



Scotland's Biodiversity: Scottish Beaver Reintroduction Update



The Scottish Beaver Trial is now over half way through. There are four beaver families that have settled around lochs at the trial site, two of which have had baby 'kits' for two years running (the other two families, both made up of a pair, have been released more recently). Scottish Natural Heritage has been given the job of coordinating the monitoring work, and then reporting to Scottish Government by May 2015, and we're doing that with the help of a number of independent monitoring bodies. You can find out more about the monitoring programme, who our partners are and see the interim reports as they're published, at www.snh.gov.uk/scottishbeavertrial. You can also find out more about the Trial by going to the website of the organisations managing the Trial (the Scottish Wildlife Trust, Royal Zoological Society of Scotland, and Forestry Commission Scotland) at www.scottishbeavers.org.uk.

Martin Gaywood, Species Action Framework Manager, SNH.

NEWSFLASH:

**The new Biodiversity Scotland
Website going live by the end
of December.**

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Contact details

Do you have a news story? Are you involved in a project? If so, then let the Biodiversity Implementation Team (BIT) 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 the Scottish Biodiversity Forum. The editors reserve the right to edit or exclude articles; the editors' decisions are final. For further information about the Biodiversity Implementation Team, log on to: www.biodiversityscotland.gov.uk



SCOTTISH
BIODIVERSITY
FORUM

South Esk—Catchment Wide Invasive Species Education

New Interpretation highlights the catchments invasive non native species

The threat of non native invasive species within the South Esk catchment, Angus was highlighted earlier this year by a range of leaflets and by the partnership's new website. A new suite of onsite interpretation now compliments these and brings invasive species education to all areas of the catchment.

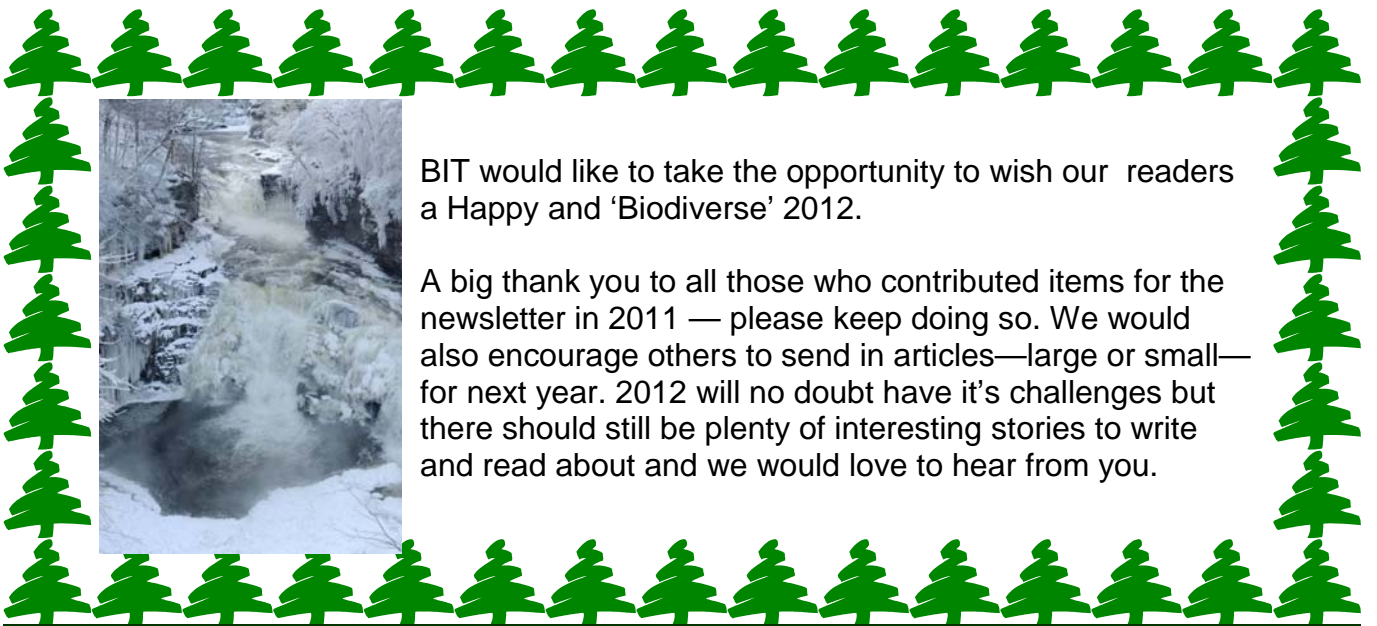
The A2 size interpretation boards are located in Glen Doll, Cortachy, Brechin and at Montrose Basin. They are located at points where walking routes begin, end or where there is a high footfall.



The content of the boards will aid anyone in using the river to identify problem plant species such as giant hogweed, Japanese knotweed and Himalayan balsam. American mink is also highlighted and there is help to distinguish between this problem species and native biodiversity.

The partnerships "River Watch" scheme is highlighted on the panels allowing the public to report any sightings of invasive species or activities being carried out within the catchment which are detrimental to the river's health. In the short time the project has ran we have already had numerous reports of invasive species which have been passed on to the relevant parties for treatment. The boards were kindly funded by Angus Council, Esk Rivers & Fisheries Trust, Esk District Salmon Fisheries Board, Scottish Natural Heritage, Cairngorms National Park Authority, and Rural Tayside LEADER.

Merry Christmas —Nollaig chridheil



BIT would like to take the opportunity to wish our readers a Happy and 'Biodiverse' 2012.

A big thank you to all those who contributed items for the newsletter in 2011 — please keep doing so. We would also encourage others to send in articles—large or small—for next year. 2012 will no doubt have it's challenges but there should still be plenty of interesting stories to write and read about and we would love to hear from you.

Forth Valley Wildlife and Landscape Forum



The first Forth Valley Wildlife and Landscape Forum brought together those actively involved in local nature conservation, including amateurs and professionals, environmental organisations, biological recorders and community groups. The aim was to raise awareness of one another's activities and encourage networking and collaboration.

This free, day long event was organised around two main elements

- In the school's large atrium local and national groups manned stalls providing information on their activities. This provided everyone with the opportunity to learn about each other's work.
- In the assembly hall there was a programme of illustrated presentations. These included three 30 min talks describing local wildlife conservation activities and a series of five minute 'taster presentations' in which local groups described their activities and encouraged delegates to visit their stalls.

The Forth Naturalist and Historian worked with the Stirling, Falkirk and Clackmannanshire Biodiversity Partnerships to organise this forum, which we hope will become an annual event.

The Forum in numbers – 78 attendees
3 main speakers
13 short talks
24 stalls

Overall, the feedback for the Forum was very positive and planning is underway for next year's event. If you or your group would like to be involved next year or for more information please email countryside@stirling.gov.uk

NTS—Creepy-crawlie census uncovers new species

A recently completed survey commissioned by the National Trust for Scotland has discovered three species of fly that are new to Scotland. They were amongst almost 500 species of flies, beetles and other invertebrates that were found to inhabit the conservation charity's Dumfries & Galloway estates.

The survey, part-financed by Scottish Natural Heritage (SNH), recommends that the Trust continues its work of conserving and encouraging the development of the wet, dry and coastal grasslands which provide an invaluable environmental resource, rich in wildlife, at their Threave and Rockcliffe estates.

The species new to Scotland are:

- * *Thaumatomyia rufa*
- * *Holocera lamellate*
- * *Chorisops tibialis*.



“Although most people look on them as ‘creepy-crawlies’, invertebrates play a vital role in ensuring the sustainability of our environment,” said Mr Lindsay Mackinlay, Nature Conservation Adviser with the National Trust for Scotland.

“However, due to the highly specialised nature of the work, it has not always been possible to investigate the beetles, flies and other insects which populate Trust estates – and this means the significance of these invertebrates and their habitats has not always been clearly understood. That was why, with the help of SNH, we commissioned the survey at Threave and Rockcliffe; both sites which were thought to support what biologists term ‘*invertebrates of importance*’ due to the presence of the fantastic wetlands and coastal grasslands.”

Lindsay’s hunch certainly paid off as the survey, carried out by expert entomologists between 2009 and 2011 revealed forty species classified as “*significant in terms of biodiversity and conservation*”, including an endangered dance fly, three species of fly previously undiscovered in Scotland and an extremely rare ladybird with possibly the longest name in any naturalist’s lexicon!

“The survey discovered a ladybird at Rockcliffe which is extremely rare in Scotland,” said Lindsay. “The official name is ‘*Subcoccinella vigintiquatuorpunctata*’, which refers to the twenty four spots on its wings, however we’re looking to see whether any of our visitors can come up with a more uniquely Scottish, and certainly a much shorter, nickname!”

Contact Sarah Cuthbert-Kerr on
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Rockcliffe coast



LBAP Round up—Western Isles

It was a typical wet and windy Hebridean morning as the organisers left South Uist for Ness on the Isle of Lewis, but slowly the sky cleared and the sun appeared. Perfect weather to be out and about and enjoying our wonderful wildlife.

The Biological Recording Activity Day held in October was part of Action Earth, a campaign run by Community Service Volunteers (CSV) to get more people involved in practical biodiversity and environmental projects. The event was run by Curracag (Outer Hebrides Natural History Society) to encourage people to take part in biological recording and contribute to the newly formed Outer Hebrides Biological Recording Project, and where better place to start than the only Local Nature Reserve in the Outer Hebrides.



Loch Stiapabhat

As the emphasis was firmly on the practical, the volunteers were soon equipped with dipping nets, trays and collecting jars, and were on the reserve ready to investigate the freshwater life of Loch Stiapabhat. Age is no barrier to experiencing the thrill of discovering the wildlife beneath your feet or getting wet and muddy in the process. The volunteers, from children to senior citizens, were soon engrossed in looking at water boatmen, pond skaters



and sticklebacks and identifying water plants such as horsetails, marsh pennywort and water mint. October may not be the best time of year for experiencing the full range the wildlife at the Loch Stiapabhat Local Nature Reserve, apart from the migratory birds of course, but it provided an opportunity to demonstrate biological recording methods and its importance in helping to protect our wildlife.

...Exploring the wildlife of Loch Stiapabhat



Our volunteers might have gone home muddy, but they had all discovered that biological recording is fun; it can be a family activity, you can do it anywhere and anyone can take part. You don't have to be an expert and we can help you become a natural history recorder, all you need is enthusiasm, getting wet and muddy is optional. If you would like to learn more about biological recording in the Outer Hebrides visit our new website: www.ohbr.org.uk. Curracag will be organising more activity days next year, so if you'd like to join in the fun check the Curracag website events page: www.curracag.org.uk/events.html.

For further information, contact :
Anne MacLellan.

Tel: 01870 604990 or

Email: amaclellan@cne-siar.gov.uk



Heritage Lottery Fund—Bee Positive—New Bumblebee project Announced



The Heritage Lottery Fund (HLF) has stepped in to help stop the serious decline in the country's bumblebee population. Today HLF announced a grant of £340,000 for an ambitious project by the Bumblebee Conservation Trust, based at Stirling University, to conserve a variety of endangered bumblebee species and their habitats throughout the UK.

Bumblebees are fundamental to our ecosystem with hundreds of species of wildflower, fruits such as raspberries, strawberries and tomatoes and vegetables such as runner beans, dependent on them for pollination. The total value of pollination in the UK exceeds £400million. However, over the last 70 years there has been a dramatic decrease in their population with two species becoming totally extinct and six of the remaining 24 species now listed as UK Biodiversity Action Plan (UK BAP) priority species.

In the UK, the flower rich grasslands on which bumblebees depend have reduced by 97% since the 1930's. This is primarily a result of a move to more intensive forms of agriculture after the Second World War, resulting in the loss of hay meadows and clover leys. Meanwhile changes in domestic gardens, with a preference for decking and mown lawns, has also meant fewer flowers for the bees. This loss of habitat has led to fragmentation with species surviving in isolated areas such as military land, grassland nature reserves and coastal grasslands. This isolation results in inbreeding which raises the likelihood of further extinctions.

Heritage Lottery Fund grant is the bees knees!

HLF's grant will enable the Bumblebee Conservation Trust to begin a three-year conservation project, helping to protect the bumblebees and their habitat for the future. Working with landowners, farmers, the public and schools across the UK, the project will raise awareness of these important pollinators and help inform people on how best to protect them. Flower-rich habitat will be provided where it is needed most to reconnect the small isolated populations while an extensive awareness-raising programme, including an interactive website, community talks, learning packs for children, and a national wildlife self-assessment garden scheme, will be rolled out across the country.

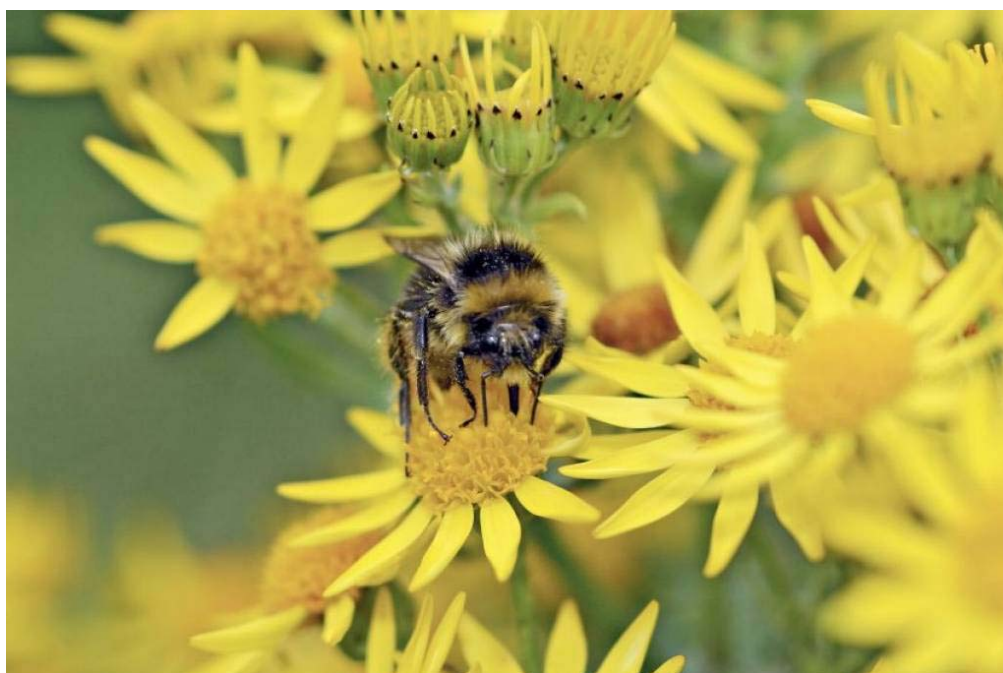
Volunteers have played a key role in the development of this project and it is anticipated that, after training, around 500 regular bumblebee recorders will gather information on the population trends.

Chris Packham, BBCT President, Television Presenter and Naturalist, welcomed the award:

“This is great news for bumblebee conservation in the UK. The funding boost from HLF will enable the Bumblebee Conservation Trust to better reach and engage with the general public on this important subject. The funding will also significantly increase the volume and quality of conservation work that they can undertake, helping to safeguard populations of some of our rarest and most beautiful bumblebees. That means more colourful flower-rich meadows for both wildlife and people to enjoy.”

Colin McLean, Head of the Heritage Lottery Fund in Scotland said:

“This much-needed project gives us all the opportunity to learn more about the bumblebees and the role they play in our biodiversity. Young people are the future custodians of our natural heritage so their passion for it is vital. With some of the awareness-raising focussed specifically towards a young audience, it will inspire and empower them to help safeguard bumblebee populations for future generations.”



Launch of Scotland's Environment Website (SEWeb)

..... bringing together in one place information on Scotland's environment

Have you ever looked for information on one aspect of biodiversity, only to find that the answer is buried within several web sites? Have you ever spent ages trying to pull together facts and figures? Finding information can be soul destroying, but with the launch of Scotland's Environment Web (www.environment.scotland.gov.uk), it will be a "whole lot easier".

Launched on 28 November by Stewart Stevenson, Minister for the Environment and Climate Change, Scotland's Environment Web is a single point of entry for data and information held by all Scottish organisations responsible for protecting Scotland's environment and human health. It involves COSLA, Food Standards Agency Scotland (FSAS), Forestry Commission Scotland (FSC), Historic Scotland, James Hutton Institute, Marine Scotland Science, NHS, RAFTS, Scottish Environment Link, Scottish Environment Protection Agency (SEPA), Scottish Government and Scottish Natural Heritage (SNH).



The screenshot shows the homepage of the Scotland's Environment Web. At the top, there is a search bar and a navigation menu with links to Home, Our Environment, Library, Map, Citizen Science, Trends & Indicators, and Sectors & Issues. The main content area features a 'Welcome to Scotland's Environment Web' section with a brief description of the site's purpose. Below this is a 'Latest News' section with several headlines and dates. To the right, there is a large image of a puffin with the text 'Wildlife' and a sub-headline about Scottish habitats. At the bottom, there are four quick links: 'What's in my backyard?', 'Our Environment', 'What's in the Library?', and 'Land Use Strategy'.

Launch of Scotland's Environment Website (SEWeb)

Scotland's Environment Web will put Scotland at the forefront of the world for sharing environmental information and is planned to act as a forum for prioritising environmental problems.

The site provides information at a range of levels suitable for different audiences:

- * Eleven chapters covering the condition of Scotland's environment, its value and the threats it faces in a form suitable for the general public. It includes summaries and key messages which highlight progress in protecting the environment. These chapters also provide a way of accessing progressively more detailed information for those with a more technical interest;



- * map-based data query tools which allow direct access to data. These are in a form that allow the public and communities to understand the condition of their local environment and will also provide direct access to data for schools and academic institutions;

- * a searchable library facility allowing users to find data and reports on Scotland's environment.



Over the next three years Scotland's Environment Web (a 4.9 million euro project which includes an EU Life award of up to 2.3million euro) will be increasing the opportunities for the public to get involved with Scotland's environment and will create a forum for debate and assessment from all corners of the environmental community. People will be asked to identify the environmental problems they think are most important. They'll also be asked to share information on the condition of their local environment, and to help shape actions to improve it.

Scotland's environment 



Stormy weather during this year's breeding season failed to blow Scotland's red kite population off course.

New figures, compiled by RSPB Scotland and Scottish Natural Heritage reveal that in 2011 there are 186 breeding pairs in Scotland, a rise of 22 on the previous year.

During this year's breeding season, a record 314 young fledged, the highest since reintroductions began in Scotland in 1989.

The red kite reintroduction programme is arguably the most successful scheme of its type in the UK and perhaps also more widely in Europe. It is now estimated that following reintroductions the UK holds between 7 and 10% of the world red kite population.

Highlights of the 2011 season in Scotland include:

- Increased evidence of the breeding populations of red kites now merging. Wild bred birds from Central Scotland and North Scotland were found breeding in Angus, the first successful nesting of a pair of red kites in this district for nearly 150 years.
- The return of the species to Cairngorms Natural Park following a successful breeding attempt on Deeside.

Bad weather and illegal killing impacts on 2011 breeding figures

However, severe gales in May did take a heavy toll on some local populations, particularly those in Central Scotland, with nests and eggs being blown from trees or nesting trees blown over. A total of 76 young fledged in Central Scotland compared to 93 the previous year. Other populations were much less severely affected by the weather.

Since being introduced back into Scotland, England and Northern Ireland from 1989, the red kite has thrived in England. However, in Scotland the red kite recovery whilst on track in many areas, has stagnated since about 2001 in others.

In North Scotland, red kite populations increased slightly from 51 breeding pairs to 53, but the evidence suggests that numbers are still being severely restricted due to illegal poisoning and other human killing. Despite their reintroduction projects starting respectively six and twelve years later, both the Central Scotland and Dumfries and Galloway populations now exceed that of North Scotland.

Duncan Orr-Ewing, RSPB Scotland Head of Species and Land Management, said: "There was real concern for red kite breeding this year after May's severe storms. The wind came at a critical time of the breeding cycle when the eggs were on the point of hatching or there were small young in the nests. Fortunately, it appears that the majority of Scotland's red kites escaped the worst of the extreme weather and the overall population continues to grow. Sadly, however, it is clear that in the north of Scotland illegal poisoning is stopping the spread of this spectacular species. We're committed to working with the majority of responsible landowners to help solve this problem, which affects not only red kites but other vulnerable wildlife as well."

Andrew Stevenson, SNH's ornithological adviser for the red kite project, said: "It is great news that red kite numbers have increased again in Scotland this year with the population showing resilience to the exceptionally poor spring weather. It's also very encouraging that the central Scotland and Aberdeenshire populations of these spectacular birds are starting to link up."



For more information, contact Louise Smith, RSPB Scotland, on 0131 317 4136 or 07540 121 457.

Grassland Fungi Project

Waxcap grasslands are fragile ecosystems known to contain a high diversity of fungi.

Fungi are uniquely challenging organisms for recognition, monitoring and conservation management. Apart from the sheer number of species, many fruiting bodies are small and last for a short time and need specialist knowledge and equipment for their identification. Some of their most obvious features (colour, size, shape etc.) vary immensely, causing further concerns for the field mycologist. Nevertheless, fungi play absolutely critical roles in ecosystem function, especially in carbon and nutrient cycling, root function in plants, and as a food source for a very wide range of organisms.

DEFRA and Scottish Natural Heritage (SNH) have come together to fund research into the classification and ecology of fungi from unimproved grassland habitats (so-called “waxcap grasslands”), which are fragile ecosystems known to contain a high diversity of fungi. They are especially vulnerable as “improvements” in the form of agricultural fertilizers cause the loss of many fungal species, with populations failing to recover for decades even after cessation of fertilization. The research is being carried out by a partnership between **CABI** (Centre for Agricultural Bioscience International), the **Royal Botanic Gardens, Kew** and the **University of Aberystwyth** with support from a large number of local fungal recording groups and expert individuals.

The fungal species of unimproved grasslands have not been studied in any detail using molecular methods. So the project will focus on two genera from the grassland system, the waxcaps themselves (*Hygrocybe* spp.) and the earthtongues (*Geoglossum* and relatives).



Hygrocybe species from unimproved grasslands, collected as part of the project

Photographs courtesy of Dr Paul Cannon

Systematics, barcoding & Ecology of Fungi from waxcap grasslands



*Collections of the common species **Hygrocybe conica**, demonstrating the great range of variation within the species as currently accepted.*

A key requirement for these and many other fungi of conservation concern in the UK is the need for molecular diagnostic tools, to assist species definition, identification and recognition of cryptic taxa. Bearing in mind the critical nature of morphological species definition for many of these fungi, the existence of cryptic species [hidden species that can't be differentiated visually] might be expected, and phylogenetic studies [relationship between species based on differences in their DNA] may also lead to detection of morphological traits that will improve the robustness of traditional identification methods. Identification of diagnostic (barcoding) DNA sequences will also allow detection of non-fruiting populations, a particularly important task bearing in mind the ephemeral and irregular fruiting events of many fungi

The project will give us the capacity to develop novel monitoring methods, as recommended in the UK Strategy for conservation of fungi "**Saving the Forgotten Kingdom**".

Next-generation sequencing approaches allow us to analyse fungal populations extracted directly from soil cores. This makes it possible not only to identify which species are present but also to study their relative abundance

In Summary, this project will allow us to (a) define species using more objective criteria, using a combination of morphological and molecular methods; (b) recognize cryptic species that may need to be considered for conservation management; (c) gain a better understanding of the ecology of waxcap fungi, (d) designate barcode sequences to allow development of novel monitoring tools for non-fruiting populations, and (e) further improve the partnership between the scientific and lay communities to study these beautiful species

For more information, contact: Dr Paul Cannon
CABI and Royal Botanic Gardens, Kew Richmond, Surrey TW9 3AB
email p.cannon<at>cabi.org

The Game & Wildlife Conservation Trust (GWCT)

Pupils from three primary schools in Perthshire and Fife learnt all about game management and work on a sporting estate when they took part in a new initiative by the Game & Wildlife Conservation Trust (GWCT) and the Royal Highland Education Trust (RHET).

Two classes from St Columba's and Ceres primary schools in Fife visited Teasses Estate on 2 November when Alex Towns of GWCT, Carole Brunton, Project Co-ordinator for RHET in Fife and Kenny Horne, the estate's headkeeper, hosted the educational event. The children enjoyed a tractor and trailer ride around the estate before enjoying a game food tasting session, courtesy of Willie Balfour, Elmwood College. A discussion on predator control and species identification followed.

The following Thursday, primary six pupils from Moncrieffe Primary School in Perth joined Alex, Anna Dickinson, Project Co-ordinator for RHET in Perthshire and Brian Kaye, manager of Culfargie Estate for a day in Perthshire. The children took a tour around Culfargie to discover the importance of maintaining a balance in nature and discussed issues such as grey squirrel trapping and crow control. This visit encompassed a walk through Tarrylaw Farm and tractor and trailer ride onto the heather moor to take in the magnificent views and learn about grouse and grazing.

The events entitled 'Beyond the Farm Gate' are aimed at increasing the pupils' knowledge of game and wildlife management and sporting estates and are augmented with class-based study.



Kenny Horne with some of the Fife pupils on Teasses Farm

- School pupils go 'Beyond the Farm Gate'

Through these events, the GWCT and RHET are providing an holistic approach to rural education and we have been fortunate to work with estates like Teasses and Culfargie which are very keen encourage an understanding of countryside issues amongst school children," said Katrina Candy, head of PR and education (GWCT Scotland).

"We already work with RHET in providing workshops at the Royal Highland Show and our own Scottish Game Fair and we are very keen to progress this partnership to the benefit of Scotland's school children.

"The majority of Scotland's countryside is managed to some extent and it is important for the public to understand this and appreciate how it is achieved.

The GWCT has been very fortunate to receive generous sponsorship for our educational work and thanks to Angle Park Sand & Gravel Co. Ltd who sponsored the transport for the Fife visit."

For Information, contact: Katrina Candy – Media and Education, Telephone – 01738 554822; Mobile – 07736 802144 www.gwct.org.uk



NESBReC—Harvestman Atlas

NESBReC is planning to produce an atlas of Harvestman species for the North-East of Scotland to come out in 2012. Mike Davidson of the Grampian Spider Group will be collating records for this atlas in the next couple of months. Therefore, if any of you have any records of such species, please do send them on to us. If any of you come across any harvestmen in the course of the next few weeks, let us know what you see or take some decent photos of any individuals you see and send them to us. Mike can then try to identify them for inclusion in the atlas.

Harvestmen are relatively under-recorded and it is hoped that a local atlas will help to stimulate interest and recording of this group of species in our area.

Although they look like spiders with long legs, harvestmen are in fact like mites, distant "cousins" of true spiders

For further information contact: Glenn Roberts, Tel: 01224 273633
email: glenn.roberts@aberdeenshire.gov.uk
www.nesbrec.org.uk



Photograph courtesy of
Chris Cathrine

Integrated Habitat Design Competition Winner Announced...

Is it really possible to have high quality urban design that benefits both people and wildlife? That's the challenge a new competition sets, and – according to this year's entries – good ideas are definitely on the up.

All too often, biodiversity has been left at the fringes of development planning, only to be slotted in towards the end of a project, and often only where space allows. As Dusty Gedge - the UK's leading living roofs campaigner and one of the competition instigators – says: 'ecology and biodiversity are often relegated to a subordinate role in the design process'. Resulting, more of than not, in hastily conceived and poorly-connected fragments of green infrastructure which don't serve the needs of communities as well as they might.



So, the Integrated Habitat Design Competition was set up - to champion the need to incorporate more of 'the green' alongside the push for 'the grey', as an intrinsic part of the urban design and planning.

And whilst this may be good for the birds and the bees, it also benefits people and makes business sense. For example, a recent study has shown that the availability of green infrastructure directly improves people's health and well-being through positive effects on obesity, circulatory disease, mental health, chronic stress and asthma.

And whilst everyone benefits from cleaner air and access to greenery, the economic benefits are apparent too. Housing developments which incorporate green infrastructure can increase property prices significantly (by up to 25% in some cases) – which is good for both developers

and home owners – and can generate economic regeneration and attract inward investment. For example, landscape improvements at Riverside Business Park in Clydebank and Winsford attracted £1million in private investment and contributed to a growth in employment by 16% and 13% respectively.



...Urban design creates a buzz!

Also, small increases in the amount of greenspace and number of trees can drastically reduce water run-off and risk of flooding, and using more natural drainage systems (such as vegetated channels and reed beds) often prove to be more effective and cheaper to maintain than their concrete and pipe counterparts.

What's more, if all of this can be linked together, as the Central Scotland Green Network initiative is aiming to do, the benefits for all are even greater.



The Integrated Habitat Design Competition saw designers from all over the UK coming up with some creative and innovative solutions for primary schools, offices and brownfield sites - from green walls to living roofs, and floating houses to raingardens - whilst still maximising the housing and business needs. All of which caused the judging panel – which comprised ecologists, planners, consultants and academics – both a good deal of discussion, and a even more deliberation.

Gratifyingly for Scotland, the winning entry was for a proposed development in Leith – where a 5 hectare ex-train and tram depot provided for 120 affordable houses whilst incorporating waste water recycling, a community market and gardens, and a combined heat and power generator, whilst retaining and re-using some the original site's key features such as Victorian workshops and chimney stacks.

Also gratifyingly, one of the highly commended entries again had a Scottish pedigree. This was for some deceptively low-key swift nesting boxes elegantly incorporated into the gable ends of existing houses in Holytown near Motherwell – illustrating that big benefits can come from the small and simple.

The competition will be running again in 2012 – for more details and to see this year's winners and finalists, see <http://ihdc.org.uk/>

For more information on the Central Scotland Green Network see <http://centralscotlandgreennetwork.org/>

PERMACULTURE ZONES



- ZONE 0 - HOME ENERGY REDUCTION TAKEN THROUGH PASSIVE HARNASSING OF NATURAL RESOURCES, I.E. SOLAR BUFFER, NATURAL VENTILATION, RAINWATER HARVESTING.
- ZONE 1 - GARDENS & PLANTINGS THAT REQUIRE FREQUENT ATTENTION SITUATED CLOSE TO HOME. HERBS, SALAD VEGETABLES AND FLOWERS.
- ZONE 2 - WATERWAYS, RAINWATER HARVESTING BUTTS, COMPOSTING BINS, BEEHIVES, FRUIT BUSHES AND OTHER PERENNIAL PLANTS
- ZONE 3 - MAINCROP GROWTH. COMMUNITY VEGETABLE GARDENS. MINIMUM CARE REQUIRED AFTER ESTABLISHMENT
- ZONE 4 - SEMI-WILD AREA WITH MINIMUM HUMAN INTERACTION. WILL INCLUDE TREES AND OTHER WIND AND NOISE BREAKS. IDEAL FOR FORAGING.
- ZONE 5 - WILD AREA. NO HUMAN APART FROM OBSERVATION OF NATURAL ECO-SYSTEMS AND CYCLES.

Phil Baarda, one of SNH's advisers on woodlands and green networks, sat on the IHDC judging panel. From this experience, he's been enthused to create a green roof on the new garden shed he's building – but that's another story.

Atlas of Highland land Mammals

The Highland Biological Recording Group has just published the most up to date account of the distribution of Highland Land Mammals, edited by our former Biodiversity team member Ro Scott.



The book documents the distribution of 37 species of land mammal that are regularly found in the Highlands with a map and short species account for each. The text summarises information on appearance and signs, ecology and behaviour, conservation status, history in the Highland, past and present management, and hints on how to see the species.



To find out more about the Highland Biological Recording Group have a look at the website: <http://www.hbrg.org.uk/>

Scottish Biodiversity Forum Logo

Have you noticed that something's different about our logo? If you have, well spotted!

In keeping with our greening credentials, we thought that a refresh of the old logo was required.

The new logo is sporting a more "natural" green colour.

Hope you approve!



Scottish Biodiversity Strategy Refresh

The Scottish Biodiversity Committee has considered its response to the Aichi Targets and the EU 2020 Biodiversity Strategy.

Our Strategy, *Scotland's Biodiversity: It's in Your Hand's* (2004), still stands. It reaches out to a wide audience and described the issues and opportunities affecting Scotland's biodiversity very well. However, much has happened over recent years and we have important opportunities for taking work forward.

So, a 2020 overview is being prepared to complement the 2004 Strategy. This will set out the principles and priorities for the Scottish Government and its partners to adopt in order to meet the 2020 biodiversity targets. Scottish Natural Heritage is hosting a workshop at Battleby on 15 February for stakeholders to contribute to the development of the strategy. A public consultation is planned for the summer.





Diary Dates

7th February 2012—Scottish Energy & Environment Conference (SEEC). Held at Ayr Racecourse. The 2012 conference programme will feature presentations on the Government's new Green Deal initiative, smarter cities and from climate change to behaviour change among many others. <http://www.seecon.org.uk/>

28th –29th February 2012– The Dundee Conference, Environmental management & Crop Protection. Held at West Park Conference Centre Dundee. The aim of the conference is to discuss crop protection problems prevalent in northern environments. <http://www.cpnb.org/>

9th March 2012—Biodiversity Science Group Conference. Challenges for Global Biodiversity Conservation: From The Soils to The Skies - Conference to be held at Royal Botanic Gardens Edinburgh in the Lecture Theatre from 9:30 to 16:00. This is a joint conference with the British Ecological Society and British Society and Soil Science. The conference aims to bring together scientists and policymakers to discuss the revision of the Scottish Biodiversity Strategy. Registration will take place in the new year for further information please contact E.Leith@rbge.ac.uk or www.biodiversityscotland.gov.uk/news

3rd-4th April 2012—Agriculture and the Environment IX. Valuing Ecosystems: Policy, Economic and Management Interactions. Held at John McIntyre Conference Centre, Pollock Halls Campus Edinburgh University. It will present scientific understanding of the complexities associated with the delivery of multiple ecosystem services and also provide a forum to discuss what still needs to be done to have an ecosystem approach recognised and supported by land managers, researchers and policy makers. <http://www.sac.ac.uk/research/projects/landeconomy/featured/sacsepaconf/>

16th –18th May 2012-Estuarine and Coastal Sciences Association:Scottish Sea Lochs & adjacent waters. To be held at The Scottish Marine Institute, Oban The conference will cover all aspects of the sciences and management of these fascinating systems. For further information: <http://www.smi.ac.uk/sealochs>

19th-20th May 2012— Scottish Bird Fair. Held at Hopetoun House near Edinburgh. Activities and events for all ages covering a wide range of birding and wildlife topics including photography, introduction to bird ID, seabird cruises on the Firth of Forth as well as gardening for wildlife will all be on offer. Tickets cost £12/£10 and can be purchased at www.scottishbirdfair.org.uk