the Seabird Group

NEWSLETTER 126

JUNE 2014

Contents

CONFERENCE NEWS

12TH SEABIRD GROUP CONFERENCE, OXFORD, UK, 21-23 MARCH 2014

On a bright spring day over 140 delegates from around the globe converged on the beautiful and historic Merton College in Oxford for the 12th International Seabird Group Conference. One of the oldest colleges in Oxford it was possible to walk through the same gardens that gave inspiration to the likes of T.S. Eliot, C.S. Lewis and J.R.R Tolkien.

Merton Hall, Oxford - Mark Tasker

To claim that the conference is international is no idle boast, with about half of those presenting having travelled from outside the UK. It is also not a conference composed of the same names and faces with the age range of delegates crossing seven decades. Presumably times have changed somewhat from the first Seabird Conference, as just over half of the presenters were female.

But enough statistics what did the conference contain? For many it started early on the Friday afternoon with an Early Careers Workshop. As the first of, hopefully, many early career meetings this workshop was a great opportunity for the early career delegates to meet each other before the start of the main conference. With over 40 people attending, to listen to enlightening and engaging talks from Sarah Wanless, Mark Bolton and Andy Webb and

Follow us on Facebook or twitter for regular links to seabird articles and papers:

https://www.facebook.com/pages/The-Seabird-Group/505575036157550?fref=ts

to discuss the aims of this newly founded group, the two hour workshop flew by. During the first half of the workshop the three speakers chatted about their careers and experiences working in a number of different environments on a variety of projects and subjects, showing just how varied a career in seabird ecology can be. With valuable insight and interesting anecdotes the take home message was that luck, hard work and enthusiasm can get you a long way! The second half of the workshop was a discussion centred on how best to develop the Early Career Seabird Group. This was hugely successful with many ideas being raised. As a result an online discussion group has been created where members can ask questions and share ideas, job opportunities, papers etc. with future plans to arrange weekend workshops and an early career led conference. If you missed the Early Career Workshop and would like to be a part of future events you can join the group by emailing jenny.sturgeon@abdn.ac.uk.

By late afternoon the registration area in the T. S Eliot Foyer was thronging with delegates eager to catch up and exchange the latest news or peek at the first round of posters and it was quite an achievement to herd everyone into the lecture theatre for the first of three plenary speakers. After a brief welcome from Professor Tim Guilford, the local conference convener, it was on to the first of the plenary speakers, Chris Perrins, who needs no introduction and indeed didn't have one. An engaging hour was spent as Chris took us through the long term monitoring of seabirds on the Welsh islands of Skomer and Skokholm. The broad nature of the work and presentation were an ideal start to the conference, ahead of the shorter, more focussed talks to follow over the next two days.

Dispersing delegates were then handed glasses of bubbly and pointed towards the buffet, some of which was located in the adjacent poster session, as if anymore enticement was needed to view and discuss the vast array of seabird research on display.

After the poster session many of the delegates took the short walk across the courtyards to the Merton College Bar where discussions continued past the witching hour and the adequate stocking of the bar beer chiller was tested to its limits, no doubt aided by the bargain prices.

The first full day of presentations on Saturday was preceded by a few short announcements including the statement that some delegates had moved on after the closing of the Merton College Bar to sample the delights of Oxford's nightclubs. Their prompt arrival for the first talk after such extensive networking must be commended.

The first oral session of the day was heralded by the second plenary speaker, Judy Shamoun-Baranes. Based at the University of Amsterdam, Judy spoke for 45minutes on the foraging and migratory patterns of large gulls. The international theme was enhanced as she took us through her studies on gull migration from the Netherlands breeding grounds to their wintering grounds and also their foraging ranges during the breeding season. There was also an interesting insight into the use of technology, not just in the form of GPS but the development of an app, to encourage the participation of the public in the reporting of foraging gulls.

The remainder of the morning was a series of talks around the **Life-history** theme. First up was Zofia Burr, who took us along the Norwegian coast up to Svalbard demonstrating the change in phenology of Puffins, Kittiwakes, Common and Brunnich's Guillemots with increasing latitude. All species had a later hatching date with increased latitude while Kittiwake also displayed increasing synchronicity with higher latitudes. Dale Kikuchi remained unflappable despite some technological gremlins as he presented his work on Rhinoceros Auklets. He demonstrated the benefits of gyroscopes and accelerometers for investigating the biomechanics of birds displaying different forces involved in propulsion by wings in flight and when swimming. The final talk before the mid morning coffee break was made by Akiko Shoji on the patterns and relationships in the breeding phenology and foraging behaviour in Manx Shearwaters. Akiko explained how earlier nesting birds raised chicks more slowly while the shearwaters also made both long and short trips with the shorter trips displaying increased foraging intensity indicating a dual foraging strategy. This suggested that the Manxies were provisioning their chicks from the short trips and maintaining their own body conditions with longer trips.

The coffee break gave further time for the first poster session with the room again rammed with folk taking in the research on show with extensive discussion on the work on view. There was also time to peruse the tempting books available from the Natural History Book Service, join the Royal Naval Bird Watching Society and indeed the Seabird Group, or discuss the latest developments in bio-logging at the stalls of Ecotone and Star-Oddi .

The **Life-history** session continued until lunch with Signe Christensen-Dalsgaard comparing the foraging plasticity of Kittiwakes over three breeding seasons at three Norwegian colonies with differing oceanographic conditions. GPS loggers were used to investigate differing responses in behaviour to temporal changes in food availability with two colonies appearing to also adopt a bimodal foraging strategy while the more northerly site switched diet. José Manuel Reyes-Gonzáles discussed Cory's Shearwaters in the Canary Islands and how a dual-foraging strategy can also emerge during incubation. Foraging strategies were compared over three seasons using tracking, behavioural and isotopic analyses with different years producing differing lengths of foraging trips, which were related to the occurrence of a dynamic eddy near the colony. Filipe Ceia presented his work on the consistency in seabird foraging niches, comparing intra-specific relationships within populations of three species; Wandering Albatross, Cory's Shearwater and Yellow-legged Gull. The study suggested a high individual heterogeneity in terms of foraging ecology.

Wandering Albatrosses again featured in Hannah Froy's talk on age-related variation in reproductive traits. Using a 30-year data set there was a clear decline in breeding performance with age until a striking increase in breeding success at the final breeding attempt, raising the question as to whether the birds know they have one last attempt left in them or whether all that extra effort contributes to their downfall. The ever-popular Wandering Albatross was the focus of Sam Patrick and her work on personalities influencing senescence rates. Until recently personality in birds was dismissed entirely but this view is changing rapidly and Sam's talk was an excellent demonstration of a different aspect of seabird research. Using boldness as a measure of personality the results demonstrated that bolder males had a decreased decline in breeding success with age (but no effect with females), with older males also undertaking longer foraging trips and gaining more mass per trip. The final talk in this session was by Hannah Grist on the individual variation in wintering location of European Shags. In a break from logger-based tracking studies Hannah demonstrated the value of large-scale colour marking and extensive field time to generate a vast number of sightings over three winters, representing over 50% of the breeding population of a single colony. This enabled an analysis of a partially migratory species, which displays substantial among-individual variation in winter location but high within-species site fidelity both within and among winters.

Departing the conference hall there was time for a final examination of the first poster session before heading across the college to the Merton Dining Hall. Expecting a light buffet lunch we found ourselves indulging in a two-course feast in the imposing hall taking the opportunity to continue discussions along the vast tables.

Not surprisingly it was a struggle to corral everyone back in to the lecture theatre, but finally the **Foraging** session got underway only a few minutes late. First up was Ellie Owen with a display of the dramatic variation in seabird foraging ranges across the UK. The use of GPS data demonstrated foraging ranges up to three times greater than previously observed, but a ten-fold difference between colonies. The findings have implications for creating single estimates for species foraging ranges. Gail Robertson narrowed the focus to a single species, Kittiwake, at a single colony on the UK North Sea coast. The study displayed greater foraging ranges during incubation, while foraging areas were largely characterised by cooler sea surface temperatures and higher chlorophyll concentrations. Continuing the focus on oceanographic features, Kylie Scales covered the use of mesoscale fronts as foraging habitats for chick-rearing Gannets. Using mapping techniques to plot foraging ranges, it was found that Gannets were more likely to occur within predictable, persistent frontal zones rather than ephemeral fronts indicating a learnt foraging behaviour. Our attention then turned to Leach's Storm Petrel and their foraging patterns during incubation. Ingrid Pollet compared two Canadian colonies where there were clear differences in the distances travelled, with stable isotope analyses indicating that those birds that travelled the furthest were feeding on prey from a higher trophic level with a higher energy content, perhaps justifying the greater foraging distance. We then travelled back across the Atlantic to hear about the intra- and inter-colony differences in winter foraging strategies in the Fulmar. Lucy Quinn compared the tracking results from a colony in the north of Scotland with one in Ireland, discovering

that there was a consistent sex difference in winter diet, with Irish birds appearing more reliant on discards while the Scottish colony females utilised the West Atlantic region more than males. Older individuals from the Scottish colony were more likely to remain in the North Sea and males who wintered closer to the colony were more reproductively successful. Lucy concluded by suggesting that females should pick an older male who stays at home, but when appealing for work it was unclear if she was using these criteria in her future career. The final talk in the Foraging session was by Alice Carravieri and back to Wandering Albatrosses. The presentation was on contamination within the albatrosses by persistent organic pollutants and mercury being driven by their foraging ecology. Strong inter-individual differences were discovered with feeding habitat effecting contaminant levels with subtropical water foraging producing higher mercury levels but lower pesticide levels.

The end of the session brought about a coffee break and the start of the second poster session, which was again well attended.

The final oral session of the day was titled **Demography and Change** and began with Tony Gaston discussing how the distribution of guillemot colonies in north-eastern Canada closely mirrors the polynyas and the locations of the first break up of the winter sea ice. The focus then moved to the southern hemisphere for Deborah Pardo's presentation on comparative albatross demography. The presentation compared extensive, long-term datasets on three species with an emphasis on the impacts of fisheries and climate on changes in demography. Aonghais Cook talked on the importance of demographic indicators for monitoring seabird populations. He focused on how demographic parameters, with correction for underlying environmental conditions, were able to detect population level changes at an earlier stage than by using abundance alone. A single-species focus was taken up by Erpur Hansen and his Icelandic Puffin studies. By studying the current collapse in reproductive success and Puffin diet Erpur suggested that breeding success is closely related to sandeel size and that those colonies in the warmer southern parts of Iceland have fared particularly badly. Heading east to Northern Norway, Tone Reiertsen has been studying the decline in Kittiwake numbers on HornØya. By analysing the long-term dataset it was shown that poor breeding success was a more important driver of population decline than adult survival. The last talk in this session was by George Divoky who explained the changes in diet and breeding success of the Black Guillemot in northern Alaska. The summer ice retreat in the last ten years has caused a change from Arctic Cod to less nutritious demersal fish with decreases in chick quality and survival. Meanwhile there has been an increase in Horned Puffins, with increased nest competition, and Polar Bears, with increased predation. He finished with Polar Bear footage that would make an excellent advertisement for the durability of 'Pelican cases'.

Mike Harris & Russell Wynn present Bill Bourne with a Lifetime Achievement Award – Mark Tasker

The formal business of the day concluded with Russell Wynn, Chairman of The Seabird Group, providing an update on group activities. Russell also used the opportunity to advertise the 2nd World Seabird Conference in South Africa in October 2015, highlight the Seabird Group travel grants awarded to overseas early career researchers attending the Oxford conference, and introduce a few ideas about the future role of the group and the format and content of the next conference. The session concluded with presentation of a Lifetime Achievement Award to Dr W.R.P. (Bill) Bourne, one of the founding members of The Seabird Group and a true giant of seabird research. After an excellent introduction by Mike Harris, Bill provided a potted history of his colourful career and put forward some of his own ideas about the future direction of the group. He was then presented with a beautiful Ian Lewington portrait of Black-bellied Storm Petrel to mark the award.

There was then more time to browse posters, books, loggers, or just continue discussions before we returned to the Merton College Dining Hall for the conference dinner. The imposing hall took on a different light from lunchtime, with the huge portraits of Merton Wardens past and present peering down on those assembled. The three long tables resulted in a general mixing of delegates while the supposed great and good were seated at the top table. The general hubbub of chatter was brought to an abrupt end with a thud from the centre of the top table, and all rose to hear a unique 'grace' with those who knew their Latin picking up the tailor made words. A delicious meal was consumed while conversations drifted from seabirds to mammals to pondering whether the hall featured in the Harry Potter movies. Although there were no seabirds swooping through to replace the owls, a picture of incubating Guillemots was circulated with a competition to correctly state which birds had an egg, with the winner to be announced the following day. Discussions then continued back in the college bar until closing.

Conference dinner at Merton Hall – Mark Tasker

The talks on the final Sunday were opened with a plenary by Francesco Bonadonna titled: 'From orientation to communication: the amazing case of petrel olfaction'. As recently as the 1970's the suggestion that birds navigate by smell was ridiculed but greater understanding of olfaction in birds has led to some novel studies including Francesco's use of Y tubes to test the birds use of smell.

There was then a natural progression into the first talk of the **Migration, navigation and movement** session with Mindaugas Mitkus talking on 'Storm Petrels can smell but what can they see?'. Accepting that petrels do use olfaction to detect prey, the talk concentrated on the visual acuity of Leach's Storm Petrels, with results suggesting that in certain light levels they have an incredibly poor spatial resolution but that on moonlit night their capabilities

are sufficient for seizing prey. Kozue Shiomi investigated the homing behaviours of Streaked Shearwaters with displacement experiments. Despite releasing birds at different distances, times and directions from the colony all birds were able to navigate back arriving safely after dark. From navigational flight to the flightless and more displacement experiments, this time on King Penguin chicks. Anna Nesterova illustrated her talk with videos of penguin chicks and their speed and collective homing abilities in finding their crèche.

After a poster session/coffee break we heard about the mysteries of Atlantic Puffin migration by Annette Fayet. Using GLS loggers on Skomer Island it was discovered that Puffins are highly dispersive, but with some evidence that partners display similar wintering routes for at least part of the period. From the other side of the globe, James Grecian talked on the impact of climate change on the Broad-billed Prion. By combining tracking data with stable isotope analysis the evidence suggests a southern shift in migration when compared to museum specimens. Onto tropical waters for Malcolm Nicoll's work on quantifying the intra-population variation in migration strategies of the Round Island Petrel. Tracking data identified the wide area covered during the non-breeding season, but identified different regions of the Indian Ocean with larger congregations. The Balearic Shearwater is critically endangered and Rhiannon Meier has combined multiple tracking systems to attempt to reveal at-sea behaviour and variation in the breeding season movements. There was an indication of variation in foraging movements between years, with the possibility that it could relate to wind fields. Movements of Boyd's Shearwaters from Cape Verde featured in Zuzana Zajková's presentation. Combining tracking and stable isotope analysis helped to fill out the movement picture of this poorly studied species. The final talk in this session, by Emiel van Loon, focussed on Lesser Black-backed Gulls and looked at trip attributes. The results displayed a relationship between the duration of nest bouts and trip length and an alteration between long and short trips.

Our final meal back in the Merton Dining Hall preceded a session on **Conservation and Impacts**. The European Storm Petrel featured in Hannah Watson's talk on the effect of human disturbance on reproductive success and nestling growth. It was shown that in those areas heavily exposed to tourists, the birds had significantly lower productivity and slower growth rates of the chicks that did survive. Although on a colony level the impact was low the study does highlight the need for careful visitor management within seabird colonies. Steffen Oppel presented work on Masked Booby and Ascension Frigatebirds following the removal of non-native predators. Although the booby population has increased frigatebirds have failed to recover with foraging competition the possible reason. The influence of oceanography on Northern Gannet foraging ecology was discussed by Samantha Cox. By investigating the use of oceanographic fronts by Gannets the possible conflict in the use of such areas for renewable energy was highlighted. Alex Robbins looked at multi-species foraging behaviour within high-energy tidal systems enabling assessment of the impact of planned tidal stream devices. Yann Tremblay explained the use of radars to plot seabird distribution from tuna purse seiners in the Indian Ocean. The novel methods employed created vast datasets and enabled interpretation of seabird densities and interactions with fishing vessels. The session was concluded by Ben Lascelles and the highlighting of Birdlife International's Global Seabird Programme. The huge range of species and area covered within the programme was remarkable and the means to access them was illustrated.

After a coffee break the final series of talks grouped under the heading **Wrecks and Parasites** contained not a single mention of loggers. Hanna Granroth-Wilding investigated how parasitism and environmental conditions interact to affect the development of nestling European shags. The findings included the greater impact of parasites on last-hatched siblings which was most pronounced in years of poor productivity. Klara Wanelik continued the theme of parasites, focusing on the socio-spatial structuring of a Common Guillemot colony. The results showing how immature guillemots make repeated attempts to enter the breeding colony, which may lead to increases in tick-borne virus transmission as immatures have higher infection rates. Moving onto the wreck part of the session, Sarah Burthe discussed the factors influencing productivity and survival of European Shags following a severe winter wreck. The impact of the wreck on a colour-marked population not only severely reduced the population but greatly affected the phenology, breeding success and pair bonds the following breeding season. Then to bring up the rear of the whole conference Mark Newell illustrated the effect of a severe summer storm, revealing not only the level of impact on seabird breeding success but the effect of aspect on the failure rate as well as the success of relays, with the intensity of the storm put in a historical context.

With the talks complete it was left to Tim Guilford to sum up and present a few awards. Prizes were given to the best student and early career posters and talks. The quality throughout was exceptionally high right to the very end, with the jury having to break during the final talk in order to consider the late talks. Eventually a consensus was reached with the best oral presentation awarded to Kylie Scales and the best poster to Thomas Clay. Due to the generous donations by the sponsors there were runners up prizes awarded to Lucy Quinn, Annette Fayet and Alice Carravieri, for talks and Carrie Gunn, Catherine Horswill and Holly Kirk for posters. The winner of the incubating guillemot competition was appropriately Mike Harris. Throughout the talks, the presenters were warned that if they appeared to be exceeding their time slot the auditorium would echo to the sound of a bird call with a prize awarded the person who could identify the most calls. The majority of calls were seabirds while a bellowing Elephant seal caused some confusion but pity the presenter who got interrupted by the sound of a Great Bustard. Eventually Norman Ratcliffe and Mark Newell were announced as joint winners.

This year was the first Seabird Group conference to actively embrace social media. In addition to live streaming via youtube there were regular updates on facebook and twitter with the latter reaching over 112,400 people!

We would like to thank all of our sponsors for helping to make this a successful conference. We thank our main sponsor, the RSPB's Centre for Conservation Science for the huge support given to this event which we are delighted has come together so well. Additionally, we would like to thank Merton College for extending such great hospitality to our attendees and providing state-of-the-art facilities in which we came together and shared our research.

The conference was also made a success by our other sponsors. We would like to thank our financial contributors: Swarovski, NHBS, Ecotone, BTO, Little Leonardo and especially Natural Power who donated generously despite being unable to attend the conference. We thank Sanders of Oxford and Oxford University Press for some great prizes, and Opticron for generously donating a fantastic prize for the best talk. We thank the Journal of Avian Biology for providing conference mugs and the Journal of Experimental Biology for notepads and pens.

The conference of course wouldn't have been possible without some key people. Thank you to Tim Guilford for convening the conference and to Akiko Shoji for taking on the primary organiser role and working day and night for many weeks to ensure the smooth running of the conference. Thank you to Ignacio Juarez Martinez for general support and among many other things organising the logistics of catering for so many people on the Friday evening. Thanks to Ollie Padget for running the website, keeping Twitter up-to-date with developments and approaching potential sponsors with huge success. We would like thank Tony Wheeler for help with online payments and Simon Cape for help with making the conference available to people who missed out on registration. We would also like to thank Holly Kirk for designing our logos, Annette Fayet for designing the conference pack map and Merton information and Chris Tyson for helping with ideas and logistics. Also to Emiel Van Loon, Anna Nestarova and Izzy Watts for providing valued support and ideas.

An extra special thanks goes to Dave Boyle for kindly allowing us to use his superb photographs; to Elisa Torrequebrada at the T.S. Eliot theatre for superb hospitality, and Caroline Massey for overseeing the organisation of the conference in Merton College.

Finally, we would like to thank Tim Guilford, Russell Wynn, Mark Newell and Stephen Votier on the Seabird Group Scientific Committee for scientific input. Additionally thanks to Ellie Owen and Kerry Leonard for continued support and advice throughout the process of conference organising.

The conference was a huge success and hopefully left everyone fired up to try and attend the **World Seabird Conference in Cape Town in October 2015** and the next **Seabird Group Conference in Edinburgh from 6-9 September 2016.**

Mark Newell, Jenny Sturgeon & Russell Wynn

THE SUCCESS OF A SMALL EAST ANGLIAN COLONY OF KITTIWAKES MAY BE DUE TO A DIET SUPPLEMENTED BY CLUPEIDS

Kittiwakes bred for the first time in Lowestoft, Suffolk in 1958. In the absence of sea-cliffs, roofs, window sills and other man-man structures were used as nest-sites. Redevelopment of buildings and perhaps treatment as a nuisance kept the population in check, and by 1988 the sole remaining site, the Harbour Pavilion, was scheduled for demolition. As a result of popular and, in particular, birder pressure the Port Authority constructed a "Kittiwake Wall" in the engineering yard ("SLP") in the harbour and this has been fully occupied to this day (**Fig.1**). A shortage of space on the "Wall" resulted in an overflow to the disused Claremont Pier about 1km away. Within the last few years, redundant tyre-fenders on the West side of Waveney Dock the harbour have been adopted. These three sub-colonies form one loose colony which is still expanding, so that buildings in the town itself are progressively being used as nest-sites. In 2013 there were about 250 AONs. This is the eastern-most colony in the British Isles and the only one between Yorkshire and Kent apart from a similar group on the outfall rigs at Sizewell Power Station, some 30km to the south which may have been part of the expansion of the Lowestoft colony but is not part of the current study.

Fig.1 Kittiwakes on the "Wall", Lowestoft harbour ("SLP")

Since 2004 the sub-colonies at SLP and Claremont have been part of a ringing project, extended in 2010 to colour-ringing, and from 2012 to a geolocator scheme. Claremont is the subject of a RAS ("Retrapping Adults for Survival") Project based on the large number of annual sightings of returning adults and sub-adults. Limited access to the SLP sub-colony in the working engineering yard is permitted while Claremont is unrestricted thanks to the interest of the owners. Waveney Dock was reached by boat for the first time in 2012.

Fig.2 Kittiwakes on tyre-fenders, Waveney Dock, Lowestoft

Productivity at the two original sites has always been high and the recent access to Waveney Dock has shown a similar picture. Counts are made of chicks-per-nest at the ringing stage (up to about 10 days) and adjustments are made for known casualties or failures (very few). It is assumed that chicks reaching ringing stage go on to fledge (J.Coulson, *pers.comm*). Results for the last 6 years are shown in **Fig. 3.**

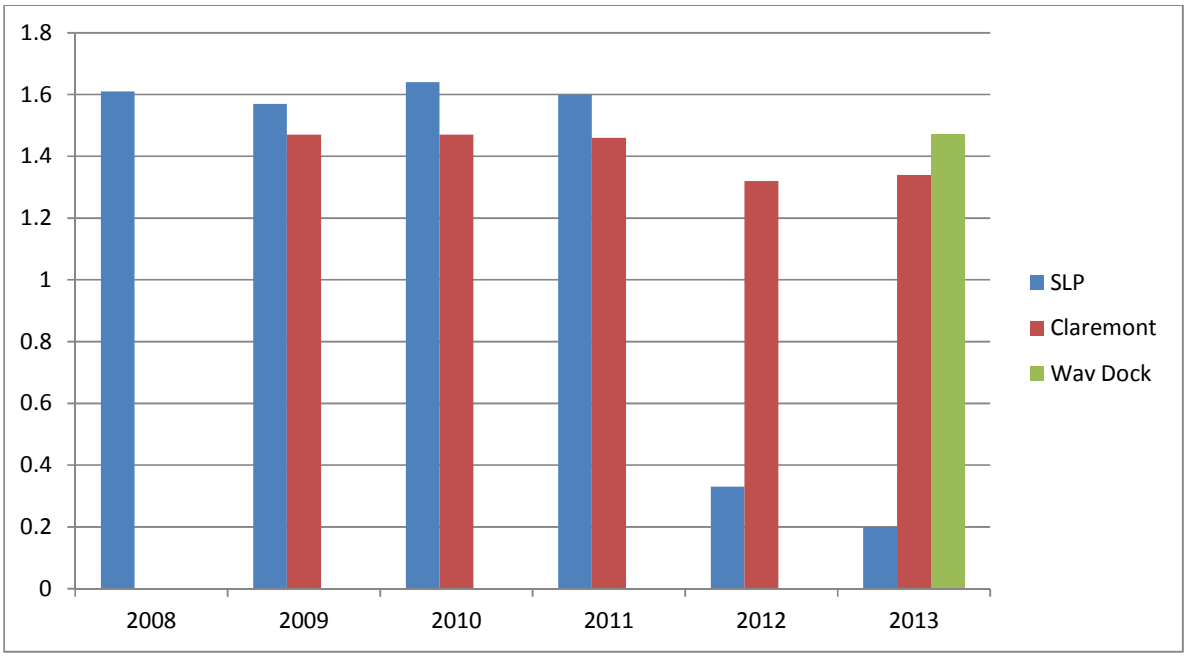


Fig.3 Kittiwake Productivity at Lowestoft. (No count at Claremont 2008, and at Waveney Dock (Wav Dock) count solely in 2013. Predation at SLP 2012 & 2013)

Earlier years show similar results and a study by others covering the 9 years to 1997 showed an average of 1.27 chicks per nest (Harris et al 1997).

So Lowestoft Kittiwakes have prospered while their cousins in the North of Scotland are in steep decline. A study of the diet of the Lowestoft birds may provide a clue to this success. Since 2008 regurgitates produced while chicks (and some adults) are being ringed have been collected in individual plastic bags, and sent frozen to Mark Newell at the Centre for Ecology and Hydrology in Edinburgh for analysis. Prey species were identified by otoliths and in some cases by bones. The results are summarised in **Table 1** below.

	2008	2009	2010	2011	2012	2013
No. of regurgitates	14	17	26	21	13	32
% with sandeel (all)	71	24	4	48	92	91
Sandeel (0 group)	36	12	0	0	8	38
Sandeel (1+ group)	50	12	4	48	92	91
Clupeidae	79	82	77	57	46	16
Gadidae		18	31			
Rockling					8	
Crustacea	14					3
Polychaete			4			
Molluscs	7					

Table 1. Frequency (%) of occurrence of prey items in regurgitates from Kittiwakes in a colony (3 sub-colonies) at Lowestoft

Sandeels form the majority of the diet in some years and clupeids (mainly Sprats) in others. The importance of clupeids to two Irish colonies was noted by Chivers et al (2012). Several studies in the northern North Sea have linked breeding success to sandeels with the inference that the long-term decline may be due to the absence of sandeels. At Lowestoft this evidently does not hold true. As each of the two main prey species fluctuates, the other provides a balance so there has always been an adequate food supply. Clupeids have thus been of significant benefit. Kittiwakes will probably take whatever prey species are available (including gadidae, specifically Whiting in two cases) but it seems that whether clupeids or sandeels were dominant in any year, there has consistently been ample food for the birds in the Lowestoft colony to raise healthy broods. Pipe-fish have never been recorded although they are present in East Anglian waters in some years, and the taking of crustaceans and polychaete worms seems to be no more than incidental.

As in Tyneside the Lowestoft Kittiwakes have an uncertain future in spite of their current success, being vulnerable to continual urban development, and recently to predation by Herring Gulls, let alone to hazards at sea.

Research at Lowestoft is partly funded by two grants from The Seabird Group (apply at http://www.seabirdgroup.org.uk/?page=grants).

Mark Newell kindly reviewed this article.

Colin Carter (Kessingland Ringing Group)

References

M.P. Harris and S.Wanless 1997 Breeding Success, diet, & brood neglect in the Kittiwake (Rissa tridactyla) over an 11-year period. ICES Journal of Marine Science.

Lorraine S. Chivers, Lundy M., Colhoun K., NewtonS.F., Reid N Diet of Black-legged Kittiwakes (Rissa tridactyla) feeding chicks at two Irish colonies highlights the importance of clupeids Bird Study 01/2012

ORKNEY MAINLAND SEABIRD BREEDING SUMMARY 2013

Orkney's seabird colonies showcase some of the worst declines of breeding seabirds in the UK and a decade of poor breeding productivity. Sadly, this year was no different. Black-legged kittiwakes, Common guillemots and Northern fulmars have been monitored since the 1980's. This season, monitoring was carried out by the RSPB, and Razorbills and European shags were monitored on mainland Orkney for the first time.

Kittiwakes had a slow start to the season: the first clutch was found on 30th May (and was immediately abandoned), however nest building and laying lasted well into June. By the end of June, almost 50% of monitored nests were still empty or had been abandoned. Less than 10% of nests monitored were known to make it to chick stage. From over 300 AON monitored, **only one chick fledged successfully** (mean productivity was 0.04 young fledged/AON). In 2012, mean breeding productivity was 0.16. One colony has gone extinct since 2009 and another 2 colonies each held less than 10 AON this year.

Guillemots also started slowly. Eggs were monitored from 24th May, and the first chick hatched on 20th June. Breeding productivity was therefore only **0.13 young 'fledged'/active and regular site**, with young leaving the cliffs between 5 - 28th July, and almost half of pairs failing at egg stage. In 2012, mean breeding productivity was 0.28. Chick provisioning and diet monitoring was carried out this season at both colonies. Chick diet composition was 64% sandeels, 18% clupeid and 2% gadoid. Chick provisioning rate was 0.27 feeds per chick per hour - unexpectedly high, given the poor season (S. Wanless, pers. comm.) and because a lack of sandeels is commonly described as the reason for the decade of declines. This may be because many chicks failed suddenly before monitoring began, therefore most of the chicks monitored did 'fledge'. Therefore, this may not represent the provisioning rate throughout the brood period.

Fulmars had an okay season with an increase in Apparently Occupied Sites monitored since 2012, and overall their mean breeding productivity was **0.40 young fledged/AOS**. This is similar to 2012 when their productivity was 0.41.

Razorbills and shags were monitored for breeding productivity for the first time in a limited number of plots. Razorbill mean productivity was **0.39 young 'fledged'/active and regular site**, however this may be inflated as monitoring started late, and so pairs that failed early in the season may have been missed. Monitoring also started late for shags and so their productivity may be inflated as well: they fledged approximately **1.9 young per AON**.

Small sections of the Seabird 2000 census were repeated around mainland Orkney this season, as well as a whole colony count taking place at Noup Cliffs RSPB reserve. The combined results show incredible reductions in breeding numbers:

- **87% reduction in kittiwake numbers** from a total of 24,934 in 2000 to 3288 in 2013
- **57% reduction in razorbill numbers** from a total of 2228 in 2000 to 966 in 2013
- **46% reduction in guillemot numbers** from a total of 45,668 in 2000 to 24,456 in 2013

Gannets: the most positive seabird story in Orkney is the growing colony of gannets at Noup Cliffs reserve. Since 2003 when three gannets nested, the colony has grown to 673 nesting birds in 2013, however there is evidence that the population growth might be slowing down. This year was a relatively successful season with productivity at **0.69 young fledged/AON**. This is a slight decrease on 2012 when productivity was 0.76.

Thalassa McMurdo Hamilton (RSPB)

REQUEST FOR COLONY PHOTOS

LOST SEABIRDS

The RSPB is calling on wildlife watchers to help build a picture of seabird declines.
Kittiwakes have declined across the UK and have been hardest hit in northern Scotland where their numbers have fallen by 86% in 25 years - many colonies in places like Orkney and Shetland have virtually disappeared. Guillemots and Arctic terns have also suffered catastrophic declines in the same period.

Research indicates that one of the main reasons for these declines is a lack of sandeels to feed on, caused by a rise in the sea temperature. From the available evidence, these birds have not just moved somewhere else, rather their populations have been whittled away.

The RSPB is campaigning for Marine Protected Areas to be designated to help tackle the threat to kittiwakes, guillemots and Arctic terns, and also for governments to take the issue of climate change, and its impact on wildlife, more seriously.

Campaigners are trying to collect images of thriving seabird cliff colonies from the past in order to compare them to the same sites today.

Although we have statistics and graphs showing declines, we need to drive the point home to decision makers by showing them real images of how our once thriving seabird strongholds have slowly but surely been turning into ghost cities. We're asking anyone who has been birdwatching, gone on holiday, worked or volunteered anywhere where there are kittiwake strongholds like Orkney, Shetland or elsewhere to have a look through their old photos and see if they have pictures of thriving cliff colonies from before 2000.

When compared with photographs of the same cliffs now, we will have a really stark image of these declines which we hope will raise awareness of the seabirds' plight, and help get them better protection. If you have some images gathering dust in a loft or sitting on a hard-drive which you think would help, then please let us know - they could make a big difference.

Anyone who has photographs of colonies of kittiwakes, guillemots or Arctic terns before 2000 can email them to: lostseabirds@rspb.org.uk

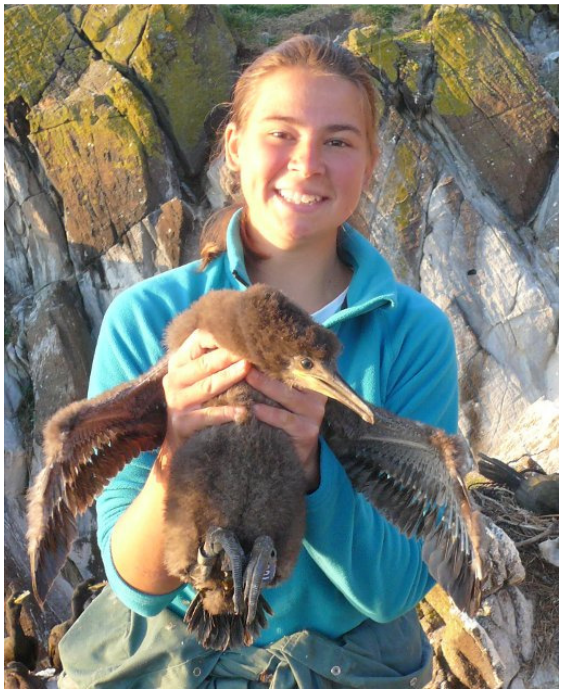
Or promote the campaign on Twitter: #lostseabirds

EARLY CAREER PROFILES

PARASITES, FAMILY CONFLICT AND SUCCESS IN THE EUROPEAN SHAG

I want to start with thanks to the Seabird Group for supporting its early career members and for this valuable opportunity for us fledglings to present ourselves. I've recently finished my PhD, working on the shags on the Isle of May in south-east Scotland, which I'm sure many seabird afficionados will be familiar with. Unusually for a seabird PhD, my overarching research question concerned parasites: how does infection interact with conflict between family members to influence individuals' behaviour and success?

Both parasites and family conflict are important factors in individuals' performance and reproductive decisions. Parasitism is generally costly to the host, so infection has the potential to alter hosts' resource balance and thus affect a broad range of fitness-related traits, with demographic and evolutionary implications. In seabirds, parasites and pathogens feature very little (as yet!) in our otherwise substantial understanding of complex environmental and social influences on fitness, despite the demonstrated role of infection for population processes in many other wild systems. Family conflict is important because it shapes the way an individual partitions resources between itself and its family members, all of whom want more than any other family member is willing to let them have, evolutionarily speaking.



Hanna Granroth-Wilding in the field

This distribution of resources is key to an individual's breeding success, both in a single attempt and across itslifetime, and hence its ecological and evolutionary contribution to the population. Therefore, if parasitism alters hosts' resource investment priorities, infection could be a key factor shaping breeding outcomes.

Let me anticipate your question: "Interesting in theory, but are parasites really of any consequence to what goes on in the colonies?" Yes, they really are, as my three main findings show. (1) Parasites are integral to how individual chicks are affected by environmental conditions, with implications for chick fitness and parents' lifetime breeding success. This came out of a parasite removal experiment repeated across five years, which enabled me to quantify how extrinsic variability influences individuals' responses to infection. (2) Parasites affect fitness-related traits more strongly in other family members than in the host individual itself, both within the breeding season (chick parasites affect parents' condition and parent parasites affect chick survival) and in the longer term (chick anti-parasite treatment advances parents' breeding in the next year). This experiment was a rare explicit test of how parasitism affects parent-offspring conflict, which also demonstrated the risk of misinterpreting the demographic and selective effect of parasites if we consider their impact on too few fitness components or across too narrow a time frame. (3) The carry-over effect of chick parasitism on parents' breeding timing is underpinned by a change in overwinter foraging effort, measured using data loggers. This experimental demonstration of a mechanism for carry-over effects also has direct fitness implications: if chick parasitism affects parents' overwinter energy requirements, it could influence their vulnerability to periods of starvation.

My optimistic hope is that this work will encourage more seabird scientists to consider how parasites and pathogens might influence their study systems. I intend to carry on in research, pursuing some of the broader questions that my doctoral research raised. For the last few months, I've been doing a bit of work on foraging distributions of giant petrels, as well as teaching at the University of Cambridge. I'll soon be taking up a temporary position on Nature's editorial team – and hoping for some grant application success for next year!

Hanna Granroth-Wilding

hannagw.phd@gmail.com

hanna.granroth-wilding.co.uk

STUDYING INTERACTIONS BETWEEN SEABIRDS AND MARINE RENEWABLE ENERGY DEVICES: MULTI-DISCIPLINARY APPROACHES HELP ANSWER KEY CONSERVATION QUESTIONS

The rapid increase in marine renewable energy devices including tide and wave turbines provides novel and unprecedented levels of anthropogenic developments within many coastal habitats. Understanding precisely how, and to what extent, tide and wave turbines could affect our coastal seabird communities is essential if we are to mitigate potentially negative impacts. Our research group at the University of Aberdeen led by Beth Scott, addresses key questions with immediate conservation consequences. We use a suite of complementary analytical and fieldwork methods to start understanding precisely how turbine installations could affect seabirds at the population level. To do so, we rely heavily upon collaborations with oceanographers, engineers and experienced fieldworkers to provide the field equipment, specialised knowledge and datasets that are needed to answer key questions. At the moment, our team consists of 8 PhDs students, 2 of which are focussed exclusively upon seabirds: myself (James Waggitt) and Marianna Chimienti. Whilst mine and Marianna's research is very different in their approaches, they are complementary and focus upon the same key question: how can marine renewable devices affect seabirds and do these effects have perceptible population level impacts?

Marianna and I have quite different backgrounds and expertise, and this is a major advantage as we often help each other out with problems and advice! Before starting my PhD in 2011, I studied a BSc and then an MRes in Marine Biology at the University Of Plymouth between 2006 and 2010. Under the supervision of Dr Stephen Votier (University of Exeter), I used a combination of GPS loggers, stable isotope analysis and behavioural observations to study the foraging strategies of gannets. However, I also worked with Dr Andy Foggo on estuarine invertebrate communities and eutrophication effects. Marianna's background is equally diverse! Before starting her PhD in 2013, Marianna studied a Master's Degree in Biology of Aquatic Systems at the University of Federico II in Naples, Italy between 2009 and 2010. Under the supervision of Dr Sandra Hochscheid (Stazione Zoologica, Anton Dohrn, Naples) she used TDRs (Time Depth Recorders) to study the diving behaviour of juvenile loggerhead sea turtles. Following this, Marianna then studied an MRes in Applied Marine and Fisheries Ecology at the University of Aberdeen between 2011 and 2012. Under the supervision of Dr Beth Scott and Prof Justin Travis she developed a theoretical 2-Dimensional model that simulated the underwater searching strategies of diving predators.

A critical component of assessing potential impacts upon seabird populations is estimating how many individuals could directly interact with devices. As part of the NERC/DEFRA funded FLOWBEC 4-D and RESPONSE projects, I am quantifying spatial overlap between seabird populations and marine renewable devices in Orkney: a region earmarked for extensive tidal stream turbine deployments. To quantify spatial overlap I am addressing three questions. Firstly, use of the European seabirds at sea (ESAS) vessel survey database and also modern aerial survey databases shall help quantify the importance of high energy habitats at regional scales. Secondly, novel applications of conventional at-sea vessel survey techniques are being used to understand foraging distributions within high energy habitats. Finally, unique deployments of seabed mounted active hydroacoustics are providing information on diving behaviours around devices. By combining the results of these three different studies, it will be possible to predict the proportions of Orkney seabird populations that could directly interact with devices. However, such research would not be possible without engineering (Eric Armstrong, Chris Hall, Dr Benjamin Williamson) and oceanographic expertise (Dr Paul Bell, Dr Pierre Cazenave, Dr Ricardo Torres). We are also indebted to support from the European Marine Energy Centre (EMEC), based in Stromness, Orkney. This research provides a great example of how multi-disciplinary approaches can help ecologists answer key questions.

Changes in prey characteristics around devices, e.g. the attraction and aggregation of fish species, could affect foraging behaviours with consequences on survival and fecundity. In collaboration with colleagues at the RSPB and Marine Scotland Science (MSS), Marianna is developing a 3-D model that aims to simulate complex and realistic searching strategies in a heterogeneous environment. The model will be used to test how the presence of devices could affect underwater searching strategies and foraging efficiencies. Model parameters are based upon empirical datasets, with foraging behaviours quantified using GPS loggers, accelerometers and TDRs, whereas prey characteristics have been quantified using the before-mentioned seabed mounted active hydroacoustics. By using this approach, it is possible to explore precisely how changes in prey characteristics can modulate underwater searching strategies and foraging efficiencies. Such research would not be possible without experienced fieldworkers from RSPB and also additional modelling expertise (Dr Kamil Barton and Prof Justin Travis). Therefore, Marianna's research is another example of how multi-disciplinary approaches can help ecologists answer key questions.

James Waggitt, PhD Student, University of Aberdeen - r01jjw11@abdn.ac.uk, Marianna: r03mc13@abdn.ac.uk

TYNE KITTIWAKES PARTNERSHIP – NEWS UPDATE (19 MAY 2014)

The Tyne Kittiwakes Partnership now have a Facebook page where you can keep up to date with project news:

https://www.facebook.com/pages/Tyne-Kittiwakes/635269083218876?fref=ts

A short film *'The Tyne Kittiwakes'* by Cain Scrimgeour was premiered on 12 March 2014:

http://birdguides.com/webzine/article.asp?a=4298

The film was funded by a grant awarded by the Northumberland & Tyneside Bird Club

Following remedial work at the Gateshead kittiwake tower, after crow predation in summer 2013, the gulls have returned. At the time of writing (5 June 2014)there are 77 apparently occupied nests.

Gateshead tower

Port of Tyne tower

Port of Tyne kittiwake tower (SGN 125: 7-8) was completed and installed on 3rd April. Twenty-one decoy nests made from river mud, sand, cement and hay mixed with water were secured onto some of the river-facing ledges to try and make it look more 'homely' to passing birds. In addition the Port of Tyne environmental people are playing kittiwake sound recordings from a 200 Watt speaker at the base of the tower during weekday working hours to further attract birds. Kittiwakes are flying up and down river on a regular basis as well as pausing on the water to feed close by. Most of the Tyne nests are further upstream. So far none have taken up residency on the new structure, although young prospecting birds should be present in the river. Perhaps this potential high-rise accommodation will fare better next year!

Daniel M Turner

SUSTAINABLE SHETLAND vs. VIKING ENERGY – UPDATE

A huge thank you to all of you out there who helped to make our Crowdfunder fundraising campaign such a success. (SGN 125) We managed to reach a total of **£20,285** through Crowdfunder in the same week that we made over £5000 in an auction of Shetland items. This shows the strength of feeling that still exists against the Viking Energy windfarm.

To date £130,000 has been raised to cover legal costs relating to the Judicial Review into the Scottish Ministers decision to grant consent to the VE development. On Thursday 27th February Scottish Ministers appealed Lady Clarke of Calton's decision of September 2013 to overturn consent, in front of a panel of three Judges in the Inner Court of Session led by Lord Gill. A judgement is expected within a few weeks.

http://www.sustainableshetland.org/

SKOMER ISLAND GUILLEMOT MONITORING FUNDING

A petition has been launched to ask Natural Resources Wales to reverse the decision to cut the £12,000 annual funding they provide for the ongoing Guillemot monitoring study on Skomer Island. The aim of the study (started in 1972), is to understand the processes responsible for long term changes in the population. Adult and immature survival, age at first breeding and reproductive success are monitored through marked individuals The effects of oil pollution and climate change on guillemot numbers are currently being assessed.

http://www.ipetitions.com/petition/reinstate-funding-for-skomer-islands-guillemot

http://skomerisland.blogspot.co.uk/2014/06/reinstate-funding-for-skomer-islands.html

ORKNEY SEABIRD HERITAGE

HELP CREATE A GIANT FLOCK OF SEABIRDS ON ORKNEY THIS SUMMER!

Seabirds are amazing, from graceful gannets to raucous razorbills. Orkney is one of Europe's best places for seabirds. Birds like the kttiwake, Arctic tern, guillemot and Arctic skuas have been part of the Orkney landscape for centuries and have their own Orkney names: Kittick, Pickieterno, Aak, Scootie Allan.

Sadly, our seabirds are in trouble, all around the British Isles - even here on Orkney, where some species have declined by 75% and some of the once lively cliffs are now almost empty! We need to take action!

ORKNEY SEABIRD HERITAGE would like to invite you and your friends to help gather **a giant flock of seabirds, created by people like you**, who are passionate about seabirds and nature? The bigger the flock, the more **it will show how much we care** and that we want to save these magnificent birds for the future!

To take part, simply make a seabird and send it to Orkney, to join the flock!

Cardboard Arctic skua – Uwe Stoneman

You can make any kind of seabird which breeds in Britain, e.g. terns, kittiwakes, guillemots, Arctic skuas, puffins and razorbills. Check out this link to see what some of them look like. You could make a bird from recycled materials, or try out some origami. Try this link for inspiration or search online for "bird sculptures" or "craft birds". Perhaps you fancy collaborating with your fellow artists at home or in school to send us a whole flock of birds – just bear in mind that you will have to post them on their flight to Orkney!

Once your fantastic creation is ready, please post it before 31 August (the sooner the better) to the **RSPB Orkney Office at 12-14 North End; Stromness; Orkney KW16 3AG**, so your bird(s) can join the flock!

If you live on Orkney, you can of course bring your bird(s) to the office in person. Best to call to make sure someone is in when you get there: tel. 01856 850176

You can follow how the flock grows on this blog at **orkneyseabirdheritage.wordpress.com**

The flock will be shown to the public on Orkney and in the Tent Gallery at Edinburgh University some time in September or October (dates to be confirmed on the blog).

If you want, you can send a message with your bird (or even write it on your bird). You may want the message to say how you feel about the decline of our seabirds or what you would like to see done to save them. If you include any personal details, such as your name, age and address, please be aware that these may be seen by members of the public.

Please note that Orkney Seabird Heritage cannot return any of the birds you send. After the project finishes, the birds will be recycled or used to raise money for RSPB and/or seabird conservation.

Uwe Stoneman

THE GULL'S FRIEND

SYKES' KITTIWAKE

About ten years ago a scruffy immature kittiwake, standing bolt upright and with a detachable head, was offered to me by a dealer in taxidermy. She claimed it cost her over £1,000 and that she would be exhibiting it at the Olympia antiques fair in London for sale at £2,200. This improbable tale had to be balanced against the fact that the bird was clearly something rather unusual. The base bears a bronze badge, engraved "a tribute to the gull's friend" and bears the three feathers emblem of the Prince of Wales. It looks like a 'one-off' presentation gift, perhaps to give a man who has everything else or maybe as a memento to one of the bird conservationists (such as W. H. Hudson) who campaigned against the plumage trade in the late 19th century. The trade and campaigns had focussed especially on kittiwakes collected off the east coast, notably at Flamborough Head), because kittiwake feathers were said to take dyes better than others and they were in great demand for the fashionable millinery trade. Kittiwake nesting colonies were plundered and decimated as a result and campaigns in support of the birds led to the formation of the RSPB. Somewhere maybe there might just be a photograph of somebody receiving this weird kittiwake object as a reward for their actions! But why would a conservationist be anything other than annoyed to receive a badly stuffed kittiwake whose head comes off?

Reluctantly I acquired the bird, which had evidently been set up by Edwin Ward (brother of Rowland Ward the London taxidermist), and his name was stamped into the gilded metal canister inserted into the bird's body. Also stamped into the metal is Queen Victoria's Royal cipher, 'VR' and a crown. Ward would have needed permission to do this, again implying something special was involved. The canister is inserted into a cardboard-lined cavity, with the lid separately attached to the bird's head. Edwin Ward was based at Wigmore Street in London 1871-1879.

The anomaly of having a dead kittiwake presented to 'The Seabirds Friend', and embellished with emblems of both the Queen and Prince of Wales puzzled me for years and I mentioned this in an interview that was published in 'Shooting Times' in March 2008. Shortly afterwards I received a telephone call that was so exciting I clean forgot to ask who was my informant. I have always regretted that discourtesy, as he provided the likely explanation for this anomalous kittiwake effigy. It appears to have belonged to Christopher Sykes who was MP for east Yorkshire (which includes Flamborough Head) between 1865 and 1892. This was the scene of the annual seabird carnage by egg collectors and 'Hooray Henrys' who went there just to shoot at the birds for amusement as soon as the closed season ended. Vast numbers were killed, many being used for the plumage trade, but most were just wasted. This

wanton slaughter was widely condemned, especially as it involved unpopular members of the rich aristocracy behaving badly. Sykes was persuaded to steer the first Seabirds Protection Bill through Parliament, apparently his only Parliamentary achievement in 25 years. The Bill was introduced in February 1869 and received Royal Assent on June 24th. Thus, Sykes was indeed the 'Gulls Friend'.

He was also a member of the well-heeled race-horse fraternity and a longtime social companion of the Prince of Wales (later Edward the 7th), who was known as 'Bertie' or 'Tum-Tum' on account of his corpulence, resulting from a lifetime of poorly-disciplined indulgence. Sykes was one of Bertie's frequent house and dinner guests, and lavishly entertained the Prince at his own houses in Berkeley Square and at Brantingham Thorpe in Yorkshire. During a Ball held at Gunton Hall (rented by Bertie as a holiday venue) in January 1870, Sykes became hopelessly drunk and had to be put to bed. The Prince retaliated for this unbecoming behaviour by ordering that a dead gull should be put in the bed beside him. Sykes is described by a biographer as a "singularly lovable and sweet natured snob, the butt of endless jokes by the Prince of Wales". A 'Gull' was the word used to describe someone gullible, a person who was easily outwitted. Other biographies confirm that Sykes was a 19th century dandy, tall, slim and always immaculately attired. He sported a dark beard, turning golden with age and bore Bertie's torments with quiet dignity. Sykes and the Prince were close friends as Bertie helped him out financially, having been at least partially responsible for his overspending on lavish entertainment. Nevertheless, Sykes was compelled to sell his home at Brantingham Thorpe and this may be how the kittiwake 'escaped' into the antiques trade.

This background all fits with the bizarre kittiwake, and it seems likely that the bird was commissioned by the Prince of Wales from Edwin Ward, holder of a Royal Warrant ("By Appointment", taxidermist to Queen Victoria), and it was presented to Sykes after the successful passage of the Seabirds Protection Act in 1869. I suspect that the bird's head lifted off to reveal a 12 bore cartridge to complete this rather tasteless joke. The nickname 'The Gull's Friend' remained with Sykes thereafter.

I would be very glad to hear of anything more regarding this tale.

Pat Morris

pat.morris5@outlook.com

***A History of Taxidermy: art, science and bad taste* - P. A. Morris, MPM Publishing 2010.**
400 pages, colour throughout, over 130,000 words and more than 1,100 pictures.

SEABIRD GROUP GRANTS

The following grants were awarded in the February round:

- A Survey of the Breeding Tern Populations within Rye Bay - Lewis Yates
- The survival rate, breeding colony size, and predation pressure during the breeding season of storm petrel (*Hydrobates pelagicus*) on the Nolsoy Island (Faroe islands Denmark) – Anna Kosmika

The next deadline for submission of grant applications is **31 October 2014**. more details and an application form can be downloaded at: http://www.seabirdgroup.org.uk/?page=grants

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	Ellie Owen (2015)	ellie.owen@rspb.org.uk
Treasurer	Kerry Leonard (2014)	kerrysleonard@hotmail.com
Membership Secretary	Lucy Quinn (2016)	seabirdgroup.membership@gmail.com
Seabird Editor	Martin Heubeck (2015)	martinheubeck@btinternet.com
Newsletter Editor	Claire Smith (2014)	seabirdgroup.newsletter@gmail.com
Newsletter Assistant Editor	Mark Newell (2014)	manew@ceh.ac.uk
Student Ordinary Member	Jenny Sturgeon (2015)	Jenny.sturgeon@abdn.ac.uk
Website Officer	Jeff Stratford (2016)	jeff.stratford@pms.ac.uk
Ordinary members	Chris Thaxter (2014)	chris.thaxter@bto.org
	Mark Lewis (2015)	lewis_sparky@yahoo.co.uk

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.**