

ISSUE 54

Summer Issue 2015



SCOTTISH NATURAL HERITAGE

The Forum

Scotland's Biodiversity: A Route Map to 2020

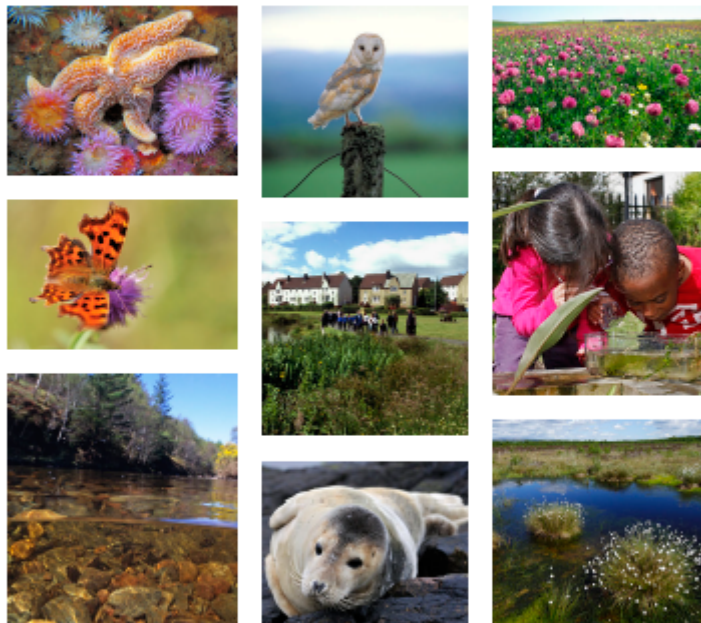
Dr Aileen McLeod, The Minister for Environment, Climate Change and Land Reform, launched the Scottish Government's new biodiversity route map at a Grow Wild Scotland community action day in Easterhouse. Scotland's Biodiversity – A Route Map to 2020 sets out the priority work needed to meet the international Aichi Targets for biodiversity and improve the state of nature in Scotland.

Dr McLeod said:

“Our awareness of the importance, value and fragility of nature is growing year on year. Through an impressive body of evidence, we are building up a clearer picture of what needs to be done to care for and restore biodiversity.

“The Route Map, published today, sets out six ‘Big Steps for Nature’ and a number of priority projects that focus on collaborative work, which the Scottish Government and a range of partners are committed to taking forward to help deliver the 2020 Challenge.

Scotland's Biodiversity – a Route Map to 2020





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Contact details

Do you have a news story? Are you involved in a project? If so, then let the Biodiversity Team know! Ask for our article guidelines to help you make the most of your article.

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The views expressed in this newsletter are not necessarily the views of Biodiversity Scotland. The editors reserve the right to edit or exclude articles; the editors' decisions are final.

For further information about the Biodiversity Team, log on to:

www.biodiversityscotland.gov.uk



Cont...A Route map to 2020

“Many of our habitats and wildlife are internationally important. Scotland’s peatlands, mountain landscapes, coastal cliffs and seas, machair and diversity of woodland ecosystems are exceptional by European standards. These support a fantastic range of species, as well as being key assets for public health and wellbeing. We want to improve the state of nature across Scotland and to ensure more people draw on its many benefits.”

The Six Big Steps for Nature are:

- Ecosystem restoration – to reverse historical losses of habitats and ecosystems, to meet the Aichi target of restoring 15 per cent of degraded ecosystems.
- Investment in natural capital – to ensure the benefits that nature provides are better understood and appreciated, leading to better management of our renewable and non-renewable natural assets.
- Quality greenspace for health and education benefits – to ensure that the majority of people derive increased benefits from contact with nature where they live and work.
- Conserving wildlife in Scotland – to secure the future of priority habitats and species.
- Sustainable management of land and freshwater – to ensure that environmental, social and economic elements are well balanced.



- Sustainable management of marine and coastal ecosystems – to secure a healthy balance between environmental, social and economic elements.

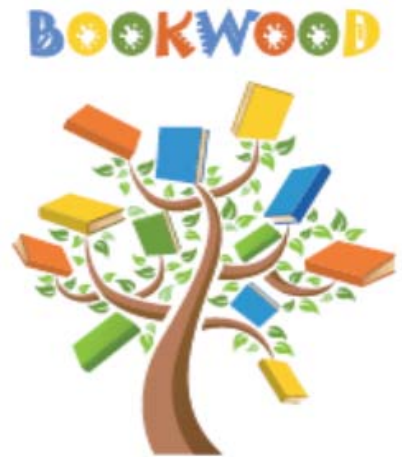

Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

Photograph © Kevin McGarry, courtesy of Grow Wild

Scotland's Nature Festival 2015...



A whopping 177 events took place this year during Scotland's Nature Festival which is organised by Scottish Natural Heritage (SNH) and partners. Events took place from the Highlands to Angus, the Central Belt, and the Scottish Borders. The event programme was advertised through The List website, helping to promote the Festival to a more mainstream audience.



A new event, BookWood, launched the festival this year. SNH asked people on Twitter, Facebook and on the BBC Out of Doors radio programme which nature books most inspired them. SNH staff started the conversation by talking about the books that have been important to them. The books that topped

the public vote were hung from a holly oak tree in Princes Street Gardens (East), for people to take away for free. A wide range of books were picked including classics such as "My Family and Other Animals" by Gerald Durrell. Childhood picks included the Ladybird series of nature books and Steve Backshall's "Deadly 60."



A full list of the top favourites is on the Biodiversity Scotland website – www.biodiversityscotland.gov.uk/naturefestival

.. And Bookwood

Books can really open our eyes and remind us what it is that we love about nature. Sometimes, a single line can change our lives. At BookWood, we invited people to consider leaving the book they chose in a café, a bus or even in the beautiful Scottish countryside for somebody else to enjoy once they have read it.

Other Festival events include ranger-led walks in parks and the countryside;

bluebell walks; seashore safaris; guided walks, some with foraging or bushcraft experts, on nature reserves; expert talks on nature, including bat, bird and otter talks and walks; and more.

Most events were free; a few had a minimal charge. The events were held by many partners, including ranger services, countryside parks, non-governmental organisations, faith groups, nature reserves, schools and community groups.

Scotland's Nature Festival (formerly Scottish Biodiversity Week) has been held every year since 2001, starting as a local initiative in Fife in 2000 and growing into a national event. Scotland's Nature Festival is about celebrating Scotland's precious wildlife and landscapes and offers the chance for everyone to get out and about and experience it for themselves.



Thank you to all of you who contributed events!

SCOTLAND'S
NATURE
FESTIVAL 2015



22 – 31 May

The UK's wildflower meadows are vanishing, and with them our native flowers and the wildlife that rely upon them. Only 3% of the meadows that existed in the 1930's now remain. Nearly 7.5 million acres of wildflower meadow have been lost so far and they are still being destroyed.



Save Our Magnificent Meadows is the UK's largest partnership project transforming the fortunes of these vanishing wildflower meadows, grasslands and wildlife. Led by Plantlife, the partnership is made up of 11 organisations and is primarily funded by the Heritage Lottery Fund, with some match funding from Scottish Natural Heritage.

Launched in April 2014, the project is

- targeting just under 6,000 hectares of wildflower meadows and grasslands in nine strategic landscapes across the UK,
- giving people all over the UK the chance to visit, enjoy and learn about our wildflower meadows and grasslands,
- raising awareness of the desperate plight of our wildflower meadows and grasslands and equipping communities with the knowledge and skills to reverse this devastating trend.

Plantlife's Chief Executive Marian Spain explains "Meadows are one of our most magical yet most threatened natural habitats and a hugely important part of our heritage. A generation ago they were commonplace on farms across the UK as the very places that sustained the animal we rely on for meat, milk and wool. But they are so rare now that many people growing up today have never seen a meadow. This project will mean that future generations will have the chance to experience the beauty of a meadow in full bloom on a summer's day."



summer's day."

In Scotland Save Our Magnificent Meadows aims to restore and maintain 30 ha of grassland and engage over 1500 people through activities and events. In the first year of the project, 16 ha of grassland have been restored and maintained and the project has engaged with almost 300 people.



Save Our Magnificent Meadows

There is very little lowland semi-natural grassland left in Scotland and so it is important to protect what little is left and ensure it is in the best possible condition. One aspect of Save Our Magnificent Meadows is to restore Mosstown Fen, a large area of fen meadow that is part of Loch of Strathbeg, the largest dune loch in Britain. The Loch and surrounding wetlands are of international importance for their nature conservation and are managed as a nature reserve by the RSPB, who are the lead Save Our Magnificent Meadows partner in Aberdeenshire. Konik ponies have been introduced to graze the area and the impacts of their grazing are being carefully monitored by students from the University of Aberdeen. Results so far are encouraging and the ponies appear to be having the desired effect.



Lowland Scotland has some of the rarest, most threatened and beautiful grassland habitats, important both for wildlife and cultural values, but they are now small and fragmented. The majority of Save Our Magnificent Meadows project sites within this area are located in the gently rolling central lowlands of West Lothian, Falkirk, Edinburgh and Fife. A lack of management poses the biggest risk, as grazing has reduced or stopped altogether. The Scottish Wildlife Trust is concentrating on more sustainable management of these grasslands. A flock of 'Chevease' ewe hogs have been introduced to one and it is hoped that their ability to graze on low nutrition swards and shed their wool will save the expense and workload of sheep shearing.

This summer we have launched [the National Meadows Award](#) to recognise the contribution farmers and other private land owners make to meadow and grassland conservation. An award is available for each UK country, with the winners announced in September (closing date for entries is 31st July). Please see press release and information on how to apply at www.magnificentmeadows.org.uk/about/news/article/meadow-and-grasslands-awards



We hope that lots of people will be encouraged to visit a meadow this summer and capture some stunning meadow views. [The National Meadows Photography Competition](#) is now open until the end of August, the 3 categories are:

- People enjoying & exploring meadows
- Wildlife and flora of meadows
- Age 14 and under.

The public will select the winning photographs which will be voted on in September. Find more information at www.magnificentmeadows.org.uk/celebrating-meadows/national-meadow-photography-competition

For more information on Save Our Magnificent Meadows, please see: www.magnificentmeadows.org.uk

OPAL (Open Air Laboratories Programme)—

People of all ages from all across the UK can now contribute to scientific research in their local area on everything from invasive species to environmental quality, through the

[Open Air Laboratories programme \(OPAL\)](#). The programme, led by Imperial College London, has been inspiring communities in England to discover, enjoy and protect their local environment since 2007. More than 850,000 people have already taken part and OPAL has now (May 2015) officially rolled out across the UK.

A range of organisations, including universities, wildlife groups and museums, are working in partnership to deliver the programme's citizen science activities, including six national environment surveys. Citizen scientists have already used lichens to identify areas affected by air pollution and discovered that earthworm diversity is high in back gardens. The expansion of OPAL's surveys now means scientists will be able to track the spread of invasive species, such as the damaging Chalara ash dieback disease, as well as find out more about the differences between urban and rural biodiversity.

Alys Fowler, nature lover and gardening correspondent, is urging people of all ages and abilities to explore nature with the OPAL programme. She said: "OPAL is a great way to find out about the nature right on your doorstep – wherever you live in the UK. It's really easy to get started; you don't need any previous knowledge or experience and it doesn't matter if you live in the countryside or a city. Best of all, OPAL resources are free and available to download from [the website](#) right now, so you don't have any excuses not to get involved!"



OPAL Director, Dr David Slawson said: "We are very pleased to be able to roll out OPAL in Scotland, Wales and Northern Ireland. Our activities have been very popular already, with more than 850,000 people taking part and submitting more than 50,000 records about their local environment. Not only are people learning more about their environment, but this valuable data is helping scientists learn a great deal about biodiversity in our country, especially in areas they would never normally be able to study, such as back gardens. We hope many more people will join in, explore nature and contribute to our knowledge of the environment across the whole of the UK."

The expansion has been made possible by a £3 million grant from the Big Lottery Fund. This comes on top of £15 million of lottery funding awarded to the project between 2007 and 2012. A number of local events are being held to mark OPAL's expansion across the UK, where people have been getting hands-on with nature and getting a taste of the surveys. People can find out about other OPAL events in their area on the [website](#).

- Rolls Out Nationwide

OPAL wants people to explore their environment and learn more about the nature right on their doorstep and to help UK scientists with exciting research with the following objectives:

1. A change of lifestyle - a purpose to spend time outside observing and recording the world around us

OPAL aims to make more than a million people more aware of the open spaces and conservation sites around them, and more knowledgeable about the contribution individuals can make to protect them.

2. An exciting and innovative educational programme that can be accessed and enjoyed by all ages and abilities

Through new approaches to learning, people will gain the opportunity to become active participants with the knowledge and confidence to debate environmental issues.

3. A new generation of environmentalists

OPAL aims to increase active membership of amateur natural history societies, many drawn from under-represented sections of society.



4. A much greater understanding of the state of the natural environment

OPAL wants to ensure everybody can participate in projects to monitor the state of the natural environment and its biodiversity. We aim to help some of the most disadvantaged communities to identify, quantify and highlight environmentally deprived spaces.

5. Stronger partnerships between the community, voluntary and statutory sectors

Scientists at regional universities, museums and wildlife organisations will build connections with those who have an aspiration or need to improve local environments. The portfolio aims to engage with hundreds of thousands of people across the UK to encourage a greater sense of ownership of their local environment.



Featured Fungus: *Coprinus comatus* (Shaggy ink cap)

Coprinus comatus is a commonly seen fungus often growing in larger groups in lawns, gardens and parks. The genus name '*Coprinus*' actually means 'living on dung' but *C. comatus* usually grows directly on soil. It is a saprotrophic fungus living from decomposing organic matter. One common feature shared by *Coprinus* species is that they 'autodigest'. That is, they dissolve their own tissue when mature thereby turning the fruit body into black ink – a feature which gave the species its common name 'ink caps'. In days gone past, the black 'ink' was actually used as ink for writing. *Coprinus* species have gills which are very close to one another which would normally restrict spore release. It is thought that the self-digesting process together with sequential spore maturation from the bottom to the top of the cap has developed to enhance spore release.



Shaggy Inkcap, as it is commonly known throughout the UK, has a tall white, shaggy or scaly, ovoid cap when young (being 5- 20 cm high and 2-6 cm wide), which expands with age to a more cylindrical shape. The margins of the cap decompose with age until the whole cap has been liquefied into black ink. This relatively large fungus possesses a fleshier fruit body compared to other *Coprinus* species. The stem varies between 10 – 35 cm in height and 1-2 cm in width being hollow and slightly widened at the base. A common feature of Shaggy Inkcap is a distinctive ring at the mid-point of stem

Coprinus comatus can be picked when still young and fresh and is edible. It is recommended to pick them during the early part of the day and to process them fairly quickly afterwards, which is why it is also known as 'breakfast mushroom'. Aged fruit bodies should be left as they turn into an inedible sticky mess. The fungus is known for its high vitamin C content as well as other vitamins and minerals (such as calcium and magnesium). In fact, *C. comatus* is used in traditional Chinese medicine to prevent haemorrhoids and to aid digestion. It has also been shown to lower the blood sugar levels and has therefore been used to partly treat diabetes type I and type II.

Season: *Coprinus comatus* can be found from April till late November.

Habitat: Often found in large groups on lawn, parks, open woodlands, disturbed soil and alongside road and woodland paths.

Distribution: The species is known to be fairly common throughout Scotland and widespread and in north temperate zones.



© A Taylor, Liz Holden , Dave Genney , Peggy Erlich

Citizen Science—New Zealand Flatworm Survey

Members of the public are being asked to help University of Aberdeen researchers pinpoint just how far a species, that wound up in the UK unintentionally, has travelled across the country.

A new national Open Air Laboratories (OPAL) survey launches this month to help find out how far the New Zealand Flatworm has spread and how big an influence it is having on the environment.

The New Zealand flatworm survey is the latest addition to the range of citizen science activities offered by [OPAL](#), which is led by Imperial College London and run by a range of organisations including universities, wildlife groups, and museums.



Members of the public who are keen to embark on some ‘citizen science’ to see if there is any sign of the New Zealand flatworm in their garden, are advised that the species is flat, dark purple-brown on top and creamy pale underneath and along the sides. They are usually 5-15 cm long and are pointed at both ends and covered in sticky mucus. They are found under pieces of wood, stone or polythene or lying on bare earth often curled up like a Swiss roll and they leave slime circles where they’ve been resting.

This is where scientists at Aberdeen University and the James Hutton Institute, a leading research centre on the New Zealand flatworm, would like the public’s help. If you find one, in your garden or elsewhere, please take a photo and submit this along with its location to [opal](#) or get involved in a short survey of your outdoor space. This will give the team an idea of what influence these flatworms may have on earthworms across the UK, and other animals that consume earthworms like moles.

Professor René van der Wal, from the University of Aberdeen, who is one of the leaders of this new initiative, said: “We want to get people looking carefully at their gardens and the greenspaces around the cities and towns they live, and school kids to explore their play grounds, in search of this rather peculiar species, and tell us what they’ve found. Ideally, they spend 10 minutes searching for flatworms, earthworms, beetles and signs of moles in a relatively structured way and tell us about their findings.”



Annie Robinson, an OPAL community scientist also from the University of Aberdeen added: “Every record submitted is invaluable and will help inform the development of our response to and research of the New Zealand Flatworm. People can go to the OPAL website and access identification, survey resources and submit pictures of the New Zealand Flatworm. Together we can learn a lot about where this species is and what it’s up to!”

A project which brings together Scotland's two National Park Authorities to address the serious threat of man-made erosion to paths across areas of outstanding natural beauty has been given a major boost with the Heritage Lottery Fund, announcing a grant of £3.26million.



Taking in iconic peaks such as Ben Lomond, Ben A'an, Beinn a' Ghlo and Lochnagar, *the Mountains and the People* project will tackle some of the worst path erosion problems in

Scotland by training young people and volunteers to care for the upland landscapes and habitats. The project will give 48 young people the opportunity to learn essential countryside skills while gaining SVQ accreditation to help them into employment. Additionally, a volunteer programme will recruit, train and support volunteers in carrying out basic construction work, maintenance and habitat management, while visitors will be given information to ensure that they don't damage the special environment that they have come to enjoy through talks, events and social media.

In total, a distance of 124.5km of eroded upland paths will be restored and upgraded. They will then be monitored through an Adopt-a-Path programme through which regular users of the paths will provide feedback on their condition, enabling problems to be tackled before they become a major issue.

Colin McLean, Head of the Heritage Lottery Fund said: "Scotland's National Parks encompass some of the country's most iconic landscapes and are vital for their contribution to tourism as



well as for the health and social benefits of the millions of people that enjoy them. Thanks to National Lottery players, we are delighted to be able to support a project which encourages people to take ownership of this rich heritage. Their newly-learned skills will not only make a positive difference to their own lives but will play an important part in looking after the future of Scotland's magnificent landscapes."

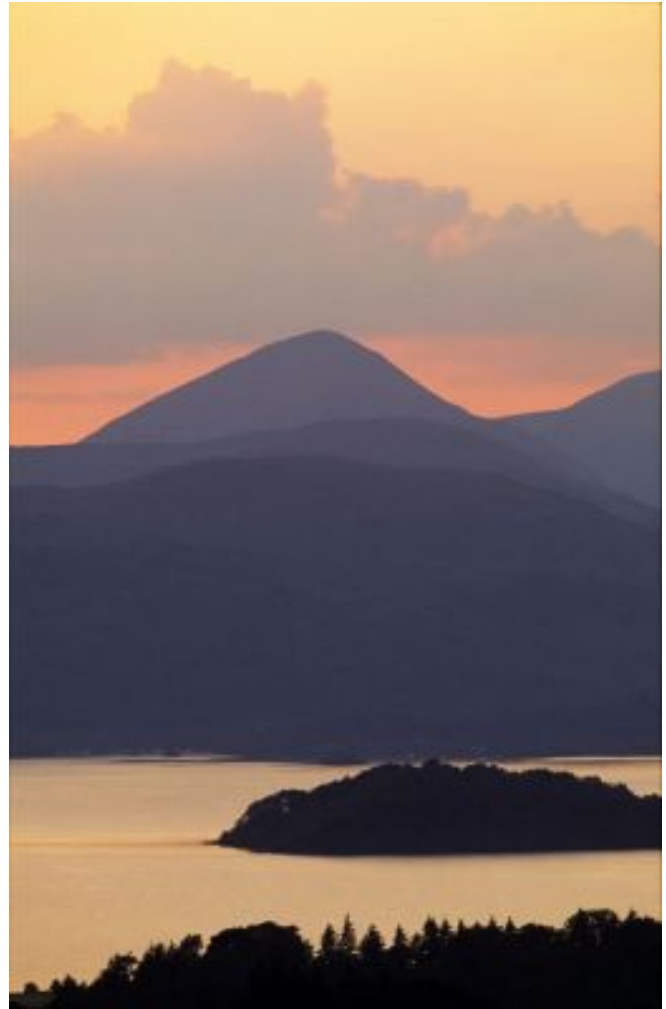
to help tackle serious path erosion on iconic Scottish peaks

Dougie Baird, Chief Executive of the Cairngorms Outdoor Access Trust (COAT) added:

“The Mountains and The People is a project designed to bring the people of Scotland together to help look after some of Scotland’s most precious national assets – the mountains of our National Parks. Mountains in Loch Lomond and The Trossachs and the Cairngorms are so important for nature and as places people can escape the hustle and bustle of modern life. The HLF funding means we can now get started and with all partners help protect the Scottish landscape for millions of people to enjoy.”

Sarah Lawther, who undertook COAT training in Aviemore last year, said:

“I found the COAT training course a really worthwhile experience. It was well managed and great emphasis was placed on finding relevant work after it. I was lucky enough to gain many weeks work experience with Cairngorm Wilderness Contracts, a company



who set themselves up off the back of the training course four years previous to me. The values they carry as a company in conservation and environmental good practise really spoke to me as I care passionately about conservation, especially in the Cairngorms as I grew up walking these mountains. I am fiercely proud to be working for this company when this is what I get to show my friends and family. I love my job, I love this place and I feel so incredibly lucky to be part of the conservation of this beautiful mountain environment. ‘

CAIRNGORMS
NATIONAL PARK AUTHORITY
ÙGH DARRAS PAIRC NÀISEANTA A'
MHONAIDH RUAIDH



Amphibians are breeding in Inverness SUDS!

Ponds have been in significant decline throughout the UK due to the intensification of agriculture and the removal of traditional cattle drinking ponds. This trend may be counteracted by recent drainage policy where the creation of new ponds has increased in the form of Sustainable Urban Drainage Systems (SUDS). These are now required in any new development to alleviate flood risk. There has been



particular growth of this habitat in the city of Inverness, which is one of the fastest growing cities in the UK. This increase could significantly benefit all pond life but in particular amphibian

species which have been in considerable decline globally in recent decades



But can these man-made structures compensate for the loss of well established natural ponds? They are designed to collect surface water run-off and are likely to experience pollution, which could hamper amphibian success. A study by O'Brien (2014) demonstrated that amphibians were using Inverness SUDS. Of 12 sites surveyed common frog (*Rana temporaria*) were breeding in 8, common toad (*Bufo bufo*) in 2 and palmate newt (*Lissotriton helveticus*) at one site.


Scottish Natural Heritage
Dualchas Nàdair na h-Alba
All of nature for all of Scotland
Nàdar air fad airson Alba air fad

- Urban pondlife

Based on this a new project has been launched by Highland Council and Scottish Natural Heritage to identify all of the SuDS in Inverness and assess their use by amphibians. A further 28 sites have been identified bringing the total to 40 and from March to August they will be surveyed to determine their use by amphibians. So far common frog has been recorded at 28 sites, common toad at 10 and palmate at 11. These preliminary results show considerable presence of all of the common amphibian species with 12 sites supporting at least 2 species and 4 supporting all 3.

DNA samples have been taken from all of the ponds with frog spawn to determine the extent, if any, of inbreeding and may give an indication of how isolated the populations are. The connectedness of the ponds will be assessed with the creation of an Integrated Habitat Network Map to identify the permeability of the surrounding landscape. This will identify routes or blockages to amphibian movement and act as a valuable tool for future development to safeguard and maximise the connectivity between these wetland habitats



It is clear that amphibians are using the SuDS pond in Inverness. The aim of this project is to raise awareness of this additional benefit to the drainage systems amongst developers and local residents and go some way to identifying the health and future management requirements of amphibian species in our urban SuDS.



Marcia Rae

Graduate Research Assistant

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O'Brien, D. (2014) Sustainable drainage system (SuDS) ponds in Inverness UK and the favourable conservation status of amphibians. Urban Ecosyst.

NTS — Drum Castle Bats...



A study carried out over the winter by expert conservationists from the National Trust for Scotland at Drum Castle in Aberdeenshire has shed light on the mammal's mysterious winter hibernation behaviour.

Trust ranger for the North East, Toni Watt explains just what she's discovered over the past few months and why bats continue to fascinate:

"Bats are mysterious creatures and there is still a lot we don't know about them, a lot still to be discovered and that is what makes my job so exciting as a Countryside Ranger for the National Trust for Scotland here in Aberdeenshire. This winter we have been studying the bats hibernating at the National Trust for Scotland's Drum Castle. In the UK all our bats hibernate. This is partly because they all feed on insects which are in short supply in the cold winter months, and partly because they are so small that they lose body heat rapidly.

At Drum the bats hibernate in deep cracks and crevices in the tower cellar and each year we carefully count the number of bats we can see for the National Bat Monitoring Programme. This has to be done carefully and with a licensed bat worker as any disturbance could cause the bats to wake up and use up valuable energy supplies. There has been a lot of work at Drum Castle over the winter, re-surfacing the courtyard and the main drive and we wanted to see if the work disturbed the bats in any way.

Very little is known about how much disturbance bats can tolerate while they are hibernating and we acquired a licence from Scottish Natural Heritage to see if the bats moved or behaved any differently while the work was taking place. SNH were keen to support us with this as any results could then be used to help inform future projects elsewhere.

...study sheds light on bats' sleeping secrets

Surveying the bats in the hibernaculum began in the autumn before work commenced and continued right through the courtyard re-surfacing work. We counted the bats and marked the crevices they were in with chalk so we could see if they moved. I also went into the hibernaculum while the work was on going to see if the bats became agitated or moved at all. But amazingly considering the noise and vibrations produced by the heavy machinery, the bats were not disturbed and numbers of bats in the hibernaculum slowly grew into winter and then started to dwindle as we moved into spring.

The bats have left for their summer roosts and for the females this will be their maternity roosts. Drum Castle cellar is open all summer when the castle is open and it is fascinating to go in there and look up at the cracks and crevices and to imagine the bats tucked away in the winter.

As well as Drum estate, nearby Crathes Castle estate is a good place to watch for bats on the trails around the Millpond, and Castle Fraser near Kemnay is also good for a batty evening stroll. Further afield, but still within the NTS, Haddo House has a lot of bats in the summer, over 500 in one maternity roost, and is well worth an evening walk, but we have yet to discover where all these bats go in the winter months.”

Trust properties are home to nine species of bat. You can find out more about them at Scotland's only bat reserve which is run by the charity at Threave Garden and Estate in Dumfries and Galloway. For more information, visit:

<http://www.nts.org.uk/Wildlife/Mammals/ThreaveBatReserve/>



the National Trust
for Scotland
a place for everyone



RSPB Celebrates Tree Nursery at Abernethy

RSPB Scotland marked an important stage in its visionary forest expansion project at Abernethy with the opening of a native tree nursery on the reserve. Children from Abernethy Primary School officially opened the nursery by sowing the first tree seeds. Guests were treated to a reception at Forest Lodge as part of the official opening ceremony and were able to visit the forest edge to see where the regeneration and enrichment planting is taking place.

Along with donations from the public, several supporter organisations and trusts of the project have helped make the tree nursery possible: ScottishPower Foundation; Laing O'Rourke on behalf of Scottish Water; Cairngorms National Park Authority; Awards For All – Scotland; Speyside Wildlife, Scot Mountain Holidays; Walkers of Aberlour; and Abernethy Conservation and Fundraising Group. RSPB Scotland was delighted to be joined by many of them at the event, and thanked all the contributors for their support.

Desmond Dugan, from RSPB Scotland, said: "The opening of our tree nursery at RSPB Scotland Abernethy is an integral part of our forest expansion project. Abernethy is a special place for some of our most iconic species in Scotland and the project will ensure that it remains this way for years to come. We're really pleased to officially open the nursery with some help from the children from Abernethy Primary School as it's them, and the generations to come, who will see the long term results of the forest expansion; they will be its future custodians. The support from the trusts and organisations, many of whom joined us for this event, is incredibly important to the project and is allowing us to undertake the important regeneration and expansion work in the forest.

Abernethy Forest is rich in wildlife including red squirrels, capercaillie, crested tits, and Scottish crossbills, along with many rare mosses, fungi and plants, and has the largest single remnant of Caledonian pinewood left in the UK. It's also home to the famous Loch Garten ospreys – when ospreys returned to breed in the UK in the 1950s it was the ancient Caledonian pinewood forest at Abernethy where they chose to make their home. However, many of the original tree species in the Caledonian forest are currently found at very low numbers, far below what they once would

have been. Through this ambitious project RSPB Scotland plans to regenerate and expand the ancient Caledonian forest by around 3000 hectares to its natural altitude limit, almost doubling its size over the next 200 years. Fragmented woodland surrounding the existing forest will be connected and enriched, allowing more space for nature to flourish.



Over the next ten years almost 100,000 trees will be planted at the reserve with the help of local school children, volunteers and contractors. Trees such as alder, aspen, birch and willow will be grown at the nursery and transplanted into the reserve to help create a richer habitat for wildlife. The expansion project began in 2012 and along with donations from the public the support from trusts and organisations has been crucial in ensuring Abernethy Forest is a special place for wildlife and people for generations to come.



Ann Loughrey, Trustee and Executive Officer, ScottishPower Foundation, said: "RSPB Scotland is one of the country's longest running and best-loved charities. Thanks to funding from the ScottishPower Foundation it has been able to invest significantly in the forest expansion project at Abernethy, enhancing the local environment and bringing lasting benefits to the area. The ScottishPower Foundation is committed to supporting programmes that promote the advancement of environmental protection and make a positive impact in the community. RSPB Scotland Abernethy is doing a range of great work to help Scotland's environment and we are delighted to support this extremely worthwhile project."

Aileen Fox from Abernethy Conservation and Fundraising Group said: "Abernethy Conservation and Fundraising Group is a team of local people who support the aims of the forest restoration project through fundraising and practical conservation. We are proud to have made a contribution to this great project and look forward to continuing our support for RSPB Scotland Abernethy and their vision for the future woodland."



CIRIA's Biodiversity Interest Group (BIG) is delighted to announce that the [BIG Challenge 2015](#) is now open for entries, with leaders from across construction, infrastructure, transport, retail and Government challenging the industry to 'do one thing' for biodiversity.

Led by the Group, the BIG Challenge is to find a space in your development, site or building, however big or small, permanent or temporary, and be creative about what you can do to enhance biodiversity. To help organisations do that, the BIG Challenge offers advice, support and learning to show how biodiversity enhancements can be simple, affordable and achievable. Joining industry leaders in biodiversity to share best practice, generate ideas, and highlight the positive contribution your organisation is making couldn't be easier; all you need to do is sign up on the website [bigchallenge.info](#), and submit your enhancement.



Last year's BIG Challenge concluded with a successful Awards ceremony, which recognised the 40 organisations who submitted 119 entries to the Challenge. Enhancements ranged from bug hotels, log piles and bird boxes, to restoring riverbanks and running wildlife workshops for schools. Doing just one thing can make a BIG difference to the decline of Biodiversity in the UK

Peter Johnson, Group Environmental Manager, Kier and Chair of the BIG adds "The response to last year's awards was overwhelming, with so many organisations signing up to the challenge, sharing their knowledge and ideas and submitting such interesting and innovative entries. The Biodiversity Interest Group is really looking forward to learning about all the new projects out there and recognising them at the 2015 Awards."



The BIG Challenge 2015 Awards ceremony will take place this October. For further information on how to enter, and to be inspired by last year's entries, please visit [bigchallenge.info](#)

Beavers in Scotland

“The '[Beavers in Scotland](#)' report was presented to Scottish Ministers in June 2015. It is the culmination of many years of dedicated research, investigation and discussion.

Ministers asked for the report to help them decide whether to permanently reintroduce beavers to Scotland. The reintroduction of a species, absent for many centuries, is a very significant decision for any Government to make. The production of this comprehensive report by Scottish Natural Heritage represents one of the most thorough assessments ever done for a species reintroduction proposal, and will support the decision-making process

It provides a comprehensive summary of existing knowledge about the likely impact of beavers living in the wild in Scotland and options for their management, and sets out four scenarios for Scottish Ministers to consider. These range from full removal of all beavers to the widespread reintroduction of beavers across Scotland.

The report draws on 20 years of work on beavers, including information from the Scottish Beaver Trial, a five-year trial reintroduction in Argyll which finished in May 2014; a project on Tayside where there may be more than 38 groups of beavers present; and work which examined the interactions between beavers and salmon and trout. It draws on the experiences that many other European and North American



countries have had living with beavers, including their effects on biodiversity, and land uses such as farming and forestry. It also describes where beavers may recolonize if allowed to stay.”

You can find out more at www.snh.gov.uk/beavers-in-scotland
Martin Gaywood, SNH.



Getting into hot water: Preventing the spread of aquatic invasive species

An earlier study from the University of Leeds and Cefas surveyed more than 1,500 water sports enthusiasts from across the UK. It found that 64% of anglers and 79% of canoeists use their equipment/boat in more than one catchment within a fortnight. Of those who did, only 22% of anglers and 10% of canoeists cleaned their kit before moving to new waters.



Lucy continued: “Once invasive species are introduced into rivers and lakes, they cause havoc and it’s incredibly difficult to remove them, so preventing them getting there in the first place is really important. Submersing them in hot water seems to work for a whole range of animals and plants, it’s easily done, and it’s safe for anyone to use.”

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The researchers wrapped four species of non-native plant (curly water thyme, New Zealand pigmyweed, floating pennywort and parrot’s feather) and three species of non-native animals (zebra mussel, killer shrimp and bloody red mysid) in angling nets. They then compared the effectiveness of submerging the animals/plants in hot water to drying the nets out, or leaving them damp.

They found that hot water caused 99% mortality across all plants and animals within an hour while drying took over seven days to cause the same level of mortality.

Dr Alison Dunn from the School of Biology at the University of Leeds said: “The length of time that some of the species could survive for when equipment was left damp was remarkable. Seven out of the eight plants and animals including the killer shrimp and zebra mussel survived for over two weeks if they were left in a damp net showing just how easily they could have survived the journey to a new waterbody.”

In 2011, the Government in partnership with a large number of environmental NGO’s launched the [Check, Clean, Dry](#) campaign to try to encourage water users to clean their kit before moving to new sites in order to accidentally spread unwanted hitchhikers. The research, which was published in *Biological Invasions*, was funded by the Biotechnology and Biological Sciences Research Council (BBSRC) and Cefas.



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CSGN 2015 Ideas Fund Award....

The John Muir Pollinator Vision project has received a boost of £5,000 from the Central Scotland Green Network (CSGN) 2015 Ideas Fund.

Buglife Scotland, which is behind the innovative project, scooped the top prize in the CSGN 2015 Ideas Fund. The John Muir Pollinator Vision was selected by delegates at the CSGN Annual Forum from a shortlist of three which also included the Urban Oats project by NADFLY Studio and Greenspace Scotland with its Young Place Changers project.

The winning initiative aims to work with communities in Central Scotland to conserve wild pollinator populations including bees, hoverflies and butterflies, along the John Muir Way.

This will be done through the creation of a B-Lines map, the first in Scotland, which will follow the route from Helensburgh in the west to Dunbar in the east. This map will be used to enrich different areas of the route with wildflowers and nesting habitats which will benefit wildlife and local communities as well as providing a nature-rich experience for those visiting the popular trail for walking and cycling.

It is hoped that the project, though enhancing the green infrastructure, will also benefit the urban communities close to the John Muir Way, many of which are in the top 15% deprived areas in Scotland.

The funding will allow Buglife Scotland to identify 10 key urban stretches along the route which would benefit from greater habitat connectivity for pollinators. Workshops and training activities will also be held to engage with local groups and communities, encouraging people of all ages to get involved.



Buglife Scotland scoops £5,000 CSGN Award



Commenting on the win, Scott Shanks, Conservation Officer at Buglife, said: “We are thrilled to have been awarded this funding from the CSGN Ideas Fund. It will play a pivotal role in the start of our exciting project to increase the wild pollinator population along one of Scotland’s most renowned trails.

“The disappearance of wildflower-rich grassland has been significant and in Scotland we have seen declines in 54% of wildflower species, which has had a drastic effect on our pollinators. Through our project we hope to not only enhance the natural heritage of the area and support Scotland’s pollinators but also to support and enhance neighbouring communities.”

Keith Geddes, Chair of the CSGNT, said: “As Europe’s largest greenspace initiative, we aim to support organisations in delivering the green network on the ground and Buglife is an extremely worthy winner of the CSGN Ideas Fund. The John Muir Way is a key flagship of ours which we launched last year and it is fantastic that Buglife has chosen to support the trail.”

As one of the Scottish Government’s national developments for Scotland in the third National Planning Framework, the CSGN is changing the face of Central Scotland, by restoring, transforming and greening the landscape of an area stretching from Ayrshire and Inverclyde in the west, to Fife and the Lothians in the east.



For further information about the CSGN visit www.centralscotlandgreennetwork.org

Grow Wild Scotland



The Wild Flowers and Water Voles Grow Wild project in Easterhouse, Glasgow, saw a very special visit from Dr Aileen McLeod, The Minister for Environment, Climate Change and Land Reform. Young people from Lochend Community High School took the minister on a tour, including showing her how the site looked before their hard work. By removing masses of litter and introducing a bounty of native wild flowers, their £4000 Grow Wild award has enabled them to transform a derelict space on the perimeter of the Seven Lochs Wetland Park.

The volunteers from Seven Lochs Wetland Park have been vital in this transformation, providing manpower to clear the land of rubbish due to heavy fly tipping, planting the new bunds and raising the land to give the water voles more natural habitats.

Lots of activities took place in the afternoon with RSPB Glasgow providing binoculars to spot local wildlife, running educational family activities and promoting their up and coming Glasgow Wildlife Garden Festival, which is part of the Green Glasgow biodiversity month this July.



Robyn Stewart from Glasgow University is surveying the water voles and came to the event to widen awareness about the species and pass on her expertise to the young people who are championing their protection locally. Glasgow City Council Land environment service also added their support by providing more wild flower plug plants for the water voles' new home.

The event also saw the launch of the Scottish Government's biodiversity route map to 2020. Scotland's Biodiversity – A Route Map to 2020 sets out the priority work needed to meet the international Aichi Targets for biodiversity and improve the state of nature in Scotland.

Dr McLeod explained: "We want to see more projects like this, this is a project that's transforming derelict land right in the heart of Glasgow for the benefit of water voles, as well as the local community. It shows that nature can thrive on all our doorsteps and how community action can transform an area."

As well as offering free wild flower seeds to groups and individuals, Grow Wild funds tens of community projects like the Easterhouse project and four huge flagship projects.

About Grow Wild

Supported by the Big Lottery Fund and led by Royal Botanic Gardens, Kew; Grow Wild inspires communities, friends, neighbours and individuals across the UK to come together to transform local spaces, by sowing, growing and enjoying native wild flowers. We believe that this simple act of creativity can turn spaces into beautiful, inspiring and colourful wildlife havens; encouraging people to care for and delight in the nature around them. Any space can be transformed – from balconies to old boots, streets to shared spaces, boxes to buckets. Anything that will hold soil, water and seeds will do: just let your imagination grow wild.

To find out more about the project check out their online profile on the Grow Wild project map for more Grow Wild Spaces,

<https://www.growwilduk.com/community-projects/wild-flowers-and-water-voles-easterhouse>



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Diary Dates

1st July 2015: Southern Upland Partnership. Annual General Meeting. Including a presentation on the Biosphere project. <http://www.sup.org.uk/>

30th August-4th September 2015: Aquatic Biodiversity & Ecosystems. Evolution Interactions & Global change. Venue Liverpool University. [For further information](#)

7th September 2015: Inspiring Meadows. A conference on the creation and management of wildflower meadows. Venue Raploch Community Campus, Stirling. [Further information](#) .

4-8 October 2015: Centre For Mountain Studies; International Conference in Perth. Perth III: Mountains of our Future Earth. [For Further information](#)

23-24 November 2015—World Forum on Natural Capital in Edinburgh. For more information: <http://www.naturalcapitalforum.com/about>

