

JNCC

NatureNews

The national and international conservation digest

Issue 19: Winter 2009

Seabed secrets unmasked



ALSO FEATURING

- + Overseas Territories
- + New Marine Director
- + European Programme



Chair's Introduction

pleased that John Goold will be our first incumbent in that post – and, making history and strengthening links, will be based in our Aberdeen office.

Finally, and with the careful thought to managing succession that has characterised his ten years in office, Deryck Steer has indicated he would like to move on from September next year. Committee will be considering the process of finding a new Managing Director at the December meeting.

Back to change in the political world, and while we are delighted that we retain our Secretary of State, we are also pleased that Huw Irranca-Davies has taken JNCC and the Support Company under his Ministerial wing, and we look forward to working with him.

Change has characterised the Committee's business recently as well!

Following a meeting that was held in July of the chairs of the country conservation bodies and myself, we decided to spend most of the September committee meeting looking at the future for JNCC – what is its most effective role, and how can we add value to the whole set of UK conservation activities.

Following September's meeting, we have a clearer picture of the issues JNCC should deal with in future, and how Committee should run its business. Principally we will be crafting how we can be more strategic, without losing focus on the statutory demands that are placed on the Committee. We return to this issue this month, with our December meeting, and I will be able to report more on this in early 2009.

All this activity is just the beginning of things to come. It will mean even more of

a focus on international work (including Overseas Territories) and marine work. Refocusing the strategy has given JNCC a 'shot in the arm', and you can expect more strategic and forecasting roles for us, while also strengthening the overall evidence base needed for conservation in a rapidly changing world.

This brings me to this issue of *Nature News*. You'll find features that continue to reflect the breadth of our remit – from helping the conservation effort for albatrosses and petrels, to the publication of the *Odonata* (dragonflies and damselflies) *Red List for Great Britain*; from the effect of the UK economy on the global environment, to human pressures on ecosystems; and from the latest title in the Geological Conservation Review series to a review of the National Heathland Conference – there is something for everyone, no matter what your conservation interests.

As we rush towards 2009, I hope the New Year brings you everything that you wish. However, I regret to inform those taking a side bet on such issues, the BBC has NOT approached me to take over from David Tennant. I can say with all sincerity that the challenges and adventures ahead in nature conservation are far too much of a lure - I am remaining where the real action is - but maybe with a TARDIS on standby, just in case change becomes quite overwhelming!!

Season's greetings to you all.

Peter Bridgewater, Chair, JNCC

As I write this introduction the USA has just elected their first African American President and the world's stock markets are still oscillating violently. If anyone does not believe that the 21st Century is one of change, they cannot have seen, heard or read any news since 1999. The natural environment is not immune from these changes, and neither is JNCC!

We have seen quite some change at the top of JNCC Support Company, with Malcolm Vincent, our Director of Science who joined us in 1994, leaving in September. In that time he has influenced the science base of nature conservation in the UK, and, through being a member of Defra-led delegations to CBD and other international bodies, globally as well. While we will miss Malcolm's sage advice and long experience, I am pleased to welcome Andy Stott to that post from 1 December. Andy has spent 15 years at Defra - most recently as Head of Biodiversity and Landscape in the Natural Environment Science Division.

Because of the considerable commitment JNCC Support Company is making to marine conservation, a new post has been created, that of 'Director of Marine'. I am

Front cover images:

Exposed bedrock on Nun Bank adjacent to Solan Bank, North Scotland. At 25 metres water depth, the rock is colonised by orange dead man's fingers *Alcyonium digitatum*, colonial sea squirts and pink encrusting coralline algae. The JNCC is responsible for identifying areas for protection in the offshore marine environment around the UK. © JNCC

Gannet in flight, taken from the RSF James Cook. © Mark Lewis/JNCC

Surf breaking over the coral reef around the low-lying island of Aneгада, British Virgin Islands. © Deborah Procter/JNCC

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.

ISSN 1479-3857 © JNCC 2008

Printed on Evolution Satin, 75% recycled post-consumer waste paper, Elemental Chlorine Free.

Designed and printed by statusdesign.co.uk, 2M.

Nature News is published three times a year, and informs its readers of the current work and projects being carried out by JNCC. Comment and feedback is much appreciated, so please email:

communications@jncc.gov.uk

tel: +44 (0)1733 866839

fax: +44 (0)1733 555948

or write to:

JNCC, Monkstone House, City Road, Peterborough PE1 1JY, UK.

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

jncc.gov.uk



Conserving albatrosses and petrels

Black-browed albatross and chick. © Sarah Crofts/Falklands Conservation

Albatrosses and petrels are among the most threatened groups of birds in the world. The last decade has seen a strong international resolve to improve their conservation status, including the development and adoption of the Agreement on the Conservation of Albatrosses and Petrels (ACAP), which came into force in February 2004. This multilateral agreement aims to reduce the threat of extinction for 26 species of albatrosses and larger petrels, and is currently ratified by 11 countries.

The UK, including and on behalf of its South Atlantic Overseas Territories (SAOTs) – Falkland Islands, South Georgia and the South Sandwich Islands, British Antarctic Territory and Tristan da Cunha – ratified ACAP in 2004, soon after it came into force, and has been integrally involved in the Agreement since its inception. JNCC's Mark Tasker served as the first Chair of the Advisory Committee. The Agreement, together with its Action Plan, describes a number of conservation measures that contracting Parties need to implement to improve the conservation status of these seabirds.

The UK SAOTs are particularly important for the conservation of albatrosses and petrels. They are breeding range states to a dozen of the 26 species covered by the Agreement. For most of these, the SAOTs host significant proportions of the global breeding population, three of which are unique as breeders to the Tristan da Cunha group of islands.

Albatrosses and petrels face a range of threats both on land and at sea. Chief among these is fisheries-related mortality, for example through bycatch.

In most cases, this is exacerbated by many other threats, in particular the impact of introduced predators at breeding sites.

Several initiatives have been undertaken to address these threats, involving a range of Government departments both in the UK and the SAOTs, non-government organisations, research institutions, industry and private landowners. Mitigation measures to reduce seabird bycatch have been developed, tested and implemented, leading to substantial reductions in the Falkland Islands and South Georgia. However, despite these successes, many populations continue to decline. The vast foraging movements of these seabirds take them onto the high seas and the national waters of other nations, making them truly international animals, whose conservation is dependent on concerted international action. This is precisely what ACAP seeks to achieve.

The importance that JNCC, the UK Government and the SAOTs attach to this agreement is emphasised by the funding of a three-year project to co-ordinate and drive forward work by the UK to implement ACAP and conserve albatrosses and petrels. JNCC's Anton Wolfaardt has been in post in Stanley since early 2008 to carry out this work.

Anton Wolfaardt



ACAP coordinator, UK South Atlantic Overseas Territories

Tel: +500 22085

Email: anton.wolfaardt@jncc.gov.uk

Working in Europe to protect biodiversity in the UK and beyond

Sugar beet is one of the feedstocks grown in the UK to produce bioethanol. This will contribute to the EU's target to achieve ten percent renewable energy in transport by 2020, as part of the forthcoming climate change and energy package. © P Green/Natural England

Most policy and legislation affecting the environment of the UK originates in the European Union (EU). JNCC provides advice on the development of environmental and other EU policies (eg energy) to the UK as a Member State, its devolved governments, the country conservation bodies for England, Northern Ireland, Scotland and Wales, and the EU institutions.

How we use our influence

We have to assess where in the policy-making process our advice is likely to be most effective. We aim to engage as early as possible, so that we can influence the development of new initiatives. We also respond to European Commission public consultations, and advise the UK Government during the negotiations among Member States and with the European Parliament, in the process to adopt legislative instruments in the European Council.

Key to the success of this work is the UK Nature and Landscape Office (UKNLO), located in Brussels. The UKNLO, run by JNCC in partnership with the country conservation bodies, has two staff who act as a policy 'radar', providing early intelligence on developments, and who are also building a network of contacts to raise the profile of JNCC and the country conservation bodies in Brussels. Further policy-relevant information and analysis is provided through a contract held with the Institute for European Environmental Policy (IEEP).

Our objectives

The objectives of our European work focus on achieving long-term nature conservation benefits in the UK, the EU and beyond. Current priorities at EU level include:

- Ensuring progress towards achieving the Gothenburg target of halting the decline of biodiversity (2010 target);
- integrating the environment into EU sectoral policies (such as energy, climate change, land use and maritime) in order to achieve sustainable development; and
- highlighting the economic, social and cultural values of biodiversity, and its importance to the quality of life for all European citizens.

Recent highlights

Recent work has focused on the European climate change and energy 'package', providing advice to UK Government and the European institutions on the development of the EU's Renewable Energy Directive. In particular, we have concentrated on:

- providing advice on sustainability criteria for biofuel and biomass production;
- providing advice on the biodiversity impacts of biofuel production at UK, EU and global levels; and
- contributing to a UK Government consultation on the UK's draft Renewable Energy Strategy.

We continue to work on the wildlife Directives, providing advice to Defra, and participating in expert groups for the Birds and Habitats Directives. The UK's terrestrial list of Special Areas of Conservation (SACs), declared under the Habitats Directive, is almost complete. Of particular note, in August 2008 the first five offshore marine candidate SACs were submitted by the UK Government to the European Commission (see page 7).

As one of the partners in a consortium that carries out the work of the European Topic Centre on Biological Diversity (ETC/BD), which assists the European Environment Agency (EEA) in reporting on Europe's environment, JNCC is able to provide expertise and early insight into developing priorities. Recent work has included input into the development and communication of indicators for the project called Streamlining European Biodiversity Indicators (SEBI) 2010. JNCC, as the UK representative, with partners from eight other EEA member countries (Austria, Czech Republic, France, Italy, The Netherlands, Sweden, Slovak Republic and Turkey), was successful in winning the bid for the next ETC/BD consortium, which will run from 2009-2013.

A forward look

Future work will be increasingly focused on the review of the European budget and the associated reform of a number of European Union policies impacting on biodiversity and ecosystems. These include the Common Fisheries Policy and the Common

Agriculture Policy. Furthermore, the European Commission has proposed a Territorial Cohesion policy, which aims to promote territorial diversity within the EU as a vital asset that can contribute to the sustainable development of the EU as a whole. JNCC will aim to ensure that sustainable development principles and measures needed to meet all existing and future environmental commitments are integrated into this new approach.

We will be gathering intelligence to identify and advise on the priorities for the new European Commission beyond 2009, and the membership of the European Parliament with a view to its likely position on the key relevant issues. This is likely to include a focus on biodiversity targets beyond 2010, at both European and global scales. We will be working to ensure economic and cultural issues that surround biodiversity are incorporated into Phase 2 of The Economics of Ecosystems and Biodiversity (TEEB) study.

We will also maintain an overview of European Directives and other related policies in the terrestrial and marine environments. This includes appreciating the relationships between Directives and assessing the implications for the UK and its nature conservation targets.

As statutory advisers, JNCC intends to improve the effectiveness of scientific evidence to underpin our European and UK policy advice, by ensuring that our extensive surveillance work, and research and information provision can be set in a policy advice context.

If you would like more information on JNCC's European policy work, please contact

Jessa Battersby



Head of European Advice

Tel: +44 (0) 1733 866808

Email: jessa.battersby@jncc.gov.uk

Hugh Laxton



Head of the UK Nature and Landscape Office

Tel: +32 (0) 2 738 74 80

Email: hugh.laxton@jncc.gov.uk

Fundraising for the Overseas Territories



Nikki Chapman. © Cathy Gardner/JNCC

Dr Nikki Chapman has recently been appointed the Overseas Territories Fundraising Officer in JNCC's Overseas Territories and Crown Dependencies Programme. This is an externally funded post, with funding being provided by the Department for International Development (DFID) as part of the Overseas Territories Environment Programme (OTEP). The post is for a year, and the role will be to explore all funding sources available for nature conservation work in the UKOTs, ideally negotiating new streams of funding. This information will be compiled and made available to all who are interested.

A second component of the role is, where required, to work with the UKOTs to submit funding applications. It has often been highlighted that the UKOTs have a great wealth of biodiversity, the conservation of which is not adequately resourced. Nikki's post is one step in

the direction of actively seeking the required resources to help ensure the conservation of biodiversity in the UKOTs.

Nikki has worked in JNCC as a Marine Ecologist, and earlier this year also took on the role of the JNCC Overseas Territories and Crown Dependencies marine focal point. As a benthic ecologist specialising in invertebrates and biogenic reefs, Nikki has substantial experience of initiating and supporting both temperate mainland and remote island based conservation projects. These projects have spanned across Belize, Philippines, Galapagos (Darwin Initiative) and Bermuda and will have given her an insight into the challenges that lie ahead.

Nikki Chapman



Overseas Territories Fundraising Officer

Tel: +44 (0) 1733 866924

Email: nikki.chapman@jncc.gov.uk

Human well-being and ecosystem management



At its annual meeting, BES (British Ecological Society) jointly hosted a special session on ecosystem services with BRAG (Biodiversity Research Advisory Group). The session covered policy issues, examples of applied science, and ideas on what research is needed and could be used in policy application.

The session attracted over 70 people and concluded with a lively question and answer session. A recurring message was the need to converge expertise from across different disciplines, including biologists,

conservationists, geographers and social scientists. Much debate focused on the difficulty this presents, with each having its own 'language' or way of presenting issues, leading to a lack of understanding across different disciplines. Trying to fulfil the needs of local people, often living in poverty, while formulating policy that is going to protect both the environment and the services it provides is never going to be easy. There is a need for a new way of looking at environment issues, which takes into account that ecosystems are dynamic, while responding to both environmental and human pressures.

The overall conclusion was a need for pragmatism and compromise. Those directly affected by the environment under consideration must see some direct

benefits from conservation. In turn, these must give benefits elsewhere. Valuing ecosystem services must be more than just accounting, and policy makers must be presented with full scenarios, no matter how complex. There was also an optimism in that it is possible for successful interdisciplinary working, if the will is there!

Presentations and a note of the session can be downloaded from either the BRAG or BES websites, see www.ukbrag.org.uk or www.britishecologicalsociety.org/articles/publicaffairs/meetings/

Tina Yates

 Biodiversity Information Officer
Tel: +44 (0) 1733 866850
Email: tina.yates@jncc.gov.uk

The UK economy: the global environment

Impacts – responsibilities – actions

On 28 January 2009, JNCC is hosting an event at the London Stock Exchange. With an invited audience from government, NGOs and industry, this gathering will emphasise the importance of recognising the economic links between the economy of the UK and global ecosystems. It will also highlight the governmental and corporate responsibilities that arise from such links. The event will stress the importance of supply and investment chain governance, to ensure sustainable use by the UK of global ecosystems, and preview and promote JNCC's proposed reporting programme.


As recent events have demonstrated, the UK economy is closely linked to its global counterparts through trade and investment. UK annual exports are valued at £200 billion, imports at £300 billion, with annual overseas investment by UK companies at £50 billion before the recent financial crisis. The inflow of goods, particularly in respect of foodstuffs, biofuels and raw materials, illustrates the dependence of the UK on the productive capacity of global ecosystems. The flow of UK capital into overseas economies highlights the ability of UK businesses to influence this productive capacity, with implications for sustainable production.

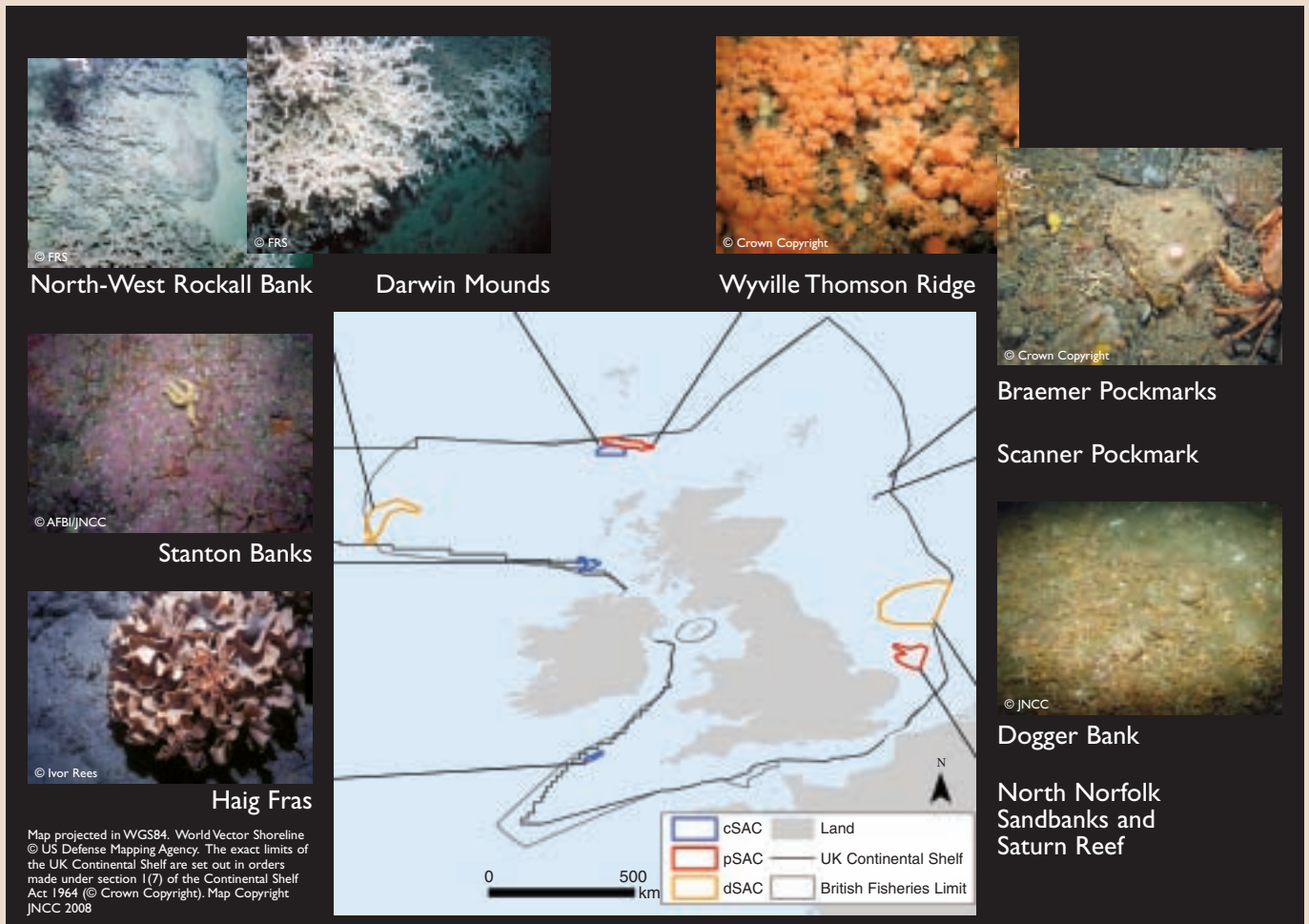
In support of the UK Government objective to decouple economic growth from increased environmental impacts, JNCC

has initiated a work programme to identify key biodiversity-relevant commodities, source countries, trends and potential impacts. This work builds on earlier government 'Sustainable Consumption and Production' studies. The analysis of commodity flows into the UK economy has been complemented by an analysis of outward investment into selected economies.

In 2009, JNCC will be initiating an annual global overview, reporting on the links between the UK economy and key overseas ecosystems. This work will monitor and report on the changing global biodiversity footprint of the UK economy arising from production of agricultural foodstuffs, forest and fishery products and biomass-based fuels. The principal geographical areas of interest for this reporting, through published reports and web-delivered materials, are a suite of countries across South America, Africa, Asia and eastern Europe which have large land areas of biodiversity value which may be compromised by increased food and bioenergy production in the coming decade.

Tony Weighell

 UK Global Impacts
Tel: +44 (0) 1733 866902
Email: tony.weighell@jncc.gov.uk



Location of UK offshore SACs.

First offshore SACs

Following JNCC's consultation at the start of the year on the first seven offshore Special Areas of Conservation (SACs), the Secretary of State formally sent five of these to the European Commission in September. The five sites that have been submitted are:

- Braemar Pockmarks and Scanner Pockmark in the North Sea;
- Haig Fras off western Cornwall;
- Stanton Banks and Darwin Mounds off western Scotland.

Defra and JNCC are resolving issues raised during the consultation for the other two possible SACs consulted upon, Wyville Thomson Ridge and North Norfolk Sandbanks and Saturn Reef, and these will be submitted to the European Commission as soon as possible.

The consultation ran for 12 weeks and attracted comments from 38 stakeholders. These were as diverse as the National Federation of Fishermen's Organisations, National Oceanography Centre, BP

Exploration and Greenpeace UK. The views of the respondents were considered by JNCC, in consultation with Government and incorporated into site proposals, with site boundaries in several cases being modified to align more closely to the edge of the habitat of interest.

Enhanced protection

The sites being proposed under the EU Habitats Directive will provide enhanced protection to marine communities associated with reefs and submarine structures made by leaking gases. These sites form a significant part of the Natura 2000 network in marine waters of the UK. JNCC is currently working towards identifying other areas suitable for designation under the Habitats Directive. The ultimate aim is to include between 20 and 60% of the UK resource of each listed habitat type in the final SAC network.

Looking to the future

JNCC is planning to consult in December 2008 on a further two possible sites. North-West Rockall Bank in the North-East Atlantic is being proposed for its

stony, bedrock and biogenic reef communities, including cold water coral *Lophelia pertusa*. Dogger Bank in the North Sea is proposed as the UK's largest sandbank, and for the part of the North Sea harbour porpoise population that it supports. The UK Dogger Bank SAC will adjoin neighbouring SACs in Dutch and German waters to create a transnational site.

The next areas to be recommended as SACs to Government by JNCC will be in the English Channel, Irish Sea, and off north-western Scotland. You can see the progress of our offshore seabed survey programme, gathering data to support identification on offshore SACs on page 10.

For further information on the offshore SAC consultation please visit www.jncc.gov.uk/marineconsult

Amy Ridgeway

Marine Protected Areas Officer

Tel: +44 (0) 1733 866841

Email: amy.ridgeway@jncc.gov.uk

Week 1

Early in the week we linger off Portland Bill while methods are honed and equipment calibrated, and one team have the unenviable task of having to dangle a tangerine-sized metal ball directly under the ship's echo sounder, using fishing rods! Luckily, our surveying kit is extremely low tech, so we spend the time practising our European Seabirds At Sea (ESAS) methods. These methods are a standardised way of recording data used across Europe, contributing to an ever growing database on European seabirds and cetaceans. By the end of the week we reached the Jones bank (through some pretty heavy seas) and start the survey proper. We all enjoy great close-up views of several Cory's shearwaters.

Week 2

The second week starts well as we score our first cetaceans of the trip, a pod of common dolphins. Just as the monotony of circling the survey area and seeing nothing but gannets is beginning to get to us, a Wilson's storm petrel flits across the bow, giving the two lucky observers a tantalisingly brief view. This is an extremely rare visitor to UK waters from the southern oceans and certainly gave the spirits a boost. After this brief rush of excitement, the week ends with a long, tedious parade of gannets. A little on-board investigation of our observations shows that our sightings of feeding birds correspond nicely with the sloping edges of the bank, and also with increased fish activity under the water.

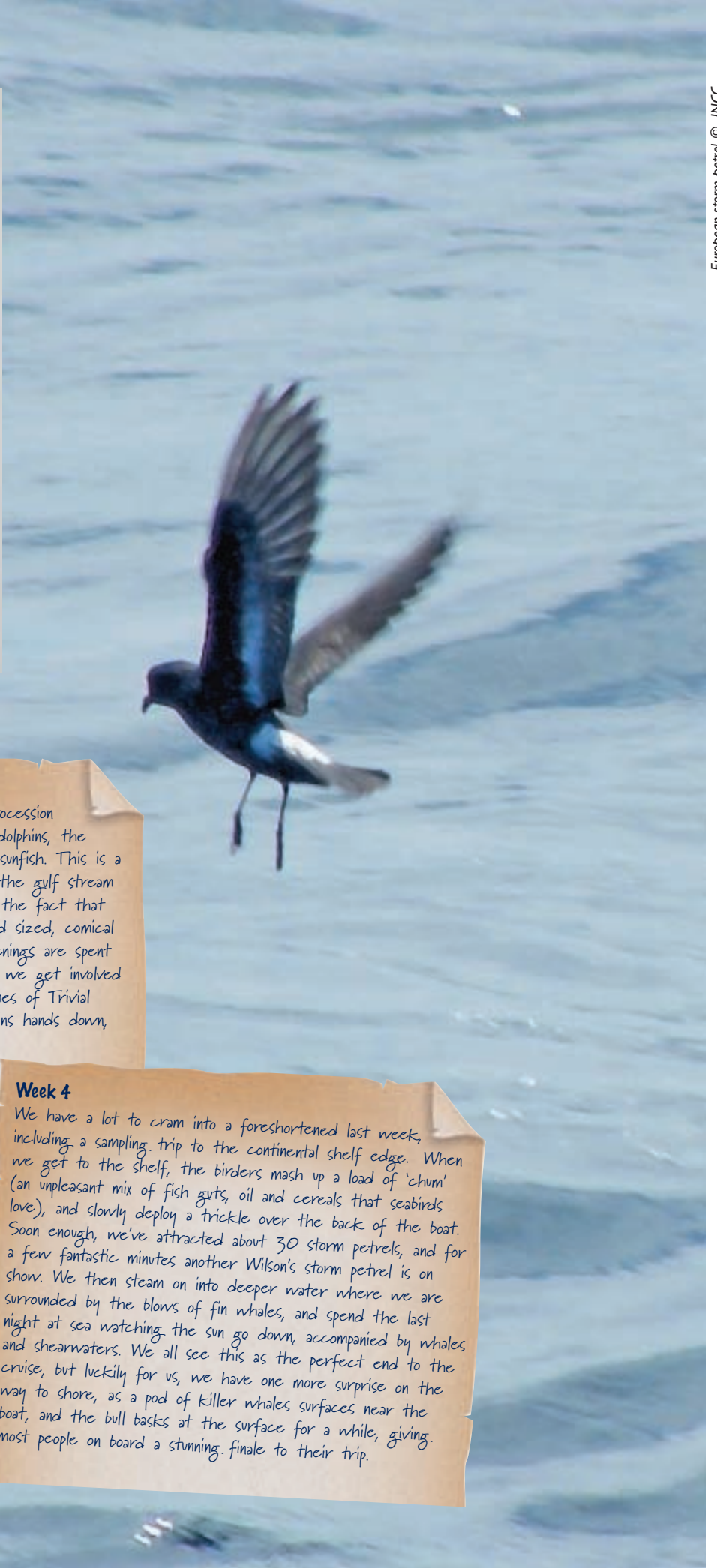


Seabird survey at the Jones Bank, Celtic Sea.

During July 2008, a group of scientists visited the Jones Bank, a sand bank approximately 100km west of the Isles of Scilly, as part of the NERC funded 'Critical Marine Habitats' project. The objective was to study how physical features such as the tide, and the slope of the sand bank affect mixing in the water column, and how this affects wildlife distributions in the area. JNCC's Seabirds at Sea team were tasked with monitoring the seabirds and cetaceans using the area. Here, Mark Lewis recounts parts from his diaries from the cruise.

Ocean sunfish. © JNCC





Week 3

The surveying continues, with the endless procession of gannets being enlivened by more common dolphins, the odd shearwater, and good numbers of ocean sunfish. This is a tropical species that gets swept along with the gulf stream and ends up in western UK waters. Despite the fact that we're seeing a lot of them, these dustbin lid sized, comical looking fish are always entertaining! The evenings are spent coding our data onto computers, after which we get involved in some highly competitive inter-institute games of Trivial Pursuit. Needless to say, the JNCC team wins hands down, and without getting caught cheating.

Week 4

We have a lot to cram into a foreshortened last week, including a sampling trip to the continental shelf edge. When we get to the shelf, the birders mash up a load of 'chum' (an unpleasant mix of fish guts, oil and cereals that seabirds love), and slowly deploy a trickle over the back of the boat. Soon enough, we've attracted about 30 storm petrels, and for a few fantastic minutes another Wilson's storm petrel is on show. We then steam on into deeper water where we are surrounded by the blows of fin whales, and spend the last night at sea watching the sun go down, accompanied by whales and shearwaters. We all see this as the perfect end to the cruise, but luckily for us, we have one more surprise on the way to shore, as a pod of killer whales surfaces near the boat, and the bull basks at the surface for a while, giving most people on board a stunning finale to their trip.

Mark Lewis



Marine Surveyor

Tel: +44 (0) 1224 655722

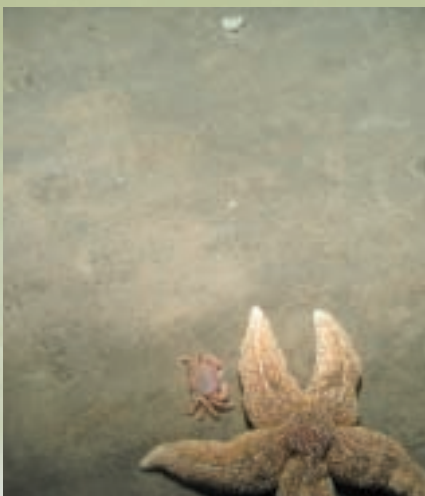
Email: mark.lewis@jncc.gov.uk



Sieving grab samples on board the RV Endeavour.
© Neil Golding/JNCC

Seabed SURVEY SURPRISES

JNCC's offshore seabed survey programme has been in action throughout the year, gathering data to support the identification of potential offshore Special Areas of Conservation (SACs) at three Areas of Search: Solan Bank, Submarine structures in the mid-Irish Sea and Dogger Bank.



A view from the towed camera sledge of the sandy habitats of Dogger Bank. © JNCC

Dogger Bank

Being in the middle of a very choppy North Sea for four weeks was the challenge for Viv Blyth-Skyrme from the Marine Protected Sites Team, when she took part in a JNCC commissioned survey of the Dogger Bank earlier this year. The survey, undertaken by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) in partnership with the British Geological Survey and Envision Mapping Ltd, on behalf of JNCC, demonstrated that the Dogger Bank isn't just an expanse of sand and gravel in the middle of the North Sea, but contains a variety of other habitats. Images of the seabed captured by an underwater camera showed small areas of stable cobble inhabited by white soft corals and tube worms. Beds of brittlestars (a type of starfish) were also seen carpeting the sandy seafloor. One photo even captured a whiting in the process of eating a sandeel! As you'd expect from a sandbank though, there was indeed lots of sandy seabed as well.

“One of the real challenges of the project was trying to undertake a seabed survey of an area over two thirds the size of Wales with just 17 days of ship time”

Neil Golding, JNCC's Offshore Survey Programme Manager.

CEFAS used state-of-the-art acoustic systems aboard the RV Endeavour to image the seabed using sound. A towed camera sledge was then used to visualise the seabed habitats identified. In certain areas, a beam trawl and grabs were used to identify the creatures living on and in the seabed.

With the work almost complete, this survey has made a significant contribution to providing a robust scientific evidence base for JNCC's proposal to recommend an SAC on the Dogger Bank to UK Government. The proposal will shortly go out to public consultation.

Neil Golding



Offshore Survey Programme Manager
Tel: +44 (0) 1733 866840

Email: neil.golding@jncc.gov.uk

Solan Bank and Submarine structures in the mid-Irish Sea

Spectacular vistas of sparkling, colourful jewel anemones and delicate Ross coral greeted scientists during a seabed survey in the offshore waters of Solan Bank, 50km due north of Cape Wrath in Scotland.

Ian Saunders and Neil Golding from the Marine Protected Sites Team joined scientists from the British Geological Survey and CEFAS on board the RV *Endeavour* on the JNCC commissioned survey. Participation in the project by staff from the University of Ulster completed the partnership.

Solan Bank is an exposed bedrock outcrop that almost reaches the sea surface, arising from the surrounding seabed around one hundred metres below. In these shallow areas, lush kelp forests cover the rock, being grazed by purple sea urchins. Deeper down, craggy bedrock ridges form cliffs almost 20m high, encrusted with orange and white soft corals known as dead man's fingers.

Special instruments that image the seafloor using sound (sidescan sonar) were towed behind the vessel while an underwater camera was used to capture video and stills from the depths. JNCC staff used bathymetry data gathered previously by the Maritime and Coastguard Agency under their Civil Hydrography Programme.

As part of the same survey, an offshore area in the mid-Irish Sea was also investigated for its submarine 'reef-like' structures, believed to originate from methane seeping through the seabed. Reporting of both areas surveyed is currently underway; a final report will be available from JNCC in March 2009.

Ian Saunders

Offshore Data Support Officer
Tel: +44 (0) 1733 866911

Email: ian.saunders@jncc.gov.uk

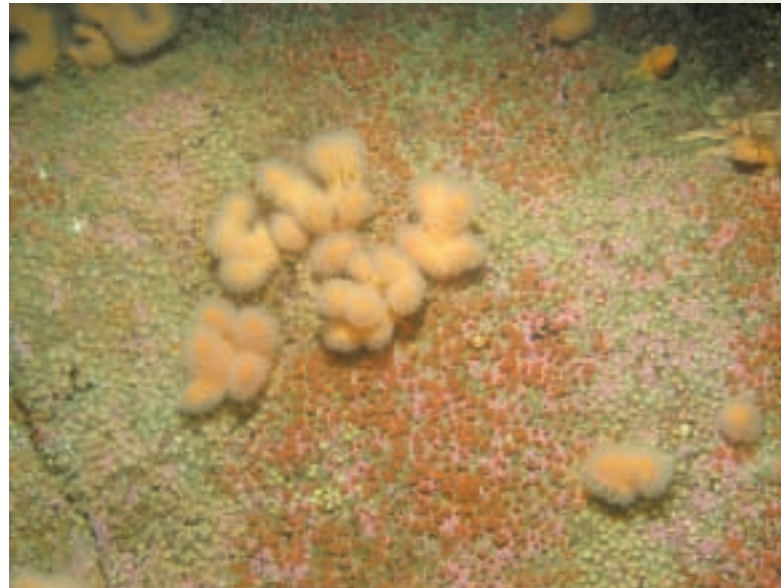


The exact limits of the UK Continental Shelf are set out in orders under section 1(7) of the Continental Shelf Act 1964 © Crown Copyright. World Vector Shoreline © US Defense Mapping Agency.

Areas of the sea bed surveyed by the JNCC in 2008. © JNCC 2008

“Being able to utilise existing high quality multibeam data from the MCA was a great boost for the survey. We could use the existing bathymetry to help us plan and subsequently focus our efforts on gathering more video and stills of the seafloor habitats.”

Neil Golding, JNCC's Offshore Survey Programme Manager.



Bedrock carpeted by jewel anemones *Corynactis viridis* and dead man's fingers *Alcyonium digitatum*. © JNCC



Climate adaptation is key

Enhancing capacity in the Caribbean UK Overseas Territories

A meeting was held in the British Virgin Islands in August this year to discuss how to deal with changes to the environment brought about by climate change. There were staff from government departments and NGOs from four Caribbean Overseas Territories: Turks and Caicos, Anguilla, Montserrat and the host Territory. We would have been joined by staff from Cayman too, but they needed to return home to prepare for the onslaught from hurricane Gustav. The workshop was organised by the Caribbean Community Climate Change Center as part of a regional initiative to help Caribbean nations develop a local and regional response to the effects of climate change. To enable the territories to participate, funding had been provided by the Department for International Development. JNCC has been involved since the project's inception.

The work is based on an approach developed in the region using Vulnerability and Capacity Assessment (VCA). The aim is to try and build regional capacity to collect and analyse data, and so expand the overall knowledge base on climate change impacts including the associated social, environmental and economic vulnerabilities. Having got the basic knowledge, it then gets turned into a useable set of tools to help civic and business leaders make critical decisions to deal with climate hazards in regions and sectors most likely to be affected. To make sure all the relevant ministries, departments, business interests and representatives of civil society are part of the process from the earliest stage, an Advisory Council is formed representing those key stakeholders. The Council then sets about determining what the scope of the assessment should be with help from facilitators trained in the application of VCA.



An Anolis lizard at Lamberts Beach, the workshop venue. © Deborah Procter/JNCC

Climate variability and change will affect all sectors of society and the relationships between the sectors, producing multiple stresses on each location. The relationships between the different stakeholders and the cross-sectoral responsibilities need to be understood and then 'mapped' to ensure that each agency incorporates the effects of climate change in their planning processes. The Advisory Council has a key role here too, as it can provide the forum through which decision makers can act.

The most important component of the VCA is the social aspect and how people cope with events, in particular their awareness and perception of risk. People can only act now if they understand and appreciate what the risks are to themselves and to future generations.

Deborah Procter
Climate Change Adviser
Tel: +44 (0) 1733 866809
Email: deborah.procter@jncc.gov.uk

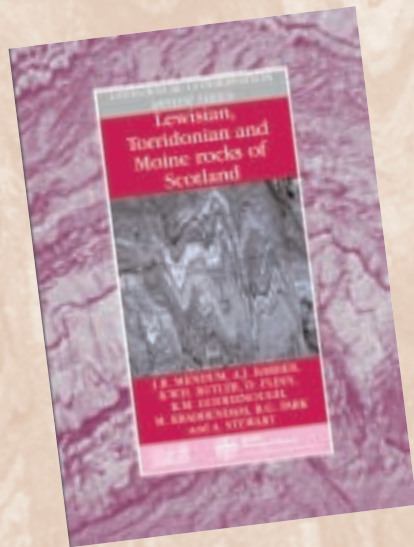
Rock of ages, clefts for all

Lewisian, Torridonian and Moine rocks of Scotland, Volume 34 of the GCR series, hits the shelves

The latest volume of the Geological Conservation Review (GCR) is a definitive account of the Lewisian, Torridonian and Moine rocks of Scotland. It describes some 116 GCR sites, which characterise the diverse and extraordinary scenery of Scotland, from wild mountains to coastal areas, to road cuttings and quarries, and

have proved to be important in unravelling the first 2,700 million years of the geological development of Great Britain.

Despite nearly 200 years of research, however, many geological problems still remain to be resolved, and these rocks continue to be the subject of research.



The volume describes the GCR sites that epitomise the older Lewisian Gneiss Complex, rocks much altered by heat, pressure and deformation, and the later Torridonian and Moine successions which consist of sedimentary and metasedimentary rocks. These rocks crop out across much of the Northern Highlands of Scotland, and in the Outer Hebrides and parts of Shetland, and include the oldest rocks in Britain, which are found on the Isle of Lewis and date back to over 3,000 million years ago.

The wealth of the geological interest found within the sites in the Northern Highlands has been exemplified by the recent recognition (2005) of part of the North-west Highlands as Scotland's first UNESCO-endorsed Geopark, demonstrating the great importance of this region in the development of geotourism.

The study of these rocks has made a great contribution to the understanding of tectonic processes and has been the focus for the development of many geological concepts, including the processes of thrust tectonics and the use of isotopic dating to unravel their complex geological histories.

The sites described in the new book rightly deserve their place in the geological 'hall of fame', and their ongoing research value, necessitating their conservation, will remain for generations to come.

Emma Durham

GCR Information Officer
Tel: +44 (0) 1733 866908
Email: emma.durham@jncc.gov.uk

JR Mendum, AJ Barber, RW Butler, D Flinn, KM Goodenough, M Krabbendam, RG Park and A Stewart. **Lewisian, Torridonian and Moine rocks of Scotland**
ISBN-13: 978 186107 483 6
Price: £76. Available from www.nhbs.com

Handy hints

For information on JNCC's geoconservation work, see www.jncc.gov.uk/earthheritage
To learn more about the Geological Conservation Review, see www.jncc.gov.uk/page-2947
To search for a GCR site on our database go to www.jncc.gov.uk/page-2949 (scroll down to the section 'Navigating the GCR Database' on that page)
To read published GCR site reports on-line, where available, go to www.theGCR.org.uk

New publication

The Odonata Red Data List for Great Britain

It's over 20 years since the last Red List assessment of British dragonflies was made and published in the *Insect Red Data Book* (Shirt, 1987). Since then a lot has happened: dragonfly recording effort has strengthened, the IUCN Red List criteria and categories have been radically overhauled, and the distribution of species has changed. All good reasons to re-assess the dragonfly fauna and produce a new Red List to help determine conservation effort for these lovely insects.

To produce such a comprehensive re-evaluation JNCC worked with the British Dragonfly Society, who analysed data from the recording scheme and used the experience of the Society's Dragonfly Conservation Group to determine the species status of all GB dragonflies.

Copies of *The Odonata Red Data List for Great Britain* are available for £5.00 from NHBS www.nhbs.com. Copies can also be downloaded for free from the JNCC website www.jncc.gov.uk/page-4517



White-faced darter *Leucorrhinia dubia* © Helen Baker

Cambridge and Peterborough Travel Plan Awards

In early October, JNCC joined BAS (British Antarctic Survey) and PECT (Peterborough Environmental City Trust) in being awarded **Step 4** in the TravelChoice and Travel for Work Cambridgeshire Awards.

Travel Plans are a large part of Peterborough's environmental and sustainability plans. They help to reduce congestion and improve the health of local people, by reducing pollution and increasing cycling and walking to work. JNCC's travel plan relates to commuting in the first instance, but with 'travel' identified as a priority area in the JNCC Sustainable Development Action Plan, the initiative also contributes to meeting its business travel targets.

To achieve the **Step 4 Award**, over the last two years JNCC has:

- embedded the Peterborough Office Travel Plan;
- established a salary sacrifice cycle scheme;
- installed two showers and sets of lockers;
- provided full access to local public transport timetables, routes and maps via intranet and details on our reception;
- promoted Peterborough's *Liftshare*, car sharing service and other national initiatives; and
- undertaken a second staff travel survey as part of a wider Travel Audit.



Amanda Gregory and Tracey Quince with the Step 4 Travel Plan Award. © TravelChoice

The travel plan's success has been demonstrated by:

- a 20% reduction in the number of staff commuting by car to the Peterborough Office;
- a 28% increase in the use of video conferencing;
- carbon savings of 29,000kg;
- travel savings of £25,000; and
- an increase in the number of staff working from home.

Future initiatives include a 'Pedometer Challenge', and 'Married to the Motor' (getting people to try a different way to travel to work). JNCC is also planning to join the National Bike Week and National Lift Share Day.

Further details on the Peterborough Office Travel Plan and any of the initiatives can be obtained from:

Amanda Gregory

Environmental Project Manager

Tel: +44 (0) 1733 866886

Email: amanda.gregory@jncc.gov.uk

National Heathland Conference 2008

Managing heathlands in the face of climate change



Site visit to Strensall Common, the largest lowland heathland in Yorkshire, most of it owned and managed by MOD. © Isabel Alonso/Natural England

JNCC's Lowland Heathland Lead Co-ordination Network and Natural England sponsored and organised this successful conference in September.

Around 90 delegates, including conservation practitioners, managers, planners and academics gathered in York to learn about the latest developments in heathland management and science.

The focus was on climate change but also 'multiple drivers'- that is, all the large-scale changes which act together, sometimes in complex ways, to put pressure on heathlands and make the task of managing sites for conservation so challenging. Such drivers include changes in land use, climate, carbon dioxide levels and nitrogen pollution.

Delegates reported that the conference was excellent. The presentations included the latest science as well as useful case-studies. They are available on-line:

www.keystone-group.co.uk/heathlands/presentations.php

Vicky Morgan

Senior Habitat Adviser

Tel: +44 (0) 1733 866830

Email: vicky.morgan@jncc.gov.uk

Conservation Conversation

Professor Lynda Warren, is Deputy Chair and an independent Joint Committee member, currently a Commissioner on the Royal Commission on Environmental Pollution, on the Committee on Radioactive Waste Management and previously an Environment Agency Board Member. She is Emeritus Professor of Environmental Law at Aberystwyth University and a Fellow of the Institute of Biology.



Q Species that inspired you as a child?

A Worms – my mother loathed them which made them even more interesting to me. So much so that I finished up doing my PhD on them. Birds – we lived in south London and one of my treats was to go for walks with my dad and look at the wildlife. He bought me Ladybird Books on birds which I still have. My first husband was a bird watching fanatic so maybe that says something about me too. Fossil ferns – we found one in a piece of coal once when I was a child and it fascinated me. My second husband is a palaeobotanist specialising in Carboniferous pteridophytes – pre-destiny?

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

A We are more and more concerned about the impacts of climate change on humans and because of this nature conservation will suffer. Too many people are failing to recognise that without the natural world there is no world for humans.

Q What would you do with a £1 million grant for nature conservation?

A I can't think of anything better than to spend it on land purchase. Ownership is still the best protection you can get.

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

A If only I was saving the world! My favourite activities are reading, going to the cinema and sleeping.

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

A Getting to grips with how we look at nature conservation from a UK perspective when we have devolved administrations. Also, continuing with the good progress we are making with marine nature conservation and ensuring that any new legislation is underpinned by policy that recognises the fundamental importance of conserving our marine resources.

Q What is your favourite place?

A Ross Island, Antarctica. I spent a wonderful time there working at Scott Base with the New Zealanders. In this country, it would be impossible to choose between the Langdale Pikes in the Lake District and the Dale Peninsula in Pembrokeshire – both places I visited on field courses in the sixth form at a time when I had hardly travelled outside south-east England. Glorious, atmospheric scenery and wonderful wildlife.

Q Who is your human hero in the natural world?

A An unsung one. Chris Tydeman, former Chief Scientist with WWF-UK and now chairman of the Herpetological Conservation Trust. His knowledge and enthusiasm for nature conversation inspired me and made me change direction from physiology and cell biology to ecology and conservation.

Q What's your pet hate in nature conservation?

A Laws and policies that treat nature conservation as just one more sectoral

interest that needs to be balanced against all the other sectoral interests. We should put the protection of biodiversity first but we never do. If you haven't got natural resources you don't have anything else.

Q Desert Island disc?

A An impossible choice between Bob Dylan's *Forever Young* – because he's been part of my life since I first went to see him in concert in 1964 – and Bach's *Violin Concerto for 2 violins in D minor* – because it takes my breath away.

Q Place you'd most like to visit?

A When I was doing my PhD on polychaete worms, I found some specimens in the Natural History Museum that had been collected from Tierra del Fuego. They were enormous and I've wanted to go see the place they were found ever since. I would also love to see the Aurora Borealis but, so far, trips to the north have failed to deliver.

Q When I'm reincarnated, I'm coming back as.....?

A I'm sorry, I know it's not very environmentally sound, but it would have to be a domestic moggy – all that sleep in the lap of luxury would be bliss.

Due to a technical issue at our typesetters, last issue's *Conservation Conversation* contained several answers which were not those given by our subject. We are therefore reproducing the corrected article in full in this edition.

Conservation Conversation

In this issue we focus on John Goold, JNCC's Director of Marine, based in the Aberdeen office.



Q What species inspired you as a child?

A Deep Sea Squid – I was always amazed by the bioluminescence. Working with sperm whales, who hunt using sonar and use the bioluminescence to locate the squid that form a large part of their diet, has bought me full circle again!

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

A The pressure imposed by a seemingly inexorable rise in global human population, the pre-eminence of “growth” as a human and economic driver and the consequential over-exploitation of the natural world and natural resources to feed that demand. We have seen what happens when the banking bubble bursts; we need to achieve some stabilisation before the ecological bubble goes the same way.

Q What would you do with a £1 million grant for nature conservation?

A Establish a marine sanctuary area and buy out the users to allow at least part of the ecosystem to recover. I doubt that £1 million would be enough though...

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

A Take as many long walks as I can with my wife and our new Siberian Husky pup.

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

A There is a rapidly increasing focus on the sea to provide resources and to support human activity, be that food, energy, transport or recreation. I would like us to achieve the goal of developing the

offshore zone in a manner that can sustainably co-exist with the natural world, rather than constantly having a detrimental impact upon it.

Q What is your favourite place?

A The Outer Hebrides. Untainted and beautiful, my wife and I go every year for the seclusion and feeling of past eras.

Q Who is your human hero in the natural world?

A David Attenborough – he has done so much over so many decades to inspire people.

Q What's your pet hate in nature conservation?

A Over regulation and a general lack of common sense.

Q Desert Island disc?

A Lou Reed - *Perfect Day*, well it would be on a desert island!

Q Place you'd most like to visit?

A The Valdes Peninsula, a UNESCO-World Heritage Site and home to a profusion of marine life as well as huge diversity of birdlife, and then on down to Antarctica – the great expanse of wilderness and a mostly untouched habitat.

Q When I'm reincarnated, I'm coming back as.....?

A Definitely not a hedgehog – they're the loveliest of animals but they're under threat and persecution from all quarters – not a good bet for reincarnation. So I would come back as a snow leopard to find peace up in the high mountains and live in awe of the breathtaking scenery.



One of John's favourite places is Claddach Vallay in The Outer Hebrides. © John Goold