

# Arctic Skuas – tracking the most rapidly declining seabird in the UK

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A decline of 81% since 1986 has been recorded in Shetland colonies, with similar losses reported in Orkney. Tagging will help us to understand why the numbers of Arctic Skuas are decreasing.

## INTRODUCTION

The Arctic Skua is thought to be the most rapidly declining seabird species in the UK.

The breeding populations of Arctic Skuas are restricted largely to the Shetland and Orkney Isles, with some smaller populations scattered across Caithness, Sutherland and some headlands and islands off the west coast of Scotland.

Massive declines of 81% have been reported since 1986, in terms of the number of breeding pairs at the sites checked each year at the Shetland colonies; similar losses have been reported on Orkney through periodic counts. Very little information on breeding populations is available from the other colonies. The suite of Special Protection Areas have been recently classed as 'insufficient' for Arctic Skua.

There are a number of possible explanations for the demise of Arctic Skua populations, including the continued reduction of sandeel stocks around Shetland, as first reported in the 1990s, and predation and competition from Great Skuas.

## INITIAL RESEARCH

These birds are famous for being kleptoparasites and will attack and rob other seabirds species as they return to the colonies to feed their own young. A common perception at coastal sites is that Arctic Skuas forage very little at sea for themselves, instead being more reliant on fish stolen from other seabirds.

Global Positioning System (GPS) tagging work, funded by private donors, was carried out on Fair Isle (Shetland) in 2017. GPS tags were glued to the back feathers of the skua – the tags fall off after a few weeks or during autumn moult. For the first time, we found that birds were going out to sea for long periods of time, and covering large distances of over 150 km from the nest site during the breeding season. Such switches in foraging behaviour, which result in increased foraging effort, are highly typical of seabirds facing a decline in food availability.

Rather remarkably, none of the birds regurgitated food whilst being handled for tag deployment, which could be indicative of a lack of food supply.

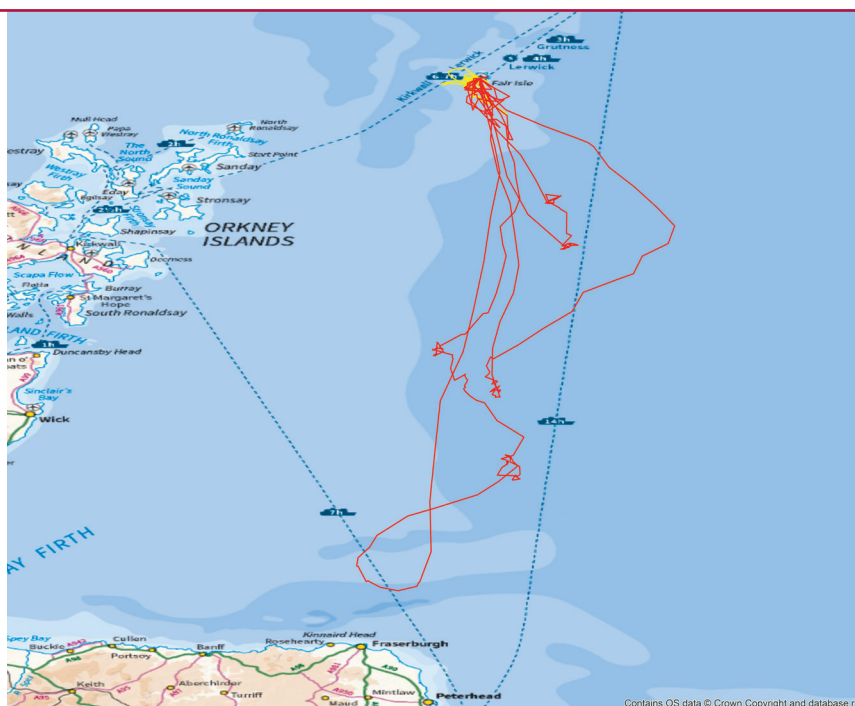


## NEST MONITORING

Detailed nest recording was carried out in 2017 for all of the Arctic Skua nests on Fair Isle. This enabled nest stage (egg, chick and failed) to be identified and then related to the foraging data gathered from the tags. Such information is vital when studying changes in foraging behaviour through the breeding season, allowing us to monitor Arctic Skua productivity at nest sites with and without tagged adults.

## FORAGING TRACKS

GPS tracks from one successful Arctic Skua nesting attempt showing incubation (yellow) and chick rearing (red) periods. A switch in foraging habits appears quite pronounced. GPS tracks were collected from six other nests in 2017, most during incubation before the nesting attempts failed. We need to deploy more GPS tags to gain a better understanding of Arctic Skua foraging patterns.



## KEY QUESTIONS

1. Is low food availability the limiting factor for Arctic Skuas in the UK?
2. Are Great Skuas impacting Arctic Skuas and, if so, how?
3. Where do Arctic Skuas go in the winter and might what happens there influence future survival?
4. Is there an interaction between Arctic Skua densities and their ability to withstand predation attempts?
5. How well are Arctic Skuas faring at poorly monitored sites?



## ACTION PLAN

- Retrieve Geolocator (GLS) tags fitted to a small number of birds to tell us where these birds are wintering. These results will be compared with those fitted by colleagues working at other breeding colonies, such as the Faroe Islands.
- Expand this tracking project to other colonies in collaboration with international researchers.
- Develop a programme of diet sampling (e.g. regurgitates or pellets collected by bird ringers) to understand more about regional variation in food availability; we can then determine whether this is linked to breeding numbers and productivity throughout the breeding range.
- Examine the diet and attendance rate data of seabird species targeted by Arctic Skuas on Fair Isle, which may provide a useful insight into what type of fish are available.
- Use cameras at nests to indicate the extent to which other seabirds predate on the nest contents of Arctic Skuas.
- Work with a network of local volunteers to monitor breeding abundance and success of Arctic Skuas across other sites in the UK.
- Develop a work programme to underpin seabird monitoring in the future, with a specific focus on skuas.
- The formation of a Species Action Plan, which will bring together experts to identify short term solutions, e.g. compensation for food declines, until long term management plans can come into force, e.g. Marine Protected Areas being in place for a number of years.

## FUNDING THIS VITAL RESEARCH

For our scientists to carry out this vital research work we will need the involvement of a few visionary people to provide the funding. The costs for the next two years will be £110,000. This will cover satellite tags, data trackers, nest cameras, a huge amount of observations, field work at different sites, analysis of results and report publication. A trip for donors is being organised to Fair Isle in June and July to see the work and to hear first hand from our researchers. Please get in touch with **david.agombar@bto.org** or telephone 01842 750050 to help or for further information.

If you already visit areas in the UK with breeding Arctic Skua and would like to help with monitoring, please email **liz.humphreys@bto.org**.

