the Seabird Group

NEWSLETTER 118

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Contents

CONFERENCES

11th SEABIRD GROUP CONFERENCE, PLYMOUTH, UK, 2-4 SEPTEMBER 2011

On a gorgeous late summer's afternoon, delegates began arriving at the University of Plymouth's modernistic Roland Levinsky Building to register for the 11th Seabird Group Conference. Most (72%) of the 131 attendees were from the UK, the remainder coming from 12 other countries, headed up by Spain (6%) and Denmark (5%). Posters were quickly displayed in the spacious main reception hall, where the Natural History Book Service had a stall offering carefully selected titles, and six companies had stands promoting remote tracking devices. The Seabird Group also maintained a stall throughout, with Ilka Win and helpers successfully recruiting new members, and arm-twisting others to either rejoin or update their payments.

Conference delegates on a seawatching field trip at Pendeen Head (Mark Newell)

Chairman Norman Ratcliffe opened the conference, noting the many years since a Seabird Group conference had been held in England. He then introduced the plenary speaker, newly 'retired' Professor Bob Furness (University of Glasgow), who illustrated some of the threats and problems facing seabirds with insights from the many research projects he has supervised over the years, as well as some entertaining images of former students in more youthful and hirsute days. A minority then remained in the lecture theatre for the Seabird Group AGM, while the rest headed upstairs for the reception, hosted by the University of Plymouth Marine Institute. Gathered on a large terrace overlooking the city centre, and fuelled by free wine and an exceptionally tasty buffet, conversation flowed long after the sun had set. At midnight the stragglers made the short walk to the halls of residence accommodation, to find what could only be described as a street party of delegates in progress outside the Nowhere Inn, an unprepossessing and idiosyncratic old pub that became the *de facto* early and late evening meeting place throughout the Conference.

Fruit juice and strong coffee was in demand at Saturday breakfast, interrupted by a fire-alarm evacuation caused by burnt toast! The opening session was a varied group of papers under the theme **Marine Renewables and Seabirds**. The UK, like a number of other countries, has set targets for generating electricity from renewable sources that require a considerable increase in the number of offshore wind farms and the development of new technologies for generation from tidal and wave devices. The impacts of all of these generation methods are still poorly understood, and present considerable challenges to the scientific community to mitigate any impacts they might have. Keith Hamer described how GPS loggers and satellite tracking (PTTs) devices fitted to adult Northern Gannets on Bass Rock, Ailsa Craig and Bempton showed that 25% of birds passed through areas licensed for wind farms around the UK, and while numbers varied between years, might be at risk of collision with wind turbines. Ruben Fijn reported on a radar study at a demonstration site off the coast of The Netherlands, measuring bird flux through the site and vertical altitude, supported by visual and aural detection. There was more movement at the height of turbines at night, involving mainly migratory landbirds, than by day. Overall avoidance rates were between 98% and 99.6%. Chris Thaxter used GPS-tagged Great Skuas and Lesser Black-backed Gulls to study connectivity between birds foraging in wind farm licensed areas and known breeding areas. Lesser Black-backed Gulls in Suffolk spent 7% of their time in nearby wind farm areas, whereas the Great Skuas showed no overlap from their more northerly breeding sites. However, there might be overlap with wind farm sites during migration periods. Elizabeth Masden needed to answer a different but more challenging question about where Black Guillemots nesting on Stroma in the Pentland Firth might suffer collision with underwater tidal turbines. Temperature-depth recorders fitted to two nesting adults gave means diving depths of 32 m, but revealed that 47% of their dive time would be at the same depth as potential underwater tidal turbines. Peter Paton told a story from Rhode Island on the eastern seaboard of North America, where they are at the preliminary stages of planning offshore wind farms. Characterisation surveys using land-based, aerial and ship surveys have generated considerable data that have been used to build density surface models.

After coffee, the theme turned to **Behaviour and Monitoring**, with Tony Bicknell describing how stable isotope values from breeding Leach's Storm-petrels, from wrecked birds in winter, and from zooplankton, suggested that winter mixing of birds from different colonies maintained genetic similarity among North Atlantic populations. Parasitic burdens can be costly to developing seabirds, and Hanna Granroth-Wilding described an experiment on the Isle of May, whereby dosing broods of European

Shags to remove gut nematodes led to changes in growth rates, begging behaviour and sibling aggression between chicks of different rank. Maternal antibodies transferred via the yolk sac provide seabird chicks with early protection against disease, and by experimentally vaccinating pre-laying females, Thierry Boulinier discovered that antibodies persisted and remained effective longer in Cory's Shearwaters (a species with slow chick growth rate) than previously known for other bird species. Linda Wilson then described how important foraging areas for breeding terns could be identified by the combined use of at-sea transect surveys and visual tracking of individual birds from a RIB, the latter also providing data on foraging range and multi-species aggregations. In the final talk of the session, Russell Wynn showed how information from intensive seawatching and from remote tracking was providing new information on the post-breeding distribution of Balearic Shearwaters in the northeast Atlantic, where they face threats from fishing activities and oil pollution.

Setting for conference banquet held at The National Marine Aquarium (Andy Webb)

In a session on **Individual Specialisation in Seabirds**, Seth Newsome used analysis of stable isotopes to evaluate causes and consequences of individual dietary specialisation in Sea Otters, finding differences in Total Individual Niche Width for different populations related to the degree of specialisation in their diet. Thomas Bodey studied the foraging distribution of individual Northern Gannets from neighbouring colonies in the Irish Sea, and although their foraging ranges were sufficient for overlapping distributions to take place, the foraging areas selected did not overlap. Individuals showed repeatable behaviours and consistent divergence between individuals also existed. Kyle Elliot fitted accelerometers, GPS loggers and time-depth recorders onto Thick-billed Murres in northern Canada, as well as studying their diet and taking blood samples; dietary specialisation occurred through certain individuals returning to the same locations and foraging in a similar way across time. Holly Kirk studied repeated migrations of individual Manx Shearwaters from Skomer to the Argentinean Patagonian shelf using geolocators, birds showing considerable variation between individuals in their migration tracks, but with each bird having similar migration tracks between different years. Tim Guilford also demonstrated greater similarity in

tracks used by Atlantic Puffins outwith the nesting season than between individuals. He went on to suggest that this pattern was consistent for individual birds using exploration then acquiring navigational memory to control migration.

In the final session of the day, themed **Foraging**, Tom Evans presented plots of foraging trips and diving patterns of chick-rearing Common Guillemots at Stora Karlsö in the Baltic, where feeding areas appeared to be influenced by wind direction during the study period. Franziska Guepner then showed how high-resolution hydrographic data could be used to help explain the post-breeding distribution of Common Guillemots in the German Bight, with most birds being found in offshore waters with strong thermal stratification. Katrin Ludynia took us to the Falkland Islands, where changing environmental conditions and food availability are believed to have been the main causes of a decline in Southern Rockhopper Penguin numbers. Deployment of GPS loggers in three seasons of favourable feeding conditions found that during incubation males foraged considerably further than females, spending up to two weeks in the productive waters of the Patagonian shelf in order to fast during the chick guard period. In Northern Ireland, Lorraine Chivers demonstrated through the use of GPS and temperature-depth loggers that in years of low breeding success Black-legged Kittiwakes at Rathlin Island increased the duration and range of foraging trips, but spent the same amount of time attempting to catch prey and resting on the sea as in a more successful year. Finally, Peter Miller described a composite mapping approach to satellite images of oceanic fronts, combining their location, strength and persistence. He then gave examples of correlating Black-legged Kittiwake breeding success to front density and distance from the colony, and the foraging locations of GPS-tagged Northern Gannets and front distribution.

The Conference Banquet was held in the National Marine Aquarium, where after a guided tour we all enjoyed a delicious meal seated underneath life-sized cetaceans suspended from the ceiling, and in a room of which one wall comprised an enormous tank of fish. Conversations then continued, first in the upstairs Horizons bar at the Aquarium, and then long into the night at the Nowhere Inn street party.

Morten Frederiksen bravely presented the first talk on Sunday morning, in a double session themed **Seabird Migration**. Geolocators were fitted to breeding Black-legged Kittiwakes at 18 colonies across their North Atlantic breeding range to discover their winter ranges. While there was considerable overlap in distribution, 80% of the c. 4.5 million adults in the Atlantic wintered west of the mid Atlantic Ridge, rendering the entire population vulnerable to pollution or changing environmental conditions in the waters east of Canada. Using geolocators and satellite-tracking devices to study juvenile dispersal requires some optimism, but Richard Phillips showed that Wandering Albatrosses matched adults in flight-speed by two months post-fledging, and that while there was considerable individual variability in dispersal patterns of juveniles, there was little evidence of regional site fidelity between years. Back in the North Atlantic, Jérôme Fort found that Little Auks breeding in northeast Greenland wintered in a restricted area of high copepod density east of Newfoundland, favouring areas where air temperature ranged from 0-5°C. Next, Viola Ross-Smith tracked dispersal patterns, migration routes, and wintering ranges on the North African coast of adult Lesser Black-backed Gulls breeding at Orford Ness, UK, discovering considerable variation between individuals. Top marine predators accumulate persistent organic pollutants, and Eliza Leat used a combination of geolocators, stable isotope ratios, and dietary studies to examine the links between pollutant burdens, wintering areas and diet of Great Skuas breeding in Iceland, Bear Island and Shetland.

The draw for the conference raffle, which raised £350, was held during the morning coffee break. Many thanks to all who contributed prizes: Rob Barrett, Bob Flood (Scilly Pelagics). Mike Harris & Sarah Wanless, Hugh Harrop, Martin Heubeck, Roger Riddington (*British Birds*), and the Natural History Book Service.

The migration theme continued with David Grémillet describing the migratory ranges of adult Northern Gannets from five colonies along the 2,500 km latitudinal gradient in their European breeding range. The maximum winter range was similar at all colonies (3,500 km), suggesting oriented chain-migration rather than unlimited dispersal, and confirming Bryan Nelson's (1978) observation that 'purposeful movement' ceased around 4,000 km. Continuing with Gannets, James Grecian used GLS tracking and stable isotope ratios to show that individuals at Grassholm and Rouzic were consistent between years in the location and size of winter ranges, and in winter diet, which had consequences for the timing of arrival at colonies, and body condition. Stable isotope ratios featured in a number of studies, and Teresa Militao then described how carbon and nitrogen signatures of feathers from Great, Manx and Cory's Shearwaters, Black-legged Kittiwakes and Common Terns could be linked to those of the water masses used at different stages of the non-breeding season. Robin Freeman showed how machine learning and pattern recognition techniques could be applied to tracking data to identify patterns in the track which correlated with known behavioural states, and how this could then be applied to larger datasets which may not have the same detailed information on behaviour, but which may exhibit the same 'patterns' in the track itself, thus lending itself to the same level of interpretation. In the last talk of the session, Ewan Wakefield combined data from tracking studies of 16 seabird species to describe a previously unknown persistent hotspot in the northwest Atlantic, a million km^2 in extent, in deep water approximately halfway between Newfoundland and Brittany. Created by interaction between seabed topography and the North Atlantic Current, this diversity hotspot is also important for tuna, turtles and cetaceans, but lies outside any EEZ and warrants international protection.

The first afternoon session was one of two with the theme **Impacts of Environmental Change**. Demonstrating the value of long-term ringing, Deborah Pardo explored the relationship between age and various demographic and life-history traits in Black-browed Albatrosses, concluding that middle-aged individuals formed the most important part of the population (reassuring, eh!). In the second talk on Southern Rockhopper Penguins in the Falklands, Nina Denhard used PIT-tags to show that high annual survival rates were linked to a narrow optimum range of sea surface temperature anomaly, and that the species and its prey are potentially very vulnerable to climatic change. In common with many in the North Atlantic, the Black-legged Kittiwake colony at Hornøya, northern Norway, has declined greatly over the past 30 years, and in describing the complex relationship between adult survival, breeding success, SST, Capelin and Herring stocks and their fisheries, Tone Reiertsen held out little hope for a change in fortune there. It had been demonstrated in 2000 that foraging trip duration of chick-rearing Northern Gannets increased with colony size, suggesting intra-specific competition for food during the breeding season, and Rachel Davies repeated the study in 2009, finding that trip duration decreased in a year of greater prey availability (2009) and that density-dependence was stronger under poorer environmental conditions. About a quarter of the world's Arctic Terns breed in Iceland, but productivity has been declining, and Freydis Vigfússdóttir showed that over three years breeding success was lower and chicks died at an earlier age in larger colonies most reliant on marine prey, whereas birds in smaller colonies closer to brackish and freshwater habitats (and a greater variety of prey) fared slightly better.

In the final session of the day, Rocio Moreno investigated longer-term environmental impacts of the 2002 *Prestige* oil spill off northwest Spain on breeding European Shags and Yellow-legged Gulls, with stable isotope and heavy metal analyses suggesting changes in trophic level foraging and contamination that persisted for at least three years post-spill. Next, Valentina Lauria examined the effects of climate change on four trophic levels in the Celtic Sea pelagic food web, finding only a weak signal of climate forcing. Returning to Hornøya, Aurore Ponchon experimentally manipulated Black-legged Kittiwake breeding success and used combined GPS and satellite tracking to investigate the behavioural response of individuals, in terms of foraging and prospecting strategies. Next, Francis Daunt described how 16 years of data on tracking European Shags breeding on the Isle of May could be used to identify the most important feeding locations (and hence potential Marine Protected Areas), over a 23-year period and a wide range of colony size and breeding success. Finally, it's a safe bet that when Rob Barrett first started measuring Atlantic Puffin eggs at Hornøya 30 years ago, he had no idea he would be closing a conference with a talk demonstrating a significant reduction in egg volume over time, a similar trend being found at Røst over the same period. A negative correlation between egg volume and pre-breeding sea surface temperature suggested a response to climate change, mediated via food availability or quality.

Conference delegates on a guided tour of the aquarium (Andy Webb)

Several factors made this a memorable and successful conference. The Scientific Committee (Stuart Bearhop, Francis Daunt, Rowena Langston, Norman Ratcliffe, Stephen Votier and Sarah Wanless) put together a varied and interesting programme, and the Session Chairs (Rowena Langston, Tim Guilford, Stuart Bearhop, Richard Phillips, Francis Daunt, Morten Frederiksen and David Grémillet) ran a tight ship, keeping everything to schedule. The quality and diversity of the 35 poster presentations meant there was always something new to look at and discuss during the breaks, while the size of the venue and quality of catering could not be faulted. The short walking distances within the campus location, not least the proximity of the Nowhere Inn, also contributed to a very user-friendly meeting.

Closing the Conference, newly-elected Chairman of the Seabird Group Russell Wynn thanked all those involved in planning and running the event, in particular Steve Votier, who received a warm round of applause and a bottle of malt whisky! In a weekend of high quality presentations, judging the Best Student Talk and Best Student Poster was no easy task, but Deborah Pardo (Centre d'Etudes Biologiques de Chizé) was a worthy winner of the former (Multi-trait Ageing and Differential Impact of Environmental Variations in an Extremely Long-lived Bird) and Louise Soanes (University of Liverpool) of the latter (How do we Accurately Estimate the Foraging areas of Seabirds?).

Early on Monday, the field excursion set off on a two-hour coach journey through the Cornish countryside to the seawatch point at Pendeen Head. News of a passage of 2,000 Great Shearwaters past Porthgwarra in two hours on Saturday raised expectations, as did a blustery westerly wind with occasional heavy showers. On arrival, a steady stream of Manx Shearwaters and Northern Gannets were heading southwest, with frequent Sooty Shearwaters, and the occasional Great and Arctic Skua. The first of a good number of Balearic Shearwaters was soon identified, but over the following hours passage slowed somewhat and broadened offshore as visibility improved. Highlights were a Sabine's Gull and four Great Shearwaters, and it was nice after a hectic weekend just to relax watching seabirds. Thanks also go to Freydís Vigfúsdóttir for organizing the fieldtrips

Martin Heubeck, Andy Webb and Linda Wilson.

CONSERVATION NEWS

MPAS FOR SEABIRDS AROUND THE UK – A CALL FOR SUPPORT

Many Seabird Group members will be aware of the recent whirlwind of activity around the designation of Marine Protected Areas (MPAs) in the UK's seas. Much of the impetus for this comes from the passing into law of the UK Marine and Coastal Access Act and the Marine (Scotland) Act in recent years.

The creation of this legislation has been much welcomed by the environmental NGO community – the culmination of over a decade of campaigning supported by a huge swathe of the British public. One of the major successes of these laws was the legal duty placed on Ministers to designate a network of protected areas at sea – particularly for nationally-important habitats and concentrations of species which receive no protection through EU legislation (the Birds and Habitats Directives).

The processes for selecting these sites differ across Scotland, England and Wales. In Scotland, the process is science-led, with proposals for nature conservation MPAs brought forward by SNH, JNCC and Marine Scotland. In England, four independent stakeholder-led groups were convened to nominate Marine Conservation Zones (MCZs) for protection. In Wales, given the high level of territorial waters already designated under EU legislation, the Welsh Government is leading on the selection of a limited number of 'highly protected' MCZs. These national level sites will prohibit any extractive or depositional activities, and aim to compliment the existing network of MPAs in Welsh waters.

As you would expect, the RSPB hoped that these MPAs would fill in the gaps for our nationally-important seabird colonies – presently protected on land through SSSIs but lacking protection in maintenance areas adjacent to their colonies and at important foraging sites offshore. In particular, we

expected that black guillemot – the only seabird species in the UK which cannot be protected by marine Special Protection Areas – would be protected by the new national level designations. Without pre-judging the outcome of the site selection process, we hope that key areas for this species will be protected in Scotland, the UK stronghold for tysties – particularly the far north.

It is thus a major disappointment that, in England, seabirds – as well as some other mobile species – have been largely excluded from the 'nationally-important' site designation process (though one site for black guillemot is currently proposed in the English MCZ network at St Bees Head in the north west). In Wales, the restricted number and size of MCZs will offer very little in the way of additional protection for seabirds or other mobile species. In both cases, this is in spite of the relative simplicity with which colony extensions to protect maintenance activity areas could have been identified using agreed methodologies already applied to identify these extensions for SPAs across the UK (albeit that only those in Scotland have thus far been classified). Identifying key seabird foraging sites is admittedly more difficult – but not without precedent, and tracking technology is already revolutionising our understanding of seabird foraging – RSPB, working with partners across Europe (as part of the FAME project - www.fameproject.eu - see SGN115 Oct 2010), is using GPS technology in an attempt to proactively inform such designation. How key areas for seabirds are included in the Scottish site selection process remains to be seen – but we are continuing to engage with Marine Scotland, SNH and JNCC through workshops and consultation responses in the hope that seabirds will be actively protected through the process.

It is especially frustrating that much of the rationale for the exclusion of seabirds from the national MPA selection processes has been the fact that all species bar black guillemot qualify for protection within SPAs classified under the Birds Directive – 30 years after the deadline for implementation of the Birds Directive in the UK, we have only three truly marine SPAs (all in inshore waters), maintenance extensions to SPA breeding colonies – although identified and agreed some years ago have thus far only been classified in Scotland, and there are no areas protected for foraging seabirds in the breeding season.

Many members of the Seabird Group have been actively engaged in MPA work as it relates to seabirds – and we hope that you share our concern about the creation of the UK's first MPA network being a massive missed opportunity for our seabird colonies. If you have time, we'd appreciate your show of support by signing our pledge at www.rspb.org.uk/marinepetition or by contacting your local elected representatives. If you'd like more information about how you can help us ensure that seabirds are adequately protected through new and existing legal tools, please don't hesitate to get in touch:

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NEW RECOMMENDATIONS FOR REDUCING SEABIRD BYCATCH

In June 2011, the European Commission launched a public consultation on ways to reduce accidental seabird catches by EU fisheries. The outcome will feed into proposals for a new European Plan of Action to reduce the industry's impact on seabird populations1. The Plan is a response to the United Nations Food and Agriculture Organization's International Plan of Action (IPOA) for Reducing the Incidental Catches of Seabirds – previously focused on longline fisheries, but now extended to all types of fishing.

The study focused on seabird bycatch in longline fisheries, using the most up-to-date estimates of seabird catches globally. Data were collected for 68 fisheries, categorised into country and fish species, which were then used to calculate an average for the number of seabirds which are killed annually.

According to the results, around 160,000 seabirds, mostly albatrosses, petrels and shearwaters, are accidentally caught and killed by longline fisheries each year. However, because of uncertainties in the data, it is possible the true total could be twice this number.

Some bird species affected by fishing bycatch are already globally endangered, for instance, the Amsterdam albatross and the Tristan albatross, which is critically endangered. However, the lack of effective monitoring of bycatch in fisheries makes it difficult to assess the real impact of fisheries on seabird populations.

Spanish hake and Nordic demersal (seabed) fisheries featured among the ten fleets with the greatest impact on seabird populations. For most of these fleets, data were insufficient to make an accurate estimate of the numbers of seabirds caught, hence the possible underestimate. In response, the researchers recommend that on-board observation programmes for monitoring bycatch should aim to cover at least 20% of all hooks. However, even 5% would be an improvement in many cases, they say.

The researchers also recommend that as a minimum, fisheries should be required to report the number of hooks observed and how these observations are distributed across a fleet; absolute numbers for birds caught (observed) and total bycatch (estimated); and a bycatch rate per 1000 hooks.

Under the IPOA, the Food and Agriculture Organization has produced a set of best practice technical guidelines for reducing seabird bycatch2. The researchers recommend that regional fisheries management organisations implement these. For some demersal fisheries, it has already been shown that the use of simple and cost-effective mitigation measures can have a substantial impact on reducing seabird catch – particularly in fisheries operating in southern hemisphere waters.

1. EC. (2011). Consultation paper: EU Action Plan for Reducing Incidental Catches of Seabirds in Fishing Gears. European Commission. 1-13. http://ec.europa.eu/fisheries/partners/consultations/seabirds/consultation_document_en.pdf

2. FAO. (2008). Report of the Expert Consultation on Best Practice Technical Guidelines for IPOA/NPOA-Seabirds. FAO Fisheries and Aquaculture Report No. 880. 2-5 September 2008, Bergen, Norway. hftp://ftp.fao.org/docrep/fao/011/i0459e/i0459e00.pdf

Source: Anderson, O.R.J., Small, C.J., Croxall, J.P. *et al.* (2011). Global Seabird Bycatch in Longline Fisheries. *Endangered Species Research*. 14: 91–106. [Online]. Available: http://www.int-res.com/articles/esr_oa/n014p091.pdf

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REQUEST FOR SPECIMENS

WINTER PUFFINS WANTED

Puffins, like other large auks, have a synchronous moult of the primaries during which time they are flightless. Although flightless adult Puffins have been found in all months between September and April, until recently it was thought that adults typically replaced their primaries in the late winter. Evidence for this view comes from two sources. First, a few birds are still growing the outer one or two primaries when they return to the colony in the early spring. Second, many Puffins found dead in late winter wrecks in the North Sea up to 2007, oiled during the *Amoco Cadiz* incident in Brittany in March 1978 and washed ashore dead on the coast of northwest Spain in March and early April 2011 were flightless.

However, recently a very different picture has emerged. Many Puffins washed ashore in Shetland and Orkney in October 2007 were in wing moult and would have been flightless. This was completely unexpected. Further indication that healthy as well as stressed adult Puffins sometimes become flightless in the late autumn comes from some birds shot for food in the Faeroe Islands in October 2009 and 2010 and collected by Jens-Kjeld Jensen. Some of these were growing their primaries. It is currently impossible to be certain if the period of flightlessness is variable or the timing of the moult has changed substantially. Either of these would be extremely unusual. In an attempt to clarify the situation I am collecting information on the wing moult in Puffins found dead between August and March, inclusive.

The timing of the primary moult changes with age and it takes 2–4 years for a young Puffin to shift the growing of its wing feathers from June or July when it is in the burrow to sometime in the winter. Thus it is essential that the approximate age of any dead bird is assessed. Puffins are aged by the number of bill grooves on the outer orange part of the beak that increase over the first 3-4 years of life. In summer this is easy but in winter, the grooves are far less distinct. The diagonal ridge dividing the bill into two parts is then often dark and not obvious, so care is needed not to include the groove posterior to this ridge when estimating age. A winter bird is best classified simply as an adult (bill with two or more grooves as in the photographs), a juvenile or first winter bird (small, relatively small all-dark bill, primaries pointed) or an immature (bill intermediate). Puffins can be easily be aged from photographs. Good examples are shown in the accompanying photograph but much can be done with poorer pictures.

If you find a dead Puffin, please photograph the head and a wing (regardless of whether or not it shows signs of moult) and send the results to me with details of place and date. If this is not possible, dry the head and a wing and post.

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ET70833: The head and wing of a Puffin ringed as an adult on the Isle of May, south-east Scotland in 1998 and shot in the Faeroes in October 2010 that had completed the replacement of its primaries. I also have the skull and stomach contents of this bird (Jens-Kjeld Jensen).

EG53924: An adult Puffin shot in the Faeroes in October 2010 that had been ringed as an immature on the Isle of May in 2003. This bird had moulted all its primaries and must have been flightless (Jens-Kjeld Jensen).

BREEDING SEASON NEWS

ISLE OF MAY 2011

Following on from two successful breeding seasons, 2011 was a mixed year for seabirds on the Isle of May NNR. The season started well with return rates for colour marked adults of all species being consistently above the long term average: shag (93%), guillemot (92%), razorbill (95%), puffin (88%) and kittiwake (80%).

Breeding was also earlier than in recent years particularly for guillemots, razorbills and kittiwakes (See SGN 117. Page 1) However, an unusually severe storm on 23rd May caused many failures with nests and birds being washed or blown off exposed sites along the length of the west cliffs. Although some birds relaid after the storm, productivity of the species was very variable. Razorbills appeared to be the most affected and had their worst season since recording began in 1982, producing only 0.52 fledged chicks per pair. Guillemots fared slightly better and had an average season with 0.71 chicks fledging per pair. As expected burrow-nesting puffins seemed to be less affected by the storm and productivity of 0.79 chicks fledging per pair, was well above the long term average and the highest since 1995. Despite some nests being blown off the cliffs kittiwakes recorded their highest breeding success since 2000 with 0.87 chicks per completed nest, and several pairs raised three chicks. Shag productivity was down following three highly successful years but at 1.52 chicks per pair, was still above average. With fulmars only just beginning to lay at the time of the storm this species was assumed to be less affected by the event. However, ultimately fulmars had a below average breeding success of 0.36 chicks per apparently occupied site with most losses appearing to occur at the chick rearing stage.

In terms of diet, prey composition varied considerably among the species. Guillemot chicks were predominantly fed clupeids (92%) while razorbills brought in sandeels in 52% of loads with small clupeids making up the rest of the chick diet. Sandeels made up 69% of fish brought in by puffins, the remainder being small rockling and clupeids. Kittiwake fed their chicks largely on sandeels (79%) but clupeids were recorded more often than usual. Samples collected from shags indicated that sandeels dominated the diet (96%).

For more information on the Isle of May study look up the website:
www.ceh.ac.uk/sci_programmes/IsleofMayLong-TermStudy

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SHETLAND (EXCLUDING FAIR ISLE) 2011

It's difficult to remain objective and philosophical when monitoring Shetland's breeding seabirds, especially if you are old enough to remember the 'golden years'. While success varied between species and location in 2011, non-breeding across a range of species with different foraging strategies and capabilities, low hatching success, chick starvation, and the predation of survivors by gulls all contributed to one of the worst seasons yet, not helped by some pretty awful weather in May.

Breeding numbers of **Red-throated Diver** seemed 'normal' in the Northmavine study area and on Foula, where 11 pairs fledged five chicks (0.45). On Fetlar, however, 22 pairs fledged only five young (0.22), on Yell the 11 pairs in the RSPB Lumbister and Black Park reserves fledged just two (0.18), while

at Hermaness NNR, Unst, four pairs fledged one (0.25). More widely, ringers reported very few broods of two surviving to fledging age.

Gulliemot colony, with rolled eggs an dead chicks at Sumburgh Head, 19th June. (Alessio Di Leo)

Numbers of adult **Fulmars** and AOS were slightly down at monitored colonies, with some long-established sites occupied only intermittently, and 15% lower than in 2006 in a census of Noss NNR (5,245 AON). Breeding success was reasonable for recent years (mean of 0.39, range 0.33-0.45) at four colonies monitored by SOTEAG, but lower at Hermaness (0.31) and Noss (0.20) using more rigorous methodology.

As ever, **Gannets** seemed impervious to food supply problems, with an increase in AOS in plots and productivity of 0.75 at Noss, and productivity of 0.61 at Hermaness.

Shag fortunes varied considerably between three monitored colonies, although the number of checks made varied considerably and will have influenced the number of breeding attempts detected. Success on Mousa (1.04 per incubating pair) was higher than at the much larger Sumburgh Head colony (0.30, the lowest on record), where there was extensive non-breeding, nest abandonment from mid May, low hatching success, and some nests were washed out by swell. At both colonies, sites fledging young were generally those that had been most successful in recent years, presumably occupied by high quality individuals. Similarly, few pairs laid on Foula, but those that did had moderate success (0.74).

Great Skuas were late returning to Foula, where breeding success (0.23/AOT) was reduced by extensive cannibalism of chicks. Breeding success was also low to moderate at three monitored reserves (0.45 on Mousa, 0.13 on Noss, 0.47 at Hermaness), although higher on Fetlar (0.70); only one chick was found in an area of Bressay where 30+ would normally be ringed. Sample sizes for monitoring **Arctic Skua** success are falling drastically. On Foula, where 41 AOT were followed, 33 pairs laid and while 11 chicks were known to have hatched, none survived to fledge. One pair on Mousa establish a territory but didn't lay, while productivity on Noss (0.50) looks good on paper, but involved two pairs fledging one chick. In three study areas on Fetlar, five territorial pairs fledged none, while the single breeding pair at Hermaness hatched a chick, which also failed to fledge.

With a high proportion not breeding, few counts were made of **Kittiwake** colonies; 480 nests on Foula compared unfavourably with 582 in 2010 and 997 in 2007. Success was monitored at nine colonies. Laying was 2-3 weeks later than in 2010, with a 2-week variation in timing between colonies, hatching success was low, and breeding success zero at six colonies, 0.03 on Foula and at Hermaness, and 0.23 at Burravoe, Yell; mean success was therefore a miserable 0.03.

Most **Common Terns** and **Arctic Terns** never settled to lay at monitored colonies, and no young were known to have fledged from these, although a handful (literally) did so at one or two small, isolated colonies.

Reduced **Guillemot** numbers at all six monitored colonies (by 14-62%) may have been due largely to low attendance by off-duty birds and non-breeders. Breeding success is only monitored at Sumburgh Head, where heavy seas on 8th May washed away the first third of eggs laid. Although most relaid, this disrupted synchronous breeding in large parts of the colony. Birds began abandoning eggs *in situ* as early as 13th May, and by late May it was clear that some incubation shifts were excessively long. There was extensive mortality of chicks from starvation in the second half of June, compounded by relentless predation by gulls, and only two chicks *may* have fledged from 142 laying pairs in the plot. Surprisingly, the proportion of sandeels among fish brought in during chick-rearing (71%, 27% gadoids) was higher than in recent years. Casual observations on Foula, Noss and at Hermaness suggested similarly low success.

Razorbill numbers were low at the same six colonies as Guillemot; at the four monitored by SOTEAG, the 2011 mean population index (1978 = 100) was just 19, having fallen relentlessly since 2000, when it stood at 106. Breeding success was monitored at Sumburgh Head for the first time, with 43 laying pairs fledging no chicks, and the situation was thought to have been similarly dire on Foula, Noss and at Hermaness. No organisation monitors **Puffin** numbers, productivity or diet, but the general impression was of a very poor season, with few fish being brought to the major colonies in late June and early July. Finally, although breeding success is not monitored, widespread pre-breeding counts of **Black Guillemots** in April suggested a stable or slightly increasing population.

Martin Heubeck & Mick Mellor (University of Aberdeen/SOTEAG); Martha Devine, Rob Fray, Malcie Smith (RSPB); Glen Tyler (Scottish Natural Heritage); Sheila Gear (Foula Ranger Service); Dave Okill (Shetland Ringing Group)

PAPER REVIEWS

A Dispersive Migration in the Atlantic Puffin and Its Implications for Migratory Navigation. Guilford, T. *et al.* (2011): PLOS ONE Vol:6 Issue: 7.

Continuing the recent trend for deploying geolocators on a variety of species Guilford et al looked to use the devices in order to understand the post breeding dispersal of Atlantic Puffins from Skomer Island, Wales. A total of 27 individuals were caught over three years with all except one retrieved, with some birds carrying devices for more than one over-winter season. This allowed the authors to compare the distribution between individuals and within individuals in subsequent years.

The results demonstrated that puffins do not migrate to a single overwintering area but disperse over a wide area which changes over the non-breeding season. Although there is great variability in travel distances and directions between individuals there is a high consistency for individuals to follow similar migration routes between years.

Most birds were recorded heading in a NW-W direction upon leaving the breeding colony before trending north or north east through the autumn. Winter sees a more southerly movement, some as far as the Mediterranean, before returning to the colony in spring.

The paper discusses how the highly dispersive population but individual route fidelity cannot be explained by genetic inheritance of compass instructions or cultural inheritance of traditional routes. Instead it proposes a hypothesis whereby the over wintering behaviour is due to individual exploration acquiring a navigational memory.

With over wintering behaviour of seabirds largely limited to ringing recoveries until recent years the value of geolocators has again been used to shed light on this vitally important stage in their ecology. The paper also allows comparisons with other over wintering behaviour of puffin from other British colonies.

The relationship between pink salmon biomass and the body condition of short-tailed shearwaters in the Bering Sea: can fish compete with seabirds?

Toge, K. et al. (2011): PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES Vol: 278 Issue: 1718

Despite many studies having been conducted on seabirds and large fishes and their important role as top predators in the marine ecosystem there are few studies which have looked at the competitive relationship between the two groups. This study looked into the relationship between the pink salmon and the short-tailed shearwater which spends the post breeding season in the central Bering Sea. The Pink Salmon has an observed biennial change in biomass and the relationship with the diet and body condition of the shearwater was investigated as both species feed on krill, small fishes and squid.

The results demonstrated a negative and significant relationship between pink salmon biomass and the shearwater's body mass and liver mass. The authors display these results as evidence that large fish as top level predators can have a significant impact on seabirds where they feed on a shared prey.

Seabird conservation and tidal stream and wave power generation: Information needs for predicting and managing potential impacts

Langton R.; Davies I. M.; Scott B. E. (2011): MARINE POLICY Vol: 35 Issue: 5

Marine renewable energy generation is planned to increase vastly in the coming years as numerous areas are ear-marked for development around the British coastline and beyond. For instance the Scottish government aim for 100% of energy requirements to come from renewable sources by 2020 with over 40% coming from the marine environment. But what impact will this have on seabirds? Tidal stream and wave power are two forms of marine renewables which have the potential to affect seabirds, both positively and negatively. This may be due to direct impact, such as mortality from collisions, or indirectly, for example by changing their flight patterns en route to foraging areas or causing shifts in

their prey distributions and abundance. With the creation of Marine Protection Areas to promote the conservation of marine habitats and species there is greater potential for overlap with proposed sites for tidal and wave power emphasising the need for a clearer understand of the impact on seabirds.

This paper highlights the fact that due to few existing developments there are very few observational data regarding the effects on birds. Gaps in current knowledge are indicated with little information on the strike rate of submerged structures or of reaction to moving parts. There is strong evidence that birds alter their flight paths around offshore wind farms whether they are stationary or active so it is possible that tidal and wave devices may displace seabirds. However if there are surface structures cormorants and shags are known to benefit from having resting sites offshore. It is also unknown to what extent birds might habituate to such schemes. Other impacts include changes in prey abundance and distribution as fish are known to use submerged structures as refuges. Whether this enables birds to forage in these areas is unknown. Other impacts include altering upwellings and changing surface currents possibly reducing the amount of prey available to surface feeders.

There is also coverage of energy expenditure of foraging seabirds and efficiency along with time activity budgets highlighting gaps in knowledge which would help to inform the decision making process on where and what type of tidal or wave project with respect populating models predicting the impact on seabirds.

LETTER TO EDITOR

FALKLAND ALBATROSSES ARE INCREASING

Dear Editor

Albatrosses give rise to endless talk. In addition to tales by ancient mariners, more recently they have been talked into twice as many species, and then most of these have been talked into a threatened state. There is limited evidence for all this, though some are certainly killed by fishing operations. Ian and Georgina Strange have been making aerial surveys of the vast Black-browed Albatross colonies in the Falkland Islands since 1964, with full cover in 1986, 2005 and 2010 (British Overseas Territories Conservation Forum *Forum News* 37:28). The overall trend has been for an increase. It appears to have been overlooked that while fishermen may kill some albatrosses, they also provide a lot of additional food for the rest.
W.R.P. Bourne

SEABIRD GROUP NEWS

The Excomm have proposed to re-elect Martin Heubeck (Seabird Editor) back onto the committee for a second term

It has been decided to change the annual report to cover the period April to March, re-aligning it with the financial year. This will make reporting to the Office of the Scottish Charity Regulator (OSCR) simpler and bring the group in line with other bodies. An update on membership figures and the group's finances will still be presented at the AGM.

THE 46TH ANNUAL REPORT OF THE SEABIRD GROUP, 2011

The following changes were made to the Executive committee following the 45th AGM in November 2010: Claire Smith (formally Assistant Newsletter Editor) replaced Liz Humphries as Newsletter Editor, with the post of Assistant Newsletter Editor being filled by Mark Newell; Kerry Leonard replaced Andrew Ramsay as Treasurer; and Chris Thaxter replaced Simon Foster as Ordinary Member. In addition, Stephen Bentall was co-opted as an Ordinary Member for one year, but shortly afterwards decided to resign.

The 45th Annual General Meeting was held at the Scottish Ringers Conference on 13th November 2010 with 22 members present. One formal meeting of the Executive Committee were held during the year (by video-conference, preceding the 45th AGM), all other business being conducted by email, most of which related to organisation of the 11th Seabird Conference, financial issues relating to the change-over in Treasurer and decisions on grants.

A total of two grant applications were received for the October 2010 grant round, of which one was successful. A total of four grant applications were received for the March 2011 grant round, of which two were successful.

At August 2011 the Seabird Group had 277 members (including institutions and statutory bodies) that have paid fully or partially (still on old rates). The number has changed from last year with an apparent decrease of 87 members. However, the number of members reported at November 2010 (364) included many individuals who were still on the database but who had not fully paid-up subscriptions. The Membership Secretary, Ilka Win, is continuing to encourage previous members to rejoin.

Seabird 24 is on target for publication by the end of 2011, with final revised drafts being due in September. For future issues, the aim for timescales to ensure publication within the correct calendar year is: September for proofs to be finalised, autumn/early winter to scout for material for the next issue, late winter to referee and spring/early summer for redrafting and final submissions. Two newsletters have been published since November 2010 (February and June issues). From February 2011, the newsletter was revamped into a single column format in response to requests from members that this would be easier to read on a screen as most people receive it by email.

The Seabird Group web-based forum now has 227 members, but traffic continues to be low. Jez Blackburn is happy to continue moderating this facility and the committee are very grateful for this.

The 11th Seabird Group conference will be held 2-4th September 2011 at the University of Plymouth, UK. Dr Steve Votier (University of Plymouth) has acted as the local organiser and has expended a significant amount of time and effort which has ensured an exceptionally smooth and successful organisational process. Freydís Vigfúsdóttir has acted as Social Convener for the conference. The Scientific Committee comprised Norman Ratcliffe, Steve Votier, Stuart Bearhop, Francis Daunt, Rowena Langston and Sarah Wanless, who reviewed abstract submissions and finalised conference themes. The Executive Committee is indebted to them all for their hard work, enthusiasm and attention to detail, which has resulted in this year's conference promising to be a great success.

Linda J Wilson, Secretary. August 2011

MINUTES OF THE FORTY-SIXTH ANNUAL GENERAL MEETING OF THE SEABIRD GROUP

1900hrs, Friday 2nd September 2011

The 11th Seabird Group Conference, University of Plymouth

Apologies: Kerry Leonard, Claire Smith

Present: Norman Ratcliffe, Linda Wilson, Andy Webb, Ilka Win, Martin Heubeck, Bob Furness, Gareth Bradbury, Rob Barrett, Russell Wynn, Sarah Wanless, Mike Harris, Mark Newell, Francis Daunt, Freydis Vigfusdottir, Chris Thaxter, Ellie Owen

1. Minutes of the 45th AGM

Minutes had been previously circulated via the Newsletter. They were proposed by Norman Ratcliffe and seconded by Andy Webb.

2. Matters arising from the minutes

There were no matters arising from the minutes

3. The 46th Annual Report

Norman Ratcliffe summarised the 46th Annual Report and thanked Ilka Win for all her hard work in ensuring that the membership figures accurately reflected the actual number of paid subscriptions. The annual report was proposed by Mike Harris and seconded by Sarah Wanless.

4. 2010-11 Accounts and Treasurer's Report

Norman Ratcliffe thanked Kerry Leonard for his hard work over the last year since taking over as Treasurer. The Seabird Group is encountering financial difficulties which are resulting in the group being c. £2.5K in deficit, which is not sustainable over the long term. This matter is being discussed by the Excom as a high priority. The number of members is much lower than previously thought, as previous numbers included many members who were still receiving the journal and newsletters, but who were not paying subscriptions. The accounts and treasurer's report were proposed by Rob Barrett and seconded by Andy Webb.

5. Nominations to the Executive Committee

Russell Wynn was proposed by Norman Ratcliffe and seconded by Ilka Win as the new Chair of the Seabird Group, replacing Norman Ratcliffe.

6. Membership

Ilka Win summarised the current membership situation. 80% of members are from the UK, 13% from continental Europe, and the remaining7% from elsewhere. 73% of members are now paying by standing order, with 13% paying by PayPal. There are now four Life Members. 73% of members receive the newsletter electronically.

Bob Furness confirmed that if we decide to claim Gift Aid, this is possible without members having to renew their standing order. The group just needs to register with HMRC and advise the tax office of the name and address of each person who paid in that financial year, and no signature is needed. The amount that can be claimed back is 20%.

AP. Ilka Win to find out which members are eligible for Gift Aid and liaise with Kerry Leonard to set up Gift Aid reclaim.

7. Update on Seabird

Martin Heubeck summarised the current situation with the journal. The next issue is on target to be published this calendar year, and this will set the cycle for future issues. Excom are investigating ways to reduce the overall costs of producing the journal. The costs for a part-colour journal are not significantly lower than a full colour journal, due to the extra design costs of finding the optimal layout. Reverting back to a black and white journal would be a step back and likely result in reduced submissions. The most appropriate solution might be to attract a commercial sponsor for the back page, with an arrangement to pay a set proportion of the production costs, rather than a fixed sum.

AP. Martin Heubeck / Excom to investigate possible journal sponsorship options

8. The next World Seabird Conference

Norman Ratcliffe currently sits on the World Seabird Union Transition Team. Based on feedback from the 1st WSC, the preferred option for the next WSC is for 2015 in Europe. The Seabird Group has been asked if they might want to be involved in hosting the next WSC. Norman Ratcliffe has approached MEDMARAVIS and the Dutch Seabird Group to investigate possibilities for a coalition to host this, thus making it a Pan European effort. Although supportive of the idea, neither group feel they have the financial or operational capacity required. The Seabird Group Excom feels that hosting the next WSC given the Seabird Group's current financial situation is too much of a financial risk. Bob Furness suggested ICES (International Council for the Exploration of the Sea) as a possible funder and organiser, especially given that ICES has done so for a previous Seabird Conference (Glasgow). MH queried whether the WSC might clash with the next seabird census. AW confirmed that the next census steering committee is spread quite widely between organisations and should not impact too much on the Seabird Group. Although the WSC and the next census might end up competing for sponsorship, the next WSC might also coincide well with the results of Seabird 2015/16.

AP. Andy Webb to ask Mark Tasker to propose to ICES the possibility of them taking on the funding and organising of the next WSC

9. AOB

Russell Wynn, as incoming Chair, thanked Norman Ratcliffe for his work as Chair over the last four years.

The meeting was adjourned at 1930.

Website: www.seabirdgroup.org.uk

Seabird Group Forum:

http://pets.groups.yahoo.com/group/seabirdgroupforum

Registered charity No. 260907

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 research.

CURRENT SEABIRD GROUP COMMITTEE

Current retiral dates (at AGM) are shown in brackets:

Chairman	Russell Wyn (2015)	rbw1@noc.ac.uk
Secretary	Linda Wilson (2012)	Linda.wilson@jncc.gov.uk
Treasurer	Kerry Leonard (2014)	kerrysleonard@hotmail.com
Membership Secretary	Ilka Win (2012)	seabirdgroup.membership@gmail.com
Seabird Editor	Martin Heubeck (2015)	martinheubeck@btinternet.com
Seabird Publishing Editor	Andy Webb (2012)	andy@andywebb.org.uk
Newsletter Editor	Claire Smith (2014)	seabirdgroup.newsletter@gmail.com
Newsletter Assistant Editor	Mark Newell (2014)	manew@ceh.ac.uk
Ordinary members	Chris Thaxter (2014)	chris.thaxter@bto.org

Current membership rates

Standing Order	£20.00
Concession	£15.00
Institution	£35.00
International:	£21
Life	£300

The Newsletter is published three times a year. The editor welcomes articles from members and others on issues relating to Seabird research and conservation. Deadlines are: 15th May (June edition); 15th September (October edition) and 15th January (February edition).

Submissions for the newsletter must be in electronic format, preferably in word and should be no more than 1500 words. Please email photographs/figures as separate files and with full credits.

Every effort is made to check the content of the material that we publish. It is not, however, always possible to check comprehensibly 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 any 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 Seabird Group.**