NEWSLETTER 152

February 2023

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New committee members

The start of this issue begins by wishing a warm welcome to new executive committee members. Our Newsletter Editor, Membership Secretary, Social Media Manager and Early-career Representative all departed at the November AGM. We would like to give a huge thank you to Katherine Booth-Jones, Danni Thompson, and Zoe Deakin for the invaluable contributions made to the work of the Seabird Group during your time on the committee. Ruth Dunn also stepped down from her role as Social Media Manager but is remaining on the executive committee to continue her work in a new position, the Journal Assistant Editor. Our new committee members introduce themselves below.

Newsletter Editor: Amy King

I am delighted to be joining the executive committee with the role as Newsletter Editor, and I hope I can use this opportunity to continue to share and promote your wonderful stories, work and events across the marine ornithology community. I am currently a Senior Research Assistant for the RSPB at Bempton, Yorkshire, and have spent my career specialising in species recovery, with a mixture of reintroductions, island eradications and species monitoring. Developing a love for seabirds during visits to Skomer Island, my work has since allowed me to visit, live and work on various islands in the UK, from the North of the UK in Orkney, to the South on the Isles of Scilly, whilst also including UKOTs such as Gough Island. During this time, I have really enjoyed being part of The Seabird Group, meeting various members in the field and at conferences, and I look forward to giving back to the community that has helped me grow my experience and knowledge in this field. Please do get in touch with me at newsletter@seabirdgroup.org.uk if you have articles or ideas you want to share in future editions. I look forward to hearing from you.

Membership Secretary: Antoine Grissot

I recently finished my PhD on Little Auk (*Alle alle)* breeding ecology at the University of Gdańsk (Poland). I am currently looking for a post-doc that will allow me to continue my research journey. In the meantime, I am very excited to join The Seabird Group Executive Committee as Membership Secretary, and to be in direct contact with the wonderful seabird community. Please do not hesitate to contact me at membership@seabirdgroup.org.uk for any query concerning your Seabird Group membership or our online shop.

Ordinary Member – Social Media Manager: Trina (Katrina) Siddiqi-Davies

Hello to everyone at The Seabird Group and thank you for giving me the opportunity to join the committee as the Social Media Manager.

I'm a third year PhD student at Oxford looking at the migration of **Manx Shearwaters** (*Puffinus puffinus*). This means I've spent a lot of my last two years with my arm down a burrow on Skomer Island, tracking birds under the most beautiful stars I've ever experienced. I am looking specifically at long term changes in winter foraging, exploring links between diet and behaviour, and investigating sex differences in pre-laying behaviour and what they might mean!

As Social Media Manager, I am hoping to continue the amazing work of Ruth; sharing papers, artwork, grants and opportunities within the seabird community and hopefully reaching out to some budding new enthusiasts. If you are an artist with some work to show off, please get in touch via our twitter page @TheSeabirdGroup and be part of our #SeabirdShowOff.

Ordinary Member – Early-career Representative: Jacqui Glencross

I am a third year PhD student researching the impacts of fishing on **African Penguin** (*Spheniscus demersus*) foraging behaviour at the University of St Andrews, Scotland. Before my PhD, I completed my masters at the University of Tasmania, Australia, focusing on mass mortality events in *Ardenna* shearwaters.

I am now very excited to be the new ECR rep for The Seabird Group. Following on from The Seabird Group Conference in Cork, where I had a great time meeting fellow ECRs, I am keen to keep the feeling of community going for everyone. If you are an early career researcher, please get in touch if you have any questions, ideas or just want to say hello at ecr@seabirdgroup.org.uk!

Ordinary Member – Journal Assistant Editor: Ruth Dunn

I am a Postdoctoral Research Associate at Lancaster University and Herriot-Watt University where I research the behaviour, energetics and ecological influence of tropical seabirds.

I have been a member of The Seabird Group's Executive Committee (ExComm) for the last two years during which I managed the Group's social media as well as playing an active role within The Seabird Group's ExComm. Last year I volunteered to take on the role of Assistant Journal Editor for The Seabird Group's journal, *SEABIRD*, and will now continue in this role for the next few years. I work alongside the journal's Editor (Viola Ross-Smith) and Editorial Board to help articles regarding the biology, conservation, identification and status of seabirds to be published within *SEABIRD* which is open access and free-to-publish in.

I have helped to introduce the online 'Early Release' of accepted *SEABIRD* articles to our website, helping the research published to reach its readers more quickly, and also benefiting authors (particularly early career researchers), by allowing them to receive swift, formal recognition of their work.

I am looking forward to continuing to serve on the Seabird Group's ExComm and to work with Viola, the Editorial Board, authors, reviewers, copyeditors, supporters, and readers to ensure the continued success of *SEABIRD* into the future.

Phenomenal breeding success on Gough Island

Vanessa Amaral-Rogers and Steffen Oppel, RSPB

In 2021 a large consortium of conservation organisations led by RSPB and Tristan da Cunha tried to eradicate invasive non-native House Mice (*Mus musculus*) from the World Heritage Site Gough Island – a rugged volcanic island in the middle of the South Atlantic that is home to millions of seabirds. Over the past decades the mice had started eating seabird eggs and chicks (and latterly adult birds too), and several species were decreasing due to mouse predation. To restore the island and its seabird populations, every single mouse on the island had to be removed.

However, despite heroic efforts under challenging weather conditions, the mouse eradication operation was not successful. In December 2021, three months after the operational team had departed from the island, a single mouse was discovered by the remaining monitoring team. They searched the island for more mice and documented a rapid increase in mouse detections at the end of the southern summer 2022.

Seabird breeding results

At any one time there are seabirds breeding on Gough. Some species breed during the summer, others during the winter, and the largest species – the critically endangered **Tristan Albatross** (*Diomedea dabbenena*) – needs almost 12 months to raise chicks. Although we were not successful in eradicating the mice from Gough Island, our efforts led to an enormous reduction of the number of mice on the island during this past breeding season and so we were hopeful this would provide the seabirds with some respite from predation. As a result, we were very interested to find out how the seabirds fared this year. Would their breeding success be as good as we had always envisioned in the (near) absence of mice?

A rare sight - MacGillivray's Prion chick with its flight feathers following their respite from mouse predation. Photo: R. Daling

Results from the winter breeders came through first and these were staggering: the Critically Endangered **MacGillivray's Prion** (*Pachyptila macgillivrayi*) increased breeding success from an average of 6% with mice (including many years of 0% success) to

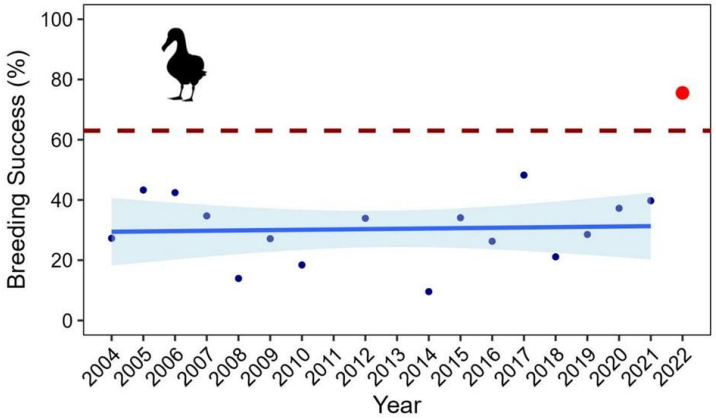


Figure 1: Breeding success of Tristan Albatrosses on Gough Island from 2004 to 2022. The horizontal dashed line is the typical breeding success on predator-free islands that would be sufficient for an albatross population to maintain itself. In 2022 the Tristan Albatrosses on Gough exceeded this threshold for the first time since records began.

All in all, the seabirds on Gough had a phenomenal breeding season this year and there was no indication of any mouse predation. Although we have long expected it to be the case, we now have evidence that removing mice will have huge benefits for this World Heritage Site.

Mice are omnivores and will primarily eat seeds, plants, and invertebrates. When mice become very abundant there is intense competition for food, and plant and invertebrate food sources can become depleted. Out of desperation hungry mice will then explore alternative food sources – and on Gough Island they started eating seabirds. In 2022 the low numbers of mice (and hence low competition) indicated they had plenty of other food to eat, and the seabirds were able to raise many chicks.

Unfortunately, we do not believe that this situation will persist. We expect mice will become so abundant that they deplete their typical food sources and then start eating seabirds once again. We do not know when this will happen, but as long as mice remain on Gough Island the future for seabirds is not secure. This year has shown us what seabirds can achieve when their chicks are not eaten by mice – and this gives us a determination to return to Gough in the future and remove the mice forever.

82% in 2022, whilst the endangered **Atlantic Petrel** (*Pterodroma incerta*) had a 63% breeding success – more than double the previous year's rate and well above average. Gough Island is the global stronghold for both species.

Results for the **Tristan Albatross** came through in October, with a massive increase from an average of 32% to 76% breeding success. Almost every Tristan Albatross in the world breeds on Gough Island.

Finally, our monitoring team on Gough sent through the numbers for the, the Near Threatened **Grey Petrel** (*Procellaria cinerea*), another species for which Gough is significant, and the results are similarly impressive, their breeding success rose from 30% to 75%.

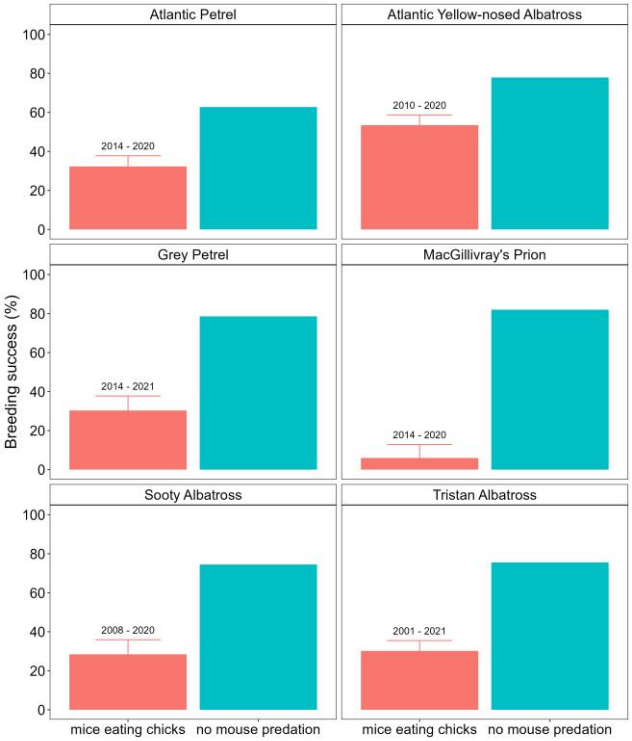


Figure 2: The change in breeding success before and after the attempt to eradicate mice from Gough Island

The Seabird Monitoring Programme migrates to the BTO

Sarah Harris, SMP Organiser, BTO

The Seabird Monitoring Programme (SMP) was established by JNCC in 1986 (then known as the Nature Conservancy Council). Working in partnership with 19 additional statutory government agencies and conservation organisations, JNCC coordinated seabird monitoring, collation of data, and data analysis to provide trends on seabird abundance and productivity change over time. The results allowed the conservation status of the UK's internationally important breeding seabird species to be assessed over time. In 2022, JNCC formed a new partnership with BTO and RSPB, and

the SMP is now funded jointly by the BTO and JNCC, in association with the RSPB, with fieldwork conducted by professional and non-professional fieldworkers. The scheme remains supported by the 19 organisations involved in the original partnership, alongside the statutory nature conservation bodies, and others, to form the SMP Advisory Group.

BTO are looking forward to taking the scheme forward, alongside the Partners and Advisory Group members. At the helm is Sarah Harris, SMP Organiser at BTO. Sarah started her ornithological career straight out of Aberystwyth University taking on the role of Ornithological Warden at the Calf of Man Bird Observatory, followed by Assistant Warden on Skomer Island, occasionally providing cover for the warden over on Skokholm too. Each island had its own mix of seabird monitoring work to carry out. Sarah is also a qualified bird ringer covering all species and has enjoyed many a visit to seabird colonies and nights spent catching - and sniffing - our nocturnal seabird friends, **European Storm Petrels** (*Hydrobates pelagicus*) and **Manx Shearwaters**. After a time working with White-tailed Eagles on the Isle of Skye, Sarah landed at BTO as the BTO/JNCC/RSPB Breeding Bird Survey National Organiser where she led the scheme for eight years. Now organising the SMP, Sarah looks forward to expanding monitoring coverage across the UK, getting the most out of the data collected so as to conserve seabirds and to enthuse as many people as possible about seabirds so that they have as many people as possible looking out for them!

There is a lot to do during this transitional period as the survey moves from JNCC to BTO's coordination and it is important all seabird participants are registered and allocated 'their' sites on SMP Online so that we better understand where the coverage gaps are. For anyone interested in the scheme, head over to the new SMP webpages at www.bto.org/smp, and if you are a Twitter user, follow the SMP at @smp_seabirds.

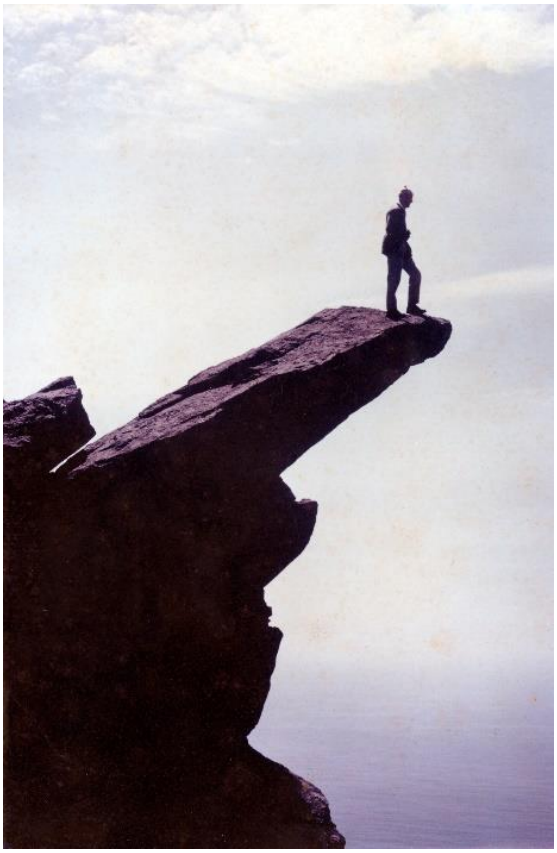
Lastly, a massive thank you to all the seabird surveyors out there who contribute to the scheme currently or have done in the past.

A collection of films about St Kilda, and more!

The late Christopher Mylne was a pioneering Scottish film maker, photographer and naturalist, who spent a great deal of time capturing, among many things, life as it was on St Kilda, Fouls and other Scottish isles. He is best known for his films focusing on this, for example, 'St Kilda: the Lonely Islands' 1967, but he also produced films shown on television that showcased his love for birds (The Remarkable Willow-Grouse), and was commissioned to develop films made for conservation bodies such as the National Trust for Scotland and the Scottish Wildlife Trust.

His work is among some of the first to compile original footage that documented the islander way of life, their traditions, and how they understood and lived on these incredible but unforgiving islands throughout the seasons, alongside the wealth of wildlife that ensured their survival throughout the years. His passion for conservation shows through as he often tried to convey environmental messages in much of his work, trying to instil resect for the natural world, that he himself had also clearly developed through his own personal studies.

A collection of his films, stills and written accounts, as well as his 'ornithoversification' poems, have now been made into a website, at https://chrismylne.com/ There is some fantastic imagery and narration, and it is well worth a look, particularly for those of you who have been lucky enough to visit some of the remote places he has documented. A few of his images are included on the next page to give you an idea of the content included in the stills section. (All photos credited to Christopher K Mylne FRPS).



Standing on top of the 'Lovers Stone'




From top left to bottom right: Visit to St Kilda in 1966 for the making of 'St Kilda, The Lonely Islands', A medieval village and cleats on St Kilda, A lesser Whitethroat in the hand with ringing kit on Foula, An Arctic Skua (Allen) on Foula

Grant Reports

How do Storm Petrels interact with marine developments and light pollution in the North-East Atlantic? A pilot study in the Faroe Islands.

Ben Porter, Cardiff University

Nocturnal seabirds such as **European Storm Petrels** (hereafter 'Storm Petrels'), are secretive species whose ecology and biology are still little understood, owing to their elusive behaviours, highly oceanic existence and small size. As a species overwhelmingly active during the night-time, these seabirds are also particularly susceptible to the effects of artificial light at night ('ALAN'). A growing body of research has been shedding light on how these species interact with artificial light in the marine environment, but significant knowledge gaps remain; this is of particularly pressing concern as anthropogenic developments in the marine environment increase, and the potential effects of lighting associated with such developments remains largely unknown.

The objective of this ongoing study is to assess how Storm Petrels interact with offshore wind farms, marine fish-farm operations and sources of artificial light at night around the Faroe Islands and wider North-East Atlantic region. The project is centred on the Faroe Islands, an archipelago located midway between the Shetland Isles and Iceland, which is home to internationally-important breeding populations of seabird species and hosts the largest known colony of European Storm Petrels in the world (c. 50,000 breeding pairs). We plan on utilising a number of field-based methods to investigate the key objectives of the project, including GPS tracking Storm Petrels, thermal-imaging surveys at night and behavioural lighting experiments.

During the summer of 2021, a two-month pilot study was made possible by generous funding provided by The Seabird Group, a Faroese travel grant, and a fish farm company in the Faroes collaborating in the research. This pilot study period provided

invaluable opportunities to investigate the Nólsoy colony study site, assess research methodologies and meet the various individuals, groups and organisations locally who are now involved in the continued development of this research project in the Faroe Islands. This work was continued during summer 2022, and we hope that acquisition of wider funding opportunities will enable the full development of the project into a multi-year study.

Critical to any work taking place in the colony on Nólsoy was the invaluable knowledge and assistance from local ornithologists Jens-kjeld Jensen and Jógvan Thomsen, both of whom live in the village on the north side of the island, and have been involved in the study of the colony for many years. Jens-kjeld and Jógvan very kindly showed us around the colony and departed innumerable insights into the behaviours and breeding biology of Storm Petrels in this area. Over previous winters (largely over winter 2020-2021) Jens-kjeld and Jógvan installed over 30 artificial Storm Petrel nest boxes throughout the colony in the hope that they will become occupied and provide accessible nests to enable work such as the GPS tracking we hoped to carry out. This number has since been increased to close to 60, and will be bolstered to 100 nest boxes by spring 2023.

Jens-kjeld constructing a nest box.

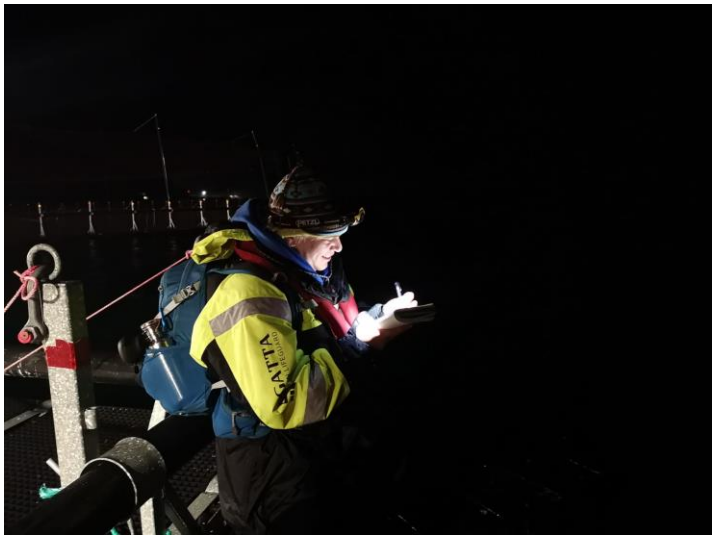
One of the main activities over summer 2021 involved carefully monitoring these artificial nest boxes and assessing their usage by Storm Petrels; comparing various differences in the box design and location within the colony to see which is preferred. Overall, nine of the 27 boxes studied in the 2021 season were used to varying degrees by Storm Petrels, with two boxes hosting pairs that successfully fledged chicks. The seven other boxes involved prospecting birds, pairs semi-constructed nests inside, and other pairs laying an egg but ultimately failing during incubation for unknown reasons. During the 2022 season, 28 out of 59 nest boxes were used to some degree, with 14 incubating pairs and seven boxes successfully fledging chicks. This already presents an exciting rate of uptake by Storm Petrels in the colony, and will allow for a host of monitoring activities to take place over coming years.

Another key focus for the 2021 pilot study was to carry out night-time surveys on fish farm installations around the Faroese archipelago; assessing potential interactions of seabirds with these platforms under the cover of darkness, especially with regards to any influence of artificial light sources associated with the installations. A well-established fish farm company called 'Hiddenfjord' very kindly agreed to collaborate with us for this element of the research project, allowing researchers to visit a fish farm in the fjord of Velbastadur at night and use thermal imaging cameras to carry out timed scan surveys of the surrounding area (using the Pulsar Axion XM30S). A total of three night-time visits were made to the fish farm during August and September, and these surveys revealed that Storm Petrels were regularly frequenting the waters immediately surrounding the fish farm installations. The visits to the farm on 29th August and 5th September 2021 recorded 61 and 104 individual Storm Petrels respectively over a two-hour period, with varying degrees of foraging and commuting behaviours noted. Several bright lights were present on the fish farm for the duration of the surveys, but no obvious attraction to these light sources were noted, although their presence could have played a wide influence in the presence of Storm Petrels in the area of the fjord itself. Following these pilot surveys, we hope to expand this night-time survey work to other fish farms across the Faroes and across wider periods of the Storm Petrel breeding season, as well as comparing periods at night when lights are not operating on the installations.

Nesting Storm Petrel in artificial box

In addition to the thermal imaging surveys carried out on the Velbastadur fish farm, night-time surveys using this survey method were also trialled along the coast and at-sea off the island of Nólsoy aboard a small vessel. A particular focus for these surveys is the proposed construction of an offshore wind farm in the sea c. 4km east of Nólsoy. This wind farm is due to be constructed between 2022 and 2025, with the potential to influence various seabird species

commuting to and from their breeding colonies on the island. Any data gathered will therefore be of great importance to help inform how this development might affect the internationally important seabird populations breeding on Nólsoy. We carried out two offshore surveys around the proposed wind farm location (at night on 24th August and 8th September 2021), and this provided very useful initial data on Storm Petrel behaviour and abundance at sea off the colony; for example, a mean number of 44 birds per 15-minute survey was recorded on 24th August 2021, with 72 birds per 15-minute survey on 8 September 2021. Again, this is a method we hope to expand and utilise more during the study.



Night-time fish farm survey

After an exciting two seasons in the development stage for this project, we hope to acquire funding to fully pursue the questions we have set out to address. The core team involved in the project at present include myself, Dr Rob Thomas (Cardiff University) and Dr Sjúrður Hammer (Faroes Environment Agency), but we have a suite of collaborative partners to thank for the invaluable input thus far, and to The Seabird Group for contributing to the first pilot study season of the project in 2021.

Manx Shearwaters in Mallaig

Martyna Syposz, OxNav Group, University of Oxford

While LED lights might be good for saving energy, they might not necessarily be an ideal solution for reducing effects of light pollution on animals. LED lights can be acquired in many colours and intensities, but most popular for outdoor lamps tend to be the ones with peaks in the green and blue part of the spectrum, changing the night landscape from the more orange and reddish colours of traditionally used pressure sodium lamps. The choice of correct outdoor lighting, however, is important as it can influence many animals living in the vicinity of, or traveling through, lit-up areas, as well as those that are affected by the glow of light, far away from its source. Anthropogenic light can change timing of activities of wild animals, affect reproduction, result in congregation of animals around its source and disturb prey-predator balance. The cumulative effects of artificial light on the physiology and behaviour of animals have ultimately the potential to disrupt key ecosystem functions. Thus, there is an urgent need to investigate the impact of different types of light on species to inform correct conservation recommendations. In particular, understanding the effect of transitioning to recently popular, energy-efficient, and long-lasting LED lights is essential.

Establishing the correct lighting regime is of special importance in coastal areas near islands with nests of nocturnally active shearwaters and petrels. Annually, during the fledging season, there are reports of juveniles coming to lit-up areas and landing on streets. Because these birds are clumsy on land, and they struggle to take to the air on flat areas, they often require a human intervention. If a grounded bird is trapped between buildings or in vegetation, it may fall victim to predation, cars, dehydration, or starvation. There are many places around the world, where rescue campaigns, volunteers and communities organise searches for grounded birds to release them back to the sea.

One such place is in Mallaig, in the northwest of Scotland, located 27km from Isle of Rum, the second largest colony of **Manx Shearwaters**, home to around 76,000 pairs. Manx Shearwaters have their nests located in burrows, which they attend during the night, probably to avoid predation from diurnal predators, such as gulls. The female lays one egg and partners alternate duties of incubating and feeding the chick. Juvenile Manx Shearwaters embark on their maiden flight during the night, with the majority fledging during the month of September. It is also when young seabirds land in streets of Mallaig and rescue searches happen daily. Once a grounded seabird is found, it is transported to a well-ventilated box (Figure 1) and only released the next morning. This procedure ensures a lower probability of a Manx Shearwaters getting confused by the lights again, though there have been instances of the same bird coming back to the town. In the morning, after rescue, the seabirds are weighed, ringed and transported onto a boat, where they are released at the open sea. The rescue and subsequent data collection in Mallaig have been undertaken regularly since 2009. For economic reasons, the bulbs in the village's streetlights, were changed from sodium pressure to LED lamps in 2015 and 2016, providing a unique opportunity to investigate whether this transition had an effect on the number of grounded seabirds. Previous research found that high pressure sodium lights showed the lowest percentage of attraction of **Short-**

Figure 1. Rescued Manx shearwater in well-ventilated box. Photo: Martyna Syposz.

tailed Shearwaters (*Ardenna tenuirostris*), when compared to metal halide and LED lights[1]. Thus, we expected that there will be an increase in number of grounded Manx Shearwaters in Mallaig, following the transition to LED lights.

We tested if the transition to LED lights predicts the number of grounded Manx shearwaters using random forest classification. In the model, we also included moon illuminance and weather variables, factors known to affect the severity of fallout. Further, we compared the relative importance of variables. The weather variables were used from the weather station, South Uist Range, located 101 km from Mallaig.

Our findings, contrary to our expectations, showed that transition from pressure sodium lamps to LED lights did not predict a change in the number of grounded seabirds in Mallaig (Figure 2). Our results, however, are not unprecedented, as a similar finding was recently reported in Hawaii, where a transition to LED lighting did not influence fallout of **Wedge-tailed Shearwaters**[2] (*Ardenna pacifica*). Other factors, such as moon and year, showed a strong effect on number of grounded birds. As in many other shearwater species, the presence of a new moon was associated with a higher fallout. Year was the second most important variable, which may reflect exceptional numbers of groundings observed in 2012 and 2018. Higher breeding success, as well as the peak fledging date, which coincides with a new moon could result in greater number of grounded seabirds. Besides moon, other variables such as visibility and strong westerly and north-westerly winds were associated with an increase in groundings in our model, probably because strong onshore winds blow flight-inexperienced fledglings in the direction of the light pollution, thus causing higher fallout.

Changes in outdoor light regimes provide an opportunity to limit the negative effects caused by artificial light pollution on wild animals. Previous research indicated that reducing the severity of seabird's fallout is possible[3]. Turning off the lights for periods of time, decreasing the number of lamps, limiting the upward and sideways spill of light or changing the spectrum of the light could reduce the number of grounded seabirds. Thus, future changes to the night landscape near seabird nesting sites should comprehensively address the total light regime, to ensure that the action will mitigate the negative effects on seabirds.

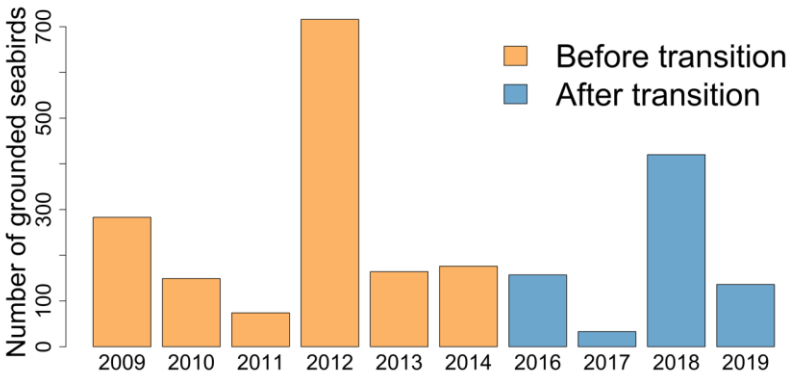


Figure 2. Number of grounded seabirds per year before (orange) and after (blue) transition to LED lights.

[1] Rodríguez, A., Dann, P. & Chiaradia, A. 2017. Reducing light-induced mortality of seabirds: High pressure sodium lights decrease the fatal attraction of shearwaters. J. Nat. Conserv. 39: 68–72.

[2] Urmston, J., Hyrenbac, K.D., Carstenn, S. & Swindle, K. 2022. Quantifying wedge-tailed shearwater (Ardenna pacifica) fallout after changes in highway lighting on Southeat O'ahu, Hawai'i. PLoS One 17.

[3] Miles, W., Money, S., Luxmoore, R. & Furness, R.W. 2010. Effects of artificial lights and moonlight on petrels at St Kilda. Bird Study 57: 244–251.

Uncovering White-tailed Tropicbird breeding sites in an understudied marine hotspot: the Island of Principe

Nina da Rocha, Seabird Ecology Lab (University of Barcelona) and Fundação Principe

The Príncipe Region, in the Gulf of Guinea, is an internationally recognised marine hotspot that harbours the most important seabird population in the tropical eastern Atlantic Ocean[4]. However, since previous expeditions and monitoring programmes to assess the regions breeding seabird populations have focused almost exclusively on the Tinhosas islets[4,5], there is limited information about the **White Tailed-tropicbird** (*Phaethon lepturus*), absent at this site but known to breed closer to Principe in relatively small numbers (50-100 pairs[5]). Despite its small size, this population represents a stronghold for the species in the Eastern Atlantic.

To address the existing knowledge gap surrounding the breeding population of White-tailed Tropicbirds on Principe and surrounding islets, NGO Fundação Principe, with support from the Conservation Leadership Programme, and the Seabird Ecology Lab from the University of Barcelona started a collaboration with the aim of gathering detailed information on the location, main phenology and major threats of the species in the region.

Initial nest surveys were carried out during the dry season in July 2021 (directed by historical data and information from interviews with local fishermen) to identify active and accessible nests. Although initial surveys confirmed the existence of a small number of active nests at the time, interviews indicated that the peak abundance of breeding pairs was likely to be in the dry season experienced in December – January.

Following a series of logistical challenges (including injuries, staff turnover, prolonged periods of fuel shortages and unfavourable weather conditions) a more detailed and ambitious plan for land-based and boat-based nest surveys was thus carried out in December 2021 – January 2022 with the participation and guidance of Professor Iacob González-Solís from the University of Barcelona and myself. On occasion, volunteers from Fundação Principe, BirdLife International and Lisbon Univeristy also participated in surveys.

Results & Discussion

Nest surveys confirmed the presence of an asynchronous breeding population of White-tailed Tropicbirds on Principe and surrounding islets, with active nests identified at three of the sites historically documented as being occupied by White-tailed Tropicbirds: Mosteiros, Boné do Jóquei and the Rio Porco Beach (Figure 1). Moreover, our findings indicate the existence of active but inaccessible nests within Obo Natural Park along the southern coast of the island (on cliffs on Ilhéu Roque and close to Rio Sao Tomé), based on observations from boat-based surveys. No active nests were found in the Belo Monte area despite frequent sightings.

Fundação Principe intern, Yanik Alberto, ringing a White-tailed Tropicbird chick during nest surveys in 2022.

In total, 31 active and accessible nests were located, with over 80% of these located on Mosteiros – an islet off the north coast of Principe and easily accessible by boat. Since this site was identified as the most appropriate for monitoring purposes, 27 adults and 4 chicks were ringed between December 2021 and May 2022 at this location. Ringed adults on average weighed 351g (ranging from 290 to 440g) and all but three could be associated with an active nest during surveys (ranging from pre-incubation to chick-rearing phases). Regurgitates were collected from three individuals but have yet to be analysed for diet composition.

[4] Valle S, Barros N, Ramírez I, Wanless RM. 2016. Population estimates of the breeding birds of the Tinhosas Islands (Gulf of Guinea), the only major seabird colony in the eastern tropical Atlantic. *Ostrich* 87: 209–215.
[5] Bollen, A., Matilde, E., & Barros, N. (2018). An updated assessment of the seabird populations breeding at Príncipe and Tinhosas. *Ostrich*, *89*(1), 47-58.

No evidence of human consumption of White-tailed Tropicbirds was found during nest surveys and interviews carried out on Principe, although historical consumption was referred to on multiple occasions. Nonetheless, caution was employed when carrying out surveys to avoid drawing attention to breeding sites by fishers visiting the areas in question. It is however worth noting that all birds breeding at accessible sites were found to be extremely sensitive to human presence, and crab predation and nest abandonment occurred on multiple occasions.

The limited number of accessible nests on the main island of Principe is likely explained by historical persecution and the prevalence of mammalian invasive species – leading to birds being confined to breeding on steep cliffs. This is supported by the fact that 30 out of 31 accessible nests were located on uninhabited islands, with no invasive predators.

Large land crabs *(Johngarthia weileri)* were observed to predate chicks and were present in most active nests during surveys. Although no direct evidence was collected, it is likely that crabs also depredate eggs. Given the large number of crabs at breeding sites with accessible nests, this could be having a large impact on fledging success at the population-level but requires long-term monitoring for confirmation.

Conclusions

Locating the exact breeding sites of White-tailed Tropicbirds around Principe is the first step towards establishing a long-term monitoring programme, assessing the status, phenology and threats to this population - information which can help guarantee their protection and viability. To locate nests, we focussed on the underexplored southern coast of Principe and the uninhabited islets tropicbirds have been known to nest on in the past (see [5]).

We estimate 100 – 150 breeding pairs use the area throughout the year, although most nests are found high on cliffs within the Natural Park and are inaccessible. Although this estimate is higher than that presented by [5], this is likely due to a more comprehensive survey period and area, rather than a positive population trend.

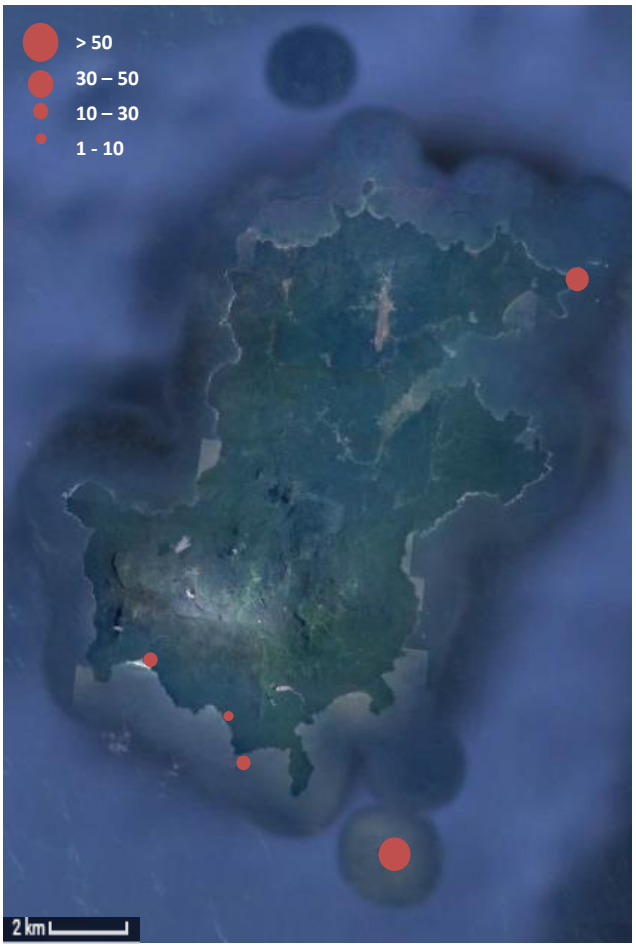


Figure 1. Map of locations of breeding sites and estimated number of breeding pairs of white-tailed tropicbirds around Principe, based on land-based and boat-based surveys (July 2021 – May 2022). The majority of accessible nests were found on Mosteiros islet off the north coast – a site that lies outside the limits of the Natural Park and benefits from no legal protection. A large breeding colony is also present on Boné do Jòquei islet, although a very small number of nests at this site are accessible. We estimate 100 – 150 breeding pairs use the area around Principe.

The distribution of breeding White-tailed Tropicbirds on Principe is likely severely confined by the presence of invasive mammalian predators (mice, rats, cats, dogs, civets, monkeys, pigs). Since the eradication of these is not feasible, it is of extreme importance that measures are implemented to safeguard breeding sites on uninhabited islets. This is of particular relevance to Mosteiros, one of the most important breeding sites for the species in Principe (used by 30-50 breeding pairs) which currently has no legal protection. Due to the accessibility of nests and sensitivity of breeding birds at this site, we urge local authorities to declare it an integral reserve so access to the islet can be restricted and regulated.

To ensure that White-tailed Tropicbirds around Principe are able to thrive, support for long-term monitoring programmes that both help understand population dynamics and build local capacity is of vital importance.

2022 Breeding Season Report for Flamborough and Filey Coast SPA

Richard Cope and David Aitken, RSPB

Results from the 2022 productivity monitoring season were mixed, with **Black-legged Kittiwake** (*Rissa tridactyla)* experiencing their most successful year since 2010; conversely, **Northern Gannet** (*Morus bassanus*) suffering their worst ever year due to HPAI, heavily impacting the monitoring plots at Staple Newk. **Northern Fulmar** (*Fulmarus glacialis*), **European Herring Gull** (*Larus argentatus)*, **Razorbill** (*Alca torda)* and **Common Guillemot** (*Uria aalge)* also showed slight declines (Figure 1). In addition to annual productivity monitoring, a boat and land-based census of the Specially Protected Area (SPA) breeding assemblage was undertaken.

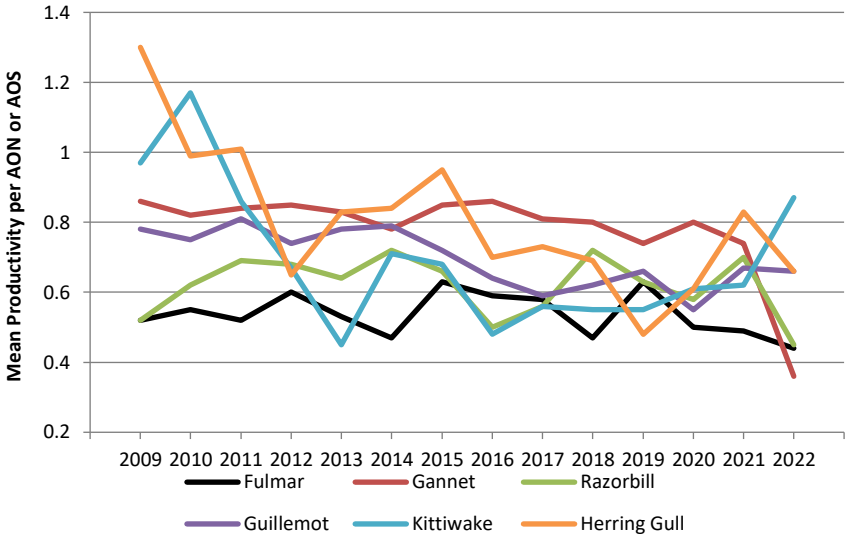


Figure 1: Summary of the productivity trends of the six monitored seabird species 2009-2022.

Northern Fulmar: Across the SPA productivity was 0.44 (SE ± 0.0415) chicks per Apparently Occupied Sites (AOS), a decrease from 2021 to the lowest ever recorded, with the general productivity trend showing a slight decrease (Figure 1). A total of 1,216 AOS were counted across the Flamborough and Filey Coast (F&FC) SPA, including 799 AOS within the original Flamborough Head and Bempton Cliffs (FH&BC) SPA colony and an additional 417 AOS at Filey (Figure 2).

Northern Gannet: A total of 267 AON (Apparently Occupied Nests) were monitored across five plots, from which only 99 chicks successfully fledged. The mean productivity for Gannet was 0.36 (SE ± 0.1256) chicks per AON. This was their lowest ever productivity and highlights the impact of HPAI on this section of the colony (Figure 1). There was a significant difference between plots, with the flatter areas at Staple Newk being the most conducive to the spread of the virus, whereas the nests on the vertical cliffs at Jubilee and Nettletrip fared much better. A total of 12,990 AOS were counted in the F&FC SPA, restricted mainly to the high cliffs of Bempton, Buckton and Speeton. In addition, 2000 non-breeding birds were also present (Figure 2).

European Shag *(Phalacrocorax aristotelis)*: The regular area at Breil was monitored and used by just a single pair, which went on to fledge a single chick. The other sites showed no breeding activity at all this year. A total of just 17 AON were located within F&FC SPA, representing a population decline of 45% from a peak of 31 pairs recorded in 1987 and 2000. These continue to be restricted to the Flamborough Head and Bempton Cliffs sections of the colony

Great Cormorant *(Phalacrocorax carbo)*: For the second year running, a small plot was monitored along Filey Cliffs. A total of eleven AON fledged twenty-five chicks, giving a productivity of 2.27 chicks/pair. This is slightly down on three chicks/pair in 2021. However, the number of nests was more than double the 2021 total monitored. These represent just over a third (34%) of the breeding population of 32 AON. Whilst the trend of this small colony has remained stable, it has shown fluctuations between 15 and 38 AOS.

Black-legged Kittiwake: Nineteen plots were monitored across the SPA and included a total of 968 AON, with a productivity of 0.87 chicks per pair. This is a notable increase from 2021 and was overall the best season since 2010 (Figure 1). The long-term trend remains a concern, however in the short-term there are hints of an improvement. A total of 44,574 AON were recorded across the F&FC SPA, potentially making it the largest colony in the UK (Figure 2). Of these, 39,653 AON were in the original FH&BC colony, while Filey held 4921 AON.

European Herring Gull: Productivity decreased dramatically across five plots with just 23 chicks fledged from 80 AON, the mean productivity of 0.25 (SE ± 0.0931) chicks fledged per pair being the lowest ever recorded (Figure 1). The long-term trend of continued decline shows no signs of abating and across the SPA just 409 AOS were recorded (Figure 2).

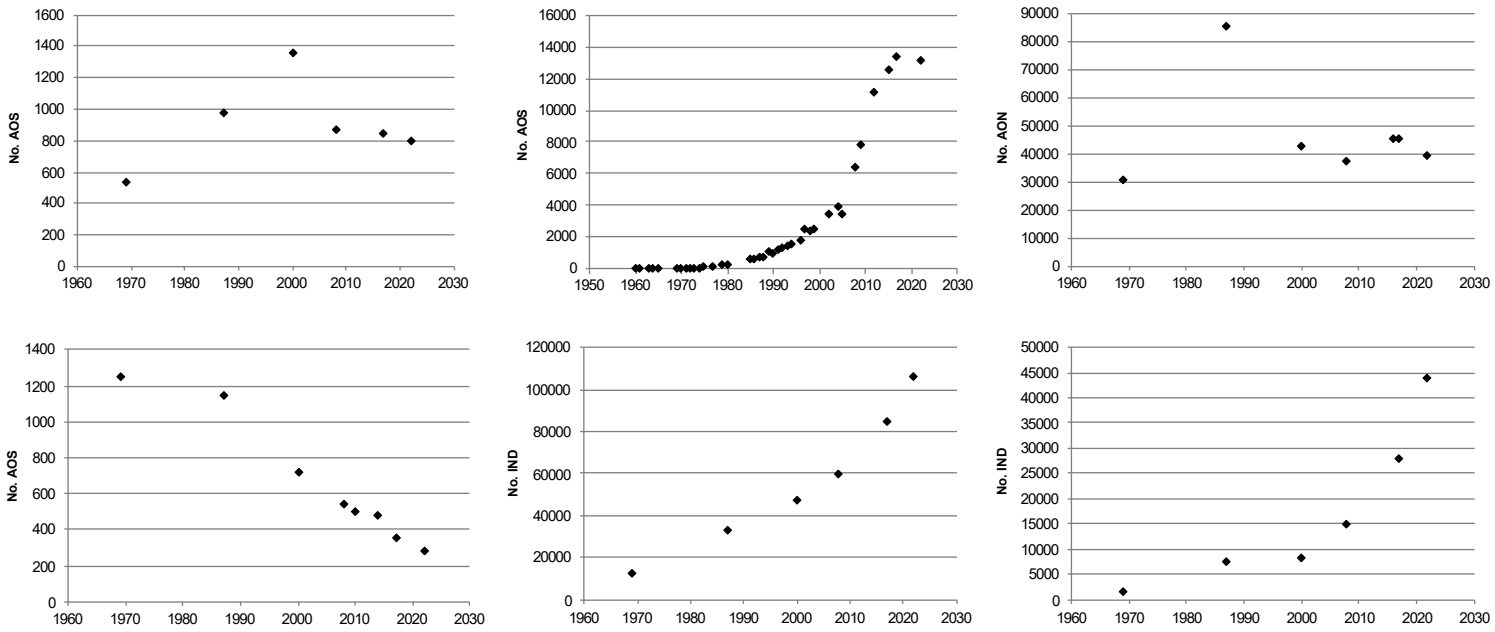


Figure 2: Trends in breeding populations for six species within the original FH&BC SPA (1969-2022). Top left: Fulmar, Top middle: Gannet, Top right: Kittiwake, Bottom left: Herring Gull, Bottom middle: Guillemot, Bottom right: Razorbill

Common Guillemot: Productivity was 0.61 (SE ± 0.0618), continuing the long-term trend of decline (Figure 1). Both displacement by Gannet and localised Carrion Crow (*Corvus corone*) predation were considered to be responsible for the low productivity on the Bempton Cliffs reserve plots, but may not reflect what is happening across the wider colony. Numbers continue to increase across the F&FC SPA, with a total of 111,925 individuals recorded (Figure 2). This suggests a breeding population of c. 74,989 pairs when applying the correction factor of 0.67. The count comprised 105,832 individuals on land in the original FH&BC SPA, with a further 6093 individuals at Filey.

Razorbill: Productivity was 0.45 (SE ± 0.0914), which indicates a sharp decline from 2021, and is the lowest productivity recorded, resulting in the long-term trend showing a slight decrease (Figure 1). Gannet displacement and some Carrion Crow predation were considered to be responsible for the low success rates on the reserve plots. However, this doesn't reflect the wider colony when compared with the SPA population increase. A total of 45,780 individuals were counted across the F&FC SPA (Figure 2), producing 30,673 pairs or 61,345 breeding individuals with the 0.67 correction factor applied. The total count comprised 44,071 individuals at Flamborough Head and Bempton Cliffs and 1709 individuals Filey.

Atlantic Puffin (*Fratercula arctica)*: An early season Puffin survey has been carried out or attempted for the last seven years, in an effort to study large scale trends and changes in numbers throughout the Flamborough and Filey Coast SPA. This cannot be considered an accurate census of the breeding population; however, it is useful to observe year-on-year large scale changes. The survey was completed on 15 March. Table 1 shows the results compared to previous successful counts.

Table 1: Results of the early season Atlantic Puffin survey 2016-2022.

	Flamborough Head to Thornwick	Thornwick to Speeton	Filey	SPA Total (not incl Filey)	SPA Total
2016	805	1462	n/a	2267	n/a
2017	712	1924	243	2636	2879
2018	493	3612	174	4105	4279
2022	581	2405	94	2986	3080

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.

Vickie Heaney – Seabird Ecologist (Isles of Scilly Wildlife Trust) and Antarctic Ornithologist Guide

I'm currently based down in Antarctica (today crossing a rough Drake Passage) working as an Ornithologist Guide onboard Scenic Discovery Yacht Eclipse 1. My job here involves guiding guests on visits to the Antarctic Peninsula and the sub-Antarctic islands of South Georgia's and the Falklands. I'm part of the 20 strong Discovery Team onboard helping guests get the most out of their visit with options for zodiac cruising/landing, kayaking, paddle-boarding and helicopter flights. In particular I help guide guests ashore at penguin colonies and give presentations about the birdlife as part of the enrichment programme.

Getting to visit these amazing places and to share them with guests is a real privilege and I love to see the joy on people's faces when they see their first albatross, whale, iceberg or penguin. By helping guests to observe the IAATO (International Association of Antarctic Tour Operators) biosecurity and safe wildlife watching guidelines we hope to create Antarctic Ambassadors and support the protection of this unique environment.

The most challenging part of the job here is the weather – not only when the wind or swell limits when we can safely take guests ashore, but also when we see the more frequent rain wetting the fluffy down of the penguin chicks and causing them to loose precious heat.

Having specialist knowledge on the region (we have onboard lecturers in Geology, History and Marine Biology as well as Ornithology) is important for this role, as well as zodiac (inflatable boat) driving skills. But the most important attribute, and the reason that most recruitment to the roles is by recommendation, is an approachable and flexible personality. You need to get on well with guests and be ready for Plan E at the drop of a hat!

I've always been into birds and islands and after a degree in zoology, I completed a PhD on Life History Strategy in Common Terns at Glasgow University. I followed this with a few research contracts, a stint as a researcher at the BBC Natural History Unit in Bristol and various eco-tourism guiding and travelling. For the last 18 years my home base has been the Isles of Scilly. From here I combine the Antarctic guide work (usually 2-3 months each winter) with regular summer work as Seabird Ecologist with the Isles of Scilly Wildlife Trust. I also moonlight guiding walks for cruise ships visiting Scilly and run a small linocut print studio.

We have a really great team at the Wildlife Trust and there's a lot of energy and enthusiasm for seabird work in Scilly working with partners in the RSPB, Natural England and the AONB. Among other things we are hoping to complete the full Scilly SPA seabird count (13 species breeding across 62 rocks and islands) in 2023 or 2024 and we are also looking to develop plans to extend the extremely successful Seabird Recovery Project beyond St Agnes and Gugh, to help the shearwaters and petrels of the other 'off-islands' of Scilly.

Advice I would give to someone working towards a similar 'portfolio' career is to make the most of every opportunity, make friends and develop lots of transferrable skills. If you can afford to volunteer on conservation projects, do – this often leads to longer term paid roles if you get on well. Make the most of free resources on the internet – there are so many free webinars that you can join and learn from. For guiding, its people and presentation skills that you will need most. No one enjoys public speaking at first, but the more you do it, the easier it becomes – really knowing your material and working hard on structure can also help to give you confidence. Good Luck!

Seabird Group Notices

Seabird paper roundup

Have you recently published a paper? Do you want to tell the world about it?
The Seabird Group wants to promote your work and we are looking to compile a list of recent seabird related papers for our future newsletter editions. Our Early Career Representative, Jacqui Glencross, is particularly interested in helping to spread awareness of new authors. Send us a message with the citation to newsletter@seabirdgroup.org.uk or ecr@seabirdgroup.org.uk.

Events

World Albatross Day

World Albatross Day marks its fourth year of celebrations this year on 19th June. The Agreement on the Conservation of Albatrosses and Petrels (ACAP) have chosen the theme 'Plastic Pollution' to draw attention to the danger plastic and other pollutants pose to seabirds. Four albatross species have also been selected to highlight the issue: **Northern Royal Albatross** *(Diomedea sanfordi)*, **Black-browed Albatross** (*Thalassarche melanophris*), **Black-footed Albatross** (*Phoebastria nigripes*) and **Laysan Albatross** (*Phoebastria immutabilis*). A range of artworks, posters and infographics will be released leading up to the date which will be available to download at the ACAP website. Keep up to date with World Albatross Day announcements, and help spread awareness of the event, by following ACAP online at their website, Facebook and Instagram.

British Ornithologist's Union Conference 2023

From the **4th – 6th April 2023** the BOU are holding their first in-person conference since 2019. The theme is 'Rapid evolutionary and plastic responses of birds to environmental change', and it is taking place in Nottingham, with a Twitter conference running in parallel. For more information visit the website https://bou.org.uk/event/bou2023-evolutionary-responses/ or search on twitter using #BOU2023.

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	Liz Humphreys (2023)	chair@seabirdgroup.org.uk
Secretary	Annette Fayet (2023)	secretary@seabirdgroup.org.uk
Treasurer	Ian Cleasby (2022)	Ian.Cleasby@rspb.org.uk
Membership Secretary	Antoine Grissot (2026)	membership@seabirdgroup.org.uk
Seabird Editor	Viola Ross-Smith (2023)	journal@seabirdgroup.org.uk
Newsletter Editor	Amy King (2026)	newsletter@seabirdgroup.org.uk
Website Officer	Jeff Stratford (2021)	jeffstratford@gmail.com

Ordinary Members:

Assistant Newsletter Editor	Kirsty Franklin (2024)	kirsty.franklin@uea.ac.uk
Seabird Assistant Editor	Ruth Dunn (2026)	journal@seabirdgroup.org.uk
ECR Representative	Jacqui Glencross (2026)	ecr@seabirdgroup.org.uk
Social Media Manager	Katrina Siddiqi-Davies (2023)	socialmedia@seabirdgroup.org.uk
EDI Officer	Lila Buckingham (2021)	edi@seabirdgroup.org.uk

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.