the south east where trees were steadily taking over some of their chalk grassland sites to help keep the habitat open by removing the woody re-growth which will help the local common lizard and slow-worm populations in the area. This is a prime example of our partnership work with London Wildlife Trust, who are currently managing this land as chalk grassland

SSSI in their *From Thorn to Orchid* project but have managed to incorporate herpetofauna into their management plans, combining both CLARE and *From Thorn to Orchid* priorities for these sites.

The spring brought about a targeted survey effort from CLARE partners and volunteers in an attempt to uncover new, up to date records on herpetofauna presence within particular sites.

GiGL created a map which highlighted 'suitable species habitat' across the capital against current records, and with this knowledge we have been able to approach the London Boroughs (local authorities) emphasising the importance of these surveys. Now a number of new sites across 16 of the London Boroughs have the materials and volunteers in place to survey throughout the rest of the season and hopefully uncover some new sites where amphibians and reptiles are still surviving in London.

Once the data has been collected and verified, even those sites which do not appear to hold any populations of herpetofauna still hold promise, as they have the potential to aid the delivery of the third of the London BAP targets – 'increasing the distribution of herpetofauna in Greater London', by reintroduction programmes.

Come the beginning of June 2012 we will have an improved, up to date atlas showing the distribution of herpetofauna which we hope will aid conservation strategy to secure the survival of amphibians and reptiles in London into the future.



The common toad © Fred Holmes



Spring

Features

If you have spotted any amphibians and reptiles around London – we want to know about it – either by post (request a CLARE leaflet) or online: www.arc-trust.org/CLARE, by following the link to the GiGL (CLARE) record form.

Thank you to all of those who have volunteered their time for this project.

For further information or to request a CLARE leaflet please contact Sophie, the CLARE Project Officer: Sophie.Hinton@arc-trust.org, 07810 184 501 or 020 7261 0447.

For more information on amphibians and reptiles of the UK please visit Amphibian and Reptile Conservation's website www.arc-trust.org.



CLARE project Habitat Management workday © CLARE



Spring

Local & Regional

Lilian Bland Community Garden Blooming Glengormley!

Rosie Irwin, Newtownabbey Borough Council

Glengormley Community Group had its second successful activity day in April, with over 25 green-fingered attendants. There was fruit tree planting and wildflower sowing with refreshments provided for all the hard-working volunteers on the day.

The fruit trees were a variety of apple, pear and plum species which will provide a bounty of produce when ripe, as well as adding to the natural surroundings and creating shelter and food for local wildlife in the area. Apple blossom is excellent for pollinators such as bumble bees and butterflies, as are wildflowers.

There were many "lil green-fingers" on the day happy to get mucky and create the best area for our wildflower seeds. The majority of seeds were very kindly donated by Ecoseeds in Strabane, as well as some seeds from the Royal Horticultural Society as part of their National Gardening Week and Blooming Britain campaign. The seeds included an annual and perennial mix of native wildflowers such as cornflower, corn marigolds, poppy and corn cockle. The Conservation Volunteers Northern Ireland provided some wildflower seedlings from their wildflower nursery of Red Campion, Teasel and Ox-eye Daisy.

Rosie Irwin, Biodiversity Trainee, Newtownabbey Council, said: "The community garden is starting to take shape now, the fruit trees and wildflowers will provide a beautiful splash of colour and local produce as well as some much needed habitat for bees and butterflies."

Lilian Bland Community Garden is funded by the Alpha Programme and supported by Conservation Volunteers NI and Newtownabbey Borough Council.

For further information please contact:

rirwin@newtownabbey.gov.uk, 02890 340063.



Lilian Bland-finished wildflower plot © Newtownabbey Borough Council

Live webcam launched to track Aylesbury's Peregrine Falcons

Paul Holton, Aylesbury Vale District Council

Look up to the sky while strolling around Aylesbury town centre and you could well be greeted with the site of the world's fastest animal swooping down on an unsuspecting pigeon. Peregrine Falcons have been in the town for a few years now and as a result of an innovative project lead by Aylesbury Vale District Council Biodiversity Team these birds are now breeding on the Bucks County Council tower block right in the centre of town.



Spring

Local & Regional

AVDC Biodiversity Team had the idea to erect an artificial nesting platform when they noted Peregrines had been seen in the area. Permission was sought and granted to erect the platform on Bucks CC tower block in the town in 2008. Volunteers working with AVDC Biodiversity Team requested advice from Bucks Bird Club and national conservation bodies on how to construct and erect the platform. In the summer of 2008 the platform was successfully erected. The local press, BBC and ITV regional news teams filmed the event and four years later, it seems the birds are comfortable enough to use the platform to nest on and to hopefully rear chicks.



Dave Short making the artificial Peregrine nest platform (2008) © AVDC



Peregrine platform erecting team (2008) © AVDC

The environment of the platform at the top of County Hall replicates the birds' natural nesting habitat on the edge of a cliff. These magnificent birds have moved into towns and cities using the tall buildings to roost and sometimes nest, feeding on feral pigeons that populate our urban areas. Dave Short and Bill Robson, volunteers with AVDC Biodiversity Team, were instrumental in erecting the box and have been monitoring progress ever since. Members of Bucks Bird Club noticed slight changes in the birds behaviour early in the spring of 2011 and it seemed apparent that the birds were finally using the platform to nest as well as roost. Experienced bird ringers inspected the platform in early July 2011 and discovered one egg in the nest on the platform. Unfortunately this egg did not hatch. It was believed that the male was only 3 or 4 years old and only just reaching sexual maturity. It is common for young Peregrines to lay infertile eggs on their first breeding year, so there was great hope they would return in 2012

In preparation for 2012 the AVDC Biodiversity Team erected a pair of web cameras on the platform which will stream live footage of the birds throughout the year and will hopefully capture key moments including mating, egg laying and incubation, hatching of eggs and the rearing of the young.

Eggs are typically laid in late March or April at 2-3 day intervals and normally three or four are laid with both the male and female sharing incubation duties. Eggs take between 29 and 32 days to incubate. Once hatched the female will brood and feed the young, whilst the male keeps up a steady supply of food. After 2-3 weeks, when the chicks are a bit bigger, both parent birds will share hunting duties and will be especially busy in keeping the young birds supplied with food. The young fledge at 35-42 days when they are then taught by the adults to hunt and handle prey in flight. This time of year (June/July) may be the best time to see the birds flying around the nest in the centre of Aylesbury. The young become independent after about two months. They will then seek out their own territories and mates as they mature. Only about 1 in 3 birds will reach breeding age, but then may expect to survive for 5-6 years or more.

This is a fabulous project and shows what can be achieved with knowledge, initiative and cooperation. We hope that for many years this spectacular bird will successfully breed in the town, something that would not



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Peregrine Falcon perched on Bucks CC tower window ledge (2009) © AVDC



Peregrine web camera on the top of the Bucks CC tower in 2012 © AVDC

be possible without the platform and which could not be shared without the generous donation of the web camera equipment and the time of our volunteers.

A hunting Peregrine in flight is one of the most awesome spectacles of the natural world which residents and visitors to Aylesbury can now experience on their doorsteps and from their own home! Please follow this [link](#) to see live footage of the Peregrine Falcon Nest Platform.

For further information please contact Paul Holton, Biodiversity Officer, AVDC on 01296 427972 or at pholton@aylesburyvaledc.gov.uk.

About the Peregrine Falcon:

- Peregrine Falcons are mainly found in the south west of England, Scotland and Ireland. They are also seen throughout Europe, Asia, North and South America, Africa and Australasia.
- Their favourite habitat is moorland areas with rocky crags, costal cliffs, and they have been found nesting on bridges and power stations.
- The birds, which can live up to 15 years, tend to hunt pigeons, wading birds and ducks.
- They can be identified by their dark crown and grey upper parts. Females are larger than males.
- The population of peregrine falcons was decimated during the sixties and seventies due to poisonous pesticides. Since the pesticides were banned, the birds have increased in numbers to nearly 1,500 pairs across the UK.



Male and female Peregrines mating (March 2012)
© AVDC



Female Peregrine and three eggs (April 2012) © AVDC



Spring

Local & Regional

Pigmyweed menace put in the shade



© Elspeth Lawson

TCV (The Conservation Volunteers)
Volunteers from leading charity for reclaiming green spaces, The Conservation Volunteers, (formally known as BTCV) have been working hard to remove a highly invasive water plant from a loch of international importance for its wildlife.

The ecology of Loch Flemington, 8 km south-west of the Highland town of Nairn, is under threat from invasion by the non-native New Zealand Pigmyweed (*Crassula helmsii*).

Designated as a Special Protection Area (SPA) within the Kildrummie Kames SSSI (Site of Specific Scientific Interest), the loch is a breeding site for Slavonian grebe (*Podiceps auritus*) and a range of other rare indigenous plants and animals. However, grebes

have not bred there since 2001 and many of the loch's other inhabitants have suffered due to nutrient pollution and the non-native pigmyweed.

New Zealand pigmyweed is a water plant, sold in garden centres as an oxygenator for ponds, which escaped into the wild in the 1970s. Growing from fragments as small as 5 mm, it spreads rapidly to form dense mats that choke out the native plant life upon which the grebes depend.

The Conservation Volunteers is working with Scottish Natural Heritage (SNH) to control the plant. Armed with waders, arm-length rubber gloves, plenty of hot tea and special covering material, volunteers are laying covering over colonies of the plant, thus starving them of light. This method has been shown to work well on the Mochrum Lochs near Wigtown in south west Scotland. Chemical treatment is not possible owing to the pigmyweed growing mainly underwater.

"We are grateful to The Conservation Volunteers for their enthusiasm in taking on this project," said Tim Dawson, SNH area officer for the Inner Moray Firth. "And also for the help we have received from the local action group which is made up of local residents, Culloden and Croy Community Council, the Centre for Ecology and Hydrology, RSPB, Kilravock Estates and other land owners as well as the Scottish Environment Protection Agency. These groups have helped form an excellent partnership which is addressing the many challenges that currently face Loch Flemington."



© Mairi Stewart



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The project was supported by the Be Plant Wise campaign through a grant to support the local action group and the work by The Conservation Volunteers is directly funded by SNH. "The work may be cold, wet and strenuous", said John Weaver, (former) Volunteer Development Officer for The Conservation Volunteers, "But we are pleased to be able to help out with the conservation of the loch. Anyone keen to help out with our conservation projects don't hesitate to get in touch!"

For further information, please contact: Elspeth Lawson, e.lawson@tcv.org.uk.

About The Conservation Volunteers

The Conservation Volunteers have been reclaiming green places since 1959. Through their own environmental projects and their network of 2,000 community groups, they help hundreds of thousands of people across the UK to take responsibility for local green places.

Their work includes:

- Green Hubs: Focal points for care for local green places
- Chestnut Fund: Helping community environmental projects get started
- Community Network: 2,000 community organisations looking after the green places that matter to them
- Training: For skills and jobs
- Big Green Weekend and Green Heroes: The UK's biggest weekend of conservation action, celebrating the people who make the difference (this year taking place 5-7 October).

Partnership provides backbone to invertebrate recording on the Avalon Marshes

Kevin Anderson, *Natural England*

Invertebrate recording on the Somerset Levels and Moors has received a major boost from a new partnership involving Somerset Wildlife Trust, Buglife and Natural England. The aim of the project is to create a hub at the Avalon Marshes Centre, near Glastonbury in Somerset, for volunteer recorders by providing invertebrate survey equipment, identification resources and dedicated database facilities.

Although the 12,500 hectares which make up the Avalon Marshes is internationally important for invertebrates, it is an under-recorded group with very few dedicated surveyors. The partnership, led by Somerset Wildlife Trust, with initial set-up funding from Natural England, and training provided by Buglife, intends to develop the Recorders of the Avalon Marshes (RoAM) so that accurate, systematic, scientific records can be provided to inform future land and water management decisions.

The first event for potential 'RoAMers' was held recently at the Centre with 25 volunteers from across Somerset Wildlife Trust, Natural England, the RSPB and the Hawk and Owl Trust receiving training in survey and identification techniques. Natural England's Shapwick Heath National Nature Reserve was then used to practice the new skills in various habitats. The day was incredibly successful with project leader, Dr Mark Steer, commenting: "Judging by the enthusiasm our volunteers have shown today to learn about the won-



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ders of invertebrates, I am sure we will soon be able to provide some really useful data about the health of our populations of aquatic beetles, dragonflies, moths and bumblebees”.

A full schedule of training and survey events is planned for the rest of the year. Should you require further details please contact Mark on 01823 652428 or email mark.steer@somersetwildlife.org.



© Kevin Anderson

When you can't see the flowers for the trees

Battle to save two of Wales' most precious wildflowers that are disappearing into the darkness of our woodland

Plantlife

Plantlife are carrying out urgent conservation work in Pembrokeshire, Monmouthshire and Montgomeryshire in order to stop the dramatic decline of two of Wales' most rare wildflowers. The Bastard Balm and the Spreading Bellflower are struggling to survive in our dark overgrown woodlands and are now top conservation priorities in Wales.

Trevor Dines from Plantlife Cymru explains: “Spreading Bellflower and Bastard Balm are among the top priorities for conservation in Wales. They are both threatened and populations are very small and sporadic, usually being found in neglected patches of ancient woodland and along old hedge banks. These habitats are vulnerable to neglect, with a lack of coppicing and hedge laying leading to overgrowth with coarse herbs and woody plants.

For Spreading Bellflower, the situation is especially critical – it's identified as being in imminent risk of extinction in Wales within 5 years with less than 5 plants recorded across all sites in some years. In order to save



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these species, we want to encourage a return of traditional woodland and hedgerow management, with coppicing being used to provide a sustainable source of timber and wood fuel, and hedgerows made stock-proof through proper laying. These activities provide precisely the conditions the plants need – light and disturbance. It's not just the rare flowers that benefit though – favourites like primroses, wood anemones and wild daffodils are also welcomed.

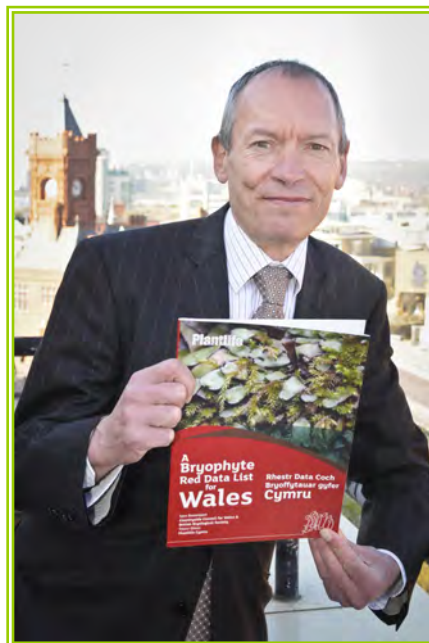
The rare woodland species have a clever trick that allows them to survive in our ever-changing woodland: their seeds. These tiny time capsules lie dormant, buried in the soil for decades until disturbance brings them to the soil surface again. Disturbance usually means an opening of the canopy and light flooding to the forest floor, and this light triggers the seeds into germinating, filling our woodland with colour once again. In one case, we know of Spreading Bellflower appearing at a site in Monmouthshire after an absence of 140 years.



Bastard balm © Andrew Gagg, *Plantlife*



Spreading bellflower © Bob Gibbons, *Plantlife*



Environment Minister for Wales, John Griffiths, holding copies of the Red Data Lists © *Plantlife*



Spring

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First Local Nature Reserves in Hull

Jennifer Hunt, Hull City Council

Hull now has its first official local nature reserves at Rockford Fields and Noddle Hill. Two of Hull's most important wildlife sites have been awarded local nature reserve status after conservation work and management plans were completed for the inner city and urban fringe sites. Rockford Fields and Noddle Hill were given the status after being improved by Hull City Council and the Yorkshire Wildlife Trust. The Local Biodiversity Partnership and the local communities have had a significant role to play in the project which would not have been possible without the excellent support from the Natural England local team.



Education pond at Noddle Hill © Bill Hipkiss

Rockford Fields, in the centre of Hull, is a five hectare meadow which is home to a vast array of wild flowers and insects in the summer months. The site is all that is left in inner Hull of the once expansive Sutton Ings (water meadows and marshes), which was used as pasture by the Monks of Meaux over eight centuries ago. A legacy of its ancient past is crow garlic *Alium vineale* which fills the meadow with the scent of garlic from early spring through to summer. Other species that grow in the site include bird's foot trefoil, knapweed, tufted vetch and a variety of grasses.

Noddle Hill, on the edge of one of Europe's largest housing estates is a well-loved wildlife haven which attracts

visitors of all ages, in summer hundreds of school children enjoy the delights of pond dipping and listening to the summer migrants. Noddle Hill's 48 hectares are rich in a variety of habitats, including wetlands for rare water beetles, great crested newts, grass snakes and water voles.

Noddle Hill is exceptionally popular among birders who can enjoy watching snipe, cuckoos, turtle doves, peregrine falcon, kingfisher and lapwing, as well as the more common British birds.



Rockford Fields © Jennifer Hunt



© Bill Hipkiss



Spring

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Biodiversity in Bearsden

Jackie Gillespie, *East Dunbartonshire Council*



KILMARDINNY LOCH
LOCAL NATURE RESERVE

Kilmardinny Loch, a jewel in the crown of East Dunbartonshire Council, is not just a local park but a Local Nature Reserve supporting a diverse range of plants and animals. In fact, the Intermediate Water Lily *Nuphar x spenneriana* and Ivy-leaved Duckweed *Lemna trisulca*, can be found growing in the shallow margins of this kettle hole loch. There is a good population of Common Toad, while the bird species found range from the woodland Great Spotted Woodpecker to the secretive Little Grebe. This park is regularly used by dog walkers, joggers and families and is an important informal play area for kids, being one of the main open green spaces within this area of Bearsden.

Sadly the recent gales have left their mark on this remnant of Kilmardinny Estate and many well loved landmark trees have either been victims of the high winds or have been felled for health and safety reasons. Much of the timber is left to rot on site to provide much needed habitat for many woodland species. However, a section of a 200 year old beech that had been felled has been used to create a carved log seat which was placed at the loch side, providing an opportunity for environmental education with the local primary schools.

Iain Chalmers of Chainsaw Creations was contracted to carve the beech log into a biodiversity seat; when



© East Dunbartonshire Council



© East Dunbartonshire Council

pupils from the local Ecoschool Committees visited the area on a field studies trip organised by the Countryside Ranger Service, they produced an impressive amount of artwork highlighting the animals and plants they wanted to see carved into the log. Iain set about creating the seat which illustrates a huge leaping pike, a dragonfly, a frog and a duck as well as a wide array of other animals.

It took two days to carve this work of art and during this time many people visited the Park to find out what was happening. As Iain's chainsaw worked its magic, the animal and plant images emerged from the wood much to the onlookers' delight. As an extra, Iain carved a charming owl on top of a standing log.

This small but significant project has helped revitalise Kilmardinny Loch and has greatly enthused the public. Following the success of the initiative, East Dunbartonshire Council Neighbourhood Services and local group, the Kilmardinny Pals, are planning other similar projects for the future.



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© East Dunbartonshire Council



© East Dunbartonshire Council

Troopers Hill – a nature wonder amidst Bristol City

Defra

Seven volunteers from Defra’s Biodiversity Programme convened at Troopers Hill in April to “take off our policy gloves” and put proper gardening gloves on with the ‘Friends of Troopers Hill’. The aim of the day was to carry out conservation work on the Hill’s priority habitats of acid heath and grassland, which overlooks the river Avon in Bristol.



Troopers Hill today © Defra

Troopers Hill is an unusual natural space near to Hanham and St George in Bristol. It has a fascinating industrial history involving fireclay and coal mining, tar distillation works (that has contributed to its acidic conditions), pennant sandstone quarrying and even copper smelting since the 1700s. There are still clues to its past around the site including a large slightly leaning chimney on the top of the hill. We were very fortunate to be given a fascinating talk on the Hill’s history by Rob Acton-Campbell during our lunch-break.



Troopers Hill early 1950s © Mr B Alvis

Following the decline in its industrial use, the Hill was purchased by Bristol City Council in 1956 for all to enjoy as a public open space – and became a Local Nature Reserve in 1995. ‘Friends of Troopers Hill’ local community group was set up in 2003, led by Susan Acton-Campbell. The group has enthusiastically worked in partnership with Bristol Parks and the local community to conserve the only significant area of lowland acidic grassland and heathland in Bristol for the benefit of local people and wildlife.



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We spent the day removing invading saplings and bramble near the main entrance steps and along the upper public pathway – the gully, and removing cherry, holm oak, hazel and hawthorn saplings – including several trees (believe it or not) – that had been overshadowing, pushing back and ultimately killing the heather and grasses. The habitat on Troopers Hill also supports many invertebrate species including 80 different moth types and 22 different butterflies- and our team was excited to have spotted the first Orange-tips of the year!



Team members breaking for lunch after starting work removing cherry, holm oak, hazel and hawthorn saplings from the steep slope © Susan Acton-Campbell



The difference to the slope a few hours of work later © Susan Acton-Campbell

Maintenance of the Local Nature Reserve is part of Bristol's Biodiversity Action Plan and Bristol Parks have developed a 5-year management plan in partnership with Friends of Troopers Hill. Work has already begun using

the latest [management plan](#) agreed at the beginning of 2012, through day-to-day work undertaken by a very dedicated

Bristol Parks keeper, the Friends' monthly work parties, and other volunteers funded by the Friends including offenders on the 'Community Payback Scheme' as part of their 'Stepping Forward' [project](#). It was great to learn that every hour of volunteer time contributes towards the match funding raised by the Friends group, so there was an added benefit to our work.

The success of the 'Friends of Troopers Hill' group has been exemplified by their recent success in securing £30,000 from the Big Lottery Fund in November 2011, through the [Community Spaces Programme](#). This is being put towards their 'Stepping Forward' project that aims to provide visitors a better quality experience at the Local Nature Reserve, while still maintaining and protecting the Hill's characteristic and long-loved features and special wildlife habitats. The project will include installing a wheelchair access path, further improvements to the steps and pathways – and a launch event to involve and help engage as many members of the community as possible.

On top of this, Troopers Hill were awarded the 2011/12 'Green Flag Award' (out of 8 in total in Bristol, but the only 'Green Flag' Nature Reserve) for the fifth year running. This has no doubt been well deserved by the great efforts to keep the Hill managed, their real public engagement with the community and being as accessible as possible to all.



Defra Biodiversity Programme volunteers with 'Friends of Troopers Hill' Chair, Susan, and Friends member, Dave © Susan Acton-Campbell



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We would thoroughly recommend Troopers Hill as an excellent place to visit – whether it be for an afternoon walk and after indulging at the nearby Beeses Riverside tea gardens, for the Friends’ work parties that take place first Saturday of every month – or the many events they hold too – including an upcoming summer evening of music on Saturday 16th June, that will welcome the South Gloucestershire youth jazz orchestra.

For more information, please visit the ‘Friends of Troopers Hill’ [website](#) or their Facebook [page](#). If you’d like to get involved in some way, they’d be happy to hear from you at friends@troopers-hill.org.uk.

Glasgow City Council puts conservation in the community with the help of TCV Natural Communities Trainee

Helen Simmons, Glasgow City Council

Thanks to the Heritage Lottery Fund and The Conservation Volunteers (TCV) Natural Communities, Glasgow City Council (Land and Environmental Services) now has a new trainee Community Engagement Officer based in the Natural Environment Unit. Urban nature conservation can only be truly successful when it has the support of local communities. An additional officer dedicated to enabling and encouraging people to get out and enjoy their local green spaces and explore the biodiversity they have to offer puts Glasgow in a good position to make a real difference. It is envisaged the trainee will contribute widely to a new Community Action Plan proposed as part of the ongoing review of Glasgow’s LBAP. This will ensure that more communities are included in conservation efforts within the city and will set in place a framework for the future.



© Cath Scott, Glasgow City Council



© Cath Scott, Glasgow City Council

Glasgow is Scotland’s largest city providing a great opportunity to engage with a diverse range of communities, such as the ‘Friends of’ groups (both of parks and Local Nature Reserves), community organisations, housing associations and many other local residents. Community engagement projects provide many benefits including:

- Enabling communities to achieve change
- Bringing communities together
- Making people feel more included in projects in their local area
- Giving a sense of pride and ownership
- Improving the biodiversity value of local areas
- Raising awareness of the importance of biodiversity
- Improving the health and wellbeing of local residents through outdoor activities



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So far the TCV Natural Communities Trainee has been trying to increase the monitoring of butterfly populations in parks and Local Nature Reserves, enabling local people to contribute to national biological recording schemes, improve their identification skills or just to simply enjoy the pleasure of watching butterflies. Time has also been spent helping a community create a 'Friends of' group, encouraging wildflower planting as part of the Glasgow's Buzzing project, working with a community organisation at a brownfield site in the north of the city, helping the countryside rangers at events and attending as many community events as is humanly possible!

Having another individual in the Natural Environment Unit this year, who can solely give their time to raising awareness of biodiversity, can only be a good thing for both Glasgow's people and its wildlife. The City of Glasgow is looking greener already.



© Cath Scott, Glasgow City Council



© Cath Scott, Glasgow City

Beach life: new wardens for South Coast

TCV (The Conservation Volunteers)

Wildlife habitats along the crowded coast of Southern England are under constant pressure. Development, marine pollution, tourism and intensive agriculture remain ever-present threats. Yet financial constraints on environmental agencies and government bodies potentially make it harder to manage these sites effectively.

What can be done? Leading charity for reclaiming green spaces, The Conservation Volunteers, is helping local people to support government bodies in protecting biodiversity, backed by the Heritage Lottery Fund and other non-government sources. Enthusiastic teams of Beach Wardens now help to look after sections of coastline, aiming to become independent with their own sources of income. They can then join the Community Network run by The Conservation Volunteers which provides resources such as discounted insurance via an on-line Community Hub.



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Hamble Conservation Volunteers

Hamble Common is a good place to appreciate the challenges faced by the South Coast. Hemmed in by



© Bob May, Hamble Conservation Volunteers

new housing and oil storage tanks, it gives a clear view across Southampton Water to the UK's largest oil refinery. Yet it is also a fine spot for shelduck, oystercatchers and ringed plovers.

Part of the Lee-on-Solent to Itchen Estuary SSSI, it is one of the last surviving patches of coastal heath in Hampshire: 48 acres of bell heather and purple moor-grass bordered by woodland, scrub, meadow, salt marsh and intertidal mud and shingle.

Over two years, Hamble residents worked with The Conservation Volunteers to build a group that works year-round in support of Eastleigh Borough Council's Countryside Service.

With over £20,000 project funding from The Veolia Environmental Trust awarded through the Landfill Communities Fund and Eastleigh Borough Council, the local volunteers undertook practical tasks and training while developing a formal structure with support from The Conservation Volunteers. The Conservation Volunteers also provided tools, equipment and insurance for the first year of independence. The group formally came into being in early 2010 and operated independently since September.

During winter they continue a tradition of scrub clearing and burning that has maintained the common's semi-natural state for thousands of years. In summer, when birds are breeding and grazing sheep prevent the growth of scrub, it's beach monitoring and cleaning. They also carry out path repairs and inspire the general public through educational wildlife walks.



© Alan Cherry

"Everyone works hard to enable the community to enjoy the common," said group secretary, Philip Rawlinson.

Since becoming independent, they have received Eastleigh Borough Council funding for insurance. Local companies donate equipment, materials and people-power: "Up to 12 volunteers join us on task days," says Philip. "The Conservation Volunteers continues to give excellent co-operation and our Parish council help wherever they can. We also work closely with Hampshire and Isle of Wight Wildlife Trust's Shoresearch programme and Marine Conservation Society's Beach Watch campaign."

Hayling Island Beach Wardens

Better known for water sports than water fowl, surfer destination Hayling Island is connected to the rest of Hampshire by a short two-lane bridge and a tiny ferry for pedestrians and cyclists. There are 8,500 dwellings, mostly at the southern end, with plans for 600 more by 2026.

Helping to protect the biodiversity of the island in association with Havant Borough Council are Hayling Is-



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land Beach Wardens. With £44,700 from the Heritage Lottery Fund (HLF) in 2010 and full beach warden training from The Conservation Volunteers, local volunteers have been building skills and knowledge as they work around the island's coast. A 2011 Campaign to Protect Rural England (CPRE) Hampshire Countryside Award, sponsored by Steve's Leaves, shows how much progress they are making!



© Bob May, *Hamble Conservation Volunteers*

The teams have tackled gorse coppicing, preparation of bird nesting sites, litter removal and path maintenance. Sites include Sandy Point, a heathland Site of Specific Scientific Interest (SSSI) and breeding ground for the Dartford Warbler (*Sylvia undata*) and the wildlife-rich Langstone Harbour which is designated a SSSI, SPA (Special Protection Area) and RAMSAR site (wetland of international importance, designated under the Ramsar Convention). The group's main centre of activity is at Sinah Common SSSI: 242-hectares of sand dunes, shingle beach, grassland and salt marsh. It is thought to be one of two sites in Britain where the endangered Childing Pink (*Petrorhagia nanteuillii*) is found.

The result has not only been good for wildlife. It has been very positive for people too, as one volunteer wrote:

"Being a part of The Conservation Volunteers has not only opened my eyes to the wildlife around me, but it has been a wonderful experience doing such important work in the community. The like-minded people I've met have played an important part in the whole experience. The camaraderie that we've built up over the months I hope will continue for years to come. It's a great way to get involved in community life as well as discovering the wonders of nature and what an amazing planet we live on."

The group aims to follow in the footsteps of Hamble Conservation Volunteers and become self-sustaining.



Childing Pink (*Petrorhagia nanteuillii*)

© Andy Horton

Coasting on

For further information about the individual groups, please contact:

Hamble Conservation volunteers:

www.hamble-conservation.co.uk

philip@hamble-conservation.co.uk

Hayling Island Beach Wardens:

hibw@btcv.org.uk

<http://www2.tcv.org.uk/display/haylingbeach>



© Katy Roberts, *The Conservation Volunteers*

To discuss how The Conservation Volunteers could help set up a Beach Warden scheme in your area, contact:

nfo@tcv.org.uk, www.tcv.org.uk



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Belfairs Park Project An update

Louise Morris, Southend-on-Sea Borough Council

In the summer 2011 edition of Biodiversity News, we reported on the Belfairs Park Project, which is about engaging local schools and communities in and around Southend in volunteering, education and family events. At the heart of the project, known as the 'Hadleigh and Daws Heath Ancient Woodlands Living Landscape Project', is the Belfairs Woodland Centre. This will be an efficient building incorporating sustainable design and energy efficient technology located on an area of amenity grassland in Belfairs Park. The aim of the centre is to provide a base from which events and activities can be launched. Run by Essex Wildlife Trust, it will be open to the whole community with many opportunities to explore, experience, learn and enjoy.

Conservation work, volunteering and education will take place across the wider Hadleigh and Daws Heath Living Landscape. A Living Landscape is a large area of countryside that has a particular character but has become fragmented by development or changes in land use. The aim of Essex Wildlife Trust is to bring these fragmented landscapes back to life by working with landowners, partners and local people. The character of the Hadleigh and Daws Heath Living Landscape is ancient woodlands, which still dominate large parts of this area.

A large part of the development of the project over the last year has been to finalise designs for the new Woodland Centre and put together a comprehensive plan for delivering this important project across the landscape for people and wildlife. Both Essex Wildlife Trust and Southend-on-Sea Council have worked with local partners and stakeholders and have undertaken a comprehensive consultation to gain an in-depth understanding of what is required from this project.

Support for the project has been fantastic with a large number of responses to the community consultation, great feedback from local schools and many individuals and local groups expressing an interest in the new Centre and the potential of getting involved in the future.

The first success of the project came in January 2012 when the Woodland Centre was granted planning approval. This is an important step as it means that we have the necessary permission to start the development within Belfairs Park.

Our second success came in March 2012 when the Heritage Lottery Fund awarded a grant for £855,000, a substantial part of the project costs. We have now raised over £1.8 million and are just £50,000 short of our target total. This includes funding from Interreg 2 Seas, Southend-on-Sea Borough Council, Network Rail, Olympus KeyMed, Cory Environmental Trust in Southend-on-Sea, Forest Education Initiative, Fowler Smith Jones Trust, The ROSCA Trust, Essex Community Foundation and Leslie Mary Carter Charitable Trust. Thanks also for donations from the Castle Point Local Group and the Southend and Rochford Local Group.

Essex Wildlife Trust has launched an appeal to raise the last £50,000 towards the project. Donations will help us to reach our target and enable us to build the Woodland Centre and carry out important improvements for the benefit of wildlife and local people.



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It is anticipated that work will begin in delivering this project this summer.

Anyone looking to find out more about the Belfairs Project, or looking to support the project either financially or in other ways, can contact Louise Morris on 01702 215602 or email louisemorris@southend.gov.uk.

The Crayfish Action Sheffield Project

Martin Nowacki, Sheffield City Council

As it moves into its concluding phase, the Sheffield Action Crayfish (SAC) project is building on its success in white clawed crayfish (*Austropotomobius pallipes*) conservation. Working within the sub-catchment area of the Sheffield district, the main aims of the project: *maintain and increase Sheffield's population of white-clawed crayfish and raise awareness of white-clawed crayfish conservation amongst the general public*, have been largely achieved through the hard work of the project officer, contactors and volunteers. The main funding was from the Esmée Fairburn Foundation with hosting and project support from Sheffield City Council.

The Sheffield Action Crayfish (SAC) project came about when it was realised that Sheffield, with its long history of nature conservation and urban wildlife recording, still retained some significant populations of native white clawed crayfish in the smaller tributaries of the River Don. However this is set against an increasing threat from the non-native crayfish, in particular the American signal crayfish (*Pasifastacus leniusculus*) and the plague that they carry through the river systems that they invade. The incentive to conserve these populations required a large degree of co-ordination of both past records and a new survey plan to record crayfish in a number of tributaries in the south western part of the Don catchment. Surveys concluded by 2010 found white clawed crayfish in three tributaries but non-native signal crayfish in were also found in a small number of other rivers and tributaries. Overall, the surveys showed that although there were non-native crayfish in a



Adult white clawed crayfish
© S. Dangerfield



Searching for crayfish during a rescue operation
© S. Dangerfield

number of the main rivers, there were strong populations of white clawed crayfish in two tributaries of the River Don that ran through the city from its western fringes.

Where surveys or any other project activities took place in the rivers and water courses high levels of biosecurity were called upon as white clawed crayfish are very susceptible to crayfish plague a potentially fatal disease caused by the fungus (*Aphanomyces astaci*). This is carried by the signal crayfish which seem to be immune to it but it can also be waterborne and transferred through wet equipment that has been used in infected water bodies. The SAC project has an aim to raise awareness of the presence of white clawed crayfish and the threats to them from the transfer of non-



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native crayfish and crayfish plague. This can be through a number of ways: engineering works in water courses, angling, biological surveys, informal and leisure use of water courses and agricultural practices. The SAC project has raised public awareness of this threat and has provided good practice guidelines to waterway users, professionals and the public on biosecurity measures that should be taken.



A juvenile crayfish © S. Dangerfield

There is still work to be done finding out more about the ways in which non-native crayfish move through watercourses to populate areas previously free of alien species. The effectiveness of weirs, dams and other barrier within water course is still being debated and there are a number of studies on the effectiveness of barrier types. Crayfish surveys carried out by the SAC project have found non-native signal crayfish upstream of what could be considered significant barriers to movement. What this does suggest is that although natural and artificial barriers can be effective, care and good biosecurity should be exercised in all activities in water courses and water bodies. It is not enough to assume that a weir or dam will protect a population of white clawed crayfish; those that use rivers should be vigilant about protecting our native species.



Searching in a 'drawn down' river bed.
© S. Dangerfield

Although a national conservation strategy for white clawed crayfish has not yet been fully achieved, it is accepted by leading conservationist that one component of a strategy for the protection of native crayfish is the establishment of 'ark sites' where new populations can be protected from non-native crayfish and crayfish plague. Buglife in their leaflet on ark sites state that "ark sites are now recognised as an essential part of the white clawed crayfish conservation strategy for England and Wales." In Sheffield the SAC project has worked with local fresh water ecologists and volunteers to set up two Ark sites in two western tributaries of the Don catchment. The sites were selected as they were close to existing large populations, and they met the criteria set out by Buglife in their Ark site advisory leaflet in that they:

- have permanent water (either running, still, or both)
- be free of Signal crayfish and other non-native crayfish species
- be isolated from the threat of colonisation by non-native crayfish
- have suitable water quality and appropriate White-clawed crayfish habitat
- be sustainable in the long term.

Works to set up the ark sites involved site selection, acquiring a licence for the capture and movement of native crayfish, project planning and management. Establishing these Ark sites has given a part of the Don catchment a leading role in white clawed crayfish conservation. It is now vitally important that these ark sites are monitored over a long period so that their role in crayfish conservation can be assessed over a period of time. As part of the project legacy it is planned that a monitoring group is established and funded by regional bodies to monitor both the Ark sites and the other important parts of the catchment. In addition two student research projects have been established to: continue the work of the project in signal crayfish distribution and, the use of barriers and weirs in crayfish conservation.



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The Crayfish Action Sheffield project has contributed to the conservation of white clawed crayfish at a local level and has carried out work that could be transferred to a catchment, regional or national level. Both practical experience from projects and the growing amount of research will hopefully ensure that crayfish rise up the conservation agenda and we can address their needs on a wider scale.



Gravid female white clawed crayfish (eggs visible) © S. Dangerfield



Large adult white clawed crayfish © S. Dangerfield

Rare plant given helping hand by North Yorkshire County Council volunteers

Matthew Millington, North Yorkshire County Council

An Endangered plant called Tassel Stonewort (*Tolypella intricata*) has established itself in three of nine ponds that were created at Water Dale in the Yorkshire Wolds. The ponds were dug last autumn by North Yorkshire County Council's countryside volunteers and staff from Natural England in a bid to save a nationally rare plant. The work was funded by the Million Ponds Project's Pond Digging fund, which is supported by Biffaward.

The Tassel Stonewort is an endangered species and is identified as a priority species for conservation in the UK Biodiversity Action Plan. It is found in a few places in southern England, but this is the only modern record for northern England.

The plant was first spotted in 2010 by Martin Hammond, a freelance ecological surveyor, on the roadside near Thixendale. Martin got the County Council's Biodiversity Officer involved and managed to secure funding to create the ponds from the Million Ponds Project.

Four countryside volunteers and staff from the County Council and Natural England created six ponds of varying sizes and profiles, with an additional pond being dug by BTCV and the local farmer creating the last two in September 2011. It is known that the plant was more common in the past and it is thought that its seeds can remain dormant in the soil for decades. By creating new shallow



NYCC staff digging one of the ponds. From left to right: Dave Ranner, Matt Millington, Steve Green © Chris McGregor



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ponds, it was hoped that the plant would multiply and spread. Sediment from the original pond was added to some of these new pools in the hope that it contained Tassel Stonewort seeds.



NYCC volunteers and Natural England staff digging one of the ponds. From left to right: Susan Warcup, Don Jordan, Dave Green, David Rees, Tony Croser,

After only a few weeks all the ponds had filled with winter rain and were colonised by pioneer water beetles, water bugs and other aquatic life. In the last week, the ponds were checked and the Tassel Stonewort has established in three of the nine ponds. It is also thriving in the original roadside pool which was de-silted after it had become filled with sediment and overgrown with grass. In one of the new ponds, Tassel Stonewort forms a dense sward over about four square metres.

County Councillor Chris Metcalfe said "It is fantastic to see that the valuable work of our countryside volunteers has enabled such a rare plant to re-establish itself in North Yorkshire. It is a wonderful example of a number of organisations and the community coming together to make the countryside of North Yorkshire better for wildlife and people."

Chris McGregor from Natural England, added: "This is a great result for one of Britain's rarest plants. Using Government Environmental Stewardship funds, the ponds will be managed to maintain the open conditions that the stonewort thrives in and we will be checking on its progress. Volunteers and staff from Natural England and Pond Conservation have provided habitat restoration expertise and worked closely on site with the landowners who have been fully behind the work. This success story has been a team effort."

The Million Ponds Project is a partnership of major landowners and land managers in England and Wales, led by Pond Conservation. The Million Pond Project aims to ensure there are once again a million ponds in the UK, reversing a century of pond loss. The project is supported by The Tubney Charitable Trust, Natural England, the Countryside Council for Wales, and The Esmée Fairburn Foundation. It's Pond Digging Fund supports the creation of ponds for the 105 pond-associated Biodiversity Action Plan species; please see www.pondconservation.org.uk/millionponds.

Pond Conservation is the national charity dedicated to protecting pond wildlife. Pond Conservation gives advice, carries out research, promotes practical action and lobbies policy makers to ensure pond wildlife and pond habitats have a secure future.

Contact Pond Conservation via email at info@pondconservation.org.uk, on 01865 483 249, or visit the website at www.pondconservation.org.uk.



Tassel stonewort in original pond
© Martin Hammond



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Marine Life Angus

Kelly Ann Dempsey, *Angus Council*

The Angus Cetacean Awareness project began recording anecdotal and WDCS (Wales and Dolphins Conservation Society) "Shore Watch" cetacean sightings data in 2010. The construction of a website to aid in data collection has long been hoped for and has finally now become reality. The website www.marinelifeangus.co.uk provides this platform and also highlights designated sites along the length of the Angus coast aiding local tourism. There is information on other biodiversity recording projects ongoing in Angus such as the "Small Blue and Coastal Butterflies Project", and ERDF (European Regional Development Fund) funding that was secured earlier this year, amongst other funding.

The website was launched on May 22nd to coincide with the marine theme of International Biodiversity Day.

For more information please contact:
info@marinelifeangus.co.uk



Where are our Waxcaps?

Alison Slade, *Somerset Wildlife Trust*



© Matthew Marshall

Over the last two years, the Somerset Biodiversity Partnership has been running public waxcap fungi surveys to improve knowledge of their distribution in the county and encourage greater participation in fungi conservation.

There are around 50 taxa of waxcaps found in England, of which 32 have currently been recorded in Somerset. Most species are only associated with mossy grasslands where there has been no ploughing or artificial fertiliser applied and hence a high diversity of waxcaps often indicates this vanishing habitat. Unfertilised lawns and short turf in old churchyards also provide good environments for waxcaps.

A variety of these brilliant fungi at one site indicate ancient grassland which may date back hundreds of years. Other characteristic grassland fungi include the unusual and delicate fairy clubs, pink-gills and earth-tongues. Whilst grassland habitat quality is often based on 'higher' plant diversity, fungal diversity can be the poor cousin when it comes to conservation.



We initially targeted the survey at West Somerset, where there is a Waxcap Species Action Plan. The Blackdown Hills AONB area was additionally targeted in 2011, which meant working jointly with the Devon Biodiversity Record Centre (DBRC).

The local community were encouraged to record waxcaps from public rights of way and open access land, which they could combine with an autumnal walk in the beautiful countryside.

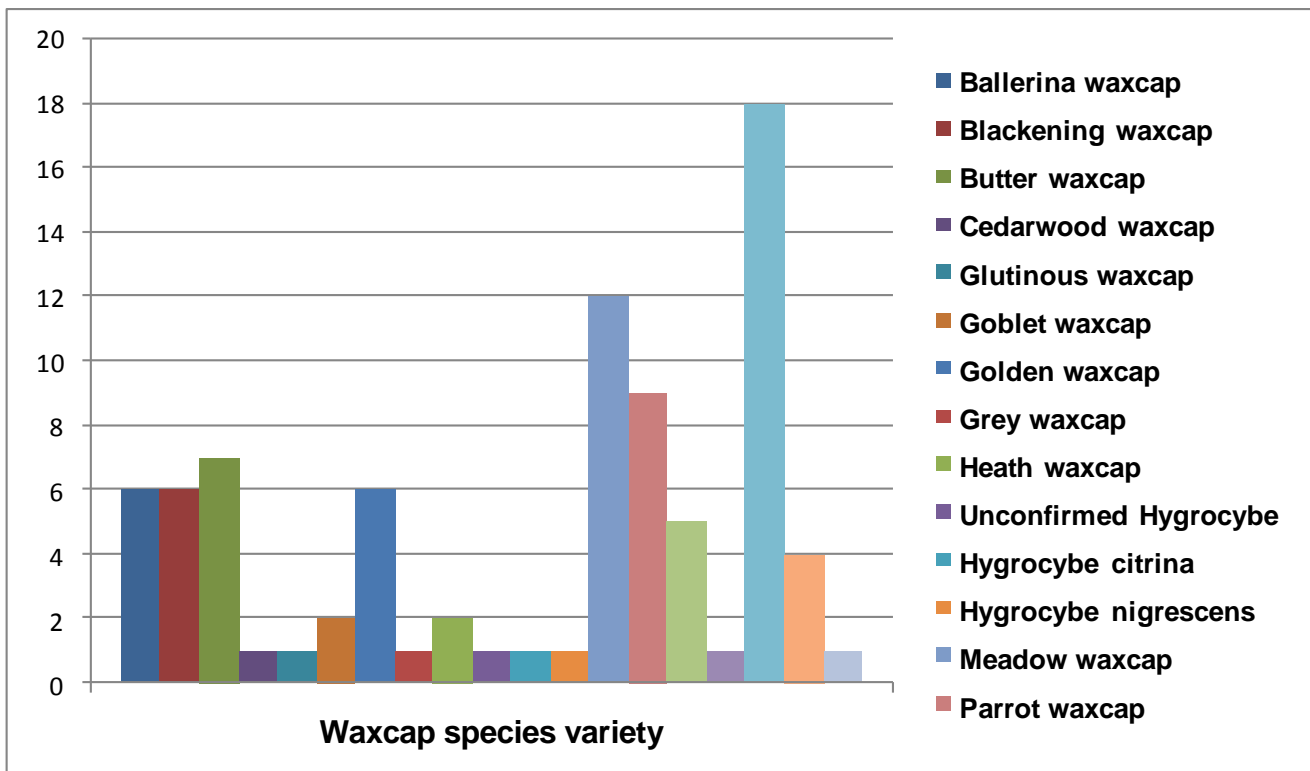
The Somerset Environmental Record Centre (SERC) designed an identification guide downloadable from their website, www.somerc.com. We printed a postcard asking people to report the colours of waxcaps found (and species if known) and also introduced on-line recording from the Somerset Wildlife Trust website. Two training days were held with an expert in waxcap identification to compliment the annual training available within Exmoor National Park.

Funding for the project came from the Quantock Hills and Blackdown Hills AONB Sustainability Development Funds (SDF) and the Wessex Water Partners Programme. To follow up the 2010 survey, the Quantock Hills AONB provided further SDF funding to allow more detailed survey and advice on managing land for waxcaps to be provided in 2011.

Results

Around 50 people took part in the survey, most were not fungi experts. The 300 records received have been mapped by both Record Centres, with new species records for West Somerset, the Quantock and Blackdown Hills and sites of Local Wildlife Site quality discovered.

Figure 1: Histogram illustrating the frequency of waxcap species records for 2011 in the Blackdown Hills AONB.





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Some survey highlights were:

The Orange waxcap (*Hygrocybe aurantiosplendens*) and the nationally rare *Hygrocybe vittelina* were recorded for the first time in the Quantock Hills AONB. Goblet waxcap (*Hygrocybe cantharellus*) – was recorded, we believe, for the first time in West Somerset and the Somerset portion of the Blackdown Hills, with an unconfirmed report of the Spindle-shank waxcap (*Hygrocybe ingrata*). Also found within the Blackdown Hills were the Somerset ‘notables’: Grey waxcap (*Hygrocybe lacmus*) and Slimy waxcap (*Hygrocybe irrigata*).



Ballerina waxcap Clayhidon churchyard © Alison Slade

The Association of British Fungus Groups ran two successful forays for fungus experts within the Blackdown Hills in 2011. These recorded Heath waxcap (*Hygrocybe laeta*) and Cedarwood waxcap (*Hygrocybe russocoriacea*) for the first time in the Somerset portion of the Blackdown Hills.



Hygrocybe cantharellus © Alison Slade

The site with the highest diversity of waxcap species was a Local Wildlife Site in the Quantock Hills, which had 11 waxcap species recorded on one day, together with earth tongues, pink gills and coral type fungi.

In total, 83 of the formerly UK BAP and 1992 Red Data Listed Ballerina waxcap (*Hygrocybe calyptriformis*) were recorded.

The advisory project in the Quantock Hills resulted in a wealth of new fungi records as well as landowners receiving survey reports and advice – which included two churchyards. One site has since been designated as a Local Wildlife Site as a result.

What we have found out:

- Waxcaps can appear from July to January!
- Some species are found in improved grassland – Meadow, Snowy and Blackening waxcaps in particular.
- Sites not previously recognised as of nature conservation value can still be discovered.
- Gardens can be good for waxcaps as well as church yards.
- These limited results suggest that there are more sites with a high diversity of waxcaps in the Quantock Hills area than the Blackdown Hills, although their distribution is wider than previously thought.



Crimson Waxcap
© Christopher Hancock

The future

The Date waxcap, still on the UK BAP list, has yet to be discovered, although recorded in neighbouring counties.

Waxcap records came in from other parts of Somerset, where surveys could be targeted in future years. We hope that having had a taste of fungal survey, those who took part will have increased confidence to continue this.



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For more information on the waxcap survey or the Somerset Biodiversity Partnership, please visit www.somersetwildlifetrust.org/biodiversity, or contact Ali Slade Alison.Slade@somersetwildlife.org.

Acknowledgements: the Blackdown Hills and Quantock Hills AONB's, Agni-Louiza Arampoglou of SERC, DBRC, Michael Jordan of the Association of British Fungus Groups, Richard Thompson and Wessex Water Partners Programme.



Waxcap training day at a Blackdown Hills churchyard © Alison Slade

ARCH Project an Interreg IVA - Two Seas Cross Border Co-operation Programme

Laurence Guedon, ARCH Project, Kent County Council

A very wide variety of habitats and species can be found in Kent and in Nord-Pas de Calais and, as a county, Kent is under ever increasing pressure in terms of its development needs. The requirement for greater levels of housing and business infrastructure to fulfil the commitments of its status as the "Gateway to Europe" and the redevelopment of large areas in and around the Thames Gateway, present us with significant challenges in our quest to balance development with sustainability of biodiversity interest.



Kent County Council and the French Region of Nord Pas de Calais have been working with the Conservatoire Botanique National de Bailleul since July 2009 on an Interreg project known as **ARCH** (Assessing Regional Changes to natural Habitats). The project has been developed to set up shared tools and methods to assess and monitor biodiversity and to improve the way that habitats and species are mapped in both regions.

ARCH consists of three main activities which will enable a wide range of stakeholders, both in Kent and Nord-Pas de Calais, to use biodiversity information in a more efficient manner.



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The second project activity is to aid long term monitoring and conservation of important areas for wildlife, enabling planners to make informed decisions on spatial planning, and assisting the decision making process by developing new tools. The aim of this project is to improve access of information and up to date data. In partnership Kent County Council and the Kent and Medway Biological Record Centre have been developing a Planning Application Screening Tool to help the local authorities to fulfill their duty in protecting priority species and habitats and to demonstrate best practice with regards to biodiversity considerations in planning development.

The features of the software have been designed in consultation with representatives from the Kent local authorities. The product has been developed to be compatible with all of the GIS software packages currently in use in Kent planning departments including MapInfo, UniForm, CadCorp, and ArcView.

The software will take the complete weekly planning list GIS layer and screen each individual polygon against a series of species and habitat datasets. A summary report can then be produced for each site to assess the potential biodiversity impact of a proposed development. This summary will include the site location, the type of application, and a list showing the nearest record for any European protected species, all bats, reptiles and amphibians plus any designated sites found on or within a 1km buffer zone of a site. An interactive map of the site will be available within the tool, as part of the screening process, to show the application footprint in context of the surrounding area.

A series of workshops was held at the KMBRC on in mid April for the Kent local authorities, giving participants the opportunity to test the tool and to give their feedback before the release of the final version.

The Kent Planning Application Screening Tool will provide the Kent local authorities an excellent and effective service with case by case evidence, reducing the time and delays to planning decisions. The latest ARCH Habitat data will also be integrated into the tool when available, offering Kent Districts the best available information on Kent habitat biodiversity.

For more information on the tool, please contact Hannah Cook, Centre Manger, KMBRC: Hannah.cook@kmbrc.org.uk .

For more information on the ARCH Project, please contact Laurence Guedon, ARCH Project and Communications Coordinator: Laurence.guedon@kent.gov.uk and visit our website www.archanature.eu.





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Welsh Wood Pasture Creation

Kay Haw, Woodland Trust

At Green Castle Woods, converting unimproved grassland into low-maintenance wood pasture will demonstrate integration of trees into a working agricultural landscape, adding value to both biodiversity and productivity.



WOODLAND
TRUST

The Woodland Trust's Green Castle Woods, Carmarthenshire, has fields whose history and pattern dates back to 1779. They have never been ploughed or intensively managed. Some are botanically rich, containing locally important marsh orchids, *Dactylorhiza* spp., yellow rattle, *Rhinanthus minor* and whorled caraway, *Carum verticillatum* (the county flower of Carmarthenshire). However, others are floristically poor.

The site is within a Countryside Council for Wales red zone, which prevents block planting of woodland that would damage the established meadow community.

The project's aim is to find the most cost-effective and simple method of establishing low maintenance wood pasture, allowing farmers to create this valuable habitat (without a high degree of demanding upkeep), maintain grazing land and reap the benefits trees offer, such as wood fuel, fodder and shelter for livestock.

Currently the lower value areas are grazed by Hereford cattle all year round except winter. Historically these were overgrazed, contributing to the lack of diversity.

The higher conservation value fields are only grazed or cut in late summer (after July), to diversify the height of the sward. This benefits small mammals and the owl population, currently in decline on the site. They are cut for hay/haylage once every three or four years, though some can only be grazed as the slopes are too steep for machinery. It is essential to maintain an open habitat to promote the whorled caraway, Devil's-bit scabious (*Succisa pratensis*) and holly blue butterfly (*Celastrina argiolus*).

In 2011 a survey recommended wood pasture/stand-alone trees for the floristically poor fields as they will benefit from improved grazing and increased structural and biological diversity. Planting rates will be 10-15 trees per hectare.

In the botanically rich fields the planting rate will be far lower, just 3-4 trees per hectare. This will increase diversity while maintaining the important floral interest. No planting will take place in the overly steep fields as they already contain established trees, providing year-round shelter for livestock.

Planting will use historic maps to choose appropriate spe-



Green Castle, yellow rattle field © Chris Matts, WTPL



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cies. The maps show traditional names for several fields, such as Parc y berllan (orchard field) and Parc deri (field full of oak trees). In Parc y berllan, traditional orchard fruit varieties (including some Welsh) will be planted along with modern types, which should produce a better crop. The trees will provide an important source of nectar for pollinators, along with the meadow flowers.

Stand-alone trees will be planted in the majority of open fields with some small block planting in the awkward corners. Two techniques will be trialled:

- Planting small groupings of 5-7 whips, eventually selecting the best and felling the rest.
- Planting stand-alone trees of 1.5m in height; it is thought these have the best chance of survival with minimum intervention.

Different tree guards will also be trialled:

- 'Riven' fence style made from split oak or chestnut.
- Stock fencing or post and rail.
- Sheep-proof, using two stakes and plastic style mesh wrapped into a tube.

The project should be able to guide future cost-effective wood pasture creation.

For more on Green Castle Woods please visit the pages of the [Woodland Trust website](#).



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UK BAP Update

UK Biodiversity Indicators in Your Pocket – 2012

Emma Durham, JNCC on behalf of UK BAP

It is with great pleasure that we are able to announce that the most recent (2012) update to the UK biodiversity indicators (*Biodiversity Indicators in Your Pocket 2012*) has now been published (29 May 2012). More details are available on the BIYP web-pages (<http://jncc.defra.gov.uk/biyp/>).

The UK biodiversity indicators are produced from a large amount of data, provided by government, the statutory agencies, research bodies, and the voluntary sector. They have been updated every year since 2007, and provide an overview of biodiversity trends in the UK, showing changes in various aspects of biodiversity, such as population sizes of particular species, expenditure on biodiversity, and the area of land managed for wildlife.

As previously mentioned in 'Biodiversity News' (Issue 56), the biodiversity indicators have recently undergone a review, as the original indicators, selected in 2006, had been selected to measure progress against the 2010 Convention on Biological Diversity (CBD) target, to '*significantly reduce the current rate of biodiversity loss by 2010*', and the European Union target to halt biodiversity decline – targets which are now out of date. The review has been undertaken to ensure that the indicators will be of relevance to the new international goals and targets, agreed in October 2010 at the 10th Conference of the Parties (COP10) of the CBD (the '*Strategic Plan for Biodiversity 2011–2020*'), and the new European Biodiversity Strategy, published in May 2011.

As a result of the review, the biodiversity indicator suite has expanded to 24. All of the 18 original indicators have been re-used, although several of them have been revised, or are to be updated or developed further in the future. In addition, several new indicators have been created, most of which are currently under development. The descriptions of these new indicators, and the proposed work to develop them and the already existing indicators requiring revision, along with information on how each indicator is of relevance to the new CBD goals and targets, have been included in the most recent update.

It is envisaged that the development of the indicators set will be completed over the next two to three years, and that regular updates, and details of progress, will be available on the [BIYP web-pages](#). Be sure to visit them to see the latest information, and to re-visit them in the near future to keep up-to-date with the changes being made.



From Microbes to Mountains...

CIWEM (Chartered Institute of Water and Environmental Management)

At end of March CIWEM published their first of a suite of publications that will be launched in 2012 on Ecosystem Services. 'From Microbes to Mountains' seeks to inform environmental professionals and the public by summarising the wealth of information available on this increasingly important subject into one easily digestible document.

The terms 'ecosystem services' and 'natural capital' are increasingly used across the environment sector and within policy circles. They provide the 'goods' on which our economic, social, mental and cultural wellbeing are built, forming a core part of our heritage. However, due to their complexity and relatively recent conception, understanding of their definitions and purpose remains weak. 'From microbes to mountains' goes some way to informing environmental professionals and the public alike through: defining the terminology, providing the environmental and political context through which terminology has developed, and highlighting where the strengths and weaknesses lie.

CIWEM's response to the policy implications of such approaches will be outlined in the separate Policy Position Statement 'Ecosystem Services' which is due to be published in Summer 2012. The content from these documents will be published in an amalgamated form in a final report.

CIWEM's Executive Director, Nick Reeves OBE, says: "From Microbes to Mountains' is informative and educational. It provides a good understanding of the role of ecosystem services in environmental management and its vital contribution to the economy. Such work helps to not only inform environmental professionals, but the public too, and so fulfilling CIWEM's charitable and public benefit aims. This important piece of work provides a spring board for CIWEM's policy development in this increasingly expanding and vital sector."

You can read the 'From Microbes to Mountains' report [here](#).

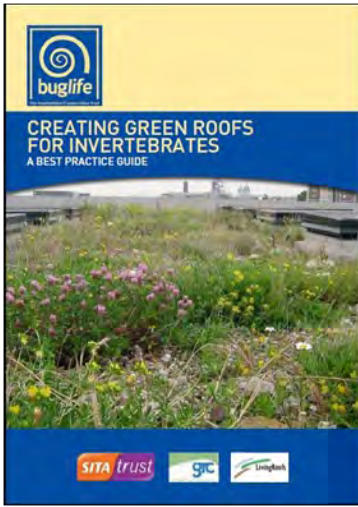


Best practice guidance: Creating green roofs for biodiversity

Buglife

Green roofs have been around for centuries and were originally used to hold down water-proofing and keep buildings warm in winter and cool in summer. However, it wasn't until the early 1980s that green roofs became accepted as a standardised building technique in Europe, particularly in Germany.

Further to providing all the usual benefits associated with green infrastructure, improved building performance and amenity value, green roofs designed with biodiversity in mind can be an innovative means of providing habitat where it would otherwise be lacking, such as in dense urban areas or to provide supplementary habitat within wider, more conventional, mitigation schemes.



Buglife – The Invertebrate Conservation Trust, in partnership with Livingroofs.org has recently completed a three year ‘Living Roof’ project in London. The SITA Trust funding the project has successfully installed six biodiverse roofs across some of the most densely populated areas of London.

In February of this year, Buglife, Livingroofs.org and the Green Roof Consultancy Ltd produced the UK’s first guidance on creating biodiverse green roofs, specifically for invertebrates. The guidance provides a background to green roofs, guidance on roof design such as substrate depth and type, choosing plants, and how to create a variety of habitats such as wildflower meadows, bare ground, and even ponds. Habitat features such as log piles, bee banks and bug hotels provide areas for basking, burrowing and hunting - adding to the diversity of invertebrates that a roof can support.

The guidance is supported by scientific evidence - biodiverse green roofs have been the subject of PhD studies in Switzerland and the UK, and the wildlife that visits them has been closely monitored and recorded for more than a decade. The biodiverse roofs installed as part of the London Living Roof project have been monitored over the past three years and were found to support common species such as the Zebra spider (*Salticus scenicus*) and Common carder bee (*Bombus pascuorum*), as well as UKBAP species such as the Shrilc carder bee (*Bombus humilis*) and the scarce Bombardier beetle (*Brachinus crepitans*)



A biodiverse roof in Camden, London © Buglife



Plug planting wildflowers, London © Buglife

Clare Dinham, Buglife Conservation Officer, said:

“There’s a long way to go until green roofs become commonplace in the UK, however the use of green roofs is being cited in policies relating to sustainability, climate change adaptation and green infrastructure.

“We hope that this new guidance will help those involved with the green roof industry to design and promote the use of biodiverse green roofs within new developments, as standard practice to benefit wildlife, the environment and people.”

Dusty Gedge, founder of Living Roofs.org, said: “Re-creating a habitat at roof level plays an important role in nature conservation, particularly in urban areas. This exciting guidance report has shown that taking a considered ecological approach to creating a biodiverse living roof leads to great benefits for pollinators such as beetles, spider and bees”



Biodiverse roof in Wearside, London Borough of Lewisham © Dusty Gedge



Spring

Publications

Gary Grant of the Green Roof Consultancy, said: "The careful observations of invertebrates on green roofs over many years by Dr G. Kadas in London and Dr Stephan Brenneisen in Switzerland, amongst others, have provided us with the information we need to design more biodiverse green roofs."

This guidance is aimed at anyone involved with green roofs from planners, ecologists and architects, to policy makers and the general public, and demonstrates how the overall ecological value of a roof can be greatly improved by incorporating simple, yet effective, design features.

The guidance is available to download [here](#) from www.buglife.org.uk/publications.



Brown-banded carder bee (*Bombus humilis*) found on a green roof
© Sam Ashfield



Communicate 2011: 'Nature, People, Economics'

Interactive conference summary [online now](#)

Bristol Natural History Consortium (BNHC)

Communicate is the annual conference for environmental communicators hosted by the Bristol Natural History Consortium, which brings together a mix of NGOs, media professionals, green business leaders, academics and policy makers. For the first time, the Communicate conference summary is available in interactive, online form, bringing together videos, presentations, transcripts and written contributions from our inspirational line up of environmental thinkers and communicators to provide a valuable resource for conference delegates and the wider environmental communication community.



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2011 highlights included:

- Special guest Robin Ince on the role of comedy in communicating difficult issues,
- Keynote speakers Rita Gardner (Director, Royal Geographical Society), Tessa McGregor, and Martin Brasher (Head of Wildlife, Habitats and Biodiversity, Defra),
- The Reconnecting Nature and Economics debate, featuring a video message from TEEB study leader Pavan Sukhdev, and contributions from Juliet Davenport (Good Energy), Katherine Symonds (Coca-Cola), Paul Morling (RSPB), and Paul van Gardingen (ESPA),
- Themed sessions on Co-ordinating Across Sectors, the Psychology of Persuasion, and Communicating Difficult Issues, including speakers such as Professor Aubrey Manning, Sara Parkin (Forum for the Future), and Professor Geoffrey Beattie (University of Manchester).

Communicate is an initiative of the Bristol Natural History Consortium, and in 2011 was supported by Defra, Living with Environmental Change and Bristol City Council, with additional support from Icon Films and The Bristol Hotel. The Communicate 2011 online conference summary was made possible thanks to support from Bristol City Council.

For more information about Communicate, please contact Ben Connor at ben@bnhc.org.uk, or 0117 317 8751.



Pravan Sukhdev speaking (McCluskey Fellow, Yale University and TEEB Study Leader)

© BNHC



Flora locale Training Programme 2012

The *Flora locale* training programme is created for people involved in the design, management and restoration of wild plants and landscapes for biodiversity, whether on a farm, smallholding, village green, city park or garden.

This year's range of 27 events throughout Wales, Scotland and England, include planting for pollinators, managing traditional orchards for wildlife, wildlife ponds in urban settings, or the opportunity to acquire new skills in wild flower or fungi identification. Each event is led by an individual with practical experience and provides an informal opportunity for participants to learn from an expert and each other.

To see details of the events programme please visit *Flora locale's* [website](#).

All events must be booked in advance and are charged at our standard fees unless otherwise stated. To make a booking either email us at info@floralocale.org or calls us on 01672 515723. You may also book online or download a booking form.

Water & Ecosystem Goods and Services A CIWEM - WSKEP Conference

12 June

Hamilton House, London

Sponsored by Halcrow, MWH and WRc

The aim of this meeting will be to accelerate the practical application of ecosystem goods and services thinking into workable procedures throughout the wider water sector, including the periodic review process to 2014, water quality (Water Framework Directive 2015), water resources and flooding, in order to meet the urgent requirement of getting this thinking into the current planning cycles. It will draw upon a wealth of recent work.

More information at www.ciwem.org/events or contact Lauren Goozee, lauren@ciwem.org.

Big Nature Day at the Natural History Museum

The Natural History Museum

Just one of the many events to celebrate the UN International Day of Biological Diversity that was on 22 May – with this year's theme as marine biodiversity, was the Natural History Museum's 'Big Nature Day'.

The Natural History Museum invited more than 50 local and specialist nature groups to take part in a nature fair in the Museum's grounds on Sunday 27 May. With a turn up of over 5,000 people, the day of free activities aimed at all ages celebrated the incredible variety of wildlife in the UK and the hidden value of nature for our wellbeing. Visitors were able to meet experts in all aspects of UK wildlife – from nettles and newts to stinkhorns and stag beetles – to find out about a range of different species and how they function within an ecosystem.



The day also promoted the success of the OPAL (Open Air Laboratories) network over the last five years. Visitors were encouraged to have a go at the water and bug surveys in the Museum's Wildlife Garden, and found out how to explore their local environment once they return home.

For family groups there were workshops making insect-themed hats followed by a carnival parade through the Museum led by an insect band. Visitors discovered there's more to nettles than their sting, from string and fertilizer to soup and tea. People also got to find out how to attract stag beetles into their gardens. Other activities included worm charming, examining bat poo under a microscope, making bird boxes and bug hotels, following a tree trail and looking for ladybirds!

The day launched new resources for the Cub Naturalist Badge, developed by the Natural History Museum, The Wildlife Trusts and The National Trust. The activity pack encourages Cubs to survey and record nature on their doorstep including birds, trees and bugs and will hopefully inspire a new generation of naturalists.

Big Nature Day was timed to mark the International Day of Biological Diversity and has been a great opportunity for everyone to get closer to nature.



www.nhm.ac.uk/bignatureday

RSPB Dorset events June - July 2012

Radipole Rambles at RSPB Weymouth wetlands at Radipole Lake nature reserve

10am-12 noon 16 June, 7 July

Join us for a guided walk round Radipole Lake to track down a whole host of wildlife that call the reserve home. Kingfisher to water vole, bearded tit to marsh harrier, who knows what we'll find?

For further information contact: 01305 778313
FREE event

Spider Sunday at RSPB Arne nature reserve

2pm-5pm Sun 17 June

An introduction to the spiders at Arne. Track down a wide variety with naturalist Tony Sheridan. Tony famously claims there isn't a question he can't answer on spiders; see if you can catch him out. Tony will be at the visitor centre from 1pm with some spiders to show.

£1 members, £3 non-members. For further information contact: 01929 553360

Creatures of the Night at RSPB Arne nature reserve

8pm-Late Sat 30 June

Arne is a fantastic place for wildlife and when the sun sets a whole new host of wildlife emerges. Come and discover Arne in the dark. We'll try and track down some of the reserve's nocturnal wildlife, from nightjars and glow worms to owls and bats, who knows what we'll see!

£3 members, £6 non-members. Booking essential: 01929 553360

Heathland Amble at RSPB Arne nature reserve

10am-12 noon 13 June, 20 June, 27 June, 4 July, 11 July

Come on one of our guided walks every Wednesday to track down a whole host of wildlife. From Dartford warblers to smooth snakes, raft spiders to dragonflies, who knows what we might find?

For further information contact: 01929 553360
FREE event



Nightjar Walk at RSPB Arne nature reserve

8pm-Late Wed 13 June, 20 June, 27 June, 4 July

Nightjars are truly bizarre birds and Arne is one of the best places in the UK to see them. Come and experience their eerie calls and hopefully catch a glimpse of this magical bird. There will be a chance to spot hobby and barn owl before the main feature comes out to hunt.

£3 members, £6 non-members, children FREE

Booking essential: 01929 553360

Birds, biscuits and binoculars at Upton Country Park

10am-12:30pm Thurs 14 June, 28 June

Join us for an exciting and sociable walk to explore the wildlife that can be found in and around the park. Don't worry if you don't know the difference between a robin or a blackbird, you don't even have to be a member to come along. Relax with a hot beverage and biscuit in the hide to round it off! Meet at the Education centre, Upton Country Park, near Poole.

£1 per person. Contact: 07703607630

Night time moths and mask making

7:30pm-9pm Thurs 21 June

Join the RSPB at Upton Country Park for a night time wildlife event. Make a moth mask and then watch amazing different moths start to appear. Meet by the education room.

Contact Upton Country Park: 01202 261306 or Sarah-Jane Buckle: 07703607630

£2 members, £3 non-members.

Reptiles at RSPB Weymouth wetlands at Radipole Lake nature reserve

10am-3pm Sat 23 June

Dorset is the best county in the UK for reptiles; you can find all 6 of our native reptiles within its borders. Can you name them all? Join us at Radipole Lake to learn about the scaly side of the nature reserve. There will be a show and tell throughout the day, on the hour, every hour – starting at 10am.

For further information contact: 01305 778313

FREE event

Mini Beasting Event

10am-3pm Sun 1 July

Meet the RSPB on the grass by the Hiker cafe at Hengistbury Head. Grab a bug tail, net and bug pot and explore the habitats looking for mini beasts of Hengistbury Head.

Contact Sarah-Jane Buckle: 07703607630.

FREE event

Pond Critters

10am-3pm Sat 9 June

Meet the RSPB on the grass outside the Hiker cafe at Hengistbury Head to see what exciting pond critters you can find.

Please contact Sarah-Jane Buckle: 07703607630

FREE event

National Moth night at Hengistbury Head

8:30pm-11pm Sat 23 June

Tonight we will be inviting you to join us as we identify moths as they come to our light. Hengistbury Head gets hundreds of moth species and as most fly at night most visitors will not have had this chance to see them. Meet by the thatched barn at Hengistbury Head, Christchurch.

£3 adults, £1 under 16s (note: timing of event may be unsuitable for younger children). Booking essential with Hengistbury centre: 01202 420909

Wildlife Health Walk

10am Mon 18 June

Joining Sarah-Jane from the RSPB for a healthy walk whilst exploring the wildlife of Canford Heath. Bring sensible footwear and warm/waterproof clothing. Meet at the heath entrance.

Contact Sarah-Jane Buckle: 07703607630

FREE event

National Insect Week – make butterfly & dragonfly wings

10am-12 noon Sat 30 June

Join the RSPB at Upton Country Park and make your own butterfly or dragonfly wings to celebrate National Insect Week. Meet by the education room.

£3 children, £2 members. Contact Upton Country Park: 01202 261306 or Sarah-Jane Buckle: 07703607630

Bat Night at RSPB Weymouth wetlands at Radipole nature reserve

8pm-Late Fri 6 July

As darkness descends over Weymouth, out come the bats. Join us at Radipole to discover the variety of species that occur on the nature reserve and find out why this habitat is so important for them. Warm up with a free hot drink at the end.

£3 members, £6 non-members, children FREE. Booking essential: 01305 778313



Summertime fun at WWT Wetland Centres

Summer is an exciting time at Wildfowl & Wetlands Trust (WWT) Wetland Centres, where there's so much to see and do. Get out and about in the sunshine and experience the very best of British wildlife on a wetland walk, talk or safari, or take part in a variety of fun activities for all the family

Take some bat detectors out at night at Castle Espie, pick up a paddle at the canoe safari at Slimbridge (Gloucestershire) or Martin Mere (Lancashire), hop on a bike to discover the beautiful Welsh wetlands at Llanelli (National Wetland Centre, Wales), watch badgers feeding just outside the observatory at Caerlaverock (Dumfriesshire), or meet weird and wonderful creatures, both great and small, during hands-on animal workshops at WWT Washington whilst WWT London is hosting its own "Animal Athletics" this Olympic year.

WWT's nine wetland centres across the UK all have something different: from exciting interactive exhibits, canoe or bike safaris, discovery trails, fun, educational children's play areas and a full programme of summer activities and events.

Each centre introduces adults and children alike to the wonders of wetland wildlife and their habitats, with stunning scenery and nose-to-beak encounters with some of the world's most dramatic and rare birds, as well as exciting mammals and reptiles too. Every centre has excellent restaurants and gift shops and all have family friendly and disabled facilities.

And to make your money go further, if you've enjoyed your day and choose to become a member of WWT at the end of your visit, not only do you get your entrance fee refunded, but you get free entry to all nine centres for a full year. So you can bring the children back to any WWT centre as many times as you like throughout the year, for nothing! As well as free entry to WWT centres, members receive an exclusive quarterly magazine, *Waterlife*, which keeps you up to date on what's going on at all nine centres and WWT's conservation work around the world.

Events at WWT centres this summer

All centres are providing an action packed summer of activities to keep the children entertained! Special activities at all centres will include:

Wales

WWT Llanelli, Carmathanshire

Weekend Discoveries

11am 1-15 July

Join us for weekends of discovery, including a mini beast hunt, Dragonfly and Butterfly walk, pond dipping and crafts workshop.

T: 01554 741087

Scotland

WWT Caerlaverock, Dumfriesshire

Merse Walk

2pm-4:30pm 1 July, 5 August

Experience the unique flora and fauna of the Caerlaverock merse on a guided walk.

Booking is essential: 01387 770200

Pond Dipping

1 August, 15 August

Spend a morning with the warden pond dipping out on the reserve. An event for all the family. Children must be accompanied by an adult. Normal admission rates apply.



England

South East

WWT London

Evening Wildlife Photography

4pm-8:30pm 19 July, 2 August

This workshop gives keen photographers a rare opportunity to enjoy WWT London Wetland Centre in a relaxed, secluded atmosphere when most of the other visitors have left.

£35 – includes admission to the Centre after 3:30pm. Book your place: 020 8409 4400

Traditional Crafts Weekend

21-22 July

Our traditional country crafts weekend celebrates this aspect of wetlands with a number of demonstrations relating to rural and wetland crafts. Come along to see skilled professionals demonstrate their crafts such as duck decoy carving, spinning and coracle marking.

WWT Arundel, Sussex

Boat Safaris

11am-4:30pm throughout July & August

Cruise silently through the water in one of our electric boats and get up close to wildlife.

Boat trip included in admission fee.

T: 01903 883355

South West

WWT Slimbridge, Gloucestershire

Land Rover Safaris

11am, 2pm every Sat and Sunday

Through the summer until end of September, come along and enjoy the opportunity to go out into the reserve in the company of an expert warden.

£5 adults, £3 children – all excluding admission.

T: 01453 891900

Nature Photography on Tour

8am-2pm 21 August

Our expert reserve warden and wildlife photographer James Lees will take groups of keen photographers out onto our 800 acres of wild nature reserve on a Land Rover, providing numerous opportunities for taking unique photographs.

£60 including lunch. Please pre-book: 01453 891223

Shakespeare Play: As you like it

7:30pm 29 July

Bring your own picnic for this Shakespearean play set in the beautiful natural setting at Slimbridge.

£13.50 adults, £11.50 concessions, £7 children.

Please pre-book: 01453 891223

Slimbridge Afterhours

4:30pm-8:30pm 28 July, 25 August

Go wild after hours. More details to follow - please see our [website](#) for more information.

Painting from Life on the Severn Estuary

9:30am-4:30pm 6 July, 3 August

This is a very exclusive and exciting opportunity to have access to an area of the Severn Estuary wetlands that the public very rarely get to see. Includes a demonstration on how to work quickly and directly in the manner of impressionists.

£60 including admission. Please pre-book: 01453 891223

Bat Evening

7:30pm 10-17 August

Explore our grounds with a Bat detector to listen and watch out for these tiny creatures.

£12 per person including admission. Please pre-book: 01453 891223

Birdwatch Morning for Beginners: Summer Special

8am 18 August

Join our warden who will help you find the best starting point and share some expert tips on how to learn and develop your bird watching skills and knowledge.

£15 per person including admission.



East

WWT Welney, Norfolk

Bats & Barn Owls

9:30pm-Midnight 21 July

Using a range of survey techniques, visit the key areas of the reserve to observe some target species.

£12 including admission.

T:01353 860711

Jane Frost Willow Workshop

10am-4pm 24-25 August

Learn a variety of techniques including combining weaving, wrapping and braiding.

£65 two-day fee plus £20 for basic materials.

T:01353 860711

Wild Arena Photography Course

11 July

Wild Arena has joined forces with the Wildfowl and Wetlands Trust to offer a range of seasonal photographic workshops. For further information please visit our website.

T:01353 860711

North West

WWT Martin Mere, Lancashire

Summer Holidays: History Weeks

13-31 August

Visit the Roundhouse Village everyday to step back in time and live like a Viking.

T: 01704 895181

Moth Morning

15 July, 19 August

Join Andy Bunting from 'in focus' as he opens up moth traps set overnight to reveal the wonderful creatures they have captured.

T: 01704 895181

Bat and Barn Owl BBQ

8:30pm-11pm 20 July

Walk along the reserve spying for Barn Owls before searching for bats when it becomes dark.

£16.50 per person. To book please call: 01704 895181

North East

WWT Washington, Tyne & Wear

Walk with a Warden

2-3pm 21 July, 18 August, 15 September

Join our wildlife reserve manager as he leads a themed guided tour around our site, taking in the sights, sounds and seasonal wildlife.

T:0191 416 5454

Animal Antics

25 August

Meet weird and wonderful creatures, both great and small, during hands-on animal workshops with the staff from Wetheriggs Zoo and Animal Sanctuary.

T:0191 416 5454

Northern Ireland

WWT Castle Espie, County Down

The Owl Man

12 noon - 4:30pm 15 July, 28 July, 12 August, 27 August

Come and meet the birds of prey from various parts of the world. Learn about their habitats and why conservation is so important to their future.

T: 028 9187 4146

Bat Evening

17 August

Explore our grounds with a Bat detector to listen and watch out for these tiny creatures.

£10 adults, £7.50 children.

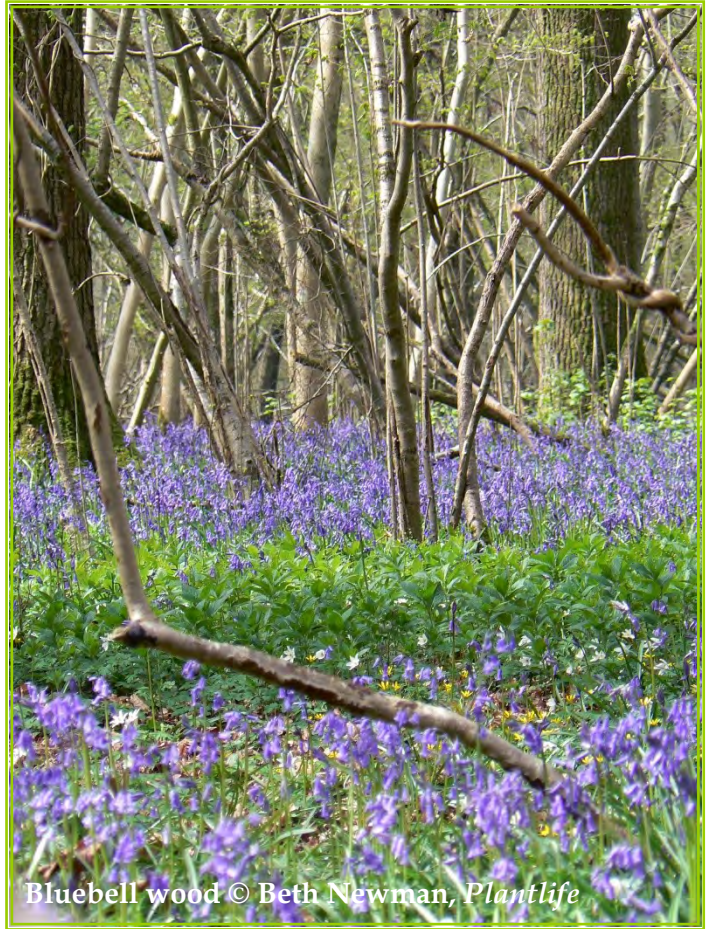
T: 028 9187 4146



Spring Runners-up photos



Montretia Crocosmia in budding phase in April
© Sean Hathaway, *Swansea Council*



Bluebell wood © Beth Newman, *Plantlife*



Red Kites circling at feeding time at Gigrin farm, Rehabilitation centre, central Wales
© Rachel Lenane, *Environment Agency*



Rare geese win the race to hatch to hatch the first young of 2012
© Wildfowl & Wetlands Trust



Bluebell wood
© Kim Lehoucka, *Plantlife*