NEWSLETTER 156

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Update from our new Chair

Alex Bond, Seabird Group Chair

Hello Seabird Group members! With the new year well and truly underway, I thought it would be useful to have a small section of the newsletter that gives a brief update on the various activities undertaken by the Executive Committee between our meetings and conferences.

This year has already been quite busy, and we are all looking forward to the conference in Coimbra this September. The programme is bound to be diverse and exciting, and I know the local organising team tried to accommodate as many talks and posters as possible.

We have also had the pleasure of awarding Research and Training Grants to some fantastic projects. You can read reports from some of the previous awardees in this issue of the newsletter. The deadline for the next round of Research Grants is 31 October, and the next Training Grant deadline is in February next year.

I'm delighted to share that we have adopted a broader concession rate to include unwaged or low-wage members. The Seabird Group should be a place for all with an interest in these wonderful birds, and this will hopefully make that even more so the case. If you have any questions, you can speak with Antoine Grissot, our Membership Secretary (membership@seabirdgroup.org.uk). Our Social Media team has also been busy, and the Seabird Group now has a presence on BlueSky (https://bsky.app/profile/theseabirdgroup.bsky.social) and TikTok (https://www.tiktok.com/@theseabirdgroup). We are always looking for things to share, especially videos from the field. You can get in touch with Trina Siddiqi-Davies or Kirsty Franklin with content and queries (socialmedia@seabirdgroup.org.uk)

For my part, I've spent the first 6 months as Chair getting to grips with the huge array of things on the go, from the SEABIRD journal to our plans for a new and improved website. It's incredible to be able to work with so many dedicated folks who are all pushing in the same direction, making the Seabird Group better every day.

So here's to a successful field season, and I look forward to seeing many of you in Portugal this September!

Guillemot and Razorbill chick provisioning in the Flamborough and Filey Coast SPA seabird colony, England, in 2023

Keith Clarkson, RSPB

With an estimated 166,576 breeding pairs of seabird, the Flamborough and Filey Coast SPA (FFC), located on the Yorkshire Coast, England, supports the largest mainland seabird colony in Britain and Ireland. Within the colony the **Common Guillemot** breeding population (111,925 individuals counted on cliffs in 2023*)* is second only to Rathlin Island, whilst the **Razorbill** population *(*45,780 individuals counted on cliffs in 2023) is the largest in the UK and Ireland[1]. Both species have undergone ongoing population increases the last fifty years[2].

Against this background, from 2009 to 2012 monitoring was carried out, alongside other colonies across the UK, to determine the composition of the Guillemot chick diet. These earlier studies found that in contrast to Guillemot chicks in many northern UK colonies which had a diet primarily of Sandeels, the chicks at FFC were predominantly fed clupeids, probably Sprats (*Sprattus sprattus)*[3]. In 2015, Ruth Jeavons, undertook a comparative study of both Guillemot and Razorbill chick diets, at Flamborough Head and Bempton Cliffs. Clupeids formed 95% of the Guillemot chick diet whilst in contrast Sandeels made up 89.7% of Razorbill chick diet[4]. More recent studies in 2018[5], 2021[6] and 2022[7], have shown a similar pattern.

In 2023, on behalf of RSPB Bempton Cliffs, I carried out 107 hours of field observations of adult birds feeding chicks between 5th June and 2nd July, on study plots at both Flamborough Head and Bempton Cliffs, during which I recorded a total of 1,542 prey items, many of which were photographed creating a photo library, to facilitate independent verification and provide a historic record of the feeds, which are available on request.

Of 842 identified prey items fed to Guillemot chicks, 88.2% were clupeids, probably Sprat, 9.4% were Sandeel*,* 1.8% Lesser Weever (*Echiichthys vipera)* and 0.5% others including European Common Squid (*Alloteuthis subulata),* gadids (*Gadidae spp*.), and one Butterfish (*Pholis gunnellus).* Whilst, of 613 prey items fed to Razorbill chicks 91.4% were Sandeel and 8.6% were clupeids.

Guillemot feeds were concentrated in the first 2-3 hours of daylight with a smaller peak in mid-late afternoon and a further small peak in the evening. In contrast Razorbill feeds were more uniformly spread across the day although negligeable in the evening.

Common Guillemot with Clupeid spp.
Photo: Keith Clarkson.

Razorbill with typical medium-sized sandeels.
Photo: Keith Clarkson.

[1] Burnell D et *al.* (2023) Seabird Counts: a census of breeding seabirds in Britain and Ireland (2015-2021), Lynx Nature Books.
[2] Clarkson K *et al.* (2022) Flamborough and Filey Coast: 2022 Seabird colony count and population trends. RSPB.
[3] Anderson HB *et al*. (2014) The diet of Common Guillemot *Uria aalge* chicks provides evidence of changing prey communities in the North Sea. Ibis, 156: 23-34.
[4] Jeavons R (2015) Chick provisioning in two species of auk with contrasting feeding strategies. MSC thesis, University of Leeds.
[5] Baker R & Duffield H (2018) Chick provisioning of the Common Guillemot *Uria aalge* and the Razorbill *Alca torda* at Flamborough Head and Bempton Cliffs seabird colony in 2018. MSc thesis, University of Leeds.
[6] O'Leary J. (2021) Differences in prey composition and total energy delivered to the nest between morphologically similar auk species may affect sensitivity to changes in prey availability. MSc thesis, University of Leeds.
[7] Mitchell S (2022) Chick provisioning of the Common Guillemot *Uria aalge* and Razorbill *Alca torda* at Flamborough Head and Bempton Cliffs. RSPB.

Neither species showed any significant seasonal variation in the diet composition. Although on the last two days of the monitoring, there was an increase in the number of large Sandeels fed to Guillemot chicks and, surprisingly, small Sprats fed to Razorbill chicks.

Auk chick diet can vary significantly between years although there is no overall trend.

Common Guillemot with Lesser Weever.
Photo: Keith Clarkson.

The chick diet study also provided evidence that Lesser Weever, an important predator of Sandeels, are regularly selected by adult Guillemots as a food source for chicks.

In conclusion, Clupeids consistently dominate Guillemot chick diet whilst the Razorbill chick diet is predominantly Sandeels.

The complex relationship between climate change and the impact of commercial fisheries is thought to have contributed to changes in the prey availability of many seabirds and, as a result of food shortages, some species have experienced reduced breeding success and population declines[8]. The effects of food shortages have been particularly pronounced in north and west Scotland, where seabirds have relied largely on Sandeels to rear chicks[9]. Here, at the FFC colony, clupeids (European Sprat and/or Atlantic Herring (*Clupea harengus)*) are a more important component of the diet and seabird population sizes have largely remained stable or increased[10].

A fascinating aspect of this ongoing research is that the FFC Razorbill population has been able to maintain ongoing growth, based upon a chick diet which consists predominantly of Sandeels. This growth has occurred despite the impacts of climate change and commercial Sandeel fisheries, which appear to have had a negative impact on the breeding success of some seabirds including, Kittiwake and Atlantic Puffin[11].

Thanks to Natural England's Action for Birds in England (AfBiE) funding.
The full version of the paper is available at: https://yorkshiremarinenaturepartnership.org.uk/manage/marine-protected-areas/flamborough-and-filey-coast-spa/seabird-monitoring-programme/

Winter Gull Survey 2023/24 – 2024-25

Emma Caulfield, British Trust for Ornithology

While in the heat of summer and surrounded by a flurry of seabird breeding activity, you might be wondering how to keep yourself entertained for the down season. What excitement is there to be had for seabirds in winter? I may have the answer for you: the BTO Winter Gull Survey (WinGS)!

Gulls are of substantial conservation concern with most gulls that commonly occur in the UK sporting Amber and Red conservation status. The BTO are increasing efforts on monitoring overwintering populations through WinGS. This initiative is particularly important due to the recent and ongoing challenges faced by gull populations, such as the outbreak of highly pathogenic avian influenza (HPAI) which is known to have caused mortality at gull breeding colonies last summer.

The main aim of the Winter Gull Survey is to collect information about the population size and distribution of gulls wintering in the UK, the Channel Islands, and the Isle of Man. The last WinGS, which took place during the winters from 2003/04 to 2005/6, concluded that the UK inland and near-shore coastal waters supported over 3.8 million wintering gulls at that time. The most abundant gull species recorded was the **Black-headed Gull** (*Chroicocephalus ridibundus*), with an estimated 2 million birds

[8] Carroll MJ *et al.* (2017) Kittiwake breeding success in the southern North Sea correlates with prior sandeel fishing mortality. Aquatic Conservation: Marine and Freshwater Ecosystems, 27 (6): 1164–1175.
[9] See 3
[10] See 2
[11] See 3

wintering across the UK. However, recent population trends constructed from Wetland Bird Survey (WeBS) data have pointed towards substantial declines in the realm of 40% in this species. The data gathered during the current WinGS will make a significant step towards addressing the information gaps that have arisen since this last comprehensive survey.

While gulls are dispersed widely across feeding areas throughout the day, it can be difficult to count a sample large enough to gain an accurate reflection of the UK population. However, during the winter gulls congregate in roosts, sometimes of many thousands!

WinGS is a bespoke, evening time survey that has been designed to take advantage of this roosting behaviour.

WinGS counts involve coordinated visits to known substantial roost sites such as large estuaries and reservoirs. In order to generate complete UK-wide population estimates, additional visits to random sample sites at inland and coastal locations are also to be carried out. Some major key sites will necessitate team coordination, and create opportunities to connect with fellow gull enthusiasts! Key dates are set for each survey period in order to coordinate counts across the UK as much as possible.

While the first winter survey period (January 2024) has come to a close, there is still plenty of opportunity to get involved! The autumn survey period, where we will be capturing gulls on passage, will begin in October with a key count date in September. January 2025 will mark the second and final survey period for WinGS, after which we will produce the first comprehensive population estimate of UK wintering gulls in 20 years- but not without the fantastic work of our counters!

Taking part

Visit www.bto.org/wings for more information on the survey. On the Taking Part page you can find more information on the survey methods and gull ID training videos. From here you can also find a link to the survey portal at app.bto.org/wings and take a look at WinGS sites near your area! Contact us at wings@bto.org if you have any questions!

The Winter Gull Survey is supported by Defra, Country Nature Conservation Agencies and BTO.

BTO Gull ID course review

Jeff Stratford

This online course run by the BTO training team was scheduled over two sessions of around 1.75 hours set a week apart. The course delivery attended for this review was the 29 November and 6 December AM sessions. Each session is delivered via Zoom with 3 presenters and on the sessions I attended there were nearly 90 participants.

The first session begins with an introduction to the principles of how to approach gull identification, three reference species and the identification the smaller gulls. After a discussion of the challenges with gull identification, the session introduces strategies and frameworks for identification which are repeatedly referenced by mnemonics throughout each session to aid recall. The identification process is centred around three reference species the **Black-Headed Gull**, **Common Gull** *(Larus canus)* and **Herring Gull** *(Larus argentatus)* with which comparisons are made. These are discussed first as series of silhouette images used to highlight structural elements of each species in order to differentiate and help with identification. The sequence of identification features used to observe and analyse then follows the same strategy throughout sessions in the order of their importance and utility. This being wings, head, bill and legs (W-H-B-L) which were introduced with an interesting mnemonic referencing the Blackadder comedy TV programme that makes it difficult to forget. The constant repetition of this sequence further helped with consolidation and ingraining of this approach. For many species recordings of gull calls were played and used to indicate differences of potential use in identification. There were extensive discussions of moult, age classes and stages of maturity in the small gulls both in flight and standing. At various points in the session participants are encouraged to join in with various quizzes and exercises via the Zoom chat. One of the first examples was

a quiz Gull or No Gull, in which a number of species similar to gulls are presented for participants to response whether a gull or not, the presenters then go on to explain in their answer significant identification features to use in this choice. Other useful participatory exercises were spotting the differences between different ages or moult stages of a species; and differences between different species of gull. Some exercises such as counting the number of first winter gulls in a small group or ageing a Common Gull in a group of other small gulls, potentially had direct application to some survey or monitoring work. A couple of days after the session participants are sent a recording of the sessions, a similar recording focussing on the identification of **Mediterranean Gulls** *(Ichthyaetus melanocephalus),* a reference group silhouette PDF, a gull topography PDF and a smaller gull ID and ageing challenge homework PDF.

The second session follows a similar format building on the first starting with a review of the homework, followed by an exploration of the larger gulls and their plumage variations, ageing and moult. Again the session commenced with an discussion of the structural differences between the **Herring Gull**, **Greater Black-Backed Gull** (*Larus Marinus*) and **Lesser Black-Backed Gull** (*Larus fuscus*) using silhouettes. Identification of each of the species of the larger gulls then followed the same format as in the earlier smaller gull session. Because of the increased number of year groups within the larger gulls more time was spent on the identification of the immature birds of these species. Also included in this session was an exploration of the impact of feather wear and sun bleaching of plumage on identification particularly of immature gulls. The final presentation was about the importance of recording and reporting observations. including some online resources for the submission of records and also national surveys to potentially become involved in. A homework exercise was sent out after the session similar to the first session which also included a challenge on spotting all the errors in an article from a national newspaper, with answers and explanation sent out a week later.

The training course covers eight species in detail: **Little Gull** (*Hydrocoloeus minutus*)**, Black-Headed Gull, Mediterranean Gull, Black-legged Kittiwake** (*Rissa tridactyla*)**, Common Gull, Herring Gull, Lesser Black-Backed Gull and, Greater Black-Backed Gull**. Other gulls are mentioned in lesser detail, such the **Glaucous Gull** (*Larus hyperboreus*) and **Iceland Gull** (*Larus glaucoides*). Sessions are well paced, interesting and fun, covering a wealth of very useful information to help with furthering each participant's identification skills and knowledge. The graphics, photos, audio recordings and videos used are well chosen and very helpful. The presenters have a wealth of real world field experience which they used in answering questions and responding to comments from participants. The use of Zoom was particularly impressive, with presenters seamlessly switching between each other and resources without a hitch. I would thoroughly recommend this course to anyone starting off of their gull identification journey and also anyone seeking to check or improve their skills. It certainly added a little more structure and rigour to my gull identification, especially of immature birds. Overall it was a very good course, great value and very enjoyable.

The Bourne Legacy

Mark Tasker

As many will remember, Bill Bourne, the main founder of the Seabird Group died in 2021. He left behind a vast amount of paperwork (he worked mostly in the time before computers, and even when they arrived, he continued to print out hard copies). Bill's interests and attention ranged far beyond seabirds, including many non-UK issues and conservation topics and there were files devoted to each of these subjects. The files have been occupying more than a whole room in his and his wife Sheila's house in Dufftown on Speyside, Scotland. Mary, Bill and Sheila's daughter, arranged with the British Trust for Ornithology's archivist for the papers to be given a new home in their archives. Mary had packed all of the papers into 116 archive boxes, along with a few miscellaneous items. Among these, six large boxes contained material specifically relating to the Seabird Group. The BTO is however located in Thetford in East Anglia, a little more than 550 miles (890 km) to the south of Dufftown.

I heard about the little problem of moving the paperwork during the last Seabird Group AGM, when it was mentioned by Liz Humphries. Realising that I lived near to Bill, and that my brother lived close to Thetford, I could see an option of driving to England without the cost of overnight stays. Some funds had been kindly donated to the BTO by the Bournes for the transfer and initial storage costs. It was estimated (very accurately by Mary) that the largest long wheelbase transit van would be needed, and after some discussion, I hired a suitable van for the one way drive. My idea was to load the van on a Saturday afternoon, spend the night at home, and then drive south on a Sunday when there are fewer commercial vehicles on the road, stay a night at my brother's house, then unload at the BTO before dropping the van off within 48 hours of hiring.

As the target weekend at the end of January approached, it was obvious that the weather gods had other thoughts and the Meteorological Office issued an amber warning for the approaching Storm Isha covering Sunday, particularly in northern England.

Mark happy to arrive at the BTO in Thetford with a van full of Bill Boune's papers.

The rental company were very obliging when I asked for a 24-hour delay for the van hire, and so it was that I took the bus into Aberdeen on Sunday morning, picked up the van and drove to Dufftown. Luckily, Mary and her husband were available and kind enough to help with the loading of the boxes into the van, while Sheila provided tea and pieces (biscuits and cakes for those not used to Scots vocabulary). The process took an hour. One could almost feel Sheila's house breathe a slight sigh of relief as the weight of papers was removed but I think Sheila's feelings may have been a little sadder.

Next morning, it was evident that Storm Isha had decided to tarry a while as the winds were still howling (though most of the rain had passed through), but the project had to continue. The short drive to the main road southwards to Aberdeen was punctuated with fallen trees, though none fully blocked the road. I found that the heaviest gusts caused the van to nose-dive slightly which was initially alarming but manageable. The navigation system predicted an eight-hour drive, but that is predicated on driving at reasonably fast allowable speeds. There was no way that was possible in the conditions, so I was mentally adjusted for a long day. Others still felt that the conditions allowed for faster driving; wrongly in some cases, as a black BMW (inevitably?) that sped past on the M90 shortly afterwards went into a spin of red tail lights and white headlights, bouncing off the central barrier to come to rest across the outside lane of the motorway. The front and back wings of the car were hanging off as the traffic edged by in the inside lane. Five minutes later, I was somewhat astonished to see the same car go past me with all of its trailing bodywork. Two overturned heavy goods vehicles (presumably blown over during the previous night) slowed the traffic at other times on the journey.

The journey took a little over ten hours, and the drop off next day was made very easy as Lesley, the BTO archivist, had organised a large squad of staff volunteers to shift the boxes into a storeroom. She now has the daunting task of going through the boxes to decide what to keep and what to recycle. I am sure there will be some fascinating and historical material in those papers – it will be very good to have these preserved for posterity – another Bourne legacy.

Breeding kittiwake arrive earlier at inland urban sites than coastal sites in the North East of England

Stevenson, N. J., Hackett K.J and Kitching, M. and Goodwin, C.

Introduction

Shoney Wind Limited "SWL" commissioned early nest occupation surveys from mid-February until mid-May at multiple **Black-legged Kittiwake** breeding sites between 2022-2024. This mini-paper focusses on arrival dates of kittiwake at urban and coastal colonies/sub-locations, whether solitary, or in small or large groups.

As a colonial species, kittiwake typically closely follow conspecifics, however, SWL suggest that urban kittiwake rely less on conspecific behaviours when selecting a breeding site than their coastal counterparts. SWL set out to a) determine whether first arrival dates at coastal and urban study sites were statistically significantly different, b) compare the range of arrival dates at coastal and urban sub-locations, and c) confirm whether urban kittiwake consistently arrive earlier to the same sub-plots between years.

Survey Methods

Surveys commenced in mid-February and continued at least weekly until mid-May. Inland urban sub-locations included Saltmeadows, the Baltic Arts Centre, and the Tyne bridge. Natural coastal sub-locations included Howick cliffs, Seahouses, Marsden rock and Cullernose point. All sub-locations were divided into sub-plots, resulting in a total of 15 inland sub-plots in 2022, 31 inland sub-plots in 2023, and 13 inland sub-plots in 2024. There were 9 coastal sub-plots in 2022 and 2023, and 6 coastal sub-plots in 2024.

Analysis methods

Three years of sub-plot data were pooled into urban or coastal categories. An unpaired two-sample Wilcoxon test was performed to test for statistically significant difference in first arrival dates.

Some of the sub-plots were consistent between years. e.g. the Baltic always had two sub-plots – the North and East face, whereas the Tyne bridge sub-plots varied between years. Scaffolding was installed on the South abutment of the Tyne bridge in mid-February 2024, preventing kittiwake arrivals at previously surveyed sub-plots. Of the coastal sub-plots, whilst Howick and Seahouses sub-plots were surveyed consistently between 2022-2024, Cullernose was introduced in 2024 and Marsden rock survey was halted. This enabled more sub-plots to be analysed whilst keeping annual survey effort to a manageable level.

A) Were first arrival dates at coastal v urban sites statistically significantly different?

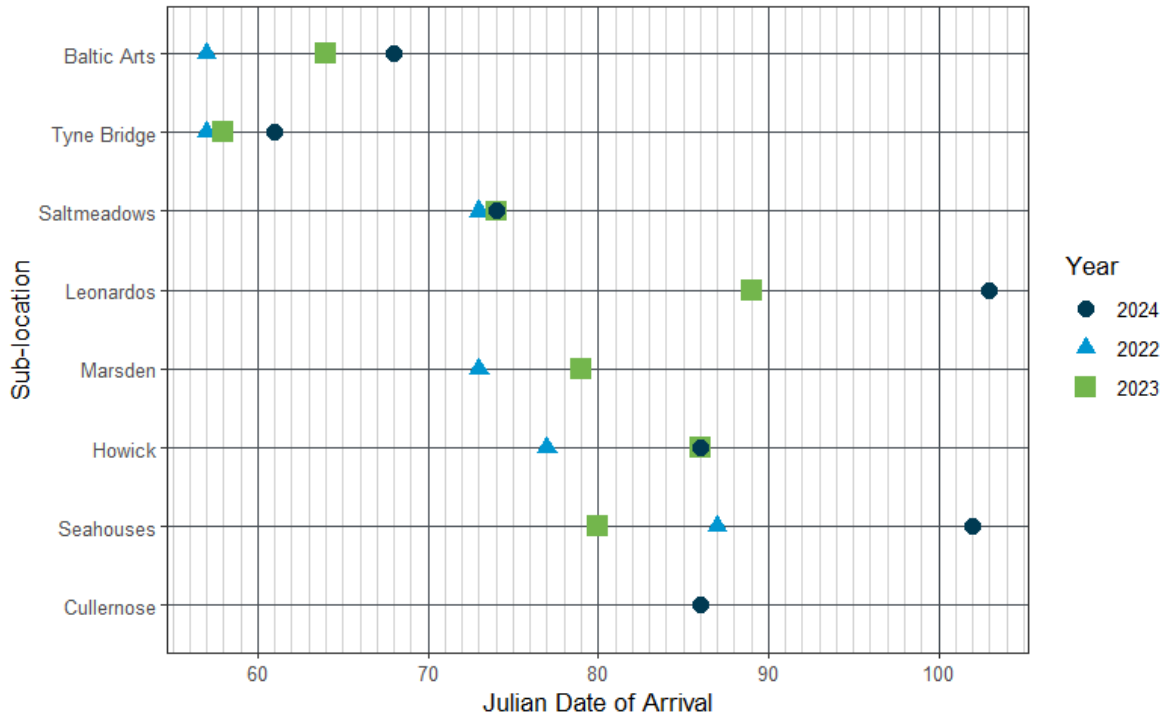
Table 1 shows the calendar dates of the first kittiwake arrivals observed and Figure 1 shows arrivals by Julian day. Taking account of all sub-plots (including the new Leonardo's colony), kittiwake arrived at urban inland locations 16-30 days earlier than coastal locations in 2022, 21-28 days earlier in 2023, and 25-41 days earlier in 2024.

Table 1: Arrival dates of each sub-location by year

	Earliest Arrival Dates at sub-locations		
	2022	**2023**	**2024**
Urban:			
Baltic Arts Centre	26 Feb	05 Mar	08 Mar
Tyne bridge	26 Feb	27 Feb	01 Mar
Saltmeadows	14 Mar	15 Mar	15 Mar
Leonardo's	-	30 Mar	12 Apr
Coastal:			
Marsden rock	14 Mar	20 Mar	-
Howick Cliffs	18 Mar	27 Mar	26 Mar
Seahouses	28 Mar	21 Mar	11 Apr
Cullernose	-	-	26 Mar

NB '-' =not surveyed

Figure 1: Julian date of *first* kittiwake arrival at each sub-location by year

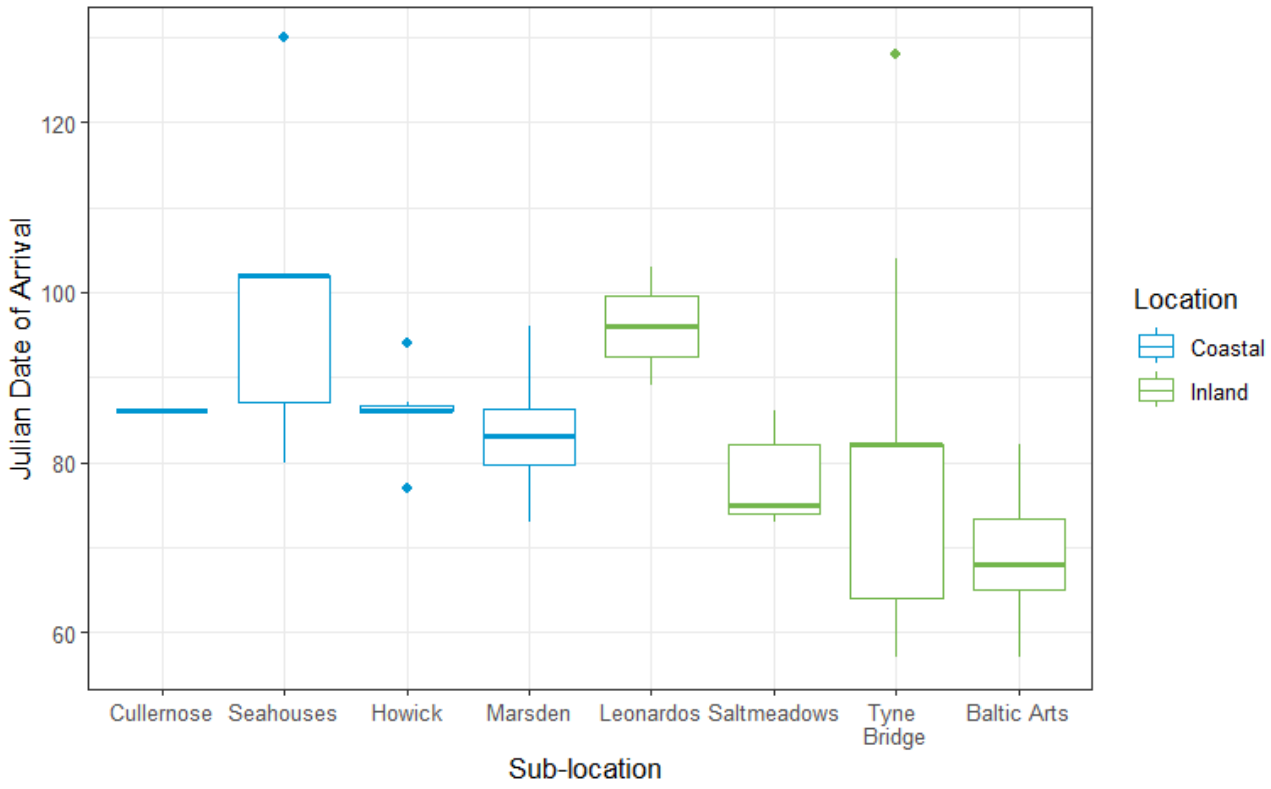


The 3-year-old urban Leonardo's colony does not have early first arrivals compared with other long established urban colonies, suggesting that the colony is too young for kittiwake to determine whether Leonardo's is worthy of early arrival and nest defence. Despite this, over the 3-year study, kittiwake returned earlier to inland breeding locations than coastal sites and this was **statistically highly significant**, (W= 1130.5, r= 0.47, p<0.001).

B) What is the range of arrival dates between coastal and urban sub-plots?

The earliest 2022-2024 arrivals at inland urban sites were consistently earlier than at coastal natural sites. Figure 2 includes all 2022–2024 data from all sub-plots but is presented by sub-location. The thick line represents the median arrival date, the upper/lower edges of the boxes represent the interquartile ranges, whiskers outside the box represent the minimum/maximum arrival dates, and dots outside the box represent outliers.

Figure 2: Boxplot showing differences in Julian arrival date at each sub-location between 2022-24.



The earliest urban arrivals were frequently solitary, followed by small groups of arrivals likely reflecting the greater variety of nesting habitat quality available in the urban environment. Arrivals at the Tyne bridge had the highest interquartile range (18 days), with 10 weeks difference in arrival dates between Tyne bridge sub-plots in 2022. Typically, birds arrived later at wind-exposed sub-plots (such as above road locations).

Coastal sites were characterised by conspecifics arriving en-masse as shown by the lower interquartile ranges, (Cullernose has no interquartile range due to only one year of survey). Urban sub-locations, as per Fretwell & Lucas 1970[12], reflected the 'ideal despotic model' where the earliest arrivals of colonial species monopolize the best quality sites, and/or the best quality ("older or dominant") individuals arrived earlier.

We postulate that some urban sites are a better quality than coastal sites and that older or more dominant kittiwake arrive earlier to defend these high-quality sites. Furthermore, we suggest that early arriving urban kittiwake may deploy a different nest-defence strategy to coastal kittiwake and may have different 'personalities' to coastal kittiwake[13].

[12] Fretwell, S.D. & Lucas, H.L. (1970). On territorial behaviour and other factors influencing distribution in birds. *Acta Biotheoretica*, 19, 16–36

[13] Collins, S., Hatch S., Elliott, K., & Jacobs, S. (2019). Boldness, mate choice and reproductive success in Rissa tridactyla. *Animal Behaviour.* 154. 67-74.

C) Do urban kittiwake consistently arrive earlier to the same sub-plots between years?

The earliest kittiwake arrivals were at the same urban sub-plots each year. The Baltic North face and the Tyne Bridge north abutment were the first two locations to see kittiwake arriving in 2022, 2023 and in 2024. Arrivals at Saltmeadows were consistently later; first arrivals were on 14 March 2022, 16 days later than the Baltic and the Tyne Bridge, and similarly arrived on 15 March in 2023 and 2024. This suggests that kittiwake perceive the Baltic North face and Tyne bridge North abutment as higher quality breeding sites than other urban sub-plots.

By contrast, first arrival dates at the coastal sites were less consistent between years, and occurred in pulses of large numbers of kittiwake. Circa 120 kittiwake arrived overnight at Howick on 18 March 2022, seven birds were observed on 27 March 2023, and 164 on 26 March 2024. Seahouses saw 135 birds arrive on 28 March 2022, 18 birds on 21 March 2023, and 41 on 11 April 2024.

Summary conclusions

The urban Tyne offers multiple orientations and locations to nest, such as girders, window recesses, gutters, and streetlamps. SWL suspect early arrivals are 'older or more dominant' individuals that have assessed the urban Tyne meta-colony 'patch quality' through previous breeding seasons and arrive early to claim and defend their preferred nest site. We propose that urban patch quality is more climatically predictable between years than wind exposed coastal patches, and that philopatry to the heterogeneous Tyne meta-colony has several advantages over the more homogenous coastal colonies surveyed.

Early arrival may allow kittiwake to switch and defend an alternative high-quality nesting site if their preferred nest site is no-longer available (e.g. following deterrent installation). Given the energetic costs of prospecting[14], it may be energetically important that urban kittiwake can readily gather 'public information'[15] from adjacent sub-plots within 10's of metres compared with prospecting distant coastal colonies.

The northeast England coastal sites are more uniform and homogenous than the urban Tyne and offer fewer patch choices and there may be less incentive to arrive early to defend a nest site. Early arriving solitary urban kittiwake cannot, by definition, be utilising conspecific attraction when arriving at e.g. a window recess capable of supporting only one nest on the North abutment of the Tyne bridge. The en-masse coastal arrivals suggest a dependency on conspecific attraction rather than individual decision making.

SWL suggest that Tyneside urban kittiwake have a 'pioneer' and/or 'plastic' nest selection strategy that coastal kittiwake do not employ. Analysis of 3 years of data has shown that urban sub-locations have significantly earlier first arrivals compared with first arrivals at coastal locations. We suggest that, as per Stevenson 2022[16], urban kittiwake arrive early to defend high quality nests within the 'Goldilocks zone of least thermoregulatory stress' i.e., where there is a net balance between heat stress from solar irradiation, and cold stress from wind exposure.

Acknowledgments

Some surveys were funded by DBS Offshore Wind. Their funding is gratefully acknowledged. 2022-2023 surveys were carried out by Martin Kitching, and 2024 surveys were carried out by Callum Goodwin.

[14] Reed, J.M & Boulinier, T., & Danchin, E., & Oring, Lewis. (1999). Informed Dispersal. *Current Ornithology* pp 189-259

[15] Doligez, Blandine & Cadet, Claire & Danchin, Etienne & Boulinier, Thierry. (2003). When to use public information for breeding habitat selection? The role of environmental predictability and density dependence. *Animal Behaviour*. 66. 973-988.

[16] Stevenson, N.J. (2022). *Kittiwake thermoregulation and the importance of solar irradiation and wind exposure in nesting site selection*. Report for RWE Renewables.

Investigating the dispersal and breeding success of a recovering seabird colony after removal of an invasive predator

Laura Shearer, Ascension Island Government

Ascension Island is a remote overseas territory of the United Kingdom located at the centre of the Atlantic Ocean (7°56'S, 14°22'W). Ascension is a young volcanic island 88km^2 in size, laying 1,504km from the African coast and 2,232km from Brazil. It supports 11 species of nesting seabird in internationally important numbers, gaining recognition as an Important Bird Area (IBA) by the RSPB in 2006[17].

The number of breeding seabirds and the proportions of the nesting species have changed dramatically since the arrival of man in 1501. Various shipwrecks introduced rats and mice onto the island and in 1815 feral cats were introduced to control the rodent population. Cats were the principal cause of the elimination of all but one species of breeding seabirds from the main island with birds reduced to offshore stacks and nearby Boatswainbird Island.[18,19] Boatswainbird became the only nesting site for the endemic **Ascension Frigatebird** (*Fregata aquila*) and supported hundreds of other seabirds during the reign of the cat.

In 2002-2004, the RSPB and partners conducted a feral cat eradication programme on the main island. This was successful in removing over 1,000 feral cats and allowed suitable nesting habitat to be reclaimed by seabirds previously restricted offshore[20]. In 2004, the **Masked Booby** (*Sula dactylatra*) began nesting on the mainland and since then their local population has increased annually.

The rapid increase in the number of breeding masked boobies is most noticeable in the Letterbox Nature Reserve (NR). The reserve is now a haven for nesting masked boobies with 2954 nesting attempts recorded during the peak of the breeding season in November 2023.

The Seabird Group grant purchased colour rings for Masked Boobies on Ascension Island. Photo: Laura Shearer

The grant received from the Seabird Group allowed continuation of long-term monitoring of this species using a mark-recapture programme with plastic coloured leg rings. The Seabird Group grant bridged a funding gap, allowing the purchase of 300 coloured rings. These have been deployed on masked booby pullus in the 2023-2024 breeding season. The colour rings purchased through this grant were used to assist with productivity monitoring of this species. Individual nests are marked and followed throughout the season to determine breeding success. Once the chicks become mobile they can creche which makes following individuals impossible without colour rings. The colour rings have also been useful for marking individuals that carried satellite tags purchased through other funding schemes. The ambition is to satellite tag the juveniles of these nests to identify feeding patterns across the Atlantic. Again, without the coloured leg rings, we would not be able to identify individuals used in this research.

I would like to extend my gratitude to the Seabird Group for this grant, allowing us the opportunity to continue with our long-term monitoring of this species.

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Spatial and temporal variation of seabird nutrient input on the Farne Islands, Northumberland

Samuel Healing, Lancaster University

Seabirds transport vast quantities of nutrients from their open ocean feeding grounds to terrestrial and nearshore ecosystems, dictating community structure and dynamics, influencing biodiversity, productivity, and biomass, boosting food availability and quality, and providing ecosystem resilience[21,22,23,24,25]. In short, seabirds are keystone species: organisms that help define entire ecosystems, delivering nutrients through their guano, a resource rich with nitrogen and phosphorous.

During my Masters, I sought to determine whether seabirds were transporting nutrients to terrestrial and nearshore systems in the UK. To test this, we compared the **Farne Islands, Northumberland**, areas that host hundreds of thousands of seabirds during the breeding season, to nearby areas of low seabird densities along the Northumberland mainland coast. Furthermore, we wanted to determine how these nutrient inputs varied over time, with the expectation that, as seabirds are seasonal breeders that spend most of the year away from their breeding colonies, nutrient levels would be at their greatest at the end of breeding season, after the birds had spent months on the Farne Islands.

Guillemots, Razorbills, Kittiwakes, Shags, and Puffins on Inner Farne, Farne Islands, overlooking Northumberland mainland coast. Photo: Samuel Healing.

Measuring and tracing how seabird nutrient inputs move through ecosystems can be done via nitrogen stable isotope analysis and measuring total nitrogen content (%N). Nitrogen exists in many forms, with the most common form of nitrogen containing 14 neutrons (^{14}N), and a less common form containing 15 neutrons (^{15}N). Whilst ^{15}N is less abundant in the natural environment, it accumulates as it progresses up the food web, increasing incrementally with each step up the food web. Subsequently, predators such as seabirds have high ^{15}N to ^{14}N ratios (expressed as $\delta^{15}N$). Therefore, in an ecosystem subject to high quantities of seabird nutrient input, if its resident communities are making use of the ^{15}N-rich guano, then we would expect to find higher $\delta^{15}N$ in organisms where seabirds breed compared to lower seabird density locations.

Seabird numbers were three orders of magnitude higher on the Farne Islands than the mainland, and they were shown to be vectoring between two and three orders of magnitude more marine-derived nitrogen inputs to the seabird islands compared to the mainland. Furthermore, we found higher $\delta^{15}N$ signals on the Farne Islands compared to low density seabird mainland sites during both early and late breeding season in terrestrial samples of soil, new-growth leaves, and lichen, as well as intertidal samples: macroalgae, turf algae, barnacles, and limpets (Figure 1 a-g). During early and late breeding season, significantly elevated %N was also found in soil, terrestrial plants, and lichen, with limpets having higher %N during early breeding season only (Figure 1 h-n). These findings support the hypothesis that seabird nutrient input is cycling through the terrestrial and intertidal environments, providing evidence of a clear link by seabirds from the open ocean to terrestrial and intertidal ecosystems. To our knowledge, this study is the first of its kind in the UK.

The results of temporal variation in seabird nutrients were less clear. The lack of discernible pattern in $\delta^{15}N$ signals suggest seabird nutrients are integrated year-round, rather than immediately following the seabird breeding season, as has been observed elsewhere in both temperate[26] and tropical islands[27].

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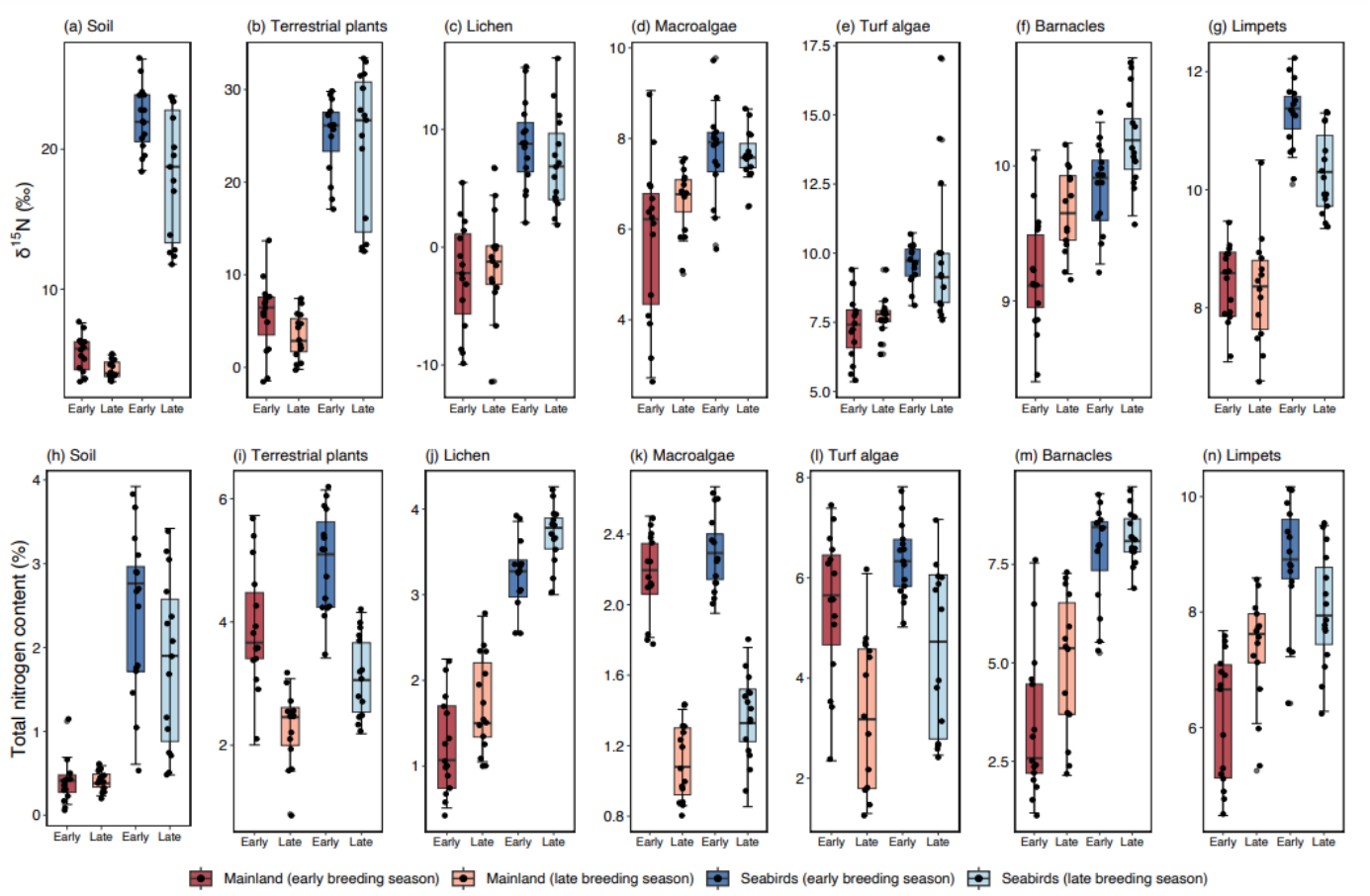

Figure 1. Early- and late-breeding season nitrogen isotope signals ($\delta^{15}N$) and total nitrogen content (%N) in terrestrial and intertidal areas on the low seabird density mainland sites (red) and seabird islands (blue). a-g, $\delta^{15}N$ values for (a) soil, (b) terrestrial plants, (c) lichen, (d) macroalgae, (e) turf algae, (f) barnacles, and (g) limpets. h-n, %N for (h) soil, (i) terrestrial plants, (j) lichen, (k) macroalgae, (l) turf algae, (m) barnacles, and (n) limpets. Values are mean (± standard error, sample size = 15).

The strongest pattern was observed on the Farne Islands, where %N was greater during early breeding season in soil, plants, macroalgae, turf algae, and limpets. On the mainland, %N in plants, macroalgae, and turf algae was also higher during early breeding season, whilst lichen, barnacles, and limpets had greater %N during late breeding season. One consistent pattern was primary producers all having higher %N content during early breeding season irrespective of location. This is likely due to algae and plant spring growth being associated with low tissue nitrogen, with nitrogen accumulating in primary producers when metabolisms slow down during winter months[22,28,29]. In lichen, the pattern was different, with %N being consistently higher during late breeding season. This is again likely due to the life cycle of lichen because, as with plants, lichen also slows its metabolism and accumulates nitrogen over winter. Then, rather than steadily using nitrogen for growth over the summer, as plants do, lichen quickly uses its nitrogen stores up once the warmer weather arrives[30], as was observed in our study.

Overall, strong evidence was found of seabird nutrients moving through terrestrial and nearshore ecosystems, through elevated $\delta^{15}N$ signals and total nitrogen content, however no strong patterns in temporal variation were detected. We therefore conclude that whilst seabirds were shown to be providing the Farne Islands with large quantities of nutrients, those nutrients did not have a major impact on the timing of recipient organisms' nutrient use. This study provides evidence of a clear link by seabirds from the open ocean to terrestrial and nearshore habitats, suggesting that seabirds are key nutrient vectors. These results promote the importance of seabird conservation in the UK, and potentially global temperate systems.

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Pioneering an international collection of non-invasive biological samples for the North Atlantic Black-legged Kittiwake

Chloe Cargill, University of Aberdeen

Project Background and Rationale

The North Atlantic **Black-legged Kittiwake**, (*Rissa tridactyla tridactyla)*, hereafter 'kittiwake', is a subspecies of migratory[31] Laridae gull with extensive breeding areas around the North Atlantic and its bordering seas[32]. The species is classified as 'Vulnerable' on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species and the total abundance of breeding pairs is declining globally[33]. The kittiwake is a wide-ranging apex predator and a valuable marine indicator species of, e.g., marine plastic pollution[34], keystone prey abundance[35] and ocean climate and competitor forcing[36]. Kittiwake populations function as national networks [37,38,39,40]nested within international metapopulations[41], in which long-term population trends differ, often profoundly, at both regional and international scales[42],[43]. Researchers require species-level biological datasets to answer large-scale questions and to inform appropriate environmental assessments, marine spatial planning decisions and the execution of offshore renewables compensatory measures at the ecosystem-level.

North-Atlantic kittiwake, *R. t. tridactyla*, in flight over St Andrews Bay, Fife, East Scotland. Photo credit: G. Ellis.

Project Objectives

The aim of this project was to bring together stakeholders from across the North Atlantic and its bordering seas to generate a resource bank for large-scale population genetics, stable isotope and heavy metal pollutant analyses.

The specific project objectives were as follows:

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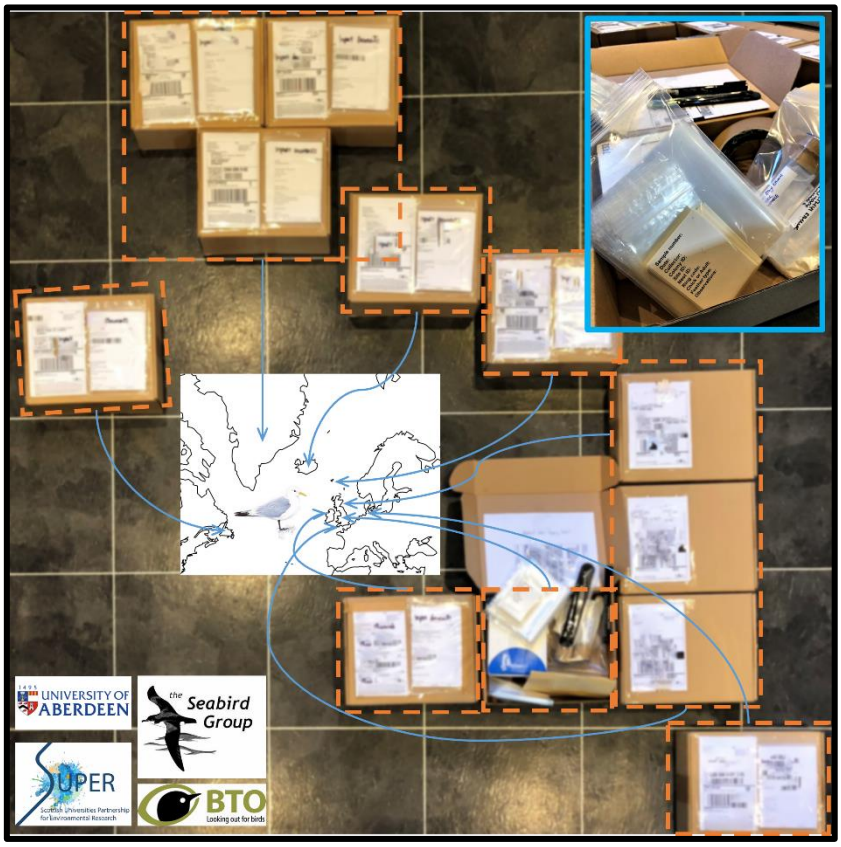
1) To establish, maintain and strengthen national and international research collaborations.
2) To build a collection of non-invasive biological samples (NBS), representative of the North Atlantic kittiwake metapopulation.
3) To facilitate the collection of NBS without excluding stakeholders due to the costs incurred.
4) To provide an opportunity to further develop the use of NBS in population genetics for marine ornithological research.
5) To maximise the value of this project by publishing sample metadata towards the development of new collaborative research projects.

Methodology

Project partners and collaborators were identified and contacted via international conferences, word of mouth, and social media platforms where appropriate. Sampling kits were designed, put together and posted out to project partners in time for the start of the 2023 kittiwake breeding season.

Non-invasive biological samples (kittiwake feathers and an ectoparasite of the kittiwake, the common seabird tick, *Ixodes uriae*) were collected over the 2023 kittiwake breeding season. Samples were posted to, stored and inventoried at the University of Aberdeen, UK, following best practice for genetic material and accepted professional standards (i.e., ICOM Code of Ethics for Museums).

The Seabird Group Research Grant was used to fund 50% of the total project costs. This grant was integral to the project values in that it enabled us to remove financial barriers to the inclusion of stakeholders who could not otherwise fund the purchase of the required research consumables. Ultimately, this meant that the collection of samples was representative of the North Atlantic black-legged kittiwake metapopulation unit, excluding other factors (see **Outcomes to Date**), rather than biased towards locations and stakeholders able to fund research consumables and postage costs.



Sampling kit boxes ready to be posted to project partners in (clockwise from left): Newfoundland Canada, Greenland, Iceland, the Faroe Islands, Helgoland Germany, Scotland, France, Ireland, Wales and Cornwall, England.

Animal Welfare Considerations: This project is targeting non-invasive biological samples to reduce the use of invasive sampling (i.e., venous blood samples) within ornithological research. The project has successfully completed full ethical review by the home institution of the applicant (University of Aberdeen), including full justification of sampling methods and sampling effort with due consideration of approaches to Replace, Reduce and Refine animal use and to ensure the ethical handling of birds.

Persons handling birds held permit/s allowing named individual/s to handle birds (i.e., BTO ringing permit for Britain and Northern Ireland or international equivalent). Project-partners also followed standardized sampling protocols. Post-fieldwork debriefs allowed us to evaluate the project success and facilitate the refinement of practices between sampling events.

The potential for the transfer of avian influenza between birds, geographic regions and between species (i.e., from bird material to humans) was mitigated by following all relevant regional restrictions, the BTO guidelines for handling birds, and DEFRA guidelines for the import of biological material. Sampling kits were designed following consultation with biosecurity experts with extensive experience handling invasive and zoonotic pathogens. Samples were transported with all required legal documentation.

Ticks were removed directly from kittiwakes to sample the correct race of *I. uriae*, which has been shown to be host specific[44, 45]. A feeding tick can be removed from the head of an adult bird, secured in the hand, in approx. 30 seconds (UK CEH, pers. comms.), therefore we were confident that tick sampling could be achieved without extending handling times beyond normal for the bird.

Outcomes to Date

The majority of sampling kits have been returned following successful field seasons (Table 1). There were reduced sampling opportunities at some sites due to technical difficulties (Ireland), a poor breeding season (Cornwall, SW England) and resurgence of avian flu (Aberdeenshire, Scotland).

Table 1: Numbers of sampling kits posted out in May 2023 and returned by November 2023.

Number of sampling kits sent out	15
Number of sampling kits returned	13
Number of sampling kits retained by project partners until 2024	2*

* Aberdeenshire, Scotland and Cornwall, SW England.

Kittiwake feather samples were collected from across the North Atlantic Ocean and have been received at the University of Aberdeen (Figure 3).

Where birds were being handled for ringing, all project partners searched for kittiwake-associated ticks. However, in all of these locations, with the sole exception of the Isle of May, Scotland, ticks were found to be absent (the Faroe Islands, Canada, Greenland). During the initial stages of the project, it was found that the kittiwake colony in Spain, at the southernmost point of the known breeding range, was no longer active and as such no monitoring work and therefore no sampling opportunities were available at this site. Feather samples from additional locations were also donated to the project, where word had spread of the objectives.

The geographic spread of kittiwake feather samples obtained from breeding colonies around the North Atlantic Ocean (region shaded blue) over the course of this project to date.

We are grateful to the following project partners and collaborators for collecting feather samples and for contributing to the continued success of this project (in no particular order): Bob Swann, Andrew Call and the Highland Ringing Group; Signe Christensen-Dalsgaard and Brett Sandercock (Norwegian Institute for Nature Research); David Jardine, Janet Jardine and Anne Middleton; Andy Rickeard and the Northumberland Ringing Group; Tom Hart and Alice Edney (University of Oxford); Matt Wood (University of Gloucestershire) and Freya Blockley; Mark Newell, Francis Daunt, Carrie Gunn, Ella Benninghaus and Sam Langlois-Lopez (UK Centre for Hydrology and Ecology); Ólafur Pétursson (Skalanes); Abbie Heaney, Rosie Norman, Rosie Milne,

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Laila Lotz and Laura Munro (University of Glasgow); David Tierney (Government of Ireland); Mark Jessopp (University College Cork); Steve Newton (BirdWatch Ireland); Sylvain Poisblaud and Stella (Groupe ornithologique et naturaliste (agrement regional Hauts-de-France); Sjúrður Hammer, Jens Keld Jensen, Johannis Danielsen and Bergur Olson (The Faroese Wildlife Agency); Jochen Dierschke and Robert Rollins (Institute for Avian Research); April Hedd and Joshua Cunningham (Environment Canada and Climate Change); Sebastien Descamps and Hallvard Strøm (Norwegian Polar Institute); Flemming Ravn Merkel, Anders Mosbech, Kasper Lambert Johansen and Morten Frederikson (Aarhus University); Aili Labansen (Greenland Institute of Natural Resources); Debs Allbrook (University of Exeter); Ruben Fijn and Rob van Bemmelen (Waardenburg Ecology); Gerry van der Meijden (TotalEnergies).

Next Steps

All feather samples are presently being documented and subsampled at the University of Aberdeen, Scotland. An inventory of all feather material available for further research projects, in particular stable isotope and heavy metal analyses, will be published online in December 2023 and an open call put out for bids to use the material. Genetic analysis for microsatellite markers is scheduled to take place over February and March 2024 and these outputs will be used within a PhD project identifying patterns of population connectivity for kittiwakes at differing spatial scales.

Seabirder Spotlight

Seabirder Spotlight aims to illuminate the variety of career paths and roles available to aspiring seabirders. Contributors are asked a range of standard questions about their careers, for example on what their current job involves, what aspects they love about their work and what skills have been important to cultivate on their journey. In particular, we hope that the contributions from members of the seabird community will inspire and motivate people in their early careers to work with seabirds.

Jennifer Appoo – Conservation biologist and PhD student, University of Reunion Island (France)

I am a conservation biologist originating from Seychelles. Seabirds are a familiar part of daily life in Seychelles. The archipelago hosts the largest concentration of seabirds in the central and western Indian Ocean.

Photo credit: Nia Stephens

However, my experience working with seabirds only began after completing my MSc in Environmental Science at the University of Montpellier (France). I returned to the Indian Ocean and over the course of six enriching years, I worked with environmental NGOs in Seychelles and Mauritius. I occupied roles such as field biologist, science officer and project coordinator. During this time, I had the privilege of working on some of the most renowned seabird hotspots in the tropical Indian Ocean, including the iconic Aldabra Atoll and Round Island in Mauritius. Through these diverse roles, I not only gained invaluable field skills in seabird monitoring, but I also gained experience in working with a myriad of species and habitats, ranging from reptiles and landbirds to vegetation and coral reefs.

It is perhaps because of this blend of experiences and skills that I became so interested in seabirds as a connector species, linking their oceanic habitats and their breeding islands. I therefore decided to pursue a PhD on the nutrient transport role of seabirds in tropical island ecosystems, a project which I co-developed with Dr Nancy Bunbury from the Seychelles Islands Foundation. Currently, I am in the final stages of completing my thesis at the University of Reunion Island (a French overseas territory in the southwest Indian Ocean), under the supervision of Prof Sébastien Jaquemet.

During my PhD, I looked at how nutrients from seabird guano influence the species and habitats around their breeding colonies. My fieldwork took me to some of the largest seabird colonies in the tropical Indian Ocean and enabled me to work with many species such as red-footed boobies *Sula sula*, lesser frigatebirds *Fregata ariel*, brown noddies *Anous stolidous*, lesser noddies *Anous tenuirostris* and sooty terns *Onychoprion fuscatus*. My PhD journey also provided me with an incredible opportunity to collaborate and learn from Prof Nick Graham at Lancaster University.

I'm really interested to continue to work with seabirds, whether in conservation or research, but preferably both. Tropical seabirds remain vastly understudied compared to their counterparts in temperate and polar regions, leaving much yet to be discovered

about their life history and ecological role. My goal is to support and contribute to science-led conservation initiatives in the Indian Ocean, and seabirds are a big part of the picture.

I believe that gaining work experience outside of academia can be very useful for academic life. Because of my professional experience, I was much better prepared for the challenges and work load of a PhD. For example, I already had some experience in planning and implementing fieldwork and writing funding and research proposals. As an early-career researcher, I also believe that having a mentor is important for personal and professional growth.

Seabird Paper Roundup

Jacqui Glencross, ECR Representative

Seabird Paper Roundup is a section included to help Early Career Researchers promote any recent seabird papers they have produced. We hope this can help highlight some of the amazing work that is being undertaken across our community, whilst highlighting work to those of you who may not be aware of it yet.

ECR PAPERS

Osiecka A. N., Briefer E.F., Kidawa D., Żurawska F., Wojczulanis-Jakubas K. (2024) Calls of the little auk (ALLE ALLE) chicks reflect their behavioural contexts. *PLoS ONE* 19(2): e0299033.

> Can seabirds communicate their emotions - and is that already true right after hatching? This paper looks at affective vocal expression in young chicks of the little auk, showing its evolutionary stability.

Osiecka A. N., Briefer E. F., Kidawa D., Wojczulanis-Jakubas K. (2024) Strong individual distinctiveness across the vocal repertoire of a colonial seabird, the little auk, ALLE ALLE. ANIMAL BEHAVIOUR 210:199-211.

> How do you find your social partners in a crowded seabird colony? This work is a detailed view on identity coding in the little auk, ranging across 5 call types and 2 years.

Charrier J., Anker-Nilsen T., Fort J., Jessopp M., Strøm H., Espinasse B. (2024) Intercolony variability in winter feeding and migration strategies of Atlantic puffins and black-legged kittiwakes. *Marine Biology* 171:79.

> During their winter moult, Atlantic puffins and black-legged kittiwakes from Norway, exhibit inter- and intraspecific differences in their isotopic niches. These variations between individuals reflect different feeding and migration strategies, with potential effects on their body condition

Machado-Gaye A.L., Kato A., Chimienti M., Gobel N., Ropert-Coudert Y., Barbosa A., Soutullo A. (2024) Using latent behavior analysis to identify key foraging areas for Adélie penguins in a declining colony in West Antarctic Peninsula. *Marine Biology* 171: 69.

> Accelerometry-based latent behavioral analysis approach to identify Adélie penguin's key foraging areas in King George Island, Antarctica.

Richards C., Cooke R., Bowler D. E., Boerder K., Bates A. E. (2024) Bycatch-threatened seabirds disproportionally contribute to community trait composition across the world. Global Ecology and Conservation 49: e02792.

> Here we took a trait-based approach to quantify global patterns of seabird community traits and describe how these patterns could shift under an extinction scenario where bycatch-threatened seabirds spatially overlap with fishing activities. Our results warn that fisheries bycatch is selectively removing a distinct suite of traits from the community within particular oceanic regions and that seabirds threatened from bycatch substantially contribute to community trait composition.

Squires, T. E. & Bond, A. L. 2024. Specimens of the extinct Spectacled Cormorant Urile perspicillatus. Bulletin of the British Ornithologists' Club 144:3-18.

Our research involved a dedicated survey of all international institutions that were believed to house specimens (skins and bones) of the recently extinct Spectacled Cormorant to verify the disposition of all materials. We conducted a comprehensive literature review to verify how the materials had arrived at each place and attempted to tie together a clearer account of the species' ecology based on all available previous research.

Osiecka, A.N., Briefer, E.F., Kidawa, D. Wojczulanis-Jakubas K. (2023) Seabird's cry: repertoire and vocal expression of contextual valence in the little auk (*Alle alle*). *Scientific Reports* 13: 8623.

Osiecka, A.N., Briefer, E.F., Kidawa, D. Wojczulanis-Jakubas K (2023) Social calls of the little auk (*Alle alle*) reflect body size and possibly partnership but not sex. *Royal Society Open Science* 10: 230845.

Seabird Group News

New social media platforms

We now have accounts on Bluesky and Tiktok, as well as Facebook and X, so do give us a follow. It would be great to see any videos or photos from our various Seabird Group members, and it's also a great time to share any snaps during this year's breeding season. It is great we can use these to connect the seabird community, and most importantly, we can keep spreading the word of the seabird!

The Seabird Group membership benefits

We have updated the additional benefits for The Seabird Group members, and have offers for Pelagic Publishing, Poyser Monographs, Lynx Nature Books and Any Weather Paper. Details and codes for these can be found on our members only page online. Please get in touch with Executive Committee member Jacqui Glencross at ecr@seabirdgroup.org.uk if you have any problems, queries or suggestions for additional member benefits.

Website: **www.seabirdgroup.org.uk**

Facebook: **www.facebook.com/pages/TheSeabirdGroup/**

Twitter: **www.twitter.com/TheSeabirdGroup (@TheSeabirdGroup)**

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

Chair	Alex Bond (2027)	chair@seabirdgroup.org.uk
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Current membership rates	
Ordinary	£30
Concession	£15
Institution	£50
Individual Life:	£300
Institution Life	£300

The Newsletter is published three times a year. The Editor welcomes articles from both members and non-members on issues relating to seabird research and conservation. We aim to provide a forum for readers' views so that those provided in the Newsletter are not necessarily those of the Editor or Seabird Group.

Submissions for the newsletter should be emailed to the newsletter editor: newsletter@seabirdgroup.org.uk. We recommend a maximum of 1500 words and ask that photographs and figures are sent as separate files and with full credits, where appropriate. **Deadlines are: 15th January (February edition); 15th May (June edition); and, 15th September (October edition).** Every effort is made to check the content of the material that we publish. It is not, however, always possible to check thoroughly every piece of information back to its original source as well as keeping news timely. If you have any concerns about any of the information or contacts provided, please contact the Newsletter Editor.