

NatureNews

JNCC's national and international conservation digest

ISSUE 23: Spring 2010



The scent of nature

2010 is the International Year of Biodiversity

Also in this edition

- Improving data access
- Valuing biodiversity
- Renewable energy
- Natural solutions





Front cover images:
The hedgehog *Erinaceus europaeus* was put on the UK BAP list of priority species in 2007 due to a marked decline in the UK, informed by monitoring schemes operated by Tracking Mammals Partnership organisations.
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The offshore wind industry is growing fast and is challenging scientists on potential environmental impacts. © Flynt/Dreamstime.com

This is one of a range of publications published by the Joint Nature Conservation Committee. JNCC advises the UK Government on national and international nature conservation issues on behalf of the Countryside Council for Wales, Natural England, Scottish Natural Heritage and the Council for Nature Conservation and the Countryside.

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You can find out more about the work of JNCC by visiting our website

jncc.gov.uk

Chair's Introduction – Spring 2010

Welcome to the Spring edition of *Nature News* – our first issue in this International Year of Biodiversity, and to celebrate you can see we've had something of a 'makeover'!

Our new logo and corporate identity make a statement in this year of biodiversity, and comes twenty years after the 'shake-up' in the Government's UK nature conservation mechanisms. JNCC's corporate image has remained static since its inception in 1991, and we now have a new look that reflects the enterprising and partnership-focussed spirit of the organisation. It's important that our stakeholders have a clear vision of 'JNCC'. I believe we now have an effective aide-mémoire that our staff can be proud of, and will become a sign of quality to everyone with whom we interact.

Talking of our business, improving access to information has been a long-term, major strand of JNCC's work. Wise choices are informed choices, where intelligence meets wisdom. Better policy making, improved planning, innovative development and effective risk management depend on having clear and current information on the status and trends of biodiversity, as well as an understanding of the economic context.

Over the last decade, JNCC has



been heavily involved in providing access to data through the National Biodiversity Network and, more recently, the Marine Environmental Data and Information Network. These resources have been invaluable in conservation decision making and activities by individuals and local and national governments.

The longstanding JNCC and British Trust for Ornithology partnership for bird monitoring has recently been renewed, with a new six-year agreement. The scientific expertise within this partnership will help to sustain the UK's lead in the science of surveillance. Underpinning this work is the commitment of an extensive network of volunteers whose input is essential in providing data on bird populations. Whilst the accountants may be able to put a value on their efforts, in essence their work is priceless.

The new agreement was signed at an International Year of Biodiversity event co-hosted by JNCC and the Linnean Society in February. This gathering asked the question 'Is biodiversity really under pressure?' and brought together natural and social scientists, as well as policy makers, to discuss and challenge the major threats to biodiversity. I very much enjoyed co-chairing the meeting, and was fascinated by the champions of the handful of pressures under consideration, all making cases for theirs being the most important area for support.

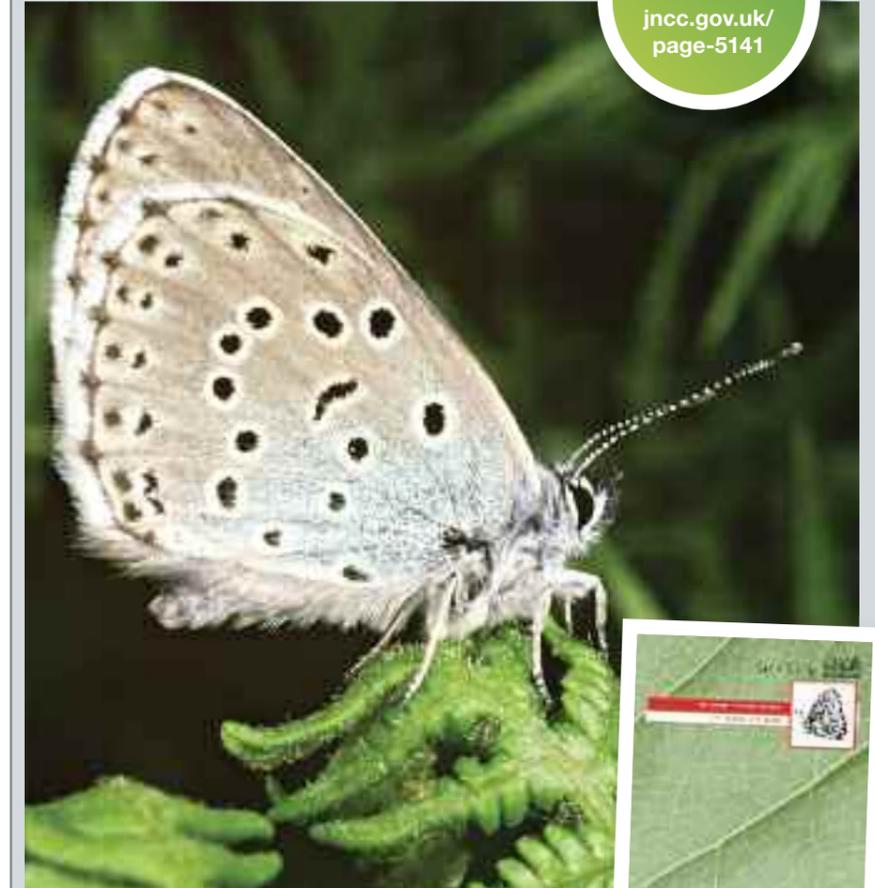
We are currently in the midst of consulting our key funders and supporters on their forthcoming needs. Our Managing Director, Marcus Yeo, has been leading this effort with our important stakeholders across all parts of the UK. I was able to join him in meeting with Jane Davidson, the Welsh Assembly Minister in December, and Edwin Poots, the Northern Ireland Environment Minister in January.

Our objective remains being the 'green glue' in nature conservation, nationally and internationally, helping the UK to deliver a comprehensive and fully joined-up approach to nature conservation. Communication is key to this, and we will continue to work with all our partners and stakeholders to deliver top-quality advice, policy and product, within the resources available to us in this increasingly stringent financial climate.

Peter Bridgewater, Chair, JNCC

Butterfly Red List – News in Brief

Check the new Red List at jncc.gov.uk/page-5141



Top: Large blue butterfly. © Peter Wakely/Natural England.
Left: Cover of *The Butterfly Red List for Great Britain*.

JNCC has just published *The Butterfly Red List for Great Britain* as part of the Species Status Assessment project. The results of this new Red List assessment show that almost a third of butterfly species are threatened in Great Britain; two are Critically Endangered, eight Endangered and nine Vulnerable. The Critically Endangered species include the Large Blue which became extinct in Britain in 1979 but has since been reintroduced, and the High Brown Fritillary, which recently experienced a population decline of 85% over 10 years.

Red Lists use standard conservation

criteria, devised by the International Union for the Conservation of Nature (IUCN), to track the risk of extinction of any species, enabling us to prioritise conservation action. Red List assessments were used in the compilation of the UK Biodiversity Action Plan list of priority species, which, in turn, helped decide the country lists of species of principal importance.

Extra information

This latest assessment, by Fox, Warren and Brereton, assesses all 62 resident and regularly breeding UK butterflies against the new IUCN criteria (Version 3.1), and is available to download from www.jncc.gov.uk/page-5141.

Valuing biodiversity is the best way to save it!

'We must improve measures of national wealth, such as GDP, to take account of natural capital and the costs of replacing it, so we can live within environmental limits and reduce the pressures on biodiversity' was the winning suggestion chosen by a hundred scientists meeting at the Linnean Society in London earlier this year.

Six leading thinkers were asked to challenge our orthodox views about biodiversity loss and come up with new solutions, at an International Year of Biodiversity event co-hosted by JNCC and the Linnean Society on 11 February 2010. The packed meeting of over a hundred natural and social scientists and policy advisers challenged the ideas put forward and voted on the scientists' proposals.

Coral reefs can recover from bleaching events in the Galapagos Islands, with reef communities re-assembling with different species more tolerant to warmer conditions according to Terry Dawson of the University of Southampton. So, the projections of mass extinctions from models of the impact that climate change will have on biodiversity may be overstated. According to him, our ecosystems are not as vulnerable as everybody assumes, and the evidence is in the recent fossil record, which shows how communities can repair themselves. He says we should prepare now for a future of novel ecosystems and landscapes.

Ammonia from livestock and other nitrogen compounds are the key pollutants affecting biodiversity, said Mark Sutton from the Centre for

Ecology and Hydrology. He argues that modern intensive food production will need to be managed at a landscape-scale to avoid the worst impacts of pollution on biodiversity. Mark's simple idea to tackle the threat from pollution is that we should eat less meat, giving multiple environmental benefits, including reducing ammonia emissions.

Invasive species spreading around the globe and eventually making every country's wildlife similar is a bigger threat than climate change, according to Angela Robinson from the Scottish Government. Once an invasive species has become widely established it is very difficult to control and can kill off native species. These changes, unlike climate change, are effectively irreversible. The GB Non-Native Species Strategy sets out the



Visit the Linnean Society online at www.linnean.org

Dr Sandra Knapp, Vice-President and Botanical Secretary of the Linnean Society (right) introduced the audience to the tasks at hand. © JNCC

key measures needed including: early detection and rapid response; control and eradication; building awareness and understanding; legislation; and research and information exchange.

We should protect un-fished areas, rather than closing heavily used areas that have been damaged by fisheries, according to JNCC's own Mark Tasker, who looked at the effects of exploitation of the planet's resources. Mark coined the phrase 'let sleeping logs die' to emphasise the way we are losing the natural cycle of decay and the biodiversity that relies on dead material from our over-exploited ecosystems. Overall he thinks we need to tackle population growth and over-consumption, which he sees as the main underlying cause of biodiversity loss.

economic and environmental aspects of sustainable development.

Changes in the way we use land continues to be the main direct cause of biodiversity loss, according to Roy Haines-Young of the University of Nottingham. People put different values on a piece of land. When a woodland is felled, one person loses treasured local biodiversity but another gains through selling the timber. Land use is the point at which many different economic sectors intersect with biodiversity so we need policy tools, such as economic valuation and other measures of worth to achieve multi-functional ecosystems which deliver many different benefits for people.

So, the elephant in the room is population growth, concluded Susan Baker from the University of Cardiff, echoing other speakers. After reviewing the progress of the Convention on Biological Diversity and other agreements she argued that current economic growth is incompatible with protecting biodiversity. She says we need to make more effort to change the economic model - to go beyond Gross domestic Product. However, unless human population also becomes a biodiversity issue, we will be unable to balance the social,

Concluding the debate, Peter Bridgewater, Chair of JNCC, said better linking between international conventions is essential. Although they all have different historical reasons for their origins, he thinks there is no reason why all biodiversity-related agreements cannot be brought together as protocols of the Convention on Biological Diversity. A unified approach would deliver better policy and ultimately reduce the rate of loss of biodiversity. The outcomes of this meeting will influence a new strategic plan for the UN Convention on Biological Diversity which will be agreed later this year in Nagoya, Japan.



Participants at the Linnean Society and JNCC event were encouraged to select which pressures they considered most important. © JNCC

Key facts

Defra Chief Scientist Bob Watson emphasised the critical linkages between climate change, biodiversity, ecosystem services, food security and development. He says we must address the underlying causes by mitigation but also decouple pressures from the impacts by adaptation. We must also make best use of scientific evidence and further mobilise and catalyse resources.

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Understanding change through birds

The past few decades has seen some dramatic changes in bird populations in the UK, of which the best known are the steep declines in farmland birds such as skylark, grey partridge and lapwings. Willow tits, once common in woodlands, and spotted flycatchers which nest in our gardens during the summer but migrate south of the Sahara every winter, have both declined by more than 80% in just 15 years.

In contrast, species such as little egret and Cetti's warbler have recently shown dramatic increases and the status of some farmland species such as reed bunting and tree sparrow appears to be improving. Long-term monitoring has revealed these changes, and will now help measure the success of conservation measures aimed at improving conditions for wildlife.

The British Trust for Ornithology (BTO) and the JNCC joined forces in February 2010 to sign up to a new shared programme of bird and environmental monitoring. For the next six years it will provide key measures for the status of biodiversity and the effect of conservation actions, and the search for evidence of the human and environmental factors, such as land management and climate change, which are driving the changes in bird numbers.

One application will be to help with the policy responses by supplying data for predicting the response of birds to different options. At a more local level the programme will provide information on the health of the many internationally important wetlands on our coasts by looking at the bird populations using them. This is a vital evidence base for management by

Link resources

UK Biodiversity Indicators (wild birds) at www.jncc.gov.uk/page-4235
Breeding Birds in the Wider Countryside at www.bto.org/birdtrends2009

Get more information at jncc.gov.uk/page-4235



BTO Director Andy Clements (right) and JNCC Managing Director Marcus Yeo (centre) sign the partnership agreement. © JNCC

English, Scottish and Welsh agencies.

The programme builds on long term results from previous JNCC and BTO monitoring programmes which supply the bird indicators for the English, Scottish, Welsh and Northern Irish biodiversity strategies, as well as for UK and European indicators.

The key to the success of the programme is the committed volunteer network co-ordinated by the BTO. The volunteers dedicate huge amounts of their free time to rigorous monitoring methods that require skill and

accuracy. They make it possible to co-ordinate sampling at thousands of locations at critical times of the year, something no professional mechanism could achieve, and the value of their effort, estimated at £49 million over the six years is outstanding. The programme uses techniques for monitoring birds that have become international examples of best practice, with the methods for breeding land birds widely copied across Europe.

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The Winds of Change – Balancing Energy with Biodiversity

The offshore wind industry is growing fast and is challenging scientists on potential environmental impacts which could affect birds, seals, dolphins, fish and seabed features, particularly when the effects are cumulative.

The UK hopes to reach 33GW of electricity from offshore wind by 2020, nearly seven times the current capacity already installed or under construction. Most of this will be developed through the Crown Estate's leasing Round 3 which could bring more than 8,000 turbines and some of the largest infrastructure projects in the world, with investment of over £100 billion.

The Marine Advice Team at JNCC expects its renewable energy consultation work to increase sharply over the next 10 years. This will mainly be through project scoping and Environmental Impact Assessments and will enable us to fulfil our role as the statutory adviser to the regulators

and developers of offshore wind outside 12 nautical miles.

"As far as possible, we aim to provide advice based on available scientific evidence. However, there is uncertainty and we need to recognise this through appropriate use of the precautionary principle, and by ensuring targeted research," says Lucy Greenhill, an Offshore Industries Adviser at JNCC. "We are positive that a risk-based approach to consenting of projects will allow necessary energy infrastructure to be built, without harm to biodiversity."

New marine resource management tools such as marine planning (under the Marine and Coastal Access Act and the Scottish Marine Act) will provide a more comprehensive decision-making framework. Good strategic management should also mean that the data gathered to enable offshore wind development will be shared, improving knowledge and

understanding of the marine environment.

Government departments, devolved administrations, regulators and industry need impartial, practical and accurate scientific advice to address important nature conservation issues. These qualities are essential for us to meet our sustainable development and energy demands in the face of climate change.

Offshore turbines. © jpsdk/Dreamstime.com



Challenges

- Renewable energy without compromise of nature conservation**
Regulators must manage the interactions between nature conservation goals and infrastructure construction needed to reach energy targets. Potential impacts on important conservation interests will challenge consultees and decision makers during project planning.
- New and more diverse consent regimes**
We need faster project delivery to reach our ambitious CO₂ reduction goals. Planning consent regimes have been overhauled around the UK and devolved powers mean that JNCC advises more authorities and regulatory bodies than ever before.
- UK and international trans-boundary working**
JNCC coordinates inter-agency working within the UK and keeps an eye on international developments, to encourage consistency and sharing of expertise and best practice approaches.
- Coherent advice**
JNCC has a broad remit to advise UK and devolved governments. We aim to ensure coherence from policy to project level, and champion key principles such as sustainable development and ecosystem-based management.

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Nature Knows Best - Natural Solutions

Find out more at
www.jncc.gov.uk/naturalsolutions

How can termites keep you cool in summer? What have kingfishers got to do with high-speed trains? Find out from 'Natural Solutions' at www.jncc.gov.uk

To highlight the immense contribution of the natural world in this International Year of Biodiversity, JNCC has a new element called 'Natural Solutions' on our website showing why biodiversity matters.

Biodiversity, the great variety of living organisms, is the basis of more economic activity than most people recognise. Our natural world provides not only the raw material but the inspiration for a host of goods and services that contribute to humanity's basic needs and general well-being.

Biodiversity is the natural capital which has underpinned the development of all human societies. Aided by new technology that lets us peer into the organisation and operation of the natural world, scientists and engineers are continuing to draw inspiration and materials from biodiversity. Biodiversity is the critical resource on which we all depend.



Transport and communication

Nature has evolved some highly efficient ways of moving objects and information around. Human designers can learn from this. Japan's Shinkansen trains are modelled on the aerodynamic shape of the common kingfisher *Alcedo atthis*.



Health

Studies show people who live near green space are healthier, happier and cope better with life's challenges than people with less access to nature. As well as providing us with medicines – about half of synthetic drugs have a natural origin – biodiversity boosts our well-being.



Energy

Organisms in nature need energy just like human societies. Plants have been harvesting solar power for about 2.5 billion years longer than humans. By copying the microscopic bumps on plant leaves, designers have significantly improved the performance of solar panels.



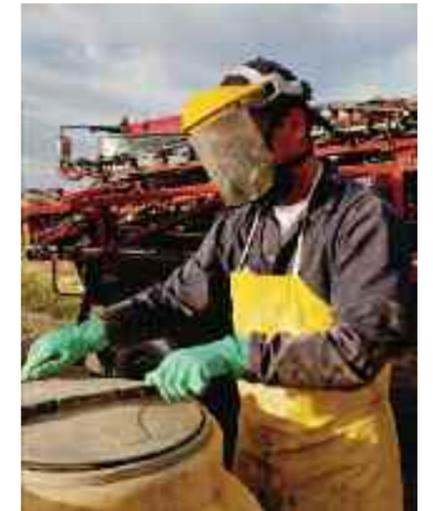
Materials and design

African termites *Macrotermes michaelseni* build structures that regulate the temperature of the nest below. Using the same principles architects have designed buildings that save a fortune in air conditioning costs. For any given environmental challenge some creature has usually already developed a solution.



Food

Whether it is barley developed by selective breeding over thousands of years, berries collected on an outing in the woods, or beefsteak, biodiversity provides everything we eat. In addition biodiversity can provide answers to some of the challenges facing agriculture, such as pest control without resorting to toxic chemicals.



Safety in numbers - Cutting costs and conserving species by sharing data

Knowing exactly where rivers are and which stretches of them are being improved or protected is just as important as knowing whether they are home to kingfishers, brown trout or water voles if we want our conservation efforts to be successful.

But hundreds of official bodies and voluntary organisations have a hand in collecting the different bits of basic

information that river conservationists need, which makes producing plans, or guidance, or even a database and toolkits for field workers to use a nightmare of permissions, restricted access to data and commercial sensitivities.

Once you move away from rivers and out into the seas the sheer cost and difficulty of collecting the data makes decision-making for conservation work

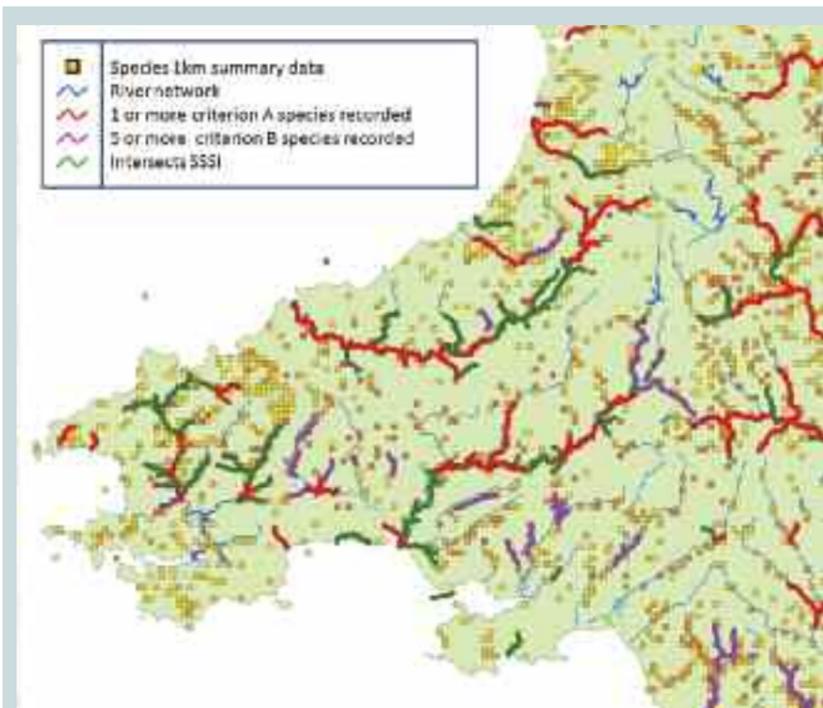
much less evidence based, and prevents joined-up decisions by different government departments and their industry and voluntary partners.

It's not just about the numbers of cod or mackerel, grey seals or cold water coral reefs, it's bringing together all the supporting information to make sure that any conservation strategy is realistic. Where are the shipping lanes, tidal flows, the sand and gravel extraction sites and the undersea telephone cables? All too often, decisions are based just on the information that is readily available, even if it is incomplete.

Our business leaders and political decision makers all want to grow our economy by increasing the availability and reusability of public sector information and helping the commercial sector to generate more money from using it.

Improving access to information and data is a major strand of JNCC's work with a particular focus on biodiversity data:

- Over the last ten years JNCC has helped to establish the National Biodiversity Network – mobilising the huge volume of records of species collected across the UK every year. The website now contains almost 50 million observations (<http://data.nbn.org.uk>).
- JNCC is also involved within the Marine Environmental Data and Information Network (MEDIN) - ensuring that data collected by all sectors in the marine environment are stored and published in a way that allows their reuse, cutting costs and improving decisions.
- Within both these initiatives JNCC has helped set the direction for action and provided technical advice and development.



Case Study

The rivers Biodiversity Action Plan working group wanted to identify priority rivers in the UK (www.jncc.gov.uk/page-4863) by combining physical information about each river with details of existing statutory protection and river wildlife. This was with a view to targeting future conservation efforts.

While much of the data required already existed in some form, actually getting hold of it was relatively challenging, often involving additional costs or having to develop or agree licensing arrangements. This was particularly true for the physical data relating to the locations of rivers themselves. Restrictions around this meant that even once the data were consolidated into a toolkit these licensing arrangements meant the toolkit could not be shared with a wider audience.

Despite the success of mobilising these data (many of which have been gathered by the voluntary sector) there remain real barriers to actively applying the data to conservation.

Firstly the accessibility of the biodiversity data is limited. Of the 50 million records in the National Biodiversity Network only 10 million can be publicly downloaded at reasonably accurate resolution. Much of the data with restricted access has been collected by voluntary recorders with no obligation to provide access to it. The real power of the data comes from combining it with other non-biodiversity related sources, for example the locations of rivers or areas targeted for habitat creation. Very often onward transmission and use of data is restricted, even though many of the sources had some public funding.

The reasons for the restrictions vary and depend on the type of organisation that owns the data. The voluntary sector often thinks that if data are being used commercially there should be some payment back to the data owner, or is simply concerned about their data being misused or misrepresented. A number of professional bodies and parts of the public sector such as the Ordnance Survey rely on income to maintain their data sources.

JNCC believes that the public sector should give a strong lead by providing more open access to data. Firstly it would permit wider use of data in conservation decisions making them better informed. Secondly, such a move by the public sector may encourage other sectors to follow suit. The real advantages of giving the voluntary sector much more open access to mapping data will be by improving the quality or accuracy of the records they collect and also by improving the way they use their own data.



Key facts

Expansion in range of the hoverfly *Rhingia rostrata* (Linnaeus, 1758)

Historically, *Rhingia rostrata* was a rarity, found mainly in the Weald and South Wales, but it has increased in both range and frequency over the last decade. It is now quite common in the Welsh borders and has colonised the East Midlands since 2003. The Hoverfly Recording Scheme has records from 24 10km squares for 1981 – 1995, compared with 113 from 1996 to present. We do not know why it has expanded, but models show a correlation with warming of the climate.

Top left: *Rhingia rostrata* 1981-1995. Top right: *Rhingia rostrata* 1996 onwards. Below: Hoverfly *Rhingia rostrata*. © Nigel Jones



Atlases and impacts

New uses are being found for the vast treasure trove of species knowledge collected as part of atlas recording projects. Atlases have always been vital for conservationists to know where things are, but now the Centre for Ecology and Hydrology, in partnership with JNCC, is exploring new analytical techniques, allowing species records to tell us more about the environment and how it is changing. For example, expansion in the range of the hoverfly *Rhingia rostrata*.

As part of this work, the Biological Records Centre recently hosted a workshop on *Measuring changes in species' distribution*. Seventy scientists and recorders from across the UK and Europe took part in what proved to be an exciting opportunity to make new links and share knowledge between field workers and research. Current analyses are giving us insights into how our countryside is being impacted by air pollution, climate change and other pressures.

Over the coming months JNCC will be engaging in two reviews of current policy. The first consultation on 'Policy options for geographic information from Ordnance Survey' is reviewing options around the future of the

Ordnance Survey. A second review being led through the Marine Environmental Data and Information Network is considering the issues around the reuse of data within the marine environment.

Biodiversity 2010 – Protecting Scotland's seas



Coral gardens. Colourful and diverse coral garden communities on Anton Dohrn Seamount, west of Scotland. © JNCC

With the International Year of Biodiversity come new measures to protect Scotland's most



Scotland's seas are a stronghold for deep sea sponge communities. © JNCC

important sea life. Many of the marine features for which Scotland's seas are a stronghold, such as coral gardens (pictured) and deep sea sponge communities (pictured), will now get the protection status they deserve. With a statutory remit to advise on selecting marine protected sites in UK offshore waters JNCC will be working at the forefront of conservation efforts.

Marine Protected Areas (MPAs) will be chosen using the best available scientific evidence, but selecting areas for conservation has to be balanced against oil and gas operations, offshore windfarms and the fishing industry interests and economy generated from Scotland's seas. As such, the new network of MPAs in Scotland's seas will be selected to cause the least possible disruption to these important economic activities and the interests of fish farmers, wave power developers and council officials.

More on
Marine Protected
Areas at
[www.jncc.gov.uk
/page-4524](http://www.jncc.gov.uk/page-4524)

Existing measures, such as European Marine Sites designated under the EC Birds and Habitats Directives, already protect features in Scottish seas that are of European importance. Until now however there was no way of conserving those features in Scotland's seas that are of national importance.

Along with the UK Marine and Coastal Access Act 2009, the new Marine (Scotland) Act, which gained Royal Assent in March 2010, enables Scottish Ministers to designate MPAs for nationally important marine habitats and species, and features of geological and geomorphological interest across Scotland's seas.

JNCC's Scottish MPA Project staff, working in partnership with Marine Scotland (Scottish Government) and Scottish Natural Heritage, will advise Scottish Ministers on how they could use these new powers to put Scotland in a better position to contribute to the UK Government's European and international marine nature conservation commitments.

Within this partnership, JNCC will be responsible for advising on locations for MPAs in Scottish offshore waters, whilst Scottish Natural Heritage will be advising on MPAs in Scottish inshore waters. The Scottish MPA Project staff are working closely with JNCC's Marine Conservation Zones and Natura 2000 staff to help deliver the UK's commitments for an ecologically coherent network of MPAs.

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Blue Turtle Award Winner 2009

More on
the blue iguana
at www.blueiguana.ky

Without Fred Burton's dedication, blue iguanas would be extinct today. Fred's conservation work in the Cayman Islands for over 20 years has helped to create a viable population of blue iguanas in their own protected area, and for the last nine years he has been the director of the Blue Iguana Recovery Programme.

Now his commitment has been recognised by JNCC, which has just awarded Fred Burton MBE the inaugural 'Blue Turtle'. This new award recognises outstanding nature conservation efforts by residents, volunteers and experts in the UK's Overseas Territories and Crown Dependencies.

Today the Blue Iguana Recovery Programme still relies heavily on its volunteer programme. Dedicated members of the local community feed and care for the animals in the captive

breeding facility, as well as give talks and provide public education experiences. Key volunteers from overseas also contribute time and expertise with specialist veterinary care and by radio tracking released animals. The recovery plan for the Blue Iguana is reviewed every five years and brings together representatives from local and international environmental agencies and volunteers from the Cayman Islands.

In December 2009 JNCC celebrated Fred Burton's dedication at a ceremony held in Peterborough.

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Fred Burton receives the Blue Turtle Award from JNCC's Chair, Peter Bridgewater. © JNCC



Dr Vin Fleming in St Helena



Dr Vin Fleming visited one of the Overseas Territories – St Helena Island in the South Atlantic, in response to a request for advice from the St Helena Government. He delivered a training course on writing funding proposals, working with people from a range of organisations on the island, to improve skills to access additional funding for biodiversity conservation.

In addition, Vin provided training in the implementation of CITES (Convention on International Trade in Endangered Species) to St Helena Government staff and advised on how St Helena could better implement the Convention. Vin also ran a workshop to raise awareness of the use of economic valuation of ecosystem services as a means of better informing the St Helena Government on decisions affecting the environment (and the services it provides to the people of St Helena).

Tackling the threat of invaders in our Overseas Territories

According to the 2009 Red List, 74 critically endangered species live in the UK Overseas Territories along with 50 endangered species and 167 vulnerable species, many of them unique to a single island or area. One of the main threats to these native species and rare habitats in our Overseas Territories are invasive species which have now firmly established themselves.

The UK has 14 Overseas Territories and three Crown Dependencies which collectively and individually make a

significant contribution to global biodiversity and geological diversity. In December 2009 Defra gave JNCC £250,000 to focus on priorities in tackling the invasive species threat in our Overseas Territories during the International Year of Biodiversity.

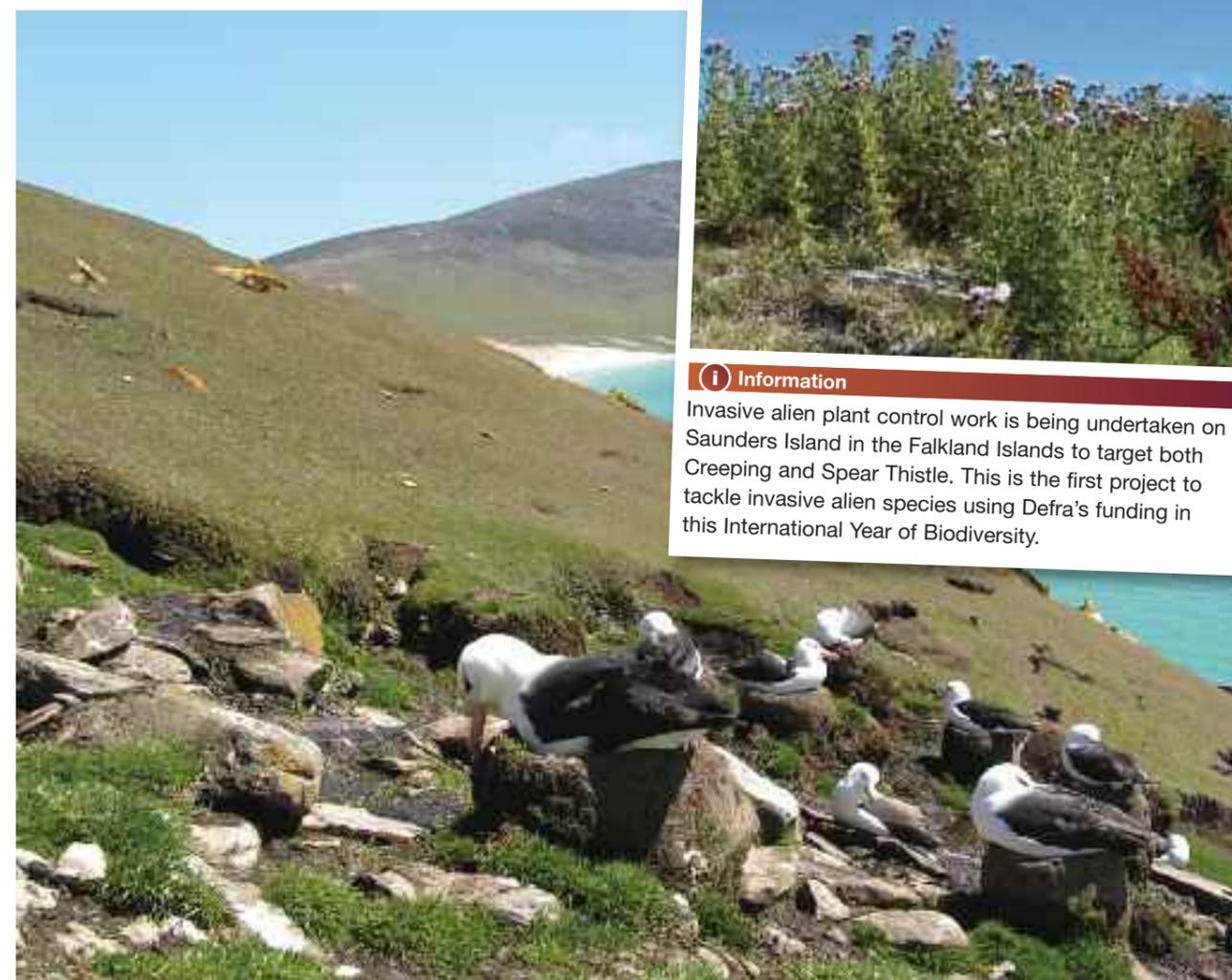
The key projects have been identified by Overseas Territories as their priorities in the sea and on land, and range from baseline survey work to public awareness campaigns, prevention, eradication and controlling invasive species and protecting

threatened species from the International Union for Conservation of Nature's Red List. Over the next issues of *Nature News*, specific projects will be focused on in more detail.

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Main: Saunders Island, Falkland Islands. © Falklands Conservation
Inset: Creeping thistle. © Falklands Conservation



Information

Invasive alien plant control work is being undertaken on Saunders Island in the Falkland Islands to target both Creeping and Spear Thistle. This is the first project to tackle invasive alien species using Defra's funding in this International Year of Biodiversity.

The Caribbean lionfish project



Lionfish. © David M Stone

Invasive lionfish which naturally live in the Indo-Pacific region are seriously threatening the coral reefs and marine biodiversity of many of the Caribbean Overseas Territories and other Caribbean Nations. It is believed the lionfish arrived with hurricanes or escaped when ships' ballast tanks were emptied during the early 1990s. Other theories include accidental release by local aquariums or hobbyists. Now they have been spotted as far north as Rhode Island, along the eastern seaboard and as far south as Colombia.

With few known natural predators, the lionfish poses a major threat to coral reefs in the Caribbean by significantly reducing juvenile populations of a wide range of native reef fish, e.g. cardinal, parrotfish and damselfish. Native grouper fish prey on lionfish, but they have been overfished and are unlikely to significantly reduce the effects of invasive lionfish on coral reef communities.

While completely eradicating lionfish does not seem realistic, affected countries are being encouraged to start control efforts for lionfish as soon as possible, including targeted fishing for them. Lionfish flesh is tasty and cooking denatures the venom in the fish spines. Recovering healthy populations of native predators which eat lionfish, such as sharks and large grouper, may also help reduce the ecological impacts of these voracious invasive predators.

The three Overseas Territories of the Cayman Islands, Turks and Caicos Islands and the British Virgin Islands will use £60,000 of funding provided by Defra, through JNCC, to focus and develop efforts to monitor and control lionfish. Anguilla will also use some of its own funding to combat the lionfish threat. The project will try to minimise the destructive impacts of the invasive

lionfish by controlling the size and spread of the infestation.

By focussing on awareness-raising the project hopes to gain additional support from the public as people understand the control actions being undertaken, report any lionfish sightings and even become involved as volunteers.

Caribbean Hub cross-territories lionfish monitoring, eradication and awareness-raising
JNCC is working with the Cayman Islands to develop the concept and mechanisms for a regional Caribbean Overseas Territories hub. The regional lionfish project will be a first step to demonstrate how a regional approach to conservation management works in practice, sharing skills, knowledge and expertise across territories.

Lionfish project in the Cayman Islands
In the Cayman Islands, the regional lionfish project will monitor the biomass of reef fish to find out how healthy the populations are, and estimate the balance of invasive and natural species. It will assess how effective the control efforts are, develop and use a rapid response protocol for reports on lionfish

sightings, raise public awareness and train volunteers.

Lionfish project on Turks and Caicos Islands
In the Turks and Caicos Islands, the lionfish project will focus on public awareness and developing relationships to control the lionfish. It will work with restaurants to put lionfish on the menu, creating an economic demand for capturing the invasive species, collect data on species locations and population sizes, and host a public 'lionfish tournament' to catch them and inform the public.

Lionfish project on the British Virgin Islands
Activities under the lionfish project in the British Virgin Islands will include training staff in various organisations in the biology, behavior, capture and control of lionfish, and initiatives on public awareness and information.

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Conservation Conversation



Guy Duke, the new JNCC independent Committee member.

This issue we focus on JNCC's new independent Committee member **Guy Duke**. Guy is an environmental writer and consultant. From 2002 to 2007 he served as Principal Administrator, Directorate-General for the Environment, European Commission, with responsibility for biodiversity and ecosystem services policy.

Q Species that inspired you as a child?

A There were many, mostly common ones. The sound which most evokes my childhood is blackbird song. I lived in a suburban area with remnant patches of woodland and summer evenings were redolent with their melodious warbling.

Q What concerns you most about the natural world in the next two decades?

A Accelerating species loss and irreversible damage to ecosystems. There is increasing recognition of the need to act quickly and decisively to stop dangerous climate change. But popular recognition of the need to act quickly and decisively to stop dangerous biodiversity loss remains very weak. For some reason we don't see it in such apocalyptic terms. But biodiversity loss will come to be seen as the greater human tragedy.



Bluebell Woods, North Downs. © Guy Duke

Q What do you do when you're not saving the world?

A I don't on the whole fool myself I am saving the world, but trust I'm on the right side. When not working, I like to be out walking with my family and our welsh springer spaniel in the wonderful Forêt des Soignes on the edge of Brussels.

Q What is your favourite place?

A In Britain, the stamping grounds of my youth. Some of the wilder corners of the woodlands and heathlands in the North Downs of Surrey. Or the Radnor Hills on the Welsh borders – I married there, in a tiny church amid the moors. In Brussels, I have some favourite spots, beautiful woodland glades, in the Forêt de Soignes.

Q Who is your human hero in the natural world?

A I'm not really one for heroes – I don't think it's healthy to put anyone on a pedestal. But I do admire many who have advanced our understanding of, and care for, the natural world – the romantic poets who inspired the British love-affair with nature, and men such as Thoreau and Aldo Leopold who inspired US conservation. Among the living, I admire Jonathan Porritt for his forthright criticism and pragmatism in working for change.

Q What's your pet hate in nature conservation?

A A tendency in the conservation community to be too timid and self effacing and insufficiently focused on where one can make the biggest impact – though I think we're getting smarter at this.

Q Desert Island Disc?

A To remind me of England, Sir Colin Davis conducting the LSO in Elgar's Nimrod - very moving. But if it's allowed,

then a boxed set of Artur Schnabel playing Beethoven's complete piano sonatas – perhaps the greatest music ever written. There's enough music there for a lifetime.

Q Place you'd most like to visit?

A Difficult to choose just one. I'd love to spend time in the dehesas of Extremadura during the spring passerine migration. I'd also love to return one day, in late spring, to the high Himalayan meadows of the Palas Valley in Pakistan, where I spent my early career – a riot of flowers, fat, whiffing golden marmots and the occasional soaring lammergeyer.

Q What would you like to achieve in your time at JNCC?

A Help JNCC strengthen its contribution to the ecosystem services agenda and promote its concerns among EU institutions. The EU will be reviewing policies and budgets for the 2013-20 period over the next 2-3 years. I'd like to think that, by the end of my term, I will have helped JNCC and UK Government secure a more ecosystem-friendly policy and budgetary framework at EU level.

Q When I'm reincarnated I'm coming back as a?

A Poet or composer – if I could be a great one – to celebrate nature. If not as a human, then perhaps as an English oak, in tranquil ancient woodland. Like many expats, I sometimes pine for that mythical corner of our green and pleasant land.