NEWSLETTER 111

June 2009

SEABIRD GROUP CONFERENCE

10TH INTERNATIONAL SEABIRD GROUP CONFERENCE, BRUGGE, BELGIUM. 27-30 MARCH 2009

The imposing, neogothic Provincial Palace of West-Flanders dominates the Markt, or market square of Brugge (Bruges), and as people gathered in the foyer on a blustery Friday afternoon, it became clear from the list of participants how truly international Seabird Group conferences have become, the 102 delegates coming from 17 countries: UK (35), The Netherlands (11), Belgium (9), Germany (7), Norway (7), Australia (6), France (6), Denmark (4), Italy (3), USA (3), Greece (2), Ireland (2), Canada (1), Greenland (1), Iceland (1), Portugal (1) and Spain (1).

The conference was organised locally by Eric Stienen, Wouter Courtens and Marc van de Walle of the Research Institute for Nature and Forest (INBO), and by Jan Seys and Ingrid Dobbelaere of the Flanders Marine Institute (VLIZ), and opened by Eric Stienen, who welcomed everybody to the historic city and Dr Jurgen Tack.

Chris Perrins (EGI, Oxford) then delivered an entertaining and thoughtful speech on the history of the Seabird Group, after which a minority of delegates attended the AGM (see minutes on page 22) in a side room while the majority got stuck into the Icebreaker Reception, which lasted late into the evening.

Chris Perrins (Jan Seys)

The first session on Saturday morning (theme - **Breeding Ecology**) consisted of four very diverse talks. Yuri Albores-Barajas compared the breeding ecology of European Storm-petrels at a cave colony on Marettimo Island, Sicily in 2007 and 2008, finding variation in body condition and breeding success in different parts of the cave within and between years. We then moved to the intensively studied Common Tern colonies at Wilhelmshaven, where Alexander Braasch had manipulated hatching sequences of eggs to investigate whether chicks benefited from the combination of an increased level of maternally deposited testosterone across the laying sequence, and being first to hatch, but found no clear effect of laying position on chick growth or testosterone levels.

CONTENTS Page

From the Isle of May, Kate Ashbrook described the complex trade-offs faced by colonially breeding Common Guillemots when food is scarce and/or of low quality. High density breeding has social benefits and offers protection against predators, but if both parents have to forage at the same time their unattended chick is more likely to be attacked (and killed) by conspecific neighbours with chicks in higher than in lower density areas. Tycho Anker-Nilssen then explained how a very different problem faces Black-legged Kittiwakes on the Norwegian archipelago of Røst, where numbers and breeding success of those nesting on cliffs declined following a 'drastic' increase in summering non-breeding White-tailed Eagles; in contrast, Kittiwake numbers increased and breeding success was maintained at a small colony on buildings, which was not visited by the eagles. Fittingly, the status of White-tailed Eagle was downgraded to Least Concern in 2006, while Black-legged Kittiwake is now on the Norwegian Red List!

After coffee, the rest of the day was devoted to three sessions on the theme of **Feeding Ecology, Energetics and Conservation**. Clive McMahon described how laying dates of highly synchronous breeding Royal Penguins on Marion Island were linked to the Southern Oscillation Index (SOI), with lower oceanic productivity and later laying when the SOI is high, and median laying date having advanced by 3.5 days over 34 years. Eric Stienen then told a complex story of Sandwich Tern chick diet, kleptoparasitism by Black-headed Gulls, and parental foraging effort, contrasting the situation at colonies in the Dutch Wadden Sea and Belgium. In the first talk involving the deployment of geolocators, Emmeline Pettex investigated whether food resources were the cause of differing population trends at gannet colonies in the Norwegian and Barents Seas, by plotting foraging ranges and trip durations and concluding that prey availability was not currently limiting Norwegian gannet populations. In warmer waters, Vitor Paiva used GPS-loggers to study the flight dynamics and foraging areas of Cory's Shearwaters in the eastern Atlantic in relation to prevailing winds, bathymetry, areas of upwelling and productivity, demonstrating the plasticity of different populations of the same species to environmental variability.

Following a hearty lunch, Juliane Riechert took us back to the Wilhelmshaven Common Terns, investigating whether prolactin and corticosternone levels influenced hatching success. In an ingenious use of dummy eggs with holes just large enough to allow blood-sucking bugs inside to feed off incubating adult terns, she found a positive relationship between hormone levels and hatching success, but no effect of the birds' age. Fisheries worldwide produce over 7 million tonnes of waste at sea each year, and while seabirds may utilise this, it is not necessarily as energy rich as natural prey. David Gremillet described how an eastward shift in sardine stocks has meant that Cape Gannet colonies off the Western Cape of South Africa are now 'in the wrong place', and while non-breeding Gannets can survive by complementing their diet with trawler waste, breeders struggle to rear chicks on such junk-food. Steve Votier continued this theme with a study of Northern Gannet diet and foraging strategies in the Irish Sea using a combination of geolocators, data from the fisheries Vessel Monitoring System, and stable isotopes, finding that Gannets adjusted their search behaviour in response to fishing boats, but that there was a weak negative correlation between the percentage of discards in the diet and body mass index. Also using stable isotopes, Orea Anderson discovered that Brown Skuas at Bird Island, South Georgia feeding on fur seal carrion and placentas bred earlier than those feeding on small petrels, while also finding that skuas feed on seal faeces, and that there was a correlation in diet specialisation between pair members.

Conference delegates (Jan Seys)

The afternoon coffee break was extended into a Poster Session, with 30 presentations on display in a room on the ground floor. These were of high quality, both in content and production, although only about half the authors provided a pack of A4 version of their poster – something to remember in future. Prizes were to be given for the best posters, with a judging panel comprising Rob Barrett, Steve Newton and Sarah Wanless.

The final session of the day kicked off with Jérôme Fort who described his bioenergetic model which integrated physiology and behaviour to assess metabolism of Little Auks and Brunnich's Guillemots, two species with a similar wintering area but different foraging strategies. He found that both species experience a strong and sudden increase in energy expenditure between November and December, which could explain the timing of winter wrecks, and how there was potential to improve the model using data from GLS and Time Depth Recorders, along with environmental conditions and to scale up to population and community levels. Maggie Watson described her meta analysis to assess costs of parasites in wild populations, such as their effects on body size, body mass and number of young produced – and ended with a plea to carry out parasite work on seabirds. The final talk of the day was presented by Jan van Franeker on marine litter and how to assess whether measures to reduce marine litter were effective. He described how monitoring of the mass of plastics in fulmar stomachs is being used as one of the Ecological Quality Objectives for the North Sea area.

At 7pm, the culturally inclined gathered back at the Provincial Palace for an hour-long guided walk around the medieval centre of Bruges in the fading light. We split into three groups, and while I found the tour fascinating, it was telling that as 1000 years of history was explained to us in the Burg Square, a couple of passing Peregrines caught most people's attention! Dinner was in the Brewery De Halve Maan (The Half Moon), established in 1546 and the last active brewery in the city. After some free beer and cheese, we got a guided tour before tucking into an excellent meal, during which winners of the Best Poster Competition were announced by Rob Barrett in a hilarious speech undoubtedly inspired by more free glasses of Brugse Zot. Chris Thaxter won the award for the best overall poster, while Renata Medeiros won the award for best student poster. Before the dessert course, the brewery staff took us downstairs again where we all had to participate in a range of traditional Belgian pub games – great fun, and interesting that some of those who track individual seabirds around the globe can be rubbish at skittles!

The Sunday morning sessions (theme – **Distribution and Migration**) began with Ewan Wakefield describing spatial use and habitat preferences of Black-browed Albatrosses through a combination of satellite tracking data from nine Subantarctic colonies, remotely sensed oceanographic data, and modelling techniques, and how an ability to predict distribution at sea can help the future conservation of the species. Carsten Evegang then presented the first results from fitting geolocators to Arctic Terns breeding in northeast Greenland, describing the timings and route of their migration south to Antarctic waters and back north in spring through the length of the Atlantic Ocean. We then learned from Pep Arcos of the Spanish results of a combined SEO (BirdLife International in Spain) and SPEA (in Portugal) project to use survey and tracking data to identify Important Bird Areas at sea in Iberian waters. We then moved to the southeastern North Sea, with Nele Markones describing how General Additive Models could be applied to survey data on seabird distribution and hydrographic parameters to predict distributions of the most abundant species.

The theme continued after coffee, as Martin Poot presented the results of surveys of wintering Red-throated Divers in the Voordelta coastal zone of southwest Netherlands, showing that fine-scale distribution in such shallow waters is largely governed by the influences of water depth, tidal state and wind direction on turbidity. On a larger scale and in clearer waters, Nils Guse gave the results of two summers of ship-based observations of seabirds in the Gulf of St Lawrence, relating their distribution to factors such as hydrography, distance from land, and the presence of cetaceans, and for Northern Gannet comparing ship-based distributions with those derived from geolocators. In the next talk, Morten Frederiksen attempted to relate observed seabird distribution off west Greenland in spring

to static (depth, distance to colony) and dynamic (ice cover, primary productivity, zooplankton biomass) environmental factors, but suspected that snapshot measurements of the dynamic factors could not predict food availability at the relevant spatial scale. In the final talk of the session, Tony Bicknell concluded that molecular markers suggested that there was likely to be gene flow between Leach's Storm-petrel colonies on St Kilda and those in Newfoundland and Iceland, while evidence from stable isotopes suggested that non-breeders from Newfoundland and St Kilda fed at different trophic levels and probably do not cross the Atlantic in a given summer.

Norman Ratcliffe (Jan Seys)

During the conference raffle, prizes had been on display at the registration desk, and the draw took place before lunch. Star prize of a four-day cetacean and seabird watching cruise across the Bay of Biscay, donated by holiday firm Company of Whales, was chosen by Sarah Wanless, while holders of other lucky numbers chose from a fine section of readable, drinkable, edible, wearable and squashable prizes. Just over £500 was raised and many thanks to those who donated prizes: Rob Barrett, Mark Bolton, John Chardine, Jan van Franeker, Hugh Harrop, Martin Heubeck, JNCC Aberdeen, Mardik Leopold and Norman Ratcliffe.

The afternoon theme was **Population Ecology**, and Norman Ratcliffe began by using models on capture-mark-resighting data from the three main Roseate Tern colonies in northwest Europe to estimate age-specific survival, and rates of return and movement. Most of the population trend in the past 30 years can be explained by the loss of one colony (Tern Island, Wexford) through erosion, and variation in sardine stocks in the Ghanaian wintering grounds. Erpur Hansen then talked about Atlantic Puffin and sandeel population dynamics in the Westman Islands, Iceland, where in recent years a lack of sandeels has led to delayed breeding, late fledging, and low fledging weights of Puffins. In the next presentation, David Monticelli compared juvenile and adult survival of Roseate Terns at temperate and tropical colonies, finding no difference, but that fledging success and juvenile survival at Aride (Seychelles) was depressed by tick infestation encouraged by invasive vegetation – with obvious management implications. Joel Durant then took us to the Crozet Islands, where variation in cohort survival of juvenile King Penguins (assessed by automatic ID transponders) may reflect variation in environmental conditions, and where modelling allows investigating the effect of such conditions on recruitment and age of first breeding.

The final session began with Freydis Vigfusdottir investigating links between high inter-annual variation in over 60 years of hunting records of Puffins in the Westman Islands (which mainly targets 2-4 year old birds) and oceanographic variation (the Sub-polar gyre index), finding time-lagged correlations between the index, sea surface temperatures, colony attendance of immature Puffins, and fledging weights, presumably operating through the food chain. James Grecian then described a modelling study of intra- and inter-specific competition for food, factoring in colony location, size, species composition and foraging ranges, as well as remotely sensed features such as sea surface temperatures, primary production, and fisheries pressure. European Shags are diurnal feeders that store little reserve energy as body fat, and Francis Daunt outlined the development of foraging in Isle of May juveniles (using activity loggers), which is constrained by day length around the winter solstice, leaving birds vulnerable to environmental conditions in January and February, when juvenile mortality is highest. We returned to the Wilhelmshaven Common Terns for the final talk of the conference, in which Christina Bauch introduced us to telomeres, nucleoprotein structures on chromosomes that protect their integrity, but shorten with age and with various stress factors. Using blood sampled from adults of known age and reproductive history by the 'dummy egg bugs', first results indicated no correlation

between telomere length and survival, but that 'short' birds arrive at the colony earlier and lay earlier, and that the female passes on a predisposition to absolute length, which may indicate a genetic effect on the breeding performance of offspring.

In closing the conference, Chairman Norman Ratcliffe thanked the Scientific Committee for putting together a fascinating programme, the Organising Committee for running a seamless and convivial weekend, and the speakers and poster presenters for the quality of their talks and displays.

Martin Heubeck, Linda Wilson & Norman Ratcliffe (contact details can all be found on the back of the newsletter)

More photos and abstracts available online: http://www.seabirdgroup.org.uk/ and http://www.vliz.be/events/seabirdconference2009/

CONSERVATION NEWS

NEW UK MARINE BODY

The **Marine Management Organisation** (MMO) is a new Non Departmental Public Body which is being set up through the Marine and Coastal Access Bill and will be the UK Government's strategic delivery body for the marine area. To provide details on what the MMO will do, how it will work with other bodies, and its organisational structure and governance, we have produced the publication '**Managing Marine Resources: The Marine Management Organisation**'

A pdf of the document is now available at: http://www.defra.gov.uk/marine/pdf/legislation/mmo-brochure.pdf

A limited number of hard copies of this publication are available by contacting Ruth Alban at Ruth.Alban@defra.gsi.gov.uk

SEABIRDS IN THE RED

Four species of seabird are new entries on the UK Red List of Birds of Conservation Concern 3 (BoCC3). This list (compiled by RSPB with a number of partners, including the Seabird Group) recognises those species that are most at threat owing to population declines. Species qualify for red listing if their breeding or wintering numbers declined by more than 50% in the last 25 years or historically, or if they occur here regularly and are recognised as globally threatened by Birdlife International.

Those of us with a long experience of birding in the Northern Isles will find it no surprise to read that Arctic Skuas are now on the red list. They have declined so rapidly they have gone straight from the green list of lowest concern to the red list. The cause of the decline is the successive years of poor sandeel availability in the Northern Isles, which has resulted in widespread breeding failures and reduced adult survival. The lack of sandeels is likely to be due to changes in oceanography such as sea surface temperatures and currents. Arctic Skua was a rare and restricted range breeder even prior to these declines, and so its claw-hold in the north of Britain is now looking extremely perilous.

Herring Gulls have experienced a much more leisurely entry into the red list than Arctic Skuas. The vast majority of the decline in their breeding numbers occurred during a crash the 1970s, and they have declined at a very slow rate since. As a consequence they have hovered just above the 50% threshold level during the previous two BoCC revisions, and a small decline since then has tipped them onto the red list. The cause of the decline in numbers is unclear, but botulism poisoning on rubbish tips and a reduction in opportunities for scavenging owing to changes in fishery and household waste management are likely to have contributed. Given Herring Gulls are still a common breeding bird in the UK, the fact their numbers were artificially inflated by poor waste management prior to the 1970s and their potential to compete with terns for nesting habitat, this is a decline conservationists might wish to avoid reversing.

Numbers of wintering Scaup have declined such that they have qualified for red listing too, but this may not indicate a problem with European

populations. The stronghold for wintering Scaup is in the Baltic and Kattegat, and these only move to the UK when these areas freeze over during hard winters. The milder winters Europe has experienced in the last decade mean this happens less often, with the result Scaup have not needed to migrate to Britain such that numbers have declined.

Balearic Shearwaters have been recognised as a full species by the BOU since the last BoCC revision, and so were considered for the first time during BoCC 3. Its global threat status of Critically Endangered, owing to declines in the breeding numbers on the Balearic Islands, instantly propelled it onto the red list. It has the odd distinction of being a new inclusion on the red list even though numbers in the UK are increasing. Balearic Shearwaters leave the Mediterranean after breeding and used to spend late summer in the Bay of Biscay to feed on pilchards along frontal systems. Increasing sea temperatures have lead to the frontal systems disappearing and the pilchard stocks collapsing. Hence, Balearic Shearwaters had to seek feeding opportunities further north, and they now occur in Britain in growing numbers.

Looking forward to BoCC 4 five years hence, it is likely that further seabird species will have the dubious honour of being red listed. The most likely candidate for future red listing is Arctic Tern, which, like the Arctic Skua, have suffered a series of breeding failures owing to sandeel shortages such that they are already on the Amber list for population decline between the 1980s and 2000. Indeed, they have probably have only avoided red listing in BoCC 3 due to extensive non-breeding in the Northern Isles since 2000, meaning that virtually no breeding birds were available to count! Kittiwakes will also make it onto the red list in the future revisions too should current trends continue, which seems probable given their low breeding performance in recent years.

For full details of BoCC 3 read the paper in British Birds, which is free to download at:
http://www.britishbirds.co.uk/BoCC3final.pdf

Norman Ratcliffe

DECLINE IN SCOTLAND'S SEABIRDS

A new report by Scottish Natural Heritage (SNH) reveals that Scotland's seabird numbers fell by 19% between 2000 and 2008.

The major cause of these declines is almost certainly a shortage of food due to a drop in the number of small fish, such as sandeels. These fish are likely being affected by rising sea temperatures because of climate change. Lower fish numbers lead to lower numbers of adult birds surviving from one year to the next, and not enough chicks being produced and surviving to replace them.

Black-legged Kittiwake feeding chick.
(Genevieve Leaper. rspb-images.com)

A range of measures has already been put in place to help address pressures on the seabirds. Voluntary reduction in sandeel fisheries means that very little if any sandeel fishing now takes place within foraging ranges of seabirds especially kittiwakes, a species which saw a particularly sharp drop in numbers. .Intensive trapping of predators, such as the brown rat and the non-native American mink, is also being carried out in various parts of the Scottish coastline and islands. This is to reduce the extent to which these species take seabird eggs and chicks.

Importantly, the Scottish Government's Marine Bill, launched this spring, includes measures to improve marine nature conservation to safeguard and protect Scotland's unique marine species and habitats.

Scotland is home to around four million breeding seabirds of 24 species. The recent drop in numbers follows two decades of occasional years of poor breeding - but poor years have

happened more often and with more severity since 2000. These figures represent a 'turning of the tide' for Scotland's seabirds, which had increased in number from the late 1960s until the end of the 1990s.

Recent declines are greater in species that feed on shoals of small fish, such as lesser sandeels: for instance, there are now 55% fewer Black-legged Kittiwake and 71% fewer Arctic Skuas breeding in Scotland than in the mid 1980s. Arctic Terns declined by 26% over the same period.

There are some winners, however. Great Skuas, which have a varied diet - from other seabirds to scavenging fishery waste at sea - have increased dramatically since the mid 1980s, and Razorbills increased by 47% over the same period.

Declines have been greater in areas such as the Northern Isles and down the east coast. This is largely because sandeels have declined and there are fewer alternative prey. In comparison, seabirds along the west coast of Scotland and further south in the Irish Sea rely less on sandeels and take more sprat and herring. These areas have not suffered the same declines of sandeels as seen in the North Sea.

On the island of Canna, the eradication of rats in 2005/6 has resulted in an increase of shag and puffin numbers after several years of decline.

A concurrent report by the Joint Nature Conservation Committee (JNCC), revealed a UK-wide decline of 9% since 2000.

The Scottish Seabird Indicator is part of a suite of biodiversity indicators, which are used to assess the state of Scotland's biodiversity: http://www.snh.org.uk/trends/trends_notes/pdf/B377378.pdfSF

UK Seabirds in 2008 is a booklet summarising the results of the UK Seabird Monitoring Programme (SMP). A copy has been sent out by post/electronically with this copy of the newsletter. It is also available to download as a PDF at: www.jncc.gov.uk/page-4555.

Adapted from: www.snh.org.uk

BERMUDA PETREL TRANSLOCATION SUCCESS

The first Bermuda Petrel *Pterodroma cahow* chick to be born on Nonsuch Island, Bermuda, for almost 400 years, has recently hatched, the result of a successful translocation programme.

Bermuda Petrel (also known as the Cahow) once numbered in the tens of thousands before the island's discovery by the Spanish in the early 1500s. The Cahow changed Bermuda's history, as the ghostly sounds made at night by the island's huge Cahow population so frightened the superstitious Spanish sailors that they thought Bermuda was inhabited by devils and never settled there. However, although they didn't settle, they left pigs on the island as food for shipwrecked sailors.

Over the next hundred years, the pigs destroyed almost 90% of the Cahow population, rooting up the bird's nest burrows and eating eggs, chicks and adult birds. By the time the English settled Bermuda in 1609, the Cahows only survived on remote islands. Due to predation by rats, cats and dogs brought to Bermuda by the early settlers, and hunting by the settlers themselves, the remaining Cahows disappeared very quickly, and were thought to be extinct by the 1620s. No Cahows was seen between 1620 and 1951, when a few breeding pairs were discovered nesting on some of the smallest and most remote rocky islands.

After removing all the rats from Nonsuch Island, 105 Cahow chicks were moved there between 2004 and 2008 in the hope of establishing a new predator-free breeding population. In 2008, the first of these now fully-grown Cahows returned to nest burrows on Nonsuch. Four Cahows, identified by their tags as leaving from Nonsuch in 2005, were recaptured 'prospecting' new nests and now a pair has successfully bred.

Adapted from
http://www.birdlife.org/news/news/2009/05/cahow_chick.html

US FISHERIES TO PROTECT ARCTIC REGIONS AND ALBATROSSES

Audubon Alaska, the state office of the National Audubon Society (BirdLife in the US), has welcomed the decision of the North Pacific Fishery Management Council (NPFMC) to prevent the expansion of industrial fishing into all US waters north of the Bering Strait for the foreseeable future. The NPFMC has acted to limit pressure on ocean ecosystems, already under stress from global warming.

With no large-scale commercial fishing in the US Arctic at present, this decision establishes one of the most far-reaching precautionary measures in fisheries management history. Audubon was part of a consortium of groups, including Oceana, Ocean Conservancy, the Pew Environment Group, local Arctic communities and fishermen, which lobbied for this result.

The groups were concerned about the impact of commercial fishing on seabirds and other Arctic wildlife due to incidental take, reduced prey availability, and habitat disturbance. Of particular concern are activities such as bottom trawling, and its potential disruption of prey species of bottom-feeding seabirds such as Spectacled Eider *Somateria fischeri.*

Twenty-three Important Bird Areas (IBAs) are located along the Alaskan Arctic Ocean coast, plus six more on the Russian side. Eight of these are of global or continental significance. Among these is Ledyard Bay, a globally significant IBA extending 30-40 miles seaward in the Chukchi Sea. This IBA is a Critical Habitat Area for Spectacled Eiders, which are listed under the US Endangered Species Act. About 33,000 Spectacled Eiders and 500,000 King Eiders *Somateria spectabilis* feed on molluscs and other bottom-living prey species in the shallow waters of the Bay.

From April into November, nearly all of the breeding King Eiders from the US and Canada, plus many Russian breeding King Eiders, migrate through, stage, and forage in the eastern Chukchi Sea. Other species which use the Chukchi Sea include Vulnerable Steller's Eider *Polysticta stelleri* and Critically Endangered Kittlitz's Murrelet *Brachyramphus brevirostris.*

Meanwhile on the West Coast of the USA, where bycatch of Endangered Black-footed Albatross *Phoebastria nigripes* in the sablefish fishery is a primary concern, fishermen are voluntarily taking measures to stop the accidental killing of seabirds by longline fishing boats. The Fishing Vessel Owners' Association (FVOA), which represents longlining captains in the halibut and sablefish fisheries along the US West Coast, has instructed its members to use streamer (tori) lines in Washington, Oregon, and Californian waters. Measures to prevent bycatch are already required by fleets operating in Alaska, where albatross deaths have been reduced by up to 80% thanks to the use of bird-scaring streamer lines.

Adapted from
http://www.birdlife.org/news/news/2009/03/alaskan_fisheries_protected.html

FISHERIES AND SEABIRD INTERACTIONS

BirdLife's Global Seabird Programme is currently working to curb the destructive effect of fisheries on albratrosses and petrels through supporting a series of satellite-tracking projects. Data from these projects will demonstrate how longline fisheries and seabird populations overlap spatially. Such information will be crucial for Regional Fisheries Management Organisations (RFMOs) who will then be better placed to implement mitigation measures.

In total, three albatross and five petrel species in the southern Indian and Atlantic Oceans will be tracked over the next two years. The species include Spectacled Petrel *Procellaria conspicillata* (Vulnerable), Sooty Albatross *Phoebetria fusca* and Indian Yellow-nosed Albatross *Thalassarche carteri* (both Endangered). The first birds - Grey Petrel Procellaria cinerea (Near Threatened) - are currently being tagged on Marion Island, part of South Africa's Cape of Good Hope Province in the southern Indian Ocean.

Adapted from
http://www.birdlife.org/news/news/2009/05/seabird_tracking.html

RESEARCH NEWS

OBIS-SEAMAP- A SPATIALLY AND TEMPORALLY INTERACTIVE MARINE MEGAVERTABGRATES ARCHIVE

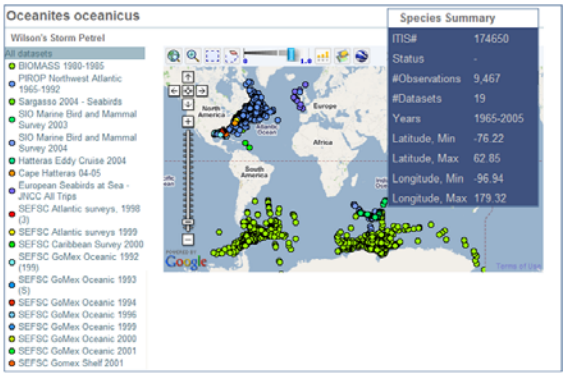
The need for the conservation of marine megavertebrates is increasing due to the on-going and long-term negative effects of direct harvests/kills, indirect fisheries catch, and habitat alteration and degradation by humans. A detailed understanding of the spatial and temporal patterns of species distribution and diversity is critical for quantifying populations, the significance of adverse events, and the potential for mitigation. Resources may be limited for researchers to gather enough information over long periods of time, across large regions, and on multiple species to fully assess conservation requirements. Therefore, a world data commons where multiple datasets are available can facilitate this fundamental need.

As part of the Census of Marine Life initiative, Duke University is leading an ambitious multi-year effort (2002 - present) along with several partners/collaborators to create a digital database of seabird, marine mammal, and sea turtle data for the Ocean Biogeographic Information System – Spatial Ecological Analysis of Megavertebrate Populations (OBIS-SEAMAP) project (Halpin *et al.* 2009). The project's objective is to compile any existing geo-referenced data that can be used to better understand the spatial and temporal patterns of species distribution and diversity in the global ocean, such as at-sea surveys, land-based counts, satellite telemetry data from tagged animals, and stranding data. These high quality data are standardized with a minimum of taxon name, latitude/longitude position, and date/time of observation and are publicly available on a web-based system (http://seamap.env.duke.edu/). The website interface is intended for educators, students, and researchers and provides maps for each dataset, a variety of supplemental products (i.e., species profiles and photos), and tabular data summaries. The OBIS-SEAMAP website also provides metadata for all datasets, including information on the data providers and collectors, description of techniques used to gather the data, survey effort details (when available), and methods to process the data for analysis. In addition, enhanced capabilities are available like the interactive display within the customized OBIS-SEAMAP mapping program, various options for queries, and tools for spatial and temporal analysis of multiple datasets at a time.

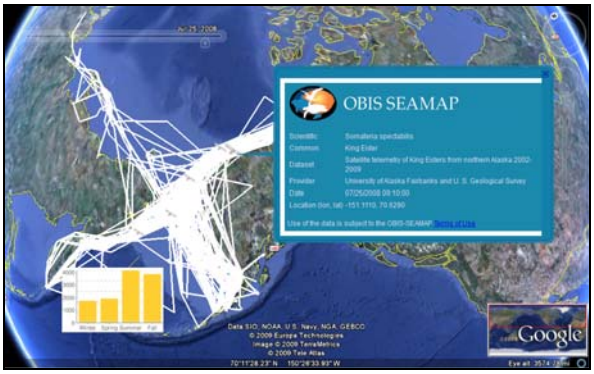
Currently, the OBIS-SEAMAP database hosts over 2.2 million records with over 240 datasets from individuals, government agencies, non-profit organizations, and academic institutions. A majority of data available on the OBIS-SEAMAP website are on seabirds (~2 million records), with more than 70 datasets registering records for 475 different bird taxa. The major contributor has been the Joint Nature Conservation Committee's dataset from the European Seabirds at Sea database with data spanning over two decades.

In order to utilize any dataset, all users must first agree to the OBIS-SEAMAP terms of use where it is required to contact the data provider(s) before using data in any publication or product since the original data provider(s) retain ownership. After agreement, public users can access metadata, maps, and downloadable files associated with the dataset. The online map interface provides the capability of viewing data at multiple resolutions (1 degree cells - 0.01 degree cells) and summarizing data within a user-defined region of interest. An interactive time series graph can be used to summarize data over different time scales (i.e., years, seasons, months, etc.) and for defining a time range of interest for viewing the data. Individual species sighted within one dataset can be selected and records from other datasets on OBIS-SEAMAP

can be easily extracted for cross-dataset comparisons.

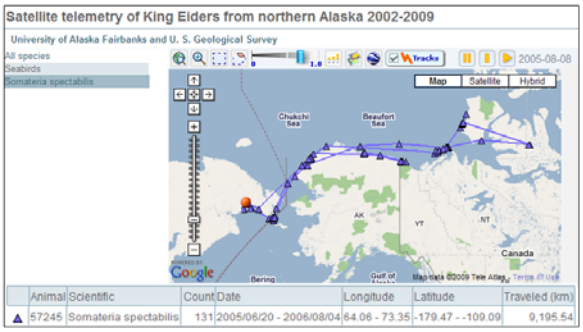


Furthermore, observation points can be used to sample concurrent environmental data such as sea surface temperature when available All available data for a dataset or species, or a subset of data that meets the user's interest criteria, can be downloaded as various formats (i.e., kml, shp, csv) along with Federal Geographic Data Committee (FGDC) compliant metadata. These formats provide greater usability within other software platforms, such as Google Earth, ESRI ArcGIS, or Excel.



Data collected from shore surveys and satellite telemetry have specialized options within the OBIS-SEAMAP interface beyond those available for viewing traditional aerial and shipboard survey sightings. The OBIS-SEAMAP project currently has over 2,700 records for nesting seabird colonies from shore based surveys in which the locations of the nesting seabird colonies are mapped as individual points and the species and site names are listed. Users can select a single site location to highlight the species within the larger list of species recorded for the whole dataset for quick access on species abundances for a specific colony. Alternatively, a single or group of species can be selected on the list to highlight all of the sites that observed those that were selected.

For satellite telemetry data, users have the added capability of selecting an individually tagged animal within the full dataset and viewing an animation on the map that tracks its path through time and space based on recorded locations.



The OBIS-SEAMAP project has recently expanded to include a geo-referenced bibliography, model outputs on species density and habitat preference, sea turtle nesting sites, and marine mammal photo-identification management. By collaborating with partners to develop these unique megavertebrate data analysis tools, spatial and temporal data were incorporated to take advantage of value-added services within OBIS-SEAMAP. Other features in development are the integration of bioacoustics data, the overlay and animation of multiple oceanographic layers, and filtering tools for ARGOS telemetry data.

It is essential that we continue to collate data already collected in the field on marine megavertebrates and to make them known to the public in a centralized repository such as the OBIS-SEAMAP website. A more complete inventory supporting a better representation of available distribution data on these taxa may facilitate prioritization of data dissemination, direct future investments to fill in spatial and temporal gaps, as well as provide guidance on conservation issues regarding these species. Participation from the seabird, sea turtle, and marine mammal research community is important not only for the advancement of the OBIS-SEAMAP project but for the public community it serves. We look forward to partnering with you and welcome your data contributions, inquiries, comments, and suggestions.

For more information on OBIS-SEAMAP, please visit: http://seamap.env.duke.edu/

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2008 BREEDING SEASON NEWS

SKOMER ISLAND

The 2008 season on the whole was below average with some species having low breeding success including Razorbill, Guillemot, Fulmar and Lesser-black Backed Gull.

Puffin

The maximum spring count of 10, 487 was down 11.2 % down on the 2007 figure which was the highest ever recorded. Given the census difficulties (and erratic nature of spring attendances), it would seem that the Puffin population on Skomer is fairly stable. Puffins seemed to have had no problem in finding plenty of Sandeels and Sprats, only one Snake Pipe-fish was seen being carried down a burrow. Productivity was a bit on the low side at 0.63.

Puffin on Skomer Island (Jo Millbrow)

Razorbill

The whole island mean total of 4973 individuals was a 2.6% increase on 2007. Despite the difficulty in accurately censusing Razorbills (many nest in enclosed sites which are not visible), there seems to have been a general increase in numbers, with over 4000 counted every year since 2001, before which the species never broke the 4000 mark. The largest ever population within study plots was recorded with a 15.4% increase on 2007 figures. The mean productivity was just 0.17 and this is the lowest recorded since monitoring began in 1993.

Guillemot

A mean total of 17,088 birds were counted, a 2.6% decrease on 2007, although study plots showed the second highest population since monitoring began. The mean productivity was 0.59 and this is the second lowest on record since 1989.

Fulmar

A mean total of 565 AOS were counted, which is 7.5% down on 2007 and is the lowest since 1987. The breeding success of 0.26 per AOS is a decrease on 2007 and the second lowest on record.

Kittiwake

A mean of 2282 AON's were counted, a 17.5% increase on 2007 figures. The mean productivity of 0.55 is a large improvement on 2007 results. Big swells washed nests and chicks off lower ledges at the end of June, with predation of chicks by Great Black-backed Gulls also a major factor in chick survival. Predation by great black-backed gulls did not end at the fledging stage, as fledglings were also observed being taken by the gulls.

Lesser-black Backed Gulls

10,419 breeding pairs. This is the lowest estimate since this method was implemented and is a 12% decline on 2007 figures. The breeding success was just 0.04 and this is the poorest year yet. This figure is based on a mark:recapture technique were approx 300 large fledglings are ringed and then a ratio of ringed:unringed birds

worked out. This year only 51 fledglings were found and rung, despite significant searches.

Herring Gull

A total of 412 Apparently Occupied Nests were counted, this is the lowest population since 2000. A mean of 0.69 chicks fledged per nest.

Great Black-backed Gull

A total of 85 Apparently Occupied Nests were located, this is a 13% decrease on 2007. Productivity was low for this species at 0.87. This is actually the lowest productivity on record and is probably attributable to a lack of their main prey, rabbits, which crashed in numbers due to myxomatosis.

Jo Milborrow, Tessa Cole (Wildlife Trust of South and West Wales), Dave Boyle (Edward Grey Institute)

j.milborrow@welshwildlife.org

FAIR ISLE OBSERVATORY APPEAL

Plans for a new observatory on Fair Isle to open in 2010 have been unveiled. It will be a modern, eco-friendly place for volunteers to stay and for scientists and students to continue their long-term research on Fair Isle's migratory and resident birds, including the island's precious seabirds. It will cost £4 million, over a quarter of which has already been pledged by Shetland Islands Council.. In just under eight months most of the money through public funds and private donation has been raised. We are now just **£200,000** short of our target.

Please help us to get over the finishing line so we can finally look forward to opening the new Bird Observatory in 2010 and secure the future of FIBOT and Fair Isle. The Trust is an independent charity, which is totally self-funded and reliant on revenue from visitors. Please note that the observatory will be closed during 2009 for refurbishment.

www.fairislebirdobs.co.uk

BIRD REPORT REVIEW

OUTER HEBRIDES BIRD REPORT 2005/2006

Outer Hebrides Bird Group
251pp. 33 colour photographs.

Available by post from Brian Rabbitts: rabbitts@hebrides.net
£8.50. Cheques made payable to 'The Outer Hebrides Bird Group'.

This is the 10th Outer Hebrides Bird Report and the first to be produced by the Outer Hebrides Bird Group that formed in January 2007 and funded by a grant from SNH. The history of recording in the area is summarised at the start and it is hoped that future reports will be annual and will include records of moths, butterflies, cetaceans and other interesting marine records.

The systematic list includes a good variety of breeding and migratory seabirds, including a good number of gull species of which photos are included. The highlight of the recording period is undoubtedly the Black-browed Albatross discovered on Sula Sgeir in August 2005 during the annual guga hunt. As well as the systematic list, many readers will welcome the inclusion of a table of selected ringing recoveries and controls. This includes the first BTO-ringed Arctic Tern to be reported in the Democratic Republic of Congo, two years and three months after being ringed on Berneray.

Also included is an interesting and detailed description of three observations of a pair of Arctic skuas hunting waders on North Uist. The only small disappointment is a lack of detail for the recording period for breeding seabirds on St Kilda, however, Brian informs me that Will Miles will be writing the outliers section for 2007, so the seabirds coverage will be even better!

Claire Smith (contact details can be found on the back of the newsletter).

SEAWATCHING NEWS

ESTACA DE BARES BIRD OBSERVATORY BULLETIN

The first issue of the "Boletín de la Estación Ornitológica de Estaca de Bares" ("Estaca de Bares Bird Observatory Bulletin"; the text is in Spanish!) is available to download at:

http://terranova-sl.es/pdf/BoletinEstOrnitEstacadeBares2008.pdf

It includes information, numbers and graphics relating the seabird passage observed from the Estaca de Bares cape (A Coruna, Galicia, NW Spain) along 152 days of 2008.

282,198 birds moving westwards and 5,135 moving eastwards were counted in 519,25 hours. The most numerous species moving westwards were Northern Gannet (149,053 inds.), Manx Shearwater (42,963 inds.), Cory's Shearwater (19,648 inds.), Kittiwake (16,813 inds.) and Sooty Shearwater (11,315 inds.). Due to their abundance in the area, Lesser Black-backed Gull and Yellow-legged Gull were not counted.

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SEAWATCH SW ANNUAL REPORT 2008 - ABRIDGED

Executive summary

SeaWatch SW is a volunteer-based project that started in 2007 and is scheduled to run until 2011 at least. The main aim is to better understand the distribution and behaviour of migratory marine megafauna, both for scientific and conservation purposes. The priority is the **Critically Endangered Balearic Shearwater**, but other migratory seabirds as well as **Basking Sharks, Ocean Sunfish and cetaceans** are the focus of intensive monitoring off southwest England.

Part 1: Balearic Shearwater monitoring in UK and Irish waters

A total of exactly **1000 Balearic Shearwater records** were submitted to SeaWatch SW and/or *Birdguides* from the UK and Ireland in 2008, relating to a maximum of **5391** birds. These figures are comparable to those in 2007, when 834 records referring to a maximum of 5153 birds were received. It should be noted that these maximum totals will include significant duplication, as some birds may remain in one area for several days or are recorded passing multiple watchpoints.

The distribution of Balearic Shearwater sightings in 2008 was also comparable to 2007. After a small influx into southwest England in January, relatively few were seen until birds returned to southwest coasts in June. Numbers built up to **a peak in August**, at which time birds began to penetrate north into the North and Irish Seas. A rapid retreat to the southwest occurred during October, and very few remained in November and December. Overall, **the pattern of Balearic Shearwater sightings in 2007 and 2008 appears to have been remarkably similar**.

As with 2007, about two-thirds of Balearic Shearwater records in 2008 came from southwest England, with less than 2% of records coming from Scotland. A significant mid-winter count of about 50 birds off Portland Bill (Dorset) on 13 Jan coincided with unprecedented winter numbers off northern Brittany, and was associated with an influx of 20,000 Razorbills and other seabirds. Likewise, the peak 2008 count of **116** birds off the SeaWatch SW watchpoint at Gwennap Head (Cornwall) on 6 Oct also coincided with unusually large numbers of birds off northwest France.

Part 2: Land-based monitoring from Gwennap Head (Cornwall)

Effort-based monitoring of Balearic Shearwaters, and other target species, was undertaken at Gwennap Head (Cornwall) between **15 July and 15 Oct 2008 (See Table 1 -3 for results)**. About 40 volunteer observers helped man the watchpoint for 93 consecutive

days, with 'dawn-to-dusk' observations totalling almost **1000** hours.

Balearic Shearwaters were seen on 90 out of 93 survey dates, with a maximum total of **1029** birds recorded. This is a slight decrease on 2007, when birds were seen every day and a total of 1361 birds were recorded. However, the pattern of movement was very similar to 2007, with **most birds (95.5%) seen flying west**, and **60% seen during morning sessions** prior to 1200 hrs. The most interesting record was of two birds flying west on 6 Oct that were attacked over the sea by an escaped falcon; luckily they both evaded capture by plunge-diving into the water!

Totals of other shearwater species seen during the Gwennap Head survey included **26,132 Manx Shearwaters, 561 Sooty Shearwaters, 499 Cory's Shearwaters and 42 Great Shearwaters**. The total for Sooty Shearwater is comparable to 2007, but the other three species saw big increases on the 2007 totals. In particular, **an impressive influx of Cory's Shearwaters peaked at 377 on 29-30 July**, coincident with a period of rapidly increasing sea surface temperature and a low-pressure system moving north from west Iberia.

Numbers of **Arctic Skuas, Great Skuas and Kittiwakes** off Gwennap Head all peaked during **mid-September**, which is about two weeks earlier than in 2007. Arctic Skuas and Kittiwakes in particular **appear to migrate together**, with the skuas relying on the Kittiwakes for food through klepto-parasitism. All three species were seen in similar numbers to 2007, but there was no repeat of the pre- and post-roost movements off Gwennap Head noted in October 2007.

Small numbers of **Guillemots and Razorbills** were seen in late July, before most birds departed for offshore waters. Both species then returned in numbers in early October, although Razorbills were much commoner than Guillemots. A total of **129 Puffins** were recorded, mostly during July. This is a slight increase on the 104 seen in 2007, and many sightings again referred to birds feeding over Runnelstone Reef.

Fulmars, Gannets and Shags were not systematically recorded due to excessively high numbers and/or local breeding populations. A sample count of Fulmars and Gannets on 24-25 Aug produced **211** and **4101** birds, respectively, and counts of Shags feeding or day-roosting off Gwenap Head peaked at **45** on 24 July (compared to a peak of 50 in 2007). There were several records of **three-figure feeding flocks of** Gannets, often in association with Common Dolphins. Two migrating flocks of about 20 Cormorants were seen moving east during the autumn.

Records of rare and scarce seabirds included a **Fea's Petrel** on 25 Aug, two **Long-tailed Skuas** on 7 Oct and **a Roseate Tern** on 18 July. Also of note were a Red-necked Grebe, 516 European Storm-petrels, two Leach's Storm-petrels, 41 Pomarine Skuas, three Sabine's Gulls, five Little Gulls, 59 Mediterranean Gulls and up to 24 Black Terns. **An influx of Grey Phalaropes in September and October included up to 65 lingering offshore**, with many seen **associating with feeding Basking Sharks**.

Other migrant waterbirds recorded off Gwennap Head included **four Barnacle Geese on 5 Oct**, and totals of 25 Little Egrets, 50 Grey Herons and 71 Whimbrel. Particularly unusual records included **a Black-tailed Godwit flying west in the company of five Manx Shearwaters** on 13 Aug and a Purple Sandpiper on 21 July. Probably the most bizarre sightings were of a **flying cow** rescued from the base of the cliff by a Royal Navy helicopter, and a trio of well-meaning mourners who unknowingly scattered the ashes of a loved one over the project co-ordinator while he was sitting below them at the watchpoint!

Part 3: Land-based observations from sister sites in southwest UK

Intensive observations were also carried out at **three sister sites** in southwest UK during the SeaWatch SW survey period between 15 July and 15 Oct. The sister sites are **Berry Head (Devon), Trevose Head (Cornwall) and Strumble Head (Pembrokeshire)**, and they contributed almost **900** hours of additional observational data during the survey period (see Tables 1-3). These observations help to provide a regional context for Gwennap Head data

Table 1 reveals some interesting patterns, although variable effort between sites means direct comparisons should be treated with caution. **Balearic Shearwaters** were seen passing the three sites in southwest England at rates >1.0 birds per hour, but fewer were seen off Strumble Head. In addition, the **influx of Cory's Shearwaters** in late July was picked up at Berry and Gwennap Head but none of these birds were seen off Trevose or Strumble Head to the north

Common Scoters are three times more abundant off Strumble Head than the other sites. These birds are passing south through the Irish Sea to wintering grounds off south Wales. **Common/Arctic Terns and skuas are most abundant off Berry Head**; these birds will have moved west through the English Channel from the North Sea, but evidently detach from the coast before reaching Gwennap Head.

One of the most intriguing events of 2008 was a series of sightings of **Yelkouan-type shearwaters** off southwest England during the late summer and autumn. Yelkouan Shearwater is the eastern Mediterranean counterpart of Balearic Shearwater, and has different structure and plumage to that species. There are currently **no accepted records for the UK**. However, the taxonomic situation and identification of *Puffinus* shearwaters from the Mediterranean region is **highly complex**, for example, small numbers of birds present on Menorca apparently show characteristics intermediate between Balearic and Yelkouan Shearwaters.

The first sighting of a Yelkouan-type shearwater was of a lingering bird **seen off Berry Head alongside a Balearic Shearwater on 29 July,** allowing structural and plumage difference to be documented. A series of reports of this, or other pale Yelkouan-type shearwaters, then came from southwest Cornwall during August. The final sighting of one of these birds was off the SeaWatch SW watchpoint at Gwennap Head on 6 Oct, although this latter record was possibly just a pale Balearic Shearwater. The photos below show the Berry Head and Gwennap Head birds; **they are both captioned as Yelkouan-type shearwaters as precise identification is yet to be determined**, and may not even be possible given current knowledge. A short article on these birds is currently in preparation and will be uploaded on to the SeaWatch SW website in due course.

Yelkouan-type shearwater (left) passing Gwennap Head with a Balearic Shearwater (right) on 6 Oct (Russell Wynn)

Part 4: Small boat surveys in the western English Channel

Marinelife again worked closely with SeaWatch SW during 2008, and carried out **small boat surveys of marine wildlife offshore of southwest England** for the second year in succession. Despite the unsettled summer weather, **43 surveys** were undertaken between March and November, covering **2002 line-km**. **Relatively few Balearic Shearwaters were recorded in 2008**, with just odd ones and twos in offshore areas, and regular sightings of up to eight birds in July in the coastal waters around Portland Bill (Dorset). Over **200 European Storm-petrels and 70 Great Skuas** were also seen, often in association with fishing boats.

Other notable seabirds included 14 Black Terns, a Roseate Tern, and small numbers of Sooty Shearwater, Puffin, Pomarine Skua and Grey Phalarope. However, the avian highlight was probably a **male Montagu's Harrier** seen heading north about 50 km south of Portland Bill on 31 May.

Part 5: SeaWatch SW project news

SeaWatch SW and *SAHFOS* co-ordinated the second **South West Marine Ecosystems (SWME) meeting**, held in Plymouth on 12 Dec 2008. About 40 invited representatives of various science and conservation organisations were in attendance, and had the opportunity to present and discuss results of marine wildlife monitoring during the year. The main themes were **new arrivals of southern invertebrate and fish species**, the effects of **unsettled summer weather** on breeding seabirds and sightings of Basking Sharks, and the continued incidence of **cetacean strandings** in southwest England.

SeaWatch SW and *Marinelife* data continue to contribute to various **conservation initiatives**, particularly relating to monitoring of the **Critically Endangered Balearic Shearwater** in UK and Irish waters. The importance of the **Runnelstone Reef** (off Gwennap Head) and **Lyme Bay** (off Dorset) as 'hotspot' areas for marine megafauna is becoming increasingly apparent, and data collected by our dedicated volunteer observers will guide future protection of these areas.

The SeaWatch SW website again had over **10,000 individual hits** in 2008, while news items on Basking Sharks and Kittiwakes appeared in **national and regional media**. A total of five Masters and one undergraduate student have successfully used SeaWatch SW in their projects during 2007 and 2008, and **a new NERC-funded PhD student** is working full-time on project data from 2009 to 2011. This latter project will be investigating the **spatio-temporal controls on distribution of migratory marine megafauna off southwest UK**.

SeaWatch SW will be continuing in 2009, with public sightings and effort-based data on Balearic Shearwaters again being collected at a regional and national level. **Effort-based surveys of marine wildlife** will be carried out at Gwennap Head between 15 July and 15 October, with supporting observations made at sister sites in Cornwall, Devon and Pembrokeshire. Small boat surveys in the western English Channel will again provide an important offshore perspective.

If you feel inspired after reading this and would like to contribute to SeaWatch SW 2009, please visit the project website and/or contact the project co-ordinator for details of **how to get involved**. The project would simply not be possible without **a dedicated team of volunteer observers**, and **we particularly need a few more experienced Seabird Observers** (familiar with Balearic Shearwaters and other target species), to come forward and volunteer their time to the Gwennap Head survey. Complimentary 'bed and brunch' is provided to Seabird Observers at Ardensawah Farm B&B near Porthgwarra; this is a very comfortable place to stay and is only a short distance from the watchpoint. Travel and subsistence costs equivalent to £70 a week will also be provided to Seabird Observers. In addition, **we welcome keen observers of any experience level** to act as **Marine Wildlife Observers** and **Support Observers** at the watchpoint. The project website and co-ordinator addresses are shown below.

Website address - http://www.seawatch-sw.org
Co-ordinator Email - rbw1@noc.soton.ac.uk

Finally, we would like to thank all the individuals and organisations that contributed to SeaWatch SW 2008. Vital financial support was received from **RSPB**, **SAHFOS**, **RNBWS**, **The Seabird Group** and **Marine Information Ltd**.

Wynn, R.B. and Brereton, T.M. (2009) SeaWatch SW Annual Report 2008. National Oceanography Centre, Southampton, 113 pp.

Editors
Russell B Wynn (NOCS and SeaWatch SW)
Tom M Brereton (Marinelife)

Table 1 Rates of **birds per hour** passing the four SeaWatch SW watchpoints between 15 July and 15 Oct 2008. Note that only those species passing at rates >0.2 birds per hour are listed:

Species	**Gwennap**	**Berry**	**Trevose**	**Strumble**
Total hours	*966*	*190*	*165*	*526.5*
Balearic Shearwater	1.07	2.61	2.37	0.34
Common Scoter	0.60	1.23	1.85	6.90
Cory's Shearwater	0.52	0.54	0	0
Sooty Shearwater	0.58	0.45	0.68	0.19
Manx Shearwater	27.05	11.34	621.52	-
European Storm-petrel	0.53	1.21	1.01	0.16
Pomarine Skua	0.04	0.31	0.08	0.06
Arctic Skua	0.69	2.75	0.76	0.96
Great Skua	0.36	1.03	0.74	0.41
Kittiwake	9.68	-	16.53	-
Sandwich Tern	0.36	2.11	3.04	2.15
Common/Arctic Tern	1.07	11.52	2.27	2.36
Guillemot/Razorbill	3.12	-	53.92	-
Puffin	0.13	0.05	0.10	-

Table 2. Total number of seabird sightings seen from the four SeaWatch SW watchpoints between 15 July and 15 Oct:

Species	**Gwennap**	**Berry**	**Trevose**	**Strumble**
Total hours	*966*	*190*	*165*	*526.5*
Balearic Shearwater	1029	496	391	181
Common Scoter	575	234	305	3632
Red-throated Diver	7	0	1	37
Black-throated Diver	1	0	1	0
Great Northern Diver	2	2	4	4
Cory's Shearwater	499	103	0	0
Great Shearwater	42	7	3	1
Sooty Shearwater	561	86	113	99
Manx Shearwater	26132	2155	102550	-
European Storm-petrel	516	230	166	83
Leach's Storm-petrel	2	0	2	53
Grey Phalarope	160	3	6	4
Pomarine Skua	41	58	14	34
Arctic Skua	663	522	126	507
Long-tailed Skua	2	10	3	8
Great Skua	347	195	122	216
Mediterranean Gull	59	10	14	59
Little Gull	5	0	4	27
Sabine's Gull	4	13	7	17
Yellow-legged Gull	0	4	2	0
Kittiwake	9348	-	2728	-
Sandwich Tern	352	401	501	1130
Roseate Tern	1	1	1	3
Common/Arctic Tern	1029	2188	374	1240
Little Tern	1	1	5	0
Black Tern	25	18	5	87
Guillemot/Razorbill	3014	-	8896	-
Puffin	129	9	17	-

Table 3 Total number of cetacean/fish sightings seen from the four SeaWatch SW watchpoints between 15 July and 15 Oct:

Species	Gwennap	Berry	Trevose	Strumble
Risso's Dolphin	7	2	0	0
Bottlenose Dolphin	106	18	0	2
Common Dolphin	384	0	22	120
Basking Shark	299	1	1	4
Ocean Sunfish	57	1	1	26

SEABIRD GROUP GRANT REPORT

2008 saw the sixth full season of activities by the Handa Island Skua Monitoring Programme, and productivity and diet continued to be monitored. In addition, data was collected for my undergraduate project, investigating the relationship between diet and productivity in Great Skuas *Stercorarius skua*. Previous years' pellet collections from transects had shown these birds to have a generalist diet on average. From 2003 to 2006, a mean of 50.3% of the pellets were identified as other seabirds, with whitefish such as Norway Pout *Trisopterus esmarkii* and Whiting *Merlangius merlangus* also featuring prominently. Across all years, fewer than 5% of all pellets were Sandeel *Ammodytes* spp. Mean fledging productivity over the same period was 0.49 chicks per pair (Jones et al., 2008). I predicted that the diet of the parent birds, as determined by pellet collection, would bear a relationship with productivity, measured by chick weight, wing measurements and overall mortality. In the apparent absence of sandeels in the area it would be reasonable to predict that adult birds successfully fledging healthy chicks would have more seabirds in their pellets than whitefish, as seabirds have the higher calorific value and are readily available in large numbers close to the Great sSkua territories.

Fieldwork commenced on the 30th May 2008, when AOTs were identified and an all-island survey was conducted. As in previous years, 2 study sites containing a roughly equal number of AOTs were selected for the monitoring of breeding parameters. Within these 2 study sites 20 territories were selected for productivity and diet monitoring. All territories were cleared on the 11th June, and pellets were collected weekly from then on. Most pellets were identified on site; however, fish pellets containing otoliths were bagged and taken to the laboratory for identification with a guide. Fish pellets without otoliths were also recorded. Chicks were measured approximately every 5 days; they were weighed to the nearest 10g and wing chord was measured to the nearest 1mm. All chicks were ringed with standard BTO and Darvic colour rings as part of an ongoing ringing project and this assisted with identification of wandering chicks.

Of the 20 territories, mean lay date was the 21st May, mean clutch size was 1.84 (n=19), hatching success was 97% (n=18) and fledging success was 38% (n=18). Mean egg volume was 79.81ml Overall, 0.65 chicks were fledged per pair. Most mortality occurred before the chicks were 10 days old, but mortality factors were difficult to determine. Of the 20 territories, 8 failed.

473 single item pellets were collected. 55.6% were identified as fish, the majority being Norway Pout and Whiting. 36.58% were bird and 7.82% were classed as other. A significant positive relationship was found between the proportion of fish pellets collected from adult birds and the weight and wing measurement of the alpha chick at 24 days (regression test: weight, $F_{1,10}$=8.883, P=0.014; wing, $F_{1,10}$=10.842, P=0.008). There was a negative relationship between the proportion of bird pellets collected from territories and alpha chick measurements, which was significant in the case of wing measurement, but not significant with weight (regression test: weight, $F_{1,10}$=3.965, P=0.074; wing, $F_{1,10}$=8.915, P=0.014).

These results suggest a relationship between the diet of the parent birds and the condition of the chicks. There was too little data, in terms of both pellets collected and chick measurements, collected from those territories that ultimately

failed and therefore a relationship between diet and fledging success could not be determined. This implies a need for more data collected over a longer period, and a larger sample size of data in general. However, as an initial result it is unexpected, as the positive linear relationship was found between chick condition and the proportion of fish pellets, despite fish such as Norway Pout and Whiting have a lower calorific value than seabirds. The seabirds on Handa suffered a poor breeding season and especially towards to second half of the season there were few birds on the cliffs, so these results could simply reflect availability. Great skuas are unable to dive to the depths at which Norway pout and Whiting are generally found, so this also highlights the importance of fishery discards to these birds. It is worth noting that none of the parent birds were specialist dieters, and the individual differences between their pellet proportions were small.

In summary, my research has shown that the Great skuas of Handa Island are generalists and the diet of the parent birds may be one factor contributing towards the condition of the chicks, and therefore overall productivity.

Acknowledgements
This study could not have been completed without the financial support from the Seabird Group and the Scottish Ornithological Club. I would like to thank my supervisor Nancy Harrison, Trevor Jones and Claire Smith of the Handa Island Skua Monitoring Programme, warden Amy Corton and assistant warden Pete Ward, Andrew Ramsey from the Highland Ringing Group, Chris Laurie and all the other volunteers. Finally, for the privilege of working and staying on the island, thanks to Dr Jean Balfour and Mr Balfour, the Handa Island Management Committee and the SWT.

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Reference:
Jones, T., Smith, C., Williams, E. & Ramsay, A. (2008) Breeding ecology and diet of Great *Stercorarius skua*
and Arctic skuas *S. parasiticus* on the west coast of Scotland. *Bird Study* 55: 257-266.

Previous annual reports can be downloaded from:
www.handaskuas.org

LETTER TO THE EDITOR

Dear Editor,

While I agree with some of John Love's comments (Seabird Group Newsletter 110, February 2009), he fails to address my main complaint. This is not that (presumably introduced) mammals are tolerated, and sometimes even studied, on some of our offshore islands, but that they are present on nearly all of them large enough to have some vegetation, so that it impossible to see what islands would be like, and how seabirds would fare, in the absence of mammals. One would have thought that this is at least as interesting as what happens if the mammals are allowed to increase indefinitely, leading to devastation of the vegetation followed by the appalling mass starvation which had gone on shortly before I visited St. Kilda.

St. Kilda in fact provides one of the best examples of the situation. All three main islands are occupied by uncontrolled flocks of Sheep, although two of the flocks are the same and two of the islands are difficult to get at, and only the small island of Dun is now free of them, apparently with more luxuriant vegetation although I have not been on it. This provides an opportunity to remove Sheep from just one of the large islands to see what happens to both the vegetation and seabirds (which may or may not be pleased). Similarly, it seems unnecessary to maintain relict populations of Black Rats (of all things) on all the three main Shiants (if as I understand they are present on all of them) instead of clearing them off at least one island. Even if the Puffins don't mind them, which I doubt, doubtless terns and storm-petrels do. SNH would be able to study them so much better if they transferred them to their headquarters.

W.R.P. Bourne
wrpbourne@yahoo.co.uk

PS. It is reported sheep were removed from Berneray, which includes Barra Head, at the southern extremity of the Outer Hebrides, in early June. It is to be hoped a record will be kept of the effect on its ecology.

SEABIRD GROUP NEWS

MARCH 2009 GRANT ROUND

A total of nine grant applications were received for the March grant round. Seven of these were successful while, as this goes to print, one is still being considered subject to further clarifications. The following grants have been awarded:

- Sule Skerry Seabird Group (Jez Blackburn): Seabird monitoring on Sule Skerry, Sule Stack, North Rona & Sula Sgeir, Orkney/Western Isles (£500)
- Sarah Davis: Arctic Skua adult survival in Shetland (£300)
- Trevor Jones: Productivity and diet of great skuas and Arctic skuas on Handa Island (£600)
- Shiants Auk Ringing Group (Jim Lennon): Shiants Isles seabird study (£400)
- Chris Rodger (on behalf of the 2009 St Kilda Petrel ringing Expedition): Mark-recapture study of Leach's Storm petrels on St Kilda (£700)
- Iván Ramírez (SPEA): Monitoring Balearic Shearwater movements on the Portuguese Atlantic coast (£900)
- Russell B Wynn: SeaWatch SW (£300)

The next deadline for the next round of grant applications is **15th October.** An application form and guidelines are available on the website.

Linda Wilson (Secretary)

JOURNALS AVAILABLE ONLINE

We are pleased to announce that back issues of the Seabird Group journals Seabird (Vols 1-20, 1969-1998) and Atlantic Seabirds (Vols 1-8, 1999-2006) are now available to download from http://www.seabirdgroup.org.uk/?page=journalarchive. These archives are in PDF format which are indexed and searchable using the facilities within Adobe Acrobat. We would like to thank Jeff Stratford for his work on the website which enabled this.

CALL FOR SEABIRD 22 SUBMISSIONS

In order to try and get Seabird 22 published and to members by the end of November, deadlines have been set of **1st August** for first submissions, and 15th September for final, fully revised resubmissions. Papers and Short Notes will be published on a first-received basis for final resubmissions, and may be held over to Seabird 23 if these deadlines are not met.

Please contact Martin Heubeck **martinheubeck@btinternet.com** for advice on papers and notes.

CALL FOR JOURNAL REVIEWS TO BE SUBMITTED IN THE NEWSLETTER

The Newsletter always contains articles that fall into a series of themes. One section that has fallen by the wayside recently is reviews of journal articles. If anyone would like to draw the attention of Seabird Group members to a recent paper on seabirds please submit an article to the editor (seabird@bto.org). The deadline for the October issue is **September 15th**. Book reviews can now be found in the journal 'Seabird.'

Statement of Financial Activities and Income and Expenditure Account of the Seabird Group for the year ended 31st March 2008

	2008 General Fund	2008 Census Fund	2008 Totals	2007 Totals
Income				
Subscriptions	£2484.00		£2484.00	£3549.51
Bank Interest	£ 453.15		£ 453.15	£ 598.54
Conference				£34336.15
Grants received				£2600.00
TOTALS	**£2937.15**		**£2937.15**	**£41084.20**
Outgoings				
Newsletter	£545.10		£545.10	£ 638.29
Journal				£1014.88
Postage	£449.45		£449.45	£ 930.99
Conference	£ 50.00 (refunds)		£ 50.00	£32488.61
Admin expenses				£ 537.60
Grants paid		£1900.00	£1900.00	£ 2300.00
TOTALS	**£1144.55**	**£1900.00**	**£3044.55**	**£38030.37**

Surplus for 2008 £1792.60

Balances as at 31st March 2008

		2008	2007
Current Assets – Bank			
Bank of Scotland	Treasurer's Account	£24554.60	£25082.60
HSBC	Treasurer Account	£ 782.33	£ 588.58
		£25336.93	**£25671.18**

Andrew Ramsay
Treasurer

Minutes of the 43rd Annual General Meeting of the Seabird Group held during the 10th International Seabird Group conference at Provinciaal Hof, Bruges, Belgium on 27 March 2009 at 19:50.

Norman Ratcliffe was in the Chair with Linda Wilson taking minutes in Alan Leitch's absence.

Fifteen members were present:
Norman Ratcliffe, Linda Wilson, Andy Douse, Chris Perrins, Martin Heubeck, Sarah Wanless, Steve Newton, Matt Parsons, Mark Bolton, Morten Frederiksen, Francis Daunt, Rob Barrett, Mark Tasker, Andy Webb and Jim Reid.

No apologies were received.

1. **Minutes of the 42nd Annual General Meeting held on Saturday 17th November 2007 at the Fife Arms Hotel in Braemar.**

   These had previously been circulated in the Newsletter, and were proposed for acceptance by Mark Tasker, seconded by Rob Barrett.

2. **Matters arising from the minutes.**

   There were no matters arising

3. **The 43nd Annual Report**

   This had also previously been circulated in the Newsletter. It was proposed for acceptance by Mark Bolton and seconded by Sarah Wanless.

4. **Accounts and Treasurers report**

   Norman Ratcliffe summarised the Treasurer's Report. The 2008 total income was £2937.15, with total 2008 outgoings being £3044.55. Current assets total c. £25K.

   The report was proposed for acceptance by Andy Webb and seconded by Steve Newton.

   The Executive Committee proposed to reduce the £25K balance somewhat by more focussed and generous awards through the group grant scheme.

5. **Election of Officers (previously advertised in the Newsletter). Alan Leitch (Secretary), and Juan Brown are due to retire and our Membership Secretary wishes to resign. Replacements require to be elected for these three posts.**

   Norman Ratcliffe nominated Linda Wilson to replace Alan Leitch as Secretary and this was seconded by Sarah Wanless.
   Norman Ratcliffe proposed Andy Webb to replace Juan Brown as Ordinary Member and also to take over the role of Seabird Publishing Editor from Linda Wilson. This was seconded by Mark Tasker.
   Norman Ratcliffe proposed Ilka Win to replace David Sowter as Membership Secretary and this was seconded by Andy Webb.

   The retiring members were thanked for all their time and hard work on the committee.

6. **Seabird, and online back issues**

   Norman Ratcliffe thanked Martin Heubeck and Linda Wilson for their efforts in getting the Seabird journal re-launched.

   Martin Heubeck explained that Seabird 21 did not get published during 2008 due to the steep learning curve involved in the re-design and re-launch of this issue. The final proofs were ready just before the

Christmas break, which also held things up a little. Nevertheless, Seabird 21 was felt to have met all the aspirations the Executive Committee held for a new image for the Journal.

Martin Heubeck also pointed out that there were no journal costings for 2008 in the Treasurer's report because of the delay in going to print. These were approximately £4700, which included an extra 250 copies printed for promotional purposes. i.e. the costs are approximately 4 times the last figure for printing Atlantic Seabirds.

Martin Heubeck made a plea for submissions for Seabird 22, with a deadline for first submissions by 1 August 2009, and final re-submissions due on 15 September 2009.

The back issues of Seabird / Atlantic Seabirds have been scanned and should be available on the website within the next week or so. Norman Ratcliffe thanked Mike Harris for originally suggesting this, and Linda Wilson for taking it forward.

7. World Seabird Conference

The World Seabird Conference will take place on 7-11 September 2010 at Victoria, British Columbia, Canada. A flier for the WSC had been put in all delegate packs. Norman Ratcliffe is on the Scientific Organising Committee. This will be the first WSC since the 1980's and it is hoped that another book will result from this one, as it did previously. The organisers of the WSC would welcome any ideas / assistance with raising moneys as there is currently a shortfall in money for the conference. The Executive Committee have already donated £1K towards the conference and also plan to set up funds to assist members to attend.

8. Membership

Membership has been stable for the last four years, fluctuating by c. 10 members, with 434 members at March 2009. There will be a membership drive during the conference, and it is hoped that Ilka Win will continue this drive in her new role as Membership Secretary.

9. Subscriptions

Norman Ratcliffe explained that the elevated costs of producing the newly revamped Seabird journal have led to the Executive Committee considering increasing the subscription rate. This still needs to be costed out, but a current estimate is that subscriptions should increase from £10 to £15 per annum. There was general discussion about the risk of losing members due to an increased subscription and also what to do if members neglected to increase their Standing Orders. It was agreed that it was better to increase by a larger amount, rather than doing it in two stages because of the logistics involved. There was some discussion on the merits of being able to pay subscriptions via PayPal (e.g. easier for foreign payments), and it was agreed that a decision on subscription amounts and payment methods should be in place before the World Seabird Conference.

10. AOB

Norman Ratcliffe brought up the issue of how best to reinvest some of the group's savings into useful research via the grant scheme. He suggested that it would be useful if Matt Parsons (JNCC) could identify the key areas where survey work was needed. Matt said this should be possible in light of the recent review of the Seabird Monitoring Programme and that he could write a short article on this for the June Newsletter. This might help encourage members to apply for grants towards such areas of work.

Chris Perrins requested that the annual Secretary's report should include a note of which grants were funded over the course of the year.

The meeting was adjourned at 20:15, in time for everyone to join the Conference Icebreaker Reception.

Registered charity No. 260907

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Seabird Group Forum :
http://pets.groups.yahoo.com/group/seabirdgroupforum/

The Newsletter is published three times a year. The editor welcomes articles from members and others on issues relating to seabird research and conservation. These should be received by 15th May (for June edition), 15th September (for October edition) or 15th January (for February edition).

The Seabird Group promotes and helps co-ordinate the study and conservation of seabirds. Members also receive the journal *Seabird*. The Group organises regular conferences and provides small grants towards seabird research. Current membership rates are:

Standing Order £9.00
Concession £5.00
Institution £15.00
Ordinary £10.00

Ilka Winn
Membership Secretary
seabirdgroup.membership@gmail.com
121 Polmuir Road
Aberdeen, AB11 7SJ

CURRENT SEABIRD GROUP COMMITTEE

Current retiral dates (at AGM) are shown in bold after the name of each member. Nominations (which should be submitted to the Secretary) from members for replacements on the committee are always welcome.

Chairman
Norman Ratcliffe **(2011)**
c/o British Antarctic Survey, High Cross, Madingley Road
Cambridge, CB3 0ET
notc@bas.ac.uk

Secretary
Linda Wilson **(2012)**
JNCC, Aberdeen
Linda.Wilson@jncc.gov.uk

Treasurer
Andrew Ramsay **(2010)**
Lower Courthill, By Tain,
Ross-shire, IV19 1NE
adkramsay@homecall.co.uk

***Seabird* Editor**
Martin Heubeck **(2011)**
Sumburgh Lighthouse, Virkie,
Shetland ZE3 9JN.
martinheubeck@btinternet.com

***Seabird* Publishing Editor**
Andy Webb **(2012)**

***Seabird Group Newsletter* Editor**
Liz Humphreys **(2010)**
BTO Scotland, University of Stirling, Stirling. FK9 4LA
liz.humphreys@bto.org

***Seabird Group Newsletter* Assistant Editor**
Claire Smith **(2010)**
Claire.B.Smith@rspb.org.uk

Other Members:
Simon Foster **(2010)**
Ilka Winn **(2012)**

EDITORIAL

The Seabird Group committee were truly delighted with the high turn out of people at the 10th International Seabird Conference. We were also pleased with the numbers of new members, particularly from outside the UK and hope that they continue to be involved with the group for many years. We would also like to point out the importance of taking part in the AGM (see minutes of the 43rd meeting on page 22). Your views really do count so we would encourage our members to attend these meetings wherever possible.

Submissions for the newsletter must be in electronic format, preferably in word and should be no more than 1500 words wherever possible. If you would like to see any new themes, please get in touch with your ideas (Email: seabird@bto.org).

Every effort is made to check the content of the material that we publish. It is not, however, always possible to check comprehensively every piece of information back to its original source, as well as keeping news timely. Please will readers make further checks at their own discretion, if they have concerns about any of the information or contacts provided, and contact me to allow feedback to other readers if necessary.

We also try to provide a forum for readers' views, so that those provided in the *Newsletter* are not necessarily those of the editor or the Seabird Group.