

Issue 53

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SCOTTISH NATURAL HERITAGE

Issue 53

Scotland's Biodiversity: Scottish Nature Festival 2015 Launch

Scotland's Nature Festival launch event – BookWood — takes place on Friday 22 May and Saturday 23 May in Edinburgh. BookWood is about nature books which a public survey found to be the most meaningful to people. More details of this will be posted soon on the festival website: biodiversityscotland.gov.uk/area/naturefestival/

From 22 – 31 May 2015 Scotland's Nature Festival provides opportunities for people across Scotland who love nature to be involved in a range of events.

Now in its tenth year the Festival programme is promoted via The List, the popular 'what's on' website, and includes a range of traditional nature-related events such as wildlife watching, talks, walks and schools events, but also embraces the arts and outdoor health activities giving it a wild appeal across the country.

Free resources are available to help promote and publicise events, including wildflower seeds and bookmarks. PVC banners are also available to help with event branding. These can be ordered via the nature festival website www.biodiversityscotland.gov.uk/naturefestival.

There is still time to get involved! If you would like your event listed as part of the Festival programme, please contact us at: biodiversity@snh.gov.uk.

BOOKWOOD



Contents ^I Contacts

Inside this issue:

<u>New Plant Tracker App</u>	3
<u>Introduction to EUNIS</u>	4-5
<u>Fife's Buzzing</u>	6-7
<u>TCV—Natural Talent</u>	8-9
<u>Featured Fungus</u>	10
<u>Saving Scotland's Red Squirrels</u>	11
<u>Scottish Waterways Trust—Nature & Well-Being</u>	12
<u>RSPB—Scotland's Big Nature Festival</u>	13
<u>Saving the Arran Whitebeam</u>	14
<u>New-t Home for Highlanders</u>	15
<u>Marine Life Angus—Report Sightings</u>	16
<u>Peatland Action—Carsegowan Moss</u>	17
<u>Amphibian Ladder Success</u>	18-19
<u>Trees For Life—Rewilding Creates Jobs</u>	20-21
<u>Habitat Definitions Published</u>	22-23
<u>RSPB—Rescued White Tailed Eagle Chick</u>	24-25
<u>Hebridean Whale & Dolphin Trust—Marine Surveys</u>	26-27
<u>Diary dates</u>	28

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.

Email: biodiversity@snh.gov.uk Tel: 01463 725325

Biodiversity Team

Scottish Natural Heritage

Great Glen House

Leachkin Road

INVERNESS IV3 8NW

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



BIODIVERSITY SCOTLAND

New Version of Plant Tracker APP



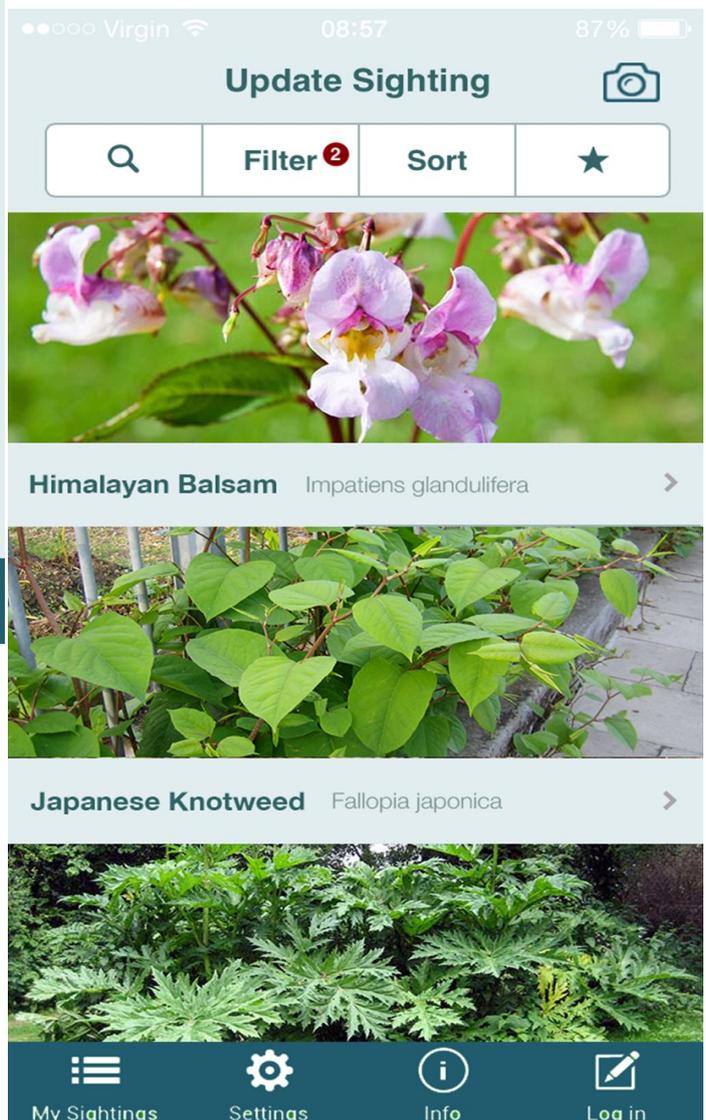
It also has the ability to record the 'absence' of a species and whether plant/s have been treated and or removed. Plant Trackers is working with CABI to enable the app to record Himalayan Balsam rust. It also comes with a new "clone record" feature for rapid recording, has enhanced navigation abilities and a new design and layout.

Plant Tracker can now boast that more than ten thousand records of invasive plants have been recorded.

The data gathered has enabled early intervention and methodical approaches to treatment by the Environment Agency, Yorkshire Wildlife Trust, Jersey Council and Cotswold Water Park Trust among others.

The information from Plant Tracker is also being used widely in research with regular downloads via the NBN Gateway.

To build on that success, a new updated version is coming in May 2015. It features a Windows phone version, can give you user reports showing how many records you've submitted, how many species you've recorded and your position on the leaderboard.



An Introduction to EUNIS

What is EUNIS?

EUNIS is the habitat classification developed and managed by the European Topic Centre on Biological Diversity for the European Environment Agency (<http://eunis.eea.europa.eu/habitats-code-browser.jsp>) It is the new pan-European standard and is also used in the EMERALD network (the counterpart of Natura outside the EU).

EUNIS is a hierarchical classification. The twelve categories at Level 1 relate to ecosystems such as woodland or heath. Hedgerows would for example, occur at Level 2, progressing in detail in Levels 3, 4 and 5 to habitats of European importance on Annex I of the Habitats Directive.

Blanket bog, oceanic oakwood and the flower-rich machair of the Western Isles are among our 51 terrestrial and freshwater habitats of European importance (Annex I of the Habitats Directive); with a further eight in the surrounding seas.

Adopting EUNIS/Annex I and the Habitat Map of Scotland

SNH is adopting the EUNIS (European Nature Information System) habitat classification for terrestrial habitat data and mapping. The Habitat Map of Scotland (see issue 52) will be categorised using EUNIS making Scottish data comparable across Europe.

Why is SNH doing this?

The INSPIRE (INfrastructure for SPatial InfoRmation in Europe) Directive addresses the need for standardisation of European spatial data, including requirements under the Habitats Directive for habitat spatial data. Lack of standardisation of habitat mapping across Europe has frustrated efforts to assess the state of the environment Europe-wide and to evaluate major policy instruments, such as the Habitats Directive.

The INSPIRE data specification requires that all habitat features must have an obligatory assigned code from the EUNIS/Annex 1 habitat classification. Under the INSPIRE Directive, habitat data collected after December 2013 must be INSPIRE-compliant and available for view, query and download from December 2014 onwards. Legacy habitat data, unless archived, must be INSPIRE-compliant by 2019.



European Nature Information System

A preliminary Land Cover Map has been created (Level 1 habitats in Scotland mapped to mean low water spring) which gives an indication of relative coverage of ecosystems:

Code	EUNIS Level 1 Class	Km ²	%
F	Heathland, scrub and tundra	20,001	25.0
E	Grasslands and lands dominated by forbs, mosses or lichens	18,874	23.6
G	Woodland, forest and other wooded land	14,245	17.8
D	Mires, bogs and fens	9,603	12.0
I	Regularly or recently cultivated agricultural, horticultural and domestic habitats	6,497	8.1
J	Constructed, industrial and other artificial habitats	3,345	4.2
C	Inland surface waters	2,497	3.1
A	Marine habitats	1,171	1.5
H	Inland unvegetated or sparsely vegetated habitats	401	0.5
B	Coastal habitats	391	0.5
X	Habitat complexes	148	0.2
	Montane habitats to be assigned to EUNIS categories	2,870	3.6
Total		80,044	100

*Preliminary
EUNIS Land
Cover Map -
Level 1
habitats in
Scotland*

What are we doing?

To support this work, a new manual has been developed which describes EUNIS and Annex I habitats as they occur in Scotland you can view it at <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2207>.

For further details please contact HABMOS@snh.gov.uk

International Year of Soils

The calendar of Scottish events and activities for the UN International Year of Soil 2015 is now available at <http://www.environment.scotland.gov.uk/international-year-of-soils-2015>. In Scotland and other countries, the year will see events that will provide a platform for showcasing active engagement with sustainable management and protection of soil resources and associated biodiversity. It aims to raise awareness of the importance of soils for food security and essential ecosystem functions.



Fife's Buzzing

“Fife’s Buzzing” is an exciting new partnership project between Buglife and Fife Council that will create and enhance over 12 hectares of wildflower species-rich grassland across Fife, with the support and involvement of the local community and school children. This three year project that started in August 2014 is funded by Heritage Lottery Fund and Fife Environment Trust.

Wildflower species-rich grassland provides an important habitat for invertebrates, especially pollinating insects, to nest and feed. In Fife, there has been a significant loss of this important habitat to urbanisation, industrialisation and agriculture. Many of the remaining grassland areas are managed strictly for amenity use and consequently, support very little wildlife and few plant species.

As a result of the above loss in habitat, Buglife has joined forces with Fife Council to create and enhance 16 wildflower meadows totalling over 12 hectares across the Kingdom of Fife to create more healthy functioning ecosystems for invertebrates and for people.

As well as being important for wildlife, meadows also offer enormous benefits for people by creating stunning natural areas that will improve the quality of greenspace for local residents and visitors to enjoy and this in turn will improve people’s health and well-being. Additionally, they will also be used as an educational tool by community groups and schools. Through the



meadow creation events, bug walks and other activities, these meadows will bring communities together through their creation, management, use and enjoyment.

Local school children sowing seeds in Dunfermline public park

Fife's Buzzing



Dunnikier Park, Kirkcaldy

With the help of pupils from Kirkcaldy High School and Commercial Primary School in Dunfermline and volunteers from Greener Kirkcaldy and Dunnikier Park Development Group, over 3,800 wildflower plug plants and 7.6kg of wildflower seed of native species have been planted and sown so far!

Additionally, surveys to record invertebrates, focusing on pollinating insects, have occurred at eight parks selected for meadow creation in autumn 2014 and spring 2015 to identify species already present within the parks as well as changes over the project lifetime that will help management of the sites. During the very first survey in August 2014, it was identified that a higher number of species of invertebrate were recorded within two pre-existing areas of meadows (30 species) than in areas of amenity grassland at all the parks surveyed (eight species). A total of thirty three species of invertebrate were recorded during this survey and includes eighteen species of pollinating insect.

If you're interested in volunteering on the Fife's Buzzing project or attending events please contact:

Suzanne Bairner on
suzanne.bairner@buglife.org.uk or call the Stirling
Office on 01786 447504.



Natural Talent UK—Mind the Gap

A recognised shortage of specialised conservation skills has prompted the UK-wide roll-out of a highly successful training scheme from The Conservation Volunteers. The Natural Talent apprenticeship programme was originally focussed in Scotland and Northern Ireland and funded by the Heritage Lottery Fund. The Natural Talent UK programme offers twelve lucky people the opportunity to become expert in ‘less charismatic’ taxonomic groups and/or habitats, helping to protect lesser-known species and create awareness of their habitats. Trainees will also encourage volunteers and communities to become more active in surveying, mapping and managing local sites for increased biodiversity.

The programme responds to ecological skills shortages identified by The House of Lords Select Committee on Science and Technology and the Chartered Institute of Ecology and Environmental Management. The (C)IEEM report *Ecological Skills: Shaping the profession for the 21st Century (2011a)* states: ‘the evidence for an ecological skills gap is compelling and alarming’. A failure to address the issue ‘could significantly undermine the UK and Ireland’s capacity to meet their post-Nagoya 2020 and 2050 biodiversity targets.’

Funded through the Esmée Fairbairn Foundation, Natural Talent UK builds upon existing partnerships whilst exploring additional areas of study with new partners. Over the next 24 months, TCV will deliver twelve new, twelve month fully-funded Natural Talent traineeships.

Trainee Frances Stoakley focuses on lichen in Roslin Valley. Photo © Dr Joe Hope



Marine Invasive Non Native Species trainee Susan Miller, is based at Heriot Watt University and will also spend some time with SEPA. She will spend the summer in Orkney carrying out surveys, community outreach and DNA work.

Meanwhile at the Royal Botanic Garden Edinburgh, actress-turned-conservationist Frances Stoakley is studying the impact of air pollution on lichen while seeking to inspire a whole new audience in marginalised communities. Trainees are



Susan Miller hunts alien invaders on Ardrossan south beach.
Photo © Glenn Hanney

also busy in England, Wales and Northern Ireland on Marine Diatoms, Entomology (specialising in Carabid beetles, Spiders and Lepidoptera) and Colliery Spoil Habitats.

From its inception in 2006, Natural Talent has worked with outstanding partners and inspirational experts across the UK to deliver a hugely successful programme. There are now forty four highly skilled apprentices based across the United Kingdom, many of whom are now employed in the conservation sector and using their skills and expertise in their current roles, seven of the apprentices have gone on to further education. Previous apprenticeships have included hymenoptera, soil ecology, fungi, bryophytes, lichens, micro-moths, upland ecosystems and coleoptera, all of which were funded by the Heritage Lottery Fund.

The Conservation Volunteers are now looking for placement providers, experts and mentors for their 2016 programme. Placement providers contribute in-kind support in the form of desk space, IT, daily supervision, access to resources and expert tuition. In return, they receive a fully-funded trainee who will very quickly become an integral part of their team and contribute to the protection of our Natural Heritage.

For further information contact j.mcfarlane@tcv.org.uk
www.tcv.org.uk/scotland/learning/natural-talent-traineeships

Featured Fungus: *Byssonectria fuispora*



This species is one of the ascomycetes or cup fungi. The spores are released under pressure and are shot into the air ([More information](#) about the different divisions within the kingdom of the fungi). In this species the fertile surface is across the top of the rather cone like structure.

B. fuispora forms a mass of small (3-5 mm) bright yellow or slightly orange cone shaped structures and will grow in association with a range of substrates including fire sites, old straw, deer dung, broadleaf woodland litter and, most commonly so far in Scotland, in the litter of pine woods.

© A Taylor

Fruiting:

The majority of records in Scotland occur between March and the beginning of September; it is considered a spring and early summer species in Continental Europe.

Habitat:

This is a litter rotting species. The book *Nordic Macromycetes* (Vol. 1) suggests that this species may well be associated with deer urine and its occurrence in discreet patches on the forest floor in many ways suggests this.

Distribution:

Widespread but occasional across the British Isles. The total number of records for this species on the Fungal Records Database of Britain and Ireland is 110 with 28 of those from Scotland.

Please remember to submit your records to your [local recording group](#) or via the [Scottish Fungi online recording form](#).



© Liz Holden

Saving Scotland's Red Squirrels

The aim of the 'Saving Scotland's Red Squirrels project' is to protect Scotland's native red squirrel population from extinction. The project has launched its exciting new website with lots of features such as blogs, videos and updates, scottishsquirrels.org.uk

Calling on the help of the public, it's much improved reporting feature will make recording red and grey squirrel sightings much easier. The new website works with the GPS on mobile devices to pinpoint a user's location. Hopefully, this will mean more accurate data for the Saving Scotland's Red Squirrels team.

Project Manager for Saving Scotland's Red Squirrels, Mel Tonkin, said: "Red squirrels are an iconic Scottish species that the public loves. This new website will allow people to learn more about red squirrels, the project itself and more of what happens behind the scenes.



The update to the squirrel reporting feature is a great step forward.

Since the start of our online recording page in 2010, Saving Scotland's Red Squirrels has received around 10,000 reports of red and grey squirrels. These are vital in enabling the project to monitor changes in squirrel distributions over a much wider area than we can cover ourselves.

There are always gaps in our records so to create the most accurate picture of squirrel populations we need many more. I would urge people to continue to report squirrels in every new area they encounter each year. The update is very user-friendly and means sightings can be recorded as soon as someone spots a red or grey squirrel.



We are inviting people to bookmark scottishsquirrels.org.uk/squirrel-sightings on their mobiles and try reporting a sighting the next time they see either a red or grey squirrel."

Saving Scotland's Red Squirrels is a partnership project between the Scottish Wildlife Trust, Scottish Natural Heritage, Forestry Commission Scotland, Scottish Land and Estates, and the Red Squirrel Survival Trust.

Scottish Waterways Trust—Nature & wellbeing

As we walked with a group of people through the snowy woods of Dunain in Inverness on one of our 'Nature Walks for Wellbeing' last month, it felt at times like we were walking into a picture. The trees were coated with snow down one side, the contrast was beautiful. Each step produced a lovely crunch which was peppered only by the occasional sound of birds moving through the tree tops searching for food. We were all benefitting from this experience, both physically and mentally. Fresh air, gentle exercise, exhilarating scenery and a chance to develop a personal response but also share it within the group.



Why don't we do this more often? The views and experiences available on a simple walk with nature can be incredibly nutritious for mind, body and soul. Finding a lovely view and just sitting in quiet contemplation, taking in all that our senses will allow can create strong connections and understandings. The way the grass blows in the wind, the bark of a tree, birdsong, the sound of the stream all create an experience. Walk into it in your mind, explore the area as you sit and let your body, mind

and spirit feel renewed. Doing this regularly in the same place through the seasons helps to connect with all that's around whilst gaining naturalist's skills first hand. Feel the benefits of being present in nature and walking your mind around it's treasures!

The greenspaces in and around Inverness are real community assets – from the easy access, green and blue arteries of the Caledonian Canal to the hill country of Dunain and wood and shore of Merkinch LNR. 'Nature Walks for Wellbeing' are regular weekly walks in Inverness delivered by Scottish Waterways Trust in partnership with Dunain Community Woodlands.

For further information contact :

Stephen@scottishwaterwaystrust.org.uk



RSPB & East Lothian Council—Scotland's Big Nature Festival



Scotland's Big Nature Festival, (which includes the Scottish Birdfair), our new name for 2015! This year RSPB has teamed up with East Lothian Council and have a fantastic new venue – Levenhall Links, in Musselburgh, renowned for its open spaces and wildlife, overlooking the Firth of Forth and part of the John Muir Way.

The two day event, now in its fourth year, is expected to draw in some 6,000 wildlife lovers from across the UK and beyond when it is held on Saturday 23 and Sunday 24 May.

There's loads to keep wildlife lovers and families entertained all weekend. Read more about **talks** by top speakers such as Bill Oddie, David Lindo, and Euan McIlwraith; and to see what you can learn at some of our **workshops**, ranging from first aid for wildlife to photography tips. Be sure to also factor in a visit to the **Biodiversity Garden** to hear about everything from bees and hoverflies to nature superheroes.

If your entourage includes little wildlife explorers, then don't miss our exciting **children's programme** which will keep wee ones entertained with storytelling, bushcraft, bug hunts, owl pellet dissections and much, much more...

There's also plenty going on outside our event tents – both at the show and beyond. You can take a guided walk around Levenhall Links, see a bird ringing demonstration, or hop on the Firth of Forth Puffin Cruise! Check out our list of **special events**.

To help you give an overview to plan your visit, take a look at the **event timetable** and highlight your must-see events!

And, nearly **100 exhibitors** will be selling everything from books and optics to wildlife art and tours to exotic and wild places – make sure to visit their stands for some great shopping, and be sure to try the fantastic artisan **food and drink** available once you need a rest!

All this, and much more will take place at this year's Scotland's Big Nature Festival. We would like to extend a warm invitation to all nature lovers to come and enjoy the show!

For more information or to buy tickets please visit www.bignaturefestival.org.uk (adults £12, children £2, under 5's free).



Island Community Fight to Save Endangered 'Arran Whitebeam' Tree (*Sorbus arranensis*)

A community group on the Scottish island of Arran is inviting members of the public to help them plant up to 200 Arran Whitebeam saplings, significantly increasing the numbers of the critically endangered tree.

Arran Community Land Initiative (ACLI) bought 80 acres of disused farmland in Whiting Bay on the Isle of Arran in December 2014 with a grant from the Scottish Land Fund. They are now raising funds through an Indiegogo crowdfunding campaign to deliver a range of community and conservation projects, including an effort to save the Arran whitebeam tree. Members of the public can receive a personalised certificate, and have an Arran whitebeam tree planted in their name, in return for a donation of £40.

Since 1869 when they were first mentioned in journals, the three species of Whitebeam tree growing on the Isle of Arran have fascinated nature conservationists and tree lovers. The Arran whitebeam is a mix of the Rock whitebeam and the Rowan, and boasts pretty leaves with a soft, white underside, white blossoms in the spring, and orange berries in the autumn. They are considered close to extinction by the World Wildlife Fund and Arran is the only place in the world where they are found growing naturally. Deer prefer nibbling them to almost any other native tree, and sheep have been known to die for them. The trees that are left mainly live precariously between 100 and 300 feet up on craggy steep-sided rocks.

Henry Murdo of Corriegills on Arran is working with ACLI to plant the trees on the land acquired by the community group above the coastal village of Whiting Bay. He says:

"The Arran whitebeam has been around since the ice age and is one of the rarest trees in the world, but it could die out in my lifetime. I'm very keen on the land being community owned that way the species can be protected."



To significantly increase species numbers and have an endangered Arran Whitebeam tree planted in your name, visit: <http://iqg.me/at/arranland>

For more information visit: www.arranland.org

"Sorbus arranensis"
by Roger Griffith -
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New-t homes for Highlanders



A project in the Highlands is creating new ponds to help vulnerable populations of the region's unique great crested newt.

Research has shown that great crested newts in the Highlands are genetically different from their cousins in the rest of Scotland, England and Wales. Some of the populations have become isolated and there is concern that this could lead to inbreeding and potentially to populations dying out.

SNH is working with farmers, landowners, Salford University and volunteers, to create around 25 new ponds specifically designed to meet the newts' needs. The ponds are being made in areas where it's thought great crested newts may have bred in the past.

Until recently there were only a dozen known sites in the Highlands where great crested newts could be found. The sites were all close to schools, roads or houses and most newt enthusiasts and herpetologists thought their presence this far north resulted from introductions.

Then in 2007 a lady walking her dog on the Black Isle found a strange newt, which turned out to be a great crested. The following spring a schoolboy found a great crested newt breeding site, also on the Black Isle. These finds were well off the beaten track and led to a search for further sites. Today there are more than 40 ponds in the Highlands where great crested newts are known to breed.

It's now thought that newts in the Highlands became isolated about 3,000 years ago, due to changing climate and habitat. It's hoped the new ponds will reconnect the isolated populations, helping them to become more resilient and their numbers increase.

Marine Life Angus - report your coastal sightings

Explore Angus's coastal wildlife sites and report your whale and dolphin sightings at to the Angus Cetacean Awareness Project (ACAP), an Angus based project recording cetaceans in Angus waters.



www.marinelifeangus.co.uk the website hosting ACAP, promotes a wealth of information on local coastal sites, great for land based viewing and also aims to publicise other local recording schemes recording local butterflies, maritime plants and marine non native species. Sightings are reported to BARS and the Tayside Local Biodiversity Action Plan and there is now a twitter account to follow [@marinelifeangus](https://twitter.com/marinelifeangus)

Since the project began there have been regular sightings at more than seven locations on the Angus coast of species including bottlenose dolphins, minke whale, porpoise and common dolphin and even humpbacks at Montrose Bay. A particular hotspot is Scurdieness lighthouse at Ferryden, Montrose. The number of sightings reported rose in 2014 and more than 100 bottlenose dolphins were recorded.



We are always looking for more sightings and would like to encourage those regularly out on the coast or on inshore waters to regularly report what they see and encourage others to do so too. Promotional materials for distribution can be send out for distribution, if you would like to receive some please email info@marinelifeangus.co.uk

Marine Images Available on SNH Flickr Pages

If you're looking for some spectacular marine photos, look no further. SNH Flickr pages are now available for anyone to use for non-commercial purposes.

<https://www.flickr.com/photos/snh-iyb2010/>



Peatland Action at Carsegowan Moss

In March the environment minister visited Carsegowan Moss in Dumfries and Galloway where a pioneering technique is being used to try to safeguard a "vital" peat bog. Dr

Aileen McLeod was invited by the Scottish Wildlife Trust to see first-hand the "peat bunding" approach being used. It involves low ground-pressure excavators removing damaged surface layers with the deeper peat used to build up a low embankment. This helps to hold back and slow the flow of water from the site.



Scottish Natural Heritage
Dualchas Nàdair na h-Alba

Peatland Restoring
ACTION Scotland's
peatlands

Dr McLeod said:

"The Scottish government recognises the importance of the benefits which peatlands provide and has allocated £15m for peatland restoration. Peatlands are vital for providing ecosystem services such as water purification, flood prevention, helping to confront the challenges of climate change and improving biodiversity. The 2020 Challenge for Scotland's Biodiversity therefore includes a commitment to restore Scotland's peatlands and I am delighted to see such action taking place at the Carsegowan Moss in Dumfries and Galloway and throughout Scotland."

The Scottish Wildlife Trust believes Carsegowan Moss is one of the best remaining examples of it's type. The bog once formed a large area of peatland along the Solway coast. Cranberry and bog asphodel grow within the sphagnum carpet. Hen harriers, merlins, short-eared and barn owls may also be seen hunting. The reserve lies to the east of the A714, between Newton Stewart and Wigtown, and was the site of a munitions factory during World War Two.

© Andy Farrington

SWT chief executive Jonny Hughes said:



"The work being carried out using the Peatland Action Fund was essential. Peatlands are vital natural capital assets that have been neglected for far too long and it's good to see the Scottish Government investing in restoration. However, in order to safeguard these vital habitats for the future, much more needs to be done to turn what is currently a liability on Scotland's balance sheet into a water, carbon and wildlife asset for future generations."

First amphibian ladder trial in the UK - a success!

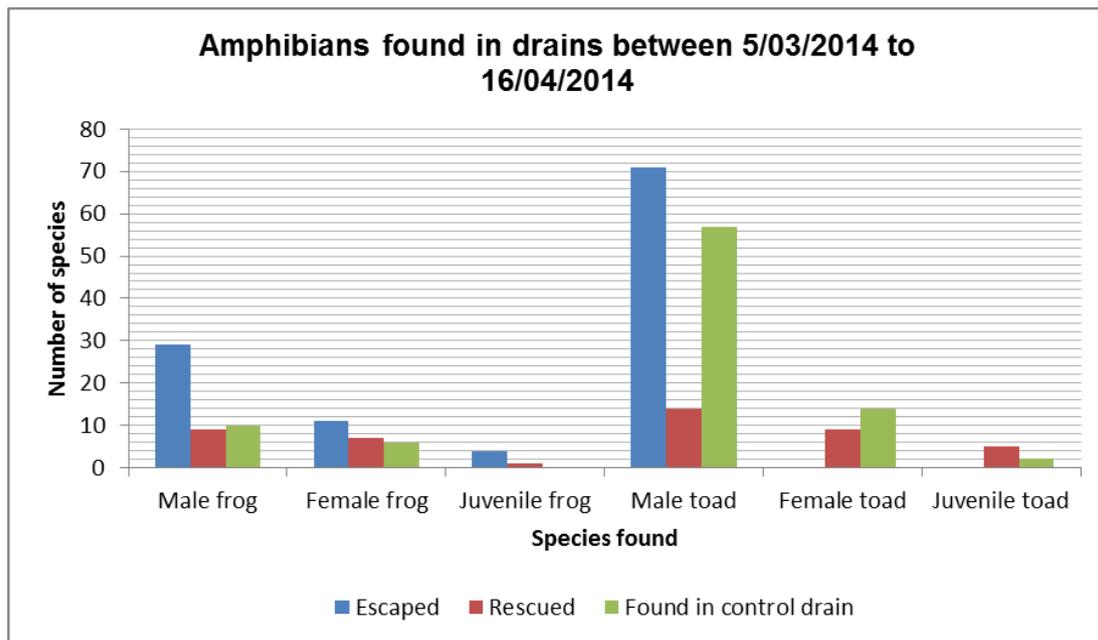
There has been increased recognition of the impact gullypots (roadside drains) are having to amphibians around the world. The drains act as large pitfall traps to amphibians moving along kerb edges and across roads. Once inside there is no escape as the gullypot sides provide no grip. Animals either drown or die of starvation.

In the Netherlands, RAVON (Reptile, Amphibian and Fish Conservation Netherlands) conducted lab based studies to determine if amphibians would use ladder structures to escape from water filled tanks. The trials were successful and the company produced their findings at 2014 Herp Worker's Meeting in Bristol, UK.

Friends of Angus Herpetofauna, were encouraged by the research performed by RAVON and began planning a trial installation of the ladders within the Angus area. Thirty eight drains were identified in Silver Birch Drive, Dundee (as well as ten in Carnoustie). The ladders were fitted at these sites and Silver Birch Drive was intensively surveyed to provide fundamental research on the potential of the ladders as a mitigation tool. Thirteen drains were not fitted with ladders in order to provide a control for the study. The first ladder design adapted from the RAVON study consisted of a steel strip covered in hessian material. The strip was then curved into a ramp shape. The top of the ladder sits neatly under the drain cover allowing the animals to crawl out of the water to the corner of the drain cover where it is then possible for them to climb out.

Source: Clare McInroy 2014





The results show a positively high number of amphibians able to escape using the ladders. Footage was filmed showing a toad using one of the ladders. To watch this visit:

<http://youtu.be/V6LWKbXCcQk>.

The ladders also provided a surface for the animals to cling onto during the day to avoid exhaustion before climbing out at dusk.

The original ladders have been replaced for the 2015 season with new ladders made from an innovative new material, Enkamat[®], produced by RAVON. Other Amphibian and Reptile conservation groups have since installed ladders into their local areas using this material so there will be more information gathered to support this preliminary study. The long term aim of the project is to inform local councils, housing developers, road construction companies etc. on the importance of installing escape methods in drains for amphibians where there are significant populations.

For further information please contact:

Clare McInroy, who undertook the surveying of this trial - cmcinroy@hotmail.co.uk or

Trevor Rose (Friends of Herpetofauna) who created and implemented the amphibian ladder trial in Angus - baankulab@yahoo.co.uk

Trees For Life

An acclaimed forest restoration project near Loch Ness is demonstrating how conservation can create employment opportunities in the Highlands, says award-winning charity Trees for Life.

Trees for Life have introduced two new seasonal staff roles at its Dundreggan Conservation Estate in Glenmoriston, bringing the number of employees at the biodiversity hotspot to six – a substantial increase on the single employee under the site’s previous ownership, when it was managed as a traditional sporting estate. With concerns about employment in much of the country, and across the Highlands in particular, Trees for Life says that the steady growth in employees at Dundreggan since its 2008 purchase of the estate –combined with high job satisfaction levels – shows how conservation action can be good for jobs.

“People benefitting from a wild, natural environment is part of our vision for a restored Caledonian Forest. Dundreggan shows that breathing new life into native woodlands and other natural habitats can offer fulfilling employment and meaningful training opportunities,” said Alan Watson Featherstone, Trees for Life’s Executive Director.

“When conservation groups buy Scottish estates, fears are sometimes expressed about possible reductions in employment – but Dundreggan shows that the opposite can be true. Bringing the land back to ecological health actually creates major benefits for local people and communities. Alongside the new jobs, hundreds of volunteers from diverse backgrounds – including the unemployed and those with limited access to healthy outdoor activities or training opportunities – are now gaining the chance to develop environmental skills, knowledge and accredited training each year.

With most practical work at Dundreggan carried out by volunteers, one of the new posts created by Trees for Life is a Long-term Volunteer Coordinator. In this role, former volunteer Tony Henry will help people to gain hands-on conservation experience, through Trees for Life’s Long-Term Volunteer Programme. In the role of Seasonal Nursery Assistant, Emma Beckinsale will help run Dundreggan’s Native Tree Nursery. Here, Trees for Life grows more than 30,000 locally sourced native trees each year, and is trialling innovative ways to propagate rare and hard-to-grow species such as aspen and montane willows.



..Rewilding creates Jobs and training Opportunities

Doug Gilbert, Dundreggan Operations Manager who oversees the estate's management said: "This is a very exciting time at Dundreggan. We are expanding our capacity to accept long-term volunteers as well as increasing the size of our tree nursery, so creating these additional jobs will really help us in our conservation work. It's great to see enthusiastic people getting the chance to live and work in this wonderful Highland setting."

The establishment of the new roles has been made possible thanks to funders including the Scottish Power Foundation, which is supporting the Long-Term Volunteers Programme in 2015.

Since being purchased by Trees for Life, the 10,000-acre estate has been transformed into the charity's flagship rewilding project. Home to a wealth of rare and endangered species – including 10 never recorded in the UK before – Dundreggan has been described as a Highlands "lost world". The expanse of wild land contains substantial areas of ancient woodlands, including remnants of the original Caledonian Forest and Scotland's largest area of dwarf birch. It is home to a group of wild boar in a fenced enclosure as part of a native forest regeneration project, and also hosts groundbreaking scientific research projects.

Dundreggan's previous role as a sporting estate has left much of it in poor ecological condition however, and restoration of its woodlands and habitats requires long-term conservation action and sustained funding.

See www.treesforlife.org.uk or call 01309 691292.



Biodiversity Science

What's new in biodiversity science?

Find out about progress with the freshwater pearl mussel project, beaver trials, developing trends and indicators for raptors, latest SNH commissioned research and much more in the latest SNH biodiversity science newsletter

<http://www.snh.gov.uk/publications-data-and-research/publications/newsletters/science-newsletter/>



Habitat Definitions Published

Scotland has a varied range of habitats that have been shaped by natural variation in the soils, land forms, surrounding seas, the vagaries of our climate and centuries of farming and other human use. The diverse mix of Atlantic, arctic, arctic-alpine and boreal elements are of world renown, with blanket bogs, oceanic oakwoods, and the flower-rich machair of the Western Isles being of European importance.

In Scotland we have many of the 65 UK BAP habitats found in the UK – there are subtle differences between these habitats and each habitat supports a range of important species. Some can be widespread throughout Scotland found from the lowlands to high tops – some are very restricted in their distribution.

A team of habitat specialists has been working for the last few years trying to capture the essence of these habitats and describe them in a clear easy to understand way. The <http://www.biodiversityscotland.gov.uk/advice-and-resources/habitat-definitions/> habitat definitions project has for the first time pulled together a ‘pen portrait’ for each of the 19 Broad habitat types as well as the 39 associated priority habitats

Each habitat description tells us what exactly the habitat is, including the characteristic species that make up the habitat as well as species that are typically found there. There is information describing how you would recognise it and some of the key differences between the habitat and other similar habitats. The geographical distribution of the habitat is outlined as well as the qualities that make it important and special.



*Loch
Shiel ©
Davie
Hudson*

Habitat Definitions Published



There are useful guides on how to manage it and a range of further information specific to each habitat. It is the intention that these are working documents so please take a look if there is something you disagree with or something we have been overlooked please do get in touch on biodiversity@snh.gov.uk and let us know what you think.

Whitenhead Sutherland © Joseph Black

This work complements the recent publication of the Manual of terrestrial EUNIS habitats in Scotland <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2207> which defines our habitats in a European context.

It is anticipated that a series of look up tables will also be produced and will be published on the Biodiversity Scotland during 2015

Read more about Habitat definitions @ <http://www.biodiversityscotland.gov.uk/advice-and-resources/habitat-definitions/>

*Beauty
within a
Scottish
Corn field ©
Andy
Richardson*



White-tailed eagle Rescue Chick ...

A young white-tailed eagle, which hit the headlines last year when her dramatic nest eviction was caught on camera, has caused a new stir after turning up fit and well in Dumfries and Galloway.

The bird, nicknamed Sona, had to be returned to her nest by Forestry Commission Scotland climbers last June after being attacked by an intruding eagle and falling 30 feet to the ground. The behaviour, which had never been recorded before, was a surprise to the experts. But Sona has provided a further surprise this January after being repeatedly sighted in the south west corner of Scotland, where white-tailed eagles haven't bred for over 150 years.

Dave Sexton, RSPB Scotland Mull Officer, said: "We know this bird well after all the drama last summer, and I'm extremely relieved to hear that she's alive and apparently healthy. We got her back into her nest uninjured after her dangerous fall, and she fledged a few weeks later. But that's often the last we'll see of these young eagles, as they wander quite widely in their first

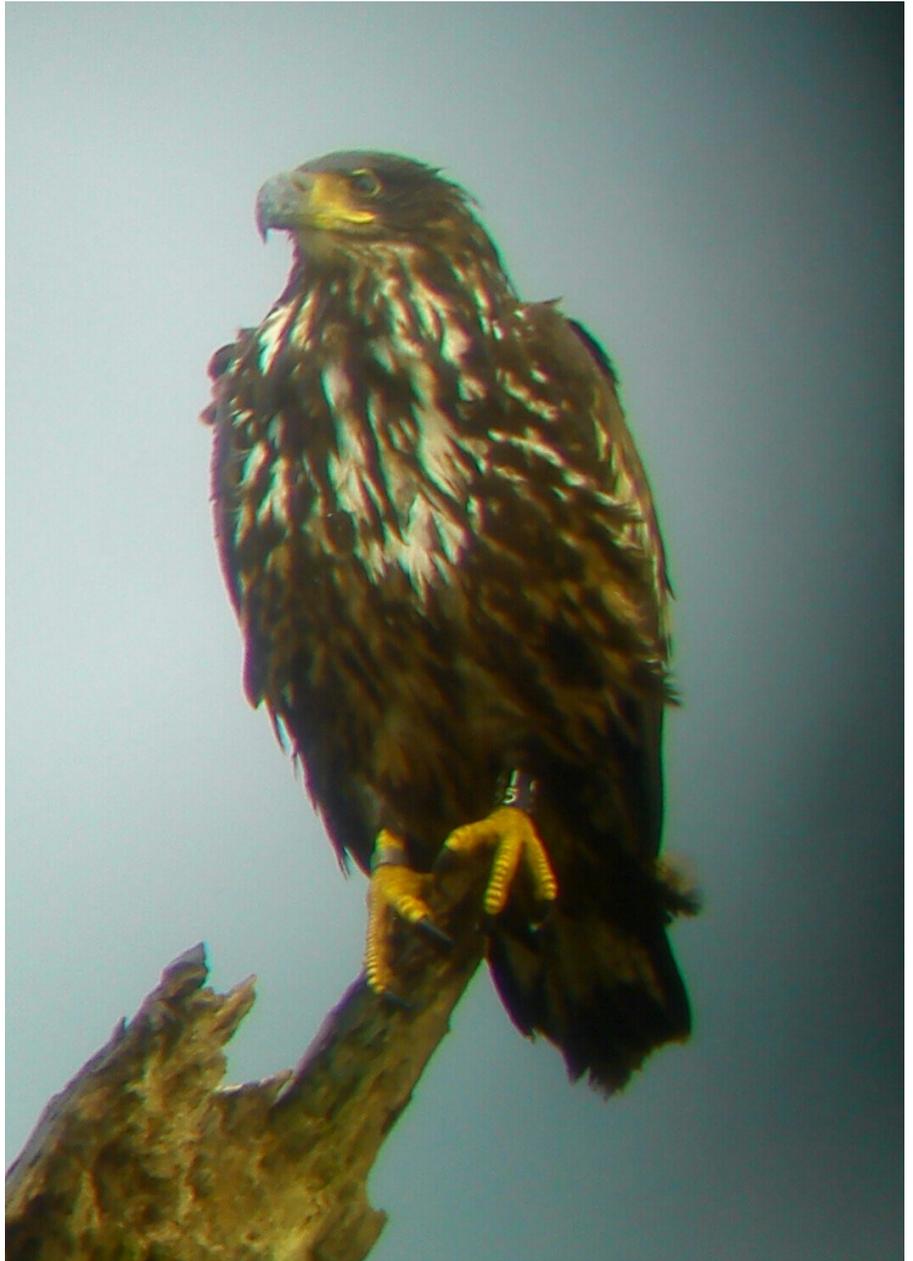
few years. It's unusual to have so many sightings of a juvenile like this in Dumfries and Galloway, even though it's perfect eagle habitat. She's gone from the Isle of Mull to the Mull of Galloway probably via the Mull of Kintyre so she clearly likes to mull things over!"

Sona, which means happy in Gaelic, was one of the stars of the BBC's Springwatch in 2014. She was just eight-weeks old when she was forced from her nest on FCS land on Mull. A member of the public, who had been watching the nest webcam, alerted the Mull Eagle Watch team to the truth behind her tumble, allowing the dramatic footage to come to light. It was also members of the public who spotted the bird in Dumfries and Galloway, and their photographs and film sent to the RSPB allowed her to be identified.



...Wings it's way to Dumfries & Galloway

Chris Rollie, RSPB Scotland area manager for Dumfries and Galloway, said: "We'd heard reports of white-tailed eagle sightings from several Wigtownshire locations in the last few weeks, and thanks to her leg rings and local birdwatcher Brian Henderson's photography, we were able to positively identify her as the lucky Mull bird. As you can imagine, people have been very excited. White-tailed eagles are such distinctive birds and it's an absolute pleasure to see one. They haven't bred in Dumfries and Galloway since 1856 and Sona will probably move on to another area before long. But it gives you a real glimpse of what the future could be, and the hope there is now just 40 years after their re-introduction, that these magnificent birds could once again be seen in our skies right across Scotland."



White-tailed eagles were re-introduced first to Rum in 1975, and quickly spread to nearby islands. An east-coast re-introduction project began in 2007, with the first chick successfully fledged in 2013. Sona's mother, Sula, was a Norwegian bird released in the first year of the east-coast project, showing that the two populations are now starting to come together to breed. Sula, and her mate Cuin, will once again be the stars of the Mull Eagle Watch webcam (provided by Carnyx Wild) this year, and you can also visit them in person through organised trips starting in April. See the original footage of the nest invasion at www.carnyx.tv



HEBRIDEAN WHALE & DOLPHIN TRUST (HWDT)

Harbour porpoise sightings off Scotland's west coast increased by 25 per cent in 2014 compared to the previous year while sightings of basking sharks unexpectedly fell by 33 per cent, during marine research expeditions carried out by Hebridean Whale and Dolphin Trust.

The charity's extensive research also revealed dramatic evidence of a shark attack on a member of an endangered group of killer whales thought to be the UK's only resident population of Orca. The latest studies were carried out in a research season lasting from May to October last year, and form part of the Trust's unique long-term monitoring of whales, dolphins and porpoises – collectively known as cetaceans – in the Hebrides. The surveys also collect data on basking sharks.

Kerry Froud, Biodiversity Officer at Hebridean Whale and Dolphin Trust, said: "Our findings add to knowledge about cetacean distribution, abundance and habitat use in Scotland's western seas – and allow us to make informed recommendations to protect these remarkable species. This pioneering research is vital for effectively conserving the world-class biodiversity of these waters – and for securing the long-term future of spectacular cetaceans and iconic basking sharks."

The Trust's teams of marine scientists and volunteers encountered 574 groups of harbour porpoises during 2014 – a 25 per cent increase in the rate of sightings compared to 2013. Reasons for this increased sighting rate – of up to eight groups per 100 kilometres surveyed – may include reasonable weather and calm seas, making the unobtrusive porpoise easier to detect. HWDT has previously discovered that the Hebrides hosts one of Europe's highest densities of the harbour porpoise, the UK's smallest cetacean – but Scotland still has no protected area for this species.



Both images © Kerry Froud

Hebridean sightings soar for harbour porpoises but plunge for basking sharks

Basking shark sightings fell by 33 per cent from the previous year to 16 encounters – showing a trend of decreasing sightings of the World’s second biggest fish in the area over recent years. This does not necessarily indicate a reduction in population size – as possible explanations include a shift further offshore in the distribution of plankton, the sharks’ favourite food. The distribution of plankton within the water column will also dictate where basking sharks are feeding – which means they may still be present, but not feeding at the surface.

Notable highlights during 2014 included two separate encounters with what is believed to be the UK’s only known resident population of killer whales – five males and four females known as the West Coast Community. This small, isolated population of orca has never produced offspring since studies began, raising fears that it faces imminent extinction. Evidence of drama emerged when one of the group’s males – known as John Coe – was observed with a large area of his tail fluke missing. Consultations with experts suggest that this was almost certainly the result of a shark attack.



In total, the surveys recorded more than 1,400 encounters with cetaceans and basking sharks, and recorded almost 600 hours of underwater acoustic detections of cetaceans.

The annual surveys depend on volunteers who have paid to help. In 2014, 65 volunteers clocked up 760 survey hours – working with scientists on visual surveys and acoustic monitoring with underwater microphones or hydrophones, and identifying individual cetaceans through photography.

Hebridean Whale and Dolphin Trust – based in Tobermory on the Isle of Mull – is recruiting volunteers for its 2015 surveys, to live and work as citizen scientists onboard Silurian for periods of almost two weeks from April to September. Participation costs cover boat expenses, accommodation, training, food and insurance, and support the trust’s research.

For details, contact Morven Russell at volunteercoordinator@hwdt.org call 01688 302620, or visit www.hwdt.org.



Diary Dates

23 April 2015: CIRIA - Building biodiversity into green infrastructure. Location. London. Further details to follow. If you are interested contact: patrick.williams@ciria.org

25th April 2015 – The Wildlife Information Centre Spring Conference: Arrivals and Departures: The Changing Face of Wildlife in the Lothians and Scottish Borders. Venue: Scottish Borders Council Headquarters, Newtown St Boswells. For further information: www.wildlifeinformation.co.uk

27 April 2015:The University of Edinburgh, School of GeoSciences, The Planet Earth Lecture Series - Achieving food security through an ecosystem services approach and why this matters to UK consumers Venue: The Queen Mother Conference Centre, The Royal College of Physicians of Edinburgh, For further information and to register - www.eventbrite.co.uk/event/15741784100

15th July 2015:CIEEM—Managing the Impact of Plant and Animal Disease on Biodiversity' Location , London.
<http://www.cieem.net/summer-conference-2015>

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

26-27 November 2015—World Forum on Natural Capital in Edinburgh. For more information: <http://www.naturalcapitalforum.com/about>

