



NEWSLETTER 137

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Letter from the Editor

2018 promises to be an exciting year, with our biennial conference taking place in Liverpool in September 2018 (read more on p.4) and the continuation of the UK's National Seabird Census – *Seabirds Count* – which the Seabird Group is supporting through the provision of grants to members to carry out censuses of key sites. In this issue, you can find an update on recent progress with the census and how to apply for grants, as well as a report from the Shetland Census Group, which provides a fantastic example of what can be achieved with the support of Seabird Group funding and through effective organisation of enthusiastic volunteers. Connected to the census, there is also a request from Nina O'Hanlon for help with collecting data on the incorporation of plastic into seabird nests (p.3).

The Seabird Group continues to fulfil its mission of supporting exciting and valuable seabird research and conservation, through our biannual grant awards (www.seabirdgroup.org.uk/grants), the latest of which we are happy to be able to announce (p.5). There are now only a few days left to get in your applications for the next round! We are very pleased to be able to report back from three grant-funded projects – Ewan Wakefield tells us of progress with tracking Sooty Shearwaters in the Falkland Islands, Burung Laut Indonesia (Seabirds Indonesia) report on a survey of Jakarta Bay, and Stuart Murray presents the results from the aerial survey of Sula Sgeir's Guillemot colonies that he told us about in the last issue (SGN 136). This packed issue also offers an article from Machrihanish Seabird Observatory, which provides further evidence for extensive movements of Gannets overland in south-west Scotland, alongside details of upcoming conferences, news items and a paper review.

Your contributions to the newsletter are always welcome – please take the opportunity to tell others in the seabird community about a monitoring or research project, interesting or unusual observations, a relevant event or other seabird-related activities!

Seabirds Count – UK National Seabird Census

Stuart Murray (Census rep, Seabird Group) and Daisy Burnell (JNCC)

In 2015, the Seabird Monitoring Programme (SMP) Partnership started the sizeable task of censusing the breeding populations of seabirds in Britain and Ireland. Although substantial progress has been made for most of the largest colonies, there are still significant gaps and many small colonies to be covered. With over 10,000 named sites in the SMP database, there is a lot of scope for volunteers to tune into their local area or pick somewhere more adventurous to census. The site map, showing sites still needing to be surveyed is almost up and running, but at present anyone interested in surveying should first contact the national co-ordinator, Daisy Burnell, at SeabirdsCountCoordinator@jncc.gov.uk. From there, she can pass surveyor details on to the appropriate regional co-ordinators. The regions that have confirmed volunteer co-ordinators have full information on their seabird

sites and so can start the process of allocating sites to volunteer surveyors. There are still regional gaps to fill in terms of having volunteer co-ordinators, e.g. Clyde, Stewarty and Wigtown in Scotland, and Essex, Dorset and a couple of inland counties in England. The full status of coverage by volunteer co-ordinators can be checked via the [Google map](#). More information on [Seabirds Count](#) can be found on [JNCC's website](#) and, for regular updates, follow [@JNCC_UKseabirds](#) or the hashtag [#SeabirdsCount](#) on Twitter.

So, how much progress has been made with actual censusing since 2015?

To date, nearly all “very large” colonies (1000-9999 birds per species) have either been started or completed. The Scilly Isles have been completed and the Isle of Man is almost done. Shetland has managed to cover most of the cliff sites and Black Guillemot surveys but have yet to brave the Bonxies. Wales has also managed to cover most of the large colonies and those situated in SPAs and reserves, but there are still plenty of non-specialist sites to cover. This is a similar case for England, with some very impressive coverage achieved in Cornwall.

Big challenges remain, however; in Wales, that is a Manx Shearwater census, with the largest colony - possibly the world's largest, taking Skokholm and Skomer together - planned for this year. But this is a formidable undertaking in terms of surveyor time and money and the Wildlife Trust for West and South Wales are actively trying to raise the funding at present.

In Scotland, where the largest colonies of seabirds are found, the progress has been a little slower, mainly due the sheer number of sites to cover. Despite the distance and remoteness from population centres, the most spectacular seabird colonies on the mainland have been censused, notably the Caithness cliffs in the far northeast and Cape Wrath in the northwest, but most of the west coast and Western Isles are yet to be visited. Orkney, however, will need many helping hands, with its 1,200 breeding seabird sites to cover.

Like the previous census, there will be a push to cover the inland breeding sites of gulls, terns and cormorants. If you know of and/or have data on any inland breeding seabird sites, that are not currently on the database (you can check [here](#)), please contact [Daisy](#). These sites will be important to cover, especially when considering the coastal nesting populations of these species are declining.

Please remember that anyone with a plan to count for the census, Seabird Group member or not, that there are small grants available from the Seabird Group solely for census work. For more information contact Stuart Murray at murraysurvey@yahoo.co.uk.

UK National Seabird Census: Fetlar and Yell skua survey 2017

Martin Schofield, RSPB

Shetland is well known as an important breeding site for both **Arctic** and **Great Skuas** in the UK. There have been fairly regular counts since the 1970s (Sears *et al.*, 1992). However, there has been no large-scale survey of breeding skuas in Shetland since the Seabird 2000 surveys.

It was not possible to carry out a complete survey of the whole of Shetland, but with financial support from the Seabird Group a full survey of the northern islands of Yell and Fetlar was undertaken in 2017, with all areas of potential skua breeding habitat on the two islands (except for a small area on Yell where it was not possible to gain permission to survey) being visited between the 12 June and 7 July, although the majority of the survey was completed by the 23 June. The counting unit used was the ‘apparently occupied territory’ (AOT) as recommended by Furness (1982). This was the count unit that was used for the 1985-86 survey, the 1992 survey and the Seabird 2000 survey. The population of **Arctic Skuas** had increased up until the late eighties but has declined since that time. There was anecdotal evidence that this decline had continued, but it was important to try to understand the scale of this change. **Great Skua** populations have been recorded to have increased at each survey.



Arctic Skua, Mousa, Shetland. Photo: Hannah Watson

Arctic Skua

The results of the survey confirmed that Arctic Skua (or **Skootie Alan** as they are locally referred to) have seen a catastrophic decline with only 32 pairs recorded across the two islands. The decline has been similar across both islands with the number of AOT on Fetlar dropping from 95 recorded during Seabird 2000 to 13 in 2017 and on Yell the number decreasing from 118 to 19. This represents a decline of 85% from the Seabird 2000 surveys and a decline of 91% from the 372 AOTs recorded during the 1985-86 survey. Previously the populations on Fetlar and Yell held just under 20% of the total Shetland population. Further surveys are necessary to assess the rest of the Shetland population to determine if a similar decline has been seen across the other islands. It is also worth highlighting that very few clubs of non-breeding adults were observed. Sadly, it appears that the future of the Arctic Skua as a breeding species on Shetland is looking very bleak at the moment. Further assessment is required, but it may be that the productivity declines (Sears *et al.*, 1995) observed since the late 1980s are now being seen in the reduced adult population.

Great Skua

The number of Great Skua (or Bonxie as they are known locally) continues to increase with 1,281 AOT recorded across Yell and Fetlar. This represents an increase of 30% from the 2001-02 survey and a massive increase of 228% on the 561 AOTs that were recorded in 1985-86. Unlike the Arctic Skua, the population increase has not been comparable between the two islands with the number of AOT on Yell in 2017 (393) being very similar to the Seabird 2000 count (384), while the number on Fetlar has increased from 593 to 888. The density of some of the colonies on Fetlar, especially at Lamb Hoga made the survey quite difficult. These results are a far cry from the situation in 1891 when a keeper was employed to protect the birds following concern over low breeding success due to disturbance including egg collecting (Pennington *et al.* 2004).

When considering the fortunes of these two species in Shetland it is also important to consider the wider context. The worldwide population of Great Skua is in the region of 16,000 AOT and therefore the Shetland population is extremely important in global terms (c.60%), while the Arctic Skua is much more numerous with the Scottish population representing a tiny proportion (<3%) of the world population (Mitchell *et al.* 2004).

These results will feed directly into the national seabird census. I'd like to thank the Seabird Group for their financial support and the volunteers who helped with the field work (Brigid Bell, T.J. Clark and Gus Routledge).

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Monitoring nest incorporation of plastic by UK seabirds



Nina O'Hanlon, University of the Highlands and Islands

Several seabird species are known to incorporate plastic into their nests, particularly those that build substantial surface nests such as **Gannets** and **Shags**. Many of you will be familiar with images from Grassholm of entangled Gannets that highlight the risk to chicks and adults of plastic incorporated into nests. However, to date, the majority of evidence concerning nest incorporation is anecdotal, with little understanding of how this issue varies over time and space, or among species. To take advantage of nationwide visits to UK seabird colonies in 2018, as part of the '**Seabirds Count**' national breeding seabird census 2015 – 2019, we are asking people to record the proportion of seabird nests that contain plastic. In the *Seabirds Count* volunteer census pack, there will be a simple form to record this information. As an additional option, information on the amount and type of plastic incorporated in nests may also be collected and would be of great value. This is obviously secondary to the priority task of counting seabirds, but any information (or photographs) that people can record will be much appreciated. If you would like to find out more,

then please get in touch by sending an email to nina.ohanlon@uhi.ac.uk. This information will help us find out where marine plastic pollution is having the greatest impact on our seabirds, and which species are most vulnerable.

14th International Seabird Group Conference, 3-6 September, Liverpool

Registration and abstract submission are now open for the [14th International Seabird Group Conference](#) to be held in Liverpool, 3-6 September 2018. Join us, for what promises to be an exciting showcase of the latest seabird research, in the heart of the city of Liverpool, famous for its maritime history and cultural diversity.

Keynote speakers include [Kyle Elliott](#) (McGill University, Canada), [Ana Sanz-Aguillar](#) (Mediterranean Institute for Advanced Studies), and [Thierry Boulinier](#) (Le centre national de la recherche scientifique or CNRS), whose talks about seabird ecology, physiology and conservation will complement two and a half days of oral and poster presentations.

Early bird registration, at just £150, is available until April 13, after which registration will rise to £225. Please visit the [conference website in order to register](#).

We encourage you to present your work on seabird research, monitoring and conservation at the conference. Please submit an abstract for a poster or oral presentation before March 16 [via the conference website](#). Prizes will be available for the best student talks and posters.

To get in touch with the conference organising committee, please contact them directly by email: seabirdconference@liverpool.ac.uk. You can follow updates in the run-up to, and during, the conference on Twitter using the hashtag [#seabirds18](#).



Seabird Group grants

The Seabird Group is excited to announce three successful applicants from our October round of grant awards. Andrew Tongue's (University of Birmingham) project - 'Birds as bioindicators of flame retardants' - will seek to measure the effects of brominated flame retardants on gulls feeding at UK landfill sites. Rosanne Michielsen (University of Amsterdam) will use her grant to study the influence of nest architecture on seabird breeding performance in Black-bellied and Wilson's Storm-petrels breeding in the Southern Shetland Islands. Lastly, Virginia Morera Pujol (University of Barcelona) will undertake an internship at the University of St. Andrews, where she will learn statistical modelling techniques to analyse tracking data to investigate the at-sea distribution and interactions of Atlantic and Mediterranean shearwaters.

The Seabird Group is also pleased to be supporting the 4th World Seabird Twitter Conference (read more below) by donating an award for the 'Best Presentation', which is a monetary prize covering the cost of registration at our upcoming 14th International Seabird Group Conference for the talented winner.

The deadline for the next round of awards is just a few days away, on **28 February**. The grant guidelines and application form can be found on our [website](#). Applications and enquiries should be directed to the Secretary, [Holly Kirk](#).



Website: www.seabirdgroup.org.uk

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

Twitter: [@TheSeabirdGroup](https://www.twitter.com/TheSeabirdGroup)

Northern Gannets crossing overland in south Kintyre, Argyll

Eddie Maguire* and Charlie Robertson, Machrihanish Seabird Observatory

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Introduction

Northern Gannets *Morus bassanus* have been noted crossing overland to the west in south Kintyre, Argyll from Campbeltown Loch since 2007 (Maguire 2015). Surveillance during August to October 2016 revealed that a total of 286 adult Gannets crossed overland to Machrihanish Bay (Atlantic) on 53 dates of observation (Maguire *et al.*, 2017).

Methods

From 1st March to 20th October 2017, **Machrihanish Seabird Observatory** (MSBO) Assistant Warden Charlie Robertson (CR) devoted most of his time each morning watching the movements of Gannets from his home overlooking Campbeltown Loch and spent many hours in the afternoon and evening at Campbeltown harbour (Fig. 1). He logged the times of all crossings and alerted MSBO wardens by mobile phone when birds were flying west over the town allowing scores of these to be timed arriving over Machrihanish Bay. His efforts involved an average of 26 days of observation each month.

Results

During this period CR obtained remarkable evidence involving *unprecedented* numbers of adult Gannets crossing 8 km to the west over the narrowest part of the Kintyre peninsula. A total of 1,461 crossed overland on 148/207 days of prolonged observation. Most of these 1,173 birds crossed during July-September and were thought to be breeding adults on foraging expeditions to the Atlantic from the Ailsa Craig colony in the Firth of Clyde some 33 km (21 miles) south-east of Campbeltown Loch harbour.

Table 1. Passage of adult Northern Gannets flying 8 km overland on foraging trips from Campbeltown Harbour (Clyde waters) to Machrihanish Bay (Atlantic) during March – October 2017.

2017	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Monthly totals	2	23	131	126	274	408	491	6
Cumulative totals	2	25	156	282	556	964	1,455	1,461
No. days of observation	27	29	22	24	31	24	30	20

Table 1 shows a substantial increase in the numbers of Gannets that crossed over Kintyre in August (408) and September (491); presumably this indicates urgency by breeding adults from the Ailsa Craig colony to gain access to foraging grounds in the Atlantic as this period coincides with the final stages of the breeding season when increasing food demands of large chicks reach their peak (Bob Furness *pers. comm.*). The seasonal pattern in the table appears to validate this theory by establishing that the peak period for the overland crossings was not just a result of more effort during the latter stages of the breeding season (fledging period) as the number of days of observation each month averaged 26.

Most Gannet chicks fledge mid to late September (Forrester *et al.* 2007). Bernie Zonfrillo (*pers. comm.*) provided the following summation on the fledging period at the Ailsa Craig colony and also comments on the possibility that passage birds may also be involved in the south Kintyre overland crossings especially during August and September.

“The first chicks fledge on 1st August with a peak in mid-September and some young are still around on Ailsa from early November. Gannets take 90-93 days from hatching to fledging on Ailsa Craig. Young cease accepting food from the adult about 10 days before fledging, but some young will accept a meal on the day they fledge. The fledglings weigh around 3.2 kg. The rapid increase in numbers of adults crossing Kintyre during August-September may also represent birds from other colonies – perhaps from the east coast or maybe even Scar Rocks (Solway) that have been foraging in the Clyde, therefore not necessarily all Ailsa birds. Some adults could have already fledged young elsewhere and be starting their migration.”

Discussion

On overland foraging trips to the Atlantic from Campbeltown Loch, adult Gannets usually depart high over the town singly or in small groups of 2–6 with, very occasionally, flocks of up to 10 birds. The maximum number seen crossing together was a flock of 16 in September 2017. Adults also often fly low over the town, many just over rooftop height (Maguire *et al*, 2017).

Wind direction appears to have little influence on the numbers that embark on this apparently unique overland shortcut to the Atlantic. MSBO weather data for the period revealed that 1,068/1,461 birds crossed overland when the wind included west in direction (i.e. SSW to NNW). From 1st June to 30th September, the wind direction prevailed from a westerly direction on 73/109 days of surveillance. Wind strength does not discourage crossings either; another high total of 50 birds flying west on 19th August in a WNW force 6. We watched many of these birds during late evening struggling to get W from the harbour and were amazed at their resolve; always head to wind, and barely making headway, they ranged all over the sky high above the town for several minutes before eventually departing to the west.

The record one-day total of birds crossing overland was 67 flying west on 7th September 2017 in a NW force 5 with squalls. However, birds will cross overland whatever the wind direction; for example; 18 birds on 12th May 2017 in a NE force 2-3 and 40 birds on 2nd September 2017 in a SE force 4.

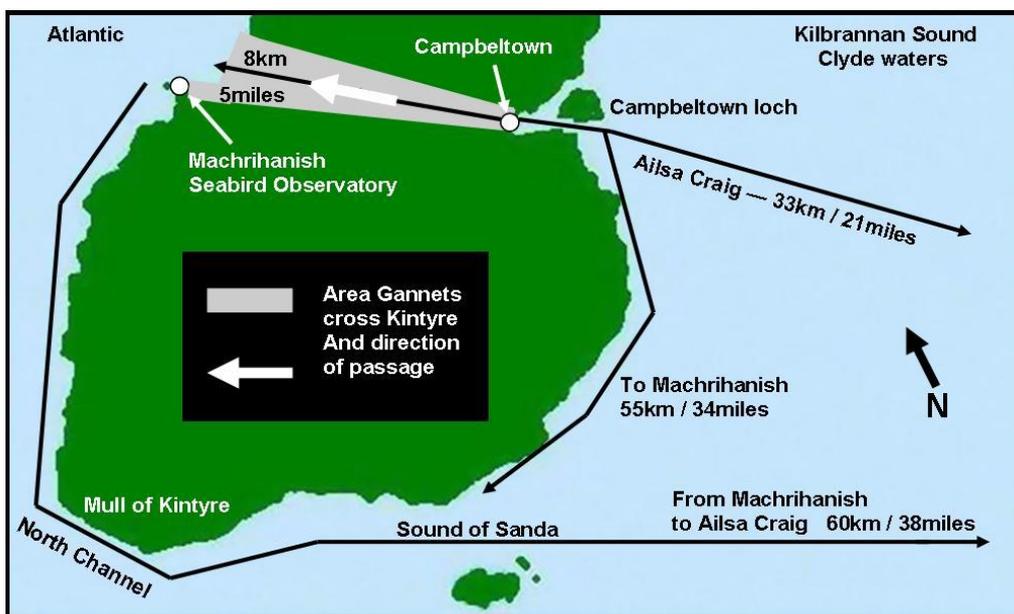


Figure 1. Map of South Kintyre, Argyll showing the westerly overland route (8 km/9 min flight) taken by adult Northern Gannets from Campbeltown Loch harbour (Clyde waters) to Machrihanish Bay (Atlantic). Direct marine routes with approximate distance from Campbeltown Loch and Machrihanish to Ailsa Craig are also shown.

At Campbeltown, no birds have been seen crossing overland to the west during the early morning period although small numbers have crossed during late morning. The main period of overland activity was consistently late afternoon and evening. The latest birds noted crossing to the west during late evening was three individuals shortly after 22:00 on 10th July. All birds crossing to the west in the evening apparently roost on the sea and after foraging successfully the following morning will be en-route for the Ailsa Craig colony sometime that day. When they return to the colony after an overnight stop on the sea many will arrive later in the day. Normally this

will sanction a mate that has been on nonflexible nest duty guarding a chick to depart on a foraging trip and, although entirely speculative, may partly explain why overland crossings to the west at Campbeltown occur mainly in the late afternoon and evening.

The following data are approximated distance and flight times of Gannets around Kintyre. Gannets do not glide over Kintyre; they employ continuous deep wingbeats to cross on level flight. When leaving Campbeltown for the west they are watched, always flapping, until out of sight, and when located over the sand dunes at Machrihanish from MSBO they are still employing continuous wingbeats. The distance covered over land is 8 km (5 miles) and as timing them crossing at MSBO was a constant 9 min from Campbeltown harbour to the sand dunes at Machrihanish, this gives a flight speed of around 56 kph (35 mph). Also, Mike Taylor (Sea-tours, Campbeltown) along with Eddie Maguire and Iomhar McMillan timed adult Gannets returning east through the Sound of Sanda for Ailsa Craig from Mike’s fast RIB. On two occasions, flight speed was logged at 33 knots; this equates to 59 kph (37 mph) and is comparable to the flight speed of Gannets crossing over Kintyre (56 kph or 35 mph).

On returning from the Atlantic to Ailsa from the north and north-west, Gannets are known to converge at the Mull of Kintyre then orientate east for Clyde waters. If adults employed an overland return from Machrihanish to Campbeltown to gain access to Clyde waters and the Ailsa colony, the distance would be around 41 km (26 miles) and flight time would be about 46 min. However, this

overland route appears to be entirely one-way. Gannets have never been recorded returning overland from Machrihanish to Campbeltown Loch. So, after foraging in the Atlantic, they obviously take a marine route back to the colony.

Breeding adults travelling south off Machrihanish en-route for Ailsa after foraging successfully in the Atlantic and sea lochs in Argyll (ap Rheinallt *et al*, 2007) are not streamlined, but visibly bloated with fish prey (distended rear ends) and are most likely at their top weight. Constrained by this additional weight they must therefore rely, essentially, on dynamic soaring (wave power) to assist them on a marine route return journey. The distance to the Ailsa colony from Machrihanish via the Mull of Kintyre is approximately 60 km (37 miles), and with a flight speed of 59 kph (37 mph) this would involve a one-hour flight.



Northern Gannet travelling south off Machrihanish Seabird Observatory on route to its breeding colony. Note distended rear end indicating bloated with prey. Photo: Eddie Maguire

Adult Gannets flying to the west over Campbeltown on a foraging expedition to the Atlantic look streamlined and are evidently at minimal weight which must obviously be a huge advantage when over land. If the overland route from Campbeltown harbour to the Atlantic was not employed by Gannets then the direct marine route to Machrihanish from there would be around 55 km (34 miles). This time-consuming marine route from the harbour to Machrihanish Bay would take around 54 min in flight time. To get there from the harbour, the birds have to travel south through Clyde waters, then west through the Sound of Sanda and finally north around the Mull of Kintyre. In contrast, the highly significant time-saving 8 km overland route to the Atlantic from Campbeltown harbour is a mere 9-min flight to the west.

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Ewan Wakefield*, T.J. Clark, Anne-Sophie Bonnet-Lebrun, Letizia Campioni, Paulo Catry

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Sooty Shearwaters are one of the world's most numerous seabirds, with an estimated global population of about 20 million individuals (Brooke 2004). Despite this abundance, the species, like so many others, has suffered marked decreases in recent decades. For example, the breeding population on the Snares Islands, in New Zealand, the species core breeding area, fell by 37% over the last three decades of the twentieth century (Scott et al. 2008). Similar declines have been observed in the California Current, the species' main wintering area (Hyrenbach and Veit 2003). The causes of these declines are unclear but invasive species, harvesting, bycatch and climate change are all suspected. On the basis of incomplete data, BirdLife currently list Sooty Shearwaters as *near threatened* (BirdLife International 2017) but others have argued that up-listing to *vulnerable* may be more appropriate (Scott et al. 2008).

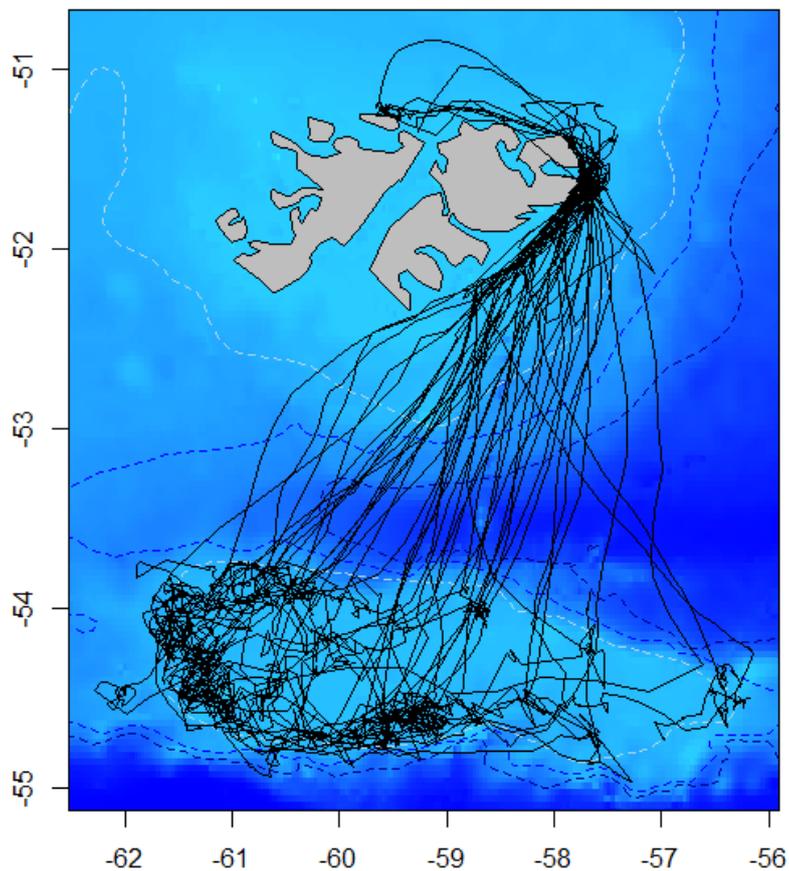
Contrary to the negative global trend, there is anecdotal evidence that Sooty Shearwaters are actually increasing in one part of their range - the Falkland Islands. The vast majority of the Falkland's Sooty Shearwater population breed on Kidney Island (0.32 km²), in the northeast of the archipelago (Fig. 1). Woods (1988) suggested (based, apparently, on observations made between 1958 and 1963 (Woods 1970)) that around 2000 pairs bred on the island but by end of the century others suggested that there were 100,000 burrows (Falklands Conservation 2006b, Otley et al. 2008). The reasons for this apparently remarkable growth are unclear but it may include a response to increased breeding habitat: In the South Atlantic, Sooty Shearwaters usually excavate breeding burrows in peat, beneath stands of tussac grass *Poa flabellata*. Tussac was once abundant in the coastal fringes of the Falklands but declined approximately 80 % following human settlement of the islands due to the introduction of grazing animals and deliberate burning. It is now largely confined to small, offshore islands (Liddle 2007). Unfortunately, many of these islands are also occupied by invasive rodents, suppressing seabird breeding activity. Kidney Island is rodent free but traditionally its tussac was harvested regularly for animal fodder. This practice ceased in the 1940s, since when tussac cover is thought to recovered, perhaps to the extent that many more Sooty Shearwater can be accommodated (Woods 1970, Falklands Conservation 2006a).

The apparent increase in Sooty Shearwater numbers in the Falklands suggests that bycatch is not a major issue in the region. However, small numbers of birds have been caught in trawl fisheries, suggesting that future changes in fishing practices could cause bycatch. Similarly, pollution caused by hydrocarbon extraction, which looks set to take off in the near future, could impact Sooty Shearwaters negatively at sea. Fortunately, these activities are closely managed in Falklands Island waters in order to mitigate negative effects on seabirds, in part through the ongoing establishment of Marine Protected Areas. These measures require accurate data on the distribution and density of seabirds at sea. The course-scale distribution of Falkland Sooty Shearwaters has been mapped using data collected from ships and geolocator tracks (White et al. 2002, Hedd et al. 2012, Hedd et al. 2014) but little is known about their fine-scale distribution.

Understanding the population dynamics and distribution of Sooty Shearwaters in the Falkland Islands would inform both local and global conservation efforts. However, prior to our project, no accurate count of Kidney Island's Sooty Shearwaters breeding population had been made. In January 2017, we visited Kidney Island to deploy geolocators on Sooty Shearwaters as part of a wider project on the movements of Shearwaters and petrels in the Atlantic. Grants from the Seabird Group and the Falkland Islands Environmental Planning Department enabled us to extend our visit, firstly, so that we could survey the island in order to make an accurate estimate the number of Sooty Shearwaters breeding there and secondly so that we could GPS-track birds during late incubation and early chick-rearing.

Fieldwork was carried out by a team of four, in two visits: From the 6th to the 12th we surveyed 2.5 m diameter plots throughout the island, recording burrow density and habitat characteristics; established occupancy monitoring plots; and deployed 25 GPS loggers. On the second visit we completed the burrow density survey; continued monitoring occupancy; recovered 21 of the GPS loggers (the remaining birds could not be recaptured); and deployed 32 geolocators.

We are currently analysing the survey data using habitat selection and occupancy models in order to produce the first accurate population estimate for Kidney Island. Preliminary results suggest that the number Sooty Shearwaters breeding there is now well in excess of 100,000 pairs. Moreover, our analysis of historical aerial photographs and recent satellite images confirm that tussac cover has increased on Kidney Island appreciably over the past 60 years and our models show that burrow density is lowest in areas where tussac has only recently recolonised. This lends some support to the hypothesised link between habitat restoration and Sooty Shearwater population size, boding well for ongoing efforts to re-establish tussac cover elsewhere in Falkland Islands.



GPS tracks (black lines) of 21 Sooty Shearwaters from Kidney Island during late incubation/early chick-rearing.

It was immediately obvious from our GPS tracking that in January, 2017 the vast majority of Sooty Shearwaters foraged south of the Falklands archipelago, on the shelf-break of the Burdwood Bank. This is an area of shallow (< 200 m) water on the south-eastern flank of the Patagonian Shelf, well known for its high biological productivity and diversity (Schejter et al. 2016). Part of the western half of the bank, which is in Argentinean Territorial waters, has been an MPA since 2013. In addition, the Falkland Islands Government is currently considering making some or all of the eastern part of the bank an MPA, which would clearly be a good step towards the protection of the island's Sooty Shearwater population. We are currently analysing our GPS data alongside the tracks of vessels licensed to fish in Falkland Island waters in order to identify if, when and where Sooty Shearwaters are at risk of bycatch.

We are very grateful for opportunity to contribute to the conservation of a remarkable a species and an incredibly valuable part of the natural world. Our work on Kidney Island was also supported by the Natural Environment Research Council (grant NE/M017990/1), the Portuguese Foundation for Science and Technology for financial support and the South Atlantic Environmental Research Institute.

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Editor: The original report can be found on our [website](#).

Grant report: Surveying the seabirds of Jakarta Bay

Editor: Below contains excerpts from a 6-page report produced by the grant recipients and published on our website. I encourage you to read the full report, which also contains many photos. You can download the report from the [grants page](#) on our website.

Fransisca Noni Tirtaningtyas, Aronika Kaban, Haffiyana Sastranegara & Nanang Khairul Hadi ([Burung Laut Indonesia](#))

Indonesia is a maritime nation composed of more than 17,000 islands and marine areas represent[ing] almost two-thirds of its total territory. Thus, over 3 million square kilometres are habitats for seabirds and other marine life. Seabirds in Indonesian waters, especially in Java Sea have been studied only a little. Cadee (1985) observed only small numbers of seabirds in the Java Sea, their numbers decreasing with distance from the coast. The absence of regular monitoring is because there is no institution which leads or coordinates such work, and there are no regular activities to identify and collect data.

Indonesia has become one of the East Asian Australasian Flyway and as a current location of wintering areas for foraging and roosting for seabirds. [Burung Laut Indonesia](#) (Seabirds Indonesia), has become one of bird conservation community in Indonesia since 2009, [that] conduct[s] research on the occurrence of seabirds in Indonesia. [T]here are 22 species of seabirds from 62 seabirds passing and/or breeding in Indonesia (35%) [that] can be found in Jakarta Bay during the study from 2011 until 2016.

Jakarta Bay covers an area of about 490 km² and is composed of waters of the strait between Java and Sumatra, as well as input from several coastal rivers. The nutrient condition in Jakarta Bay is dynamic, due to the influence of the surrounding environment, including natural factors but also the waste derived from various activities around the region, including port, residential, industrial, and recreational activities, which enters these waters. The bay is affected by runoff from 13 rivers. The depth of Jakarta Bay is <30 m, and the bottom consists of terrestrial mud, coral sand, rubble, and coralline algae.

We identified 11 seabird species with the numbers of individuals around 727, with the highest [number] of individuals from Little Black Cormorant. There were six birds protected by Indonesia Law (Peraturan Pemerintah No. 7 Tahun 1999), the status of Critically Endangered by IUCN for Christmas Frigatebird, and the status of Near Threatened by IUCN for Swinhoe's Storm Petrel.

Grant report: Sula Sgeir aerial survey, 2017

Stuart Murray (murraysurvey@yahoo.co.uk)

Sula Sgeir in the Western Isles, Scotland, is difficult and expensive to reach by sea so when the opportunity to undertake a partnership venture with Historic Scotland, who wished to record the archaeology of the rock appeared, The Seabird Group awarded me a grant to trial the less costly and quicker method of an aerial survey of breeding Guillemots. The 2017 aerial survey aimed to take high-resolution photographs from which to count breeding Guillemots, but also Gannets, Fulmars and Kittiwakes. Aerial surveys of the Gannets have been made on four occasions since 1985, but numbers of the other species here are not well documented. The species of most concern in 2017 was the Guillemot, since partial land counts made in 2012 suggested the population had severely declined since the previous count in 1986 (Murray & Wilson 2013). These two visits focused on two (of five) previously delimited count sections (Evans 1972; Figure 1) that together held 64% of the island's Guillemot population in 1986. Numbers in these sections had fallen from 16,149 to 8,902 individuals by 2012 (Murray & Wilson 2013).

Methods

A count of a major UK auk colony by aerial methods has not previously been attempted, although the method is used routinely in Iceland (Gardarsson 1995). Familiarity with the topography of a site and the distribution of species are essential, particularly for Guillemots, as habitat type can strongly influence count quality and hence results. Prior knowledge gained from earlier flights and land/sea visits to Sula Sgeir meant that I was familiar with the distribution and density of Guillemots and Razorbills. Guillemots at this colony breed among the Gannets, where they are clearly visible, and under boulders where they are difficult to count. It is usually not possible to separate Razorbills from Guillemots in aerial photographs. However, previous land- and sea-based counts of Razorbill across the island have not exceeded 1,000 birds (790 in 1986), and although some breed on the steep cliffs and within the Gannet colony, most are found in two areas of boulders well back from the coastal edge. Very few were seen during land counts in 2012. Previous survey flights confirmed that Guillemots were clearly visible among nesting Gannets, but the largest colonies are discrete from the Gannet areas and had never previously been photographed in detail.

The flight took place in the late afternoon of 30 June 2017, rather later in the month than was desirable, but had we not gone ahead that day, no count would have been obtained in 2017. Flying conditions were very good, earlier rain and low cloud having

dissipated by the time that we arrived over the island (15:53 GMT). Annoyingly, the late afternoon sun created overly bright conditions, with high glare reflected from the gannetry and deep shadows cast along the east coast. Photographic quality suffered as a result and images required manipulation of contrast and colour balance to make the birds countable. However, the high resolution of the images (up to 50 MB) meant that they could be viewed at high magnification without loss of image clarity. This made counting of individual Guillemots possible in four out of the five count sections (2, 3 and 5 were further sub-divided into a & b). Sections 2, 3, 5a, and much of Section 1, are steep rock faces with narrow ledges where Guillemots stand out clearly. Less straightforward to count were the areas of boulder rubble, found mainly in Section 5b and among the Gannets in Section 1. Section 4 was not photographed but had only a few Guillemots in earlier years (Table 2).

Results

A total of 14,475 individual Guillemots was counted in 2017 (Table 1). Assuming that in boulder areas there were as many birds out of sight as were visible, a maximum estimate of 16,000 seems reasonable. Without ground checks, this is probably the best estimate of the population that can be made since, even in the field, it is impossible to count Guillemots in among the nesting Gannets without unacceptable disturbance to both species. Although the counts are not strictly comparable, the aerial counts of sections 2 and 3 gave surprisingly similar results to the 2012 land counts. The closest counts were of 3a, which were nearly identical between the years, i.e. 2,518 in 2017 and 2,545 in 2012, similarly 3b with 1,156 in 2017 and 1,059 in 2012, an 8% increase. Counts in Section 2a were also close,

Table 1. Counts of individual Guillemots on Sula Sgeir in 2012 and 2017

Section ¹	13 June 2012	30 June 2017	% change
	Land	Aerial photos	
1	No count	2790	
2a	1418	777	45% decrease
2b	3880	3654	6% decrease
3a	2545	2518	1% decrease
3b	1059	1156	8% increase
4	No count	No count	
5a	No count	2097	
5b	No count	1483	
Total	(8,902) ³	14,475 ²	

¹ sections after Evans (1972), modified by Murray & Wilson (2012)

² an additional further 1,525 were estimated

³ only sections 2 and 3 were counted in 2012

3,654 in 2017 against 3,880 in 2012, a 6% decrease. Differences of less than 10% are probably too small to be indicative of real change between years and the only large difference was in Section 2a, with a 45% decrease from 1,418 in 2012 to 777 in 2017 (Table 1). It is not possible to make similar comparisons for Sections 1 and 5 since no counts were made of these sections in 2012 but the last counts made in 1986 were both considerably higher (Table 2). The highest recorded island count was of 25,382 individuals (24,764 counted and 618 estimated) in 1986, so the population appears to have declined substantially over the intervening period.

Table 2. Counts of individual Guillemots on Sula Sgeir, 1972 to 2017

Section	7 July 1972	16 June 1986	4 June 1998	13 June 2012	30 June 2017
	Land	Land/sea	Land/sea	Land	Aerial photos
1	1420	4290		No count	2790
2	5300	10649		5298	4431
3	1480	5500		3604	3674
4	88	25		No count	No count
5	975	4300		No count	3580
Total	9,263	24,764 ³	20,877 ²	(8,902) ¹	14,475

¹ only sections 2 & 3 counted

² no details known

³ 24,764 counted and 618 estimated, giving island total of 25,382

Sources: 2017 (this study), 2012 (Murray & Wilson, 2013), 1998 (Mitchell *et al.*, 2004), 1986 (Lloyd *et al.*, 1991) and 1972 (Evans, 1972).

Discussion

The 2017 count cannot be compared directly with previous land or sea counts but it provides a robust baseline for future aerial counts. Colony coverage was complete and shows the relative numbers and distribution of birds across the island. Although it proved impossible to make a full direct count of individuals from the photographs, the partial estimates made of small boulder areas were at least based on visible birds (Table 1). The sections with the best quality counts in 2017 - Sections 2 and 3 - held 61%

of the island total, compared with 64% in 1986. Any future counts, either from land or by air, should be focused on these sections for indications of colony change. Numbers in both sections had held up well since 2012 and losses in Section 2 were confined to Section 2a. Section 2a is a very open slope with few clear-cut ledges, and no rubble or vegetation obscuring the birds in view. Repeat counts were made from images taken at different angles and there seems little doubt about the accuracy of the result. In the other Sections with Guillemots (1 and 5), there are no reliable past counts. In both 1986 and 1998, these difficult areas were estimated from a combination of direct counts and estimates of numbers within the gannetry (the hard-to-view Section 5a; Table 1). Both areas are inherently difficult to count on the ground because good viewpoints cannot be accessed without major disturbance to breeding Gannets and auks. In contrast, both can clearly be seen from the air.

Based on the counts of Section 2 and 3, Murray & Wilson (2013) speculated that the overall island population of Guillemots in 2012 could have been as low as 12,000 birds. The latest survey suggests that this figure might have been unduly pessimistic. The 2017 results of between 14,475 and 16,000 birds, although representing a substantial decline since the high numbers of the 1980s, nevertheless indicate that *Sula Sgeir* is still an important colony in the Western Isles.

As a first attempt to count *Sula Sgeir* Guillemots from the air the survey was reasonably successful. Moreover, several valuable lessons were learned that will improve future photographic surveys. First, flying in neutral or overcast skies would reduce the reflected glare of the gannetry and show Guillemots in these areas to better advantage. Second, if a flight does have to be made under clear skies, a survey around midday would give the best results because there would be no cast shadows. This is particularly the case in the boulder areas where the overhead light reduces or removes the 'black hole' effect that hampered accurate counts here in 2017. Otherwise, all sections of the island are clearly visible with little obscured ground. The *Sula Sgeir* gannetry is counted on a decadal basis. The next survey is scheduled for 2023 and could usefully be extended to include Guillemots.

Postscript. Gannet, Fulmar and Kittiwake are in the process of being counted from the 2017 survey photographs.



Figure 1. *Sula Sgeir* from the west, showing the five sections delimited for counting purposes (after Evans, 1972). Photo: Stuart Murray

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Morales J, Lucas A, Velando A. 2018. Maternal programming of offspring antipredator behaviour in a seabird. *Behavioral Ecology* DOI: 10.1093

It is thought that mothers can prepare their young so that they are well adapted for the environment into which they are born. These effects are likely mediated via differential allocation of nutrients to the egg. A range of nutrients - including lipids, proteins, hormones, and antioxidants - are deposited in the egg by the mother in differing proportions, which can affect development and growth of the embryo and the newly-hatched chick. **Predation risk** is a key environmental factor influencing animals, but can mothers convey useful information that will prepare their offspring for living in an environment with high predation risk? In a study with **Yellow-legged Gulls**, the authors exposed mothers to either mink (a predator) or rabbit (non-predator) decoys and quantified the antipredator response of young at two days old. Chicks from the second-laid eggs of mothers exposed to mink decoys crouched faster after hearing playback with adult alarm calls, compared with chicks from second-laid eggs of mothers exposed to rabbit decoys. The results therefore suggest that maternal signals can prepare offspring for being reared in an environment with high predation risk, but interestingly, the effect was only evident in chicks from the second-laid eggs.

Upcoming events

27th International Ornithological Congress, 19-26 August 2018, Vancouver

On behalf of the **International Ornithologists' Union**, Vancouver will welcome ornithologists from around the world to the 27th International Ornithological Congress (IOC). The IOC is one of the oldest and most prestigious meetings for avian scientists and has been held every four years since 1884. The conference offers a great line-up of plenary speakers, including **Peter Ryan** (Percy FitzPatrick Institute of African Ornithology, South Africa), who has a wealth of experience studying seabirds and their conservation and **Gabrielle Nevitt** (University of California Davis, USA), much of whose research focuses on olfaction in marine birds.

The conference features a vast number of symposia, covering diverse topics including cognition, energetics, bird-parasite interactions, ageing, impact of anthropogenic noise, form and function of nests, diet changes in migratory birds and the list goes on. While seabird research could likely feature in any symposium, there are a few symposia with a specific focus on seabirds. These include 'Conservation reliant seabirds in the Pacific Basin', which will address the lag in seabird studies in Asia and highlight major conservation issues facing seabirds in the region; 'Wetland foodwebs – the importance of long-chained fatty acids for shorebirds and seabirds', which will explore the significance of essential omega-3 fatty acids generated by primary producers in the ocean for seabirds and shorebirds, and how the fragmentation and alteration of wetlands may influence primary production with knock-on effects across foodwebs; and, 'Advances in biosecurity to reverse invasive alien species impacts on islands', which will address the fundamental impact invasive alien species have on native bird populations, specifically taking examples from seabird colonies.

Alongside the conference, the City of Vancouver is hosting the **Vancouver International Bird Festival**, which will offer workshops, walks, talks, exhibitions and lectures across Vancouver, most of which will be free to attend. Read more at <http://www.vanbirdfest.com/>. In addition, the conference provides opportunities for day trips including tours to various birding destinations in the mountains, on the coast, in the city and on the sea. Further details can be found [here](#).

Abstract submission for oral and poster presentations closes on 29 March. Further information, along with links to registration and abstract submission can be found on the website <http://www.iocongress2018.com/>. You can also follow updates on Twitter [@IOCongress2018](#).

4th World Seabird Twitter Conference, 17-19 April 2018

Following the success of the first three conferences, the fourth annual **World Seabird Twitter Conference** (WSTC4) is fast approaching. The wholly virtual conference takes place over 17-19 April 2018, during which presenters will communicate their research or monitoring project in a series of four consecutive "Tweets" in a 15-minute timeslot. WSTC4 is a multilingual conference with presentations accepted in English, French and Spanish. Abstract submission has been extended until **2 March**. Further information can be found [here](#) and you can follow the conference live on Twitter via the hashtag **#WSTC4**.

IUCN red list

We start with the good news, which sees **Black-browed Albatross** *Thalassarche melanophris* downlisted from *Near Threatened* to *Least Concern*. Once listed as *Endangered*, the global population has risen to an estimated 700,000 breeding pairs. However, while some populations are increasing, others are decreasing, and likely require careful conservation intervention to avoid further declines. **Black-legged Kittiwake** *Rissa tridactyla* is the latest Atlantic seabird to be uplisted to *Vulnerable*, following steep population declines. Researchers are attempting to address the cause(s) behind the declines in breeding pairs and productivity. A lack of food is thought to be the main cause of a more than 50% drop in the global population of the **Cape Gannet** *Morus capensis* in just over 50 years and has led to it being uplisted from *Vulnerable* to *Endangered*. While hake-fishery discards may have provided some help to the struggling Gannets, there is a risk of mortality from being caught and drowned in fishing gear. Furthermore, chicks fed on hake discards grow more slowly and have a lower chance of survival than chicks reared on the traditional diet of sardines and anchovy. The **Antipodean Albatross** *Diomedea antipodensis* has been uplisted to *Endangered*. Warming oceans and a subsequent reduction in their prey is probably a major cause of their decline. Antipodean Albatrosses now have to travel further in search of food, bringing them into areas where they overlap with fishing vessels and the risk of mortality associated with fishing gear has increased. However, tracking data shows it is only the females that have changed their movement patterns, resulting in a female-biased mortality and a skewed sex-ratio in the population. Fisheries bycatch and introduced non-native predators are two major threats across the albatross family and 15 of the world's 22 albatross species remain globally threatened. However, in recent years, the Albatross Task Force and eradication programmes have made huge progress towards reversing negative trends and we hope to hear of more and more success stories to come. Further bad news for procellariiform seabirds comes with the uplisting of **Westland Petrel** *Procellaria westlandica* from *Vulnerable* to *Endangered*. Numerous threats face the Westland Petrel, which occupies a very narrow breeding range in Westland, New Zealand. Damage to up to 50% of the major colonies (containing approximately 75% of the population) occurred following a tropical storm in 2014. Further threats come from erosion and landslides, introduced species, and human disturbance at colonies, amongst others. Lastly, the **Aleutian Tern** *Onychoprion aleuticus* has been uplisted from *Least Concern* to *Vulnerable*, completely skipping the in-between category of *Near Threatened*. Breeding colonies in Alaska have undergone rapid population declines, while trends in Russia are less clear. Potential causes of declines likely include habitat modification, predation, egg harvesting and human disturbance.

You can read more about the IUCN Red List at <http://www.iucnredlist.org> and on BirdLife's website <http://www.birdlife.org/>.

Sources: BirdLife and IUCN Red List

Seabird Tracking Database

In 2017, Birdlife's Seabird Tracking Database exceeded ten million data points. One of the largest conservation collaborations in the world, the database comprises data from over 120 research institutes and more than 170 scientists. The database holds information for 113 species in more than 10 million locations, allowing the study of movements of seabirds and facilitating identification of marine areas that are crucial for seabirds. Data can be searched and viewed within the site. If you are interested in contributing to the database or using data, read more on the website at <http://www.seabirdtracking.org/>.

Population change following mammal eradication

The latest issue of *Animal Conservation*, a peer-reviewed journal published by the **Zoological Society of London**, features a paper written by **Michael de La Brooke** and colleagues on "Seabird population changes following mammal eradications on islands". Previously, success has tended to be measured by increased nesting success and adult mortality, but the recovery of seabird populations has not previously been documented. Utilising data from multiple populations and species, across the world, they identify commonalities among case-studies where population growth was faster. The paper is also accompanied by commentaries from **Tony Martin**, **David Towns** and **Joanna Burger**, who provide interesting perspective and discussion around the ethics of eliminating introduced mammals, the requirements for improved monitoring and the need for integration with other factors to fully understand seabird population changes. The full paper and commentaries are freely available for anyone to read and I encourage you to do so. The contents page, with links to each article, can be found [here](#).



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

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Registered charity No. 260907

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

CURRENT SEABIRD GROUP COMMITTEE

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

Chairman	Stephen Votier (2019)	S.C.Votier@exeter.ac.uk
Secretary	Holly Kirk (2020)	secretary@seabirdgroup.org.uk
Treasurer	Will Miles (2018)	willtsmiles@hotmail.com
Membership Secretary	Alice Trevail (2018)	membership@seabirdgroup.org.uk
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Newsletter Editor	Hannah Watson (2018)	newsletter@seabirdgroup.org.uk
Website Officer	Jeff Stratford (2020)	jeff.stratford@pms.ac.uk
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Seabird Census	Stuart Murray (2018)	murraysurvey@yahoo.co.uk
Social Media	Viola Ross-Smith (2018)	viola.ross-smith@bto.org

Current membership rates	
Standing Order	£20
Concession	£15
Institution	£35
International	£21
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.