

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

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Ascension Island is a remote overseas territory of the United Kingdom located at the centre of the Atlantic Ocean (7°56'S, 14°22'W). Ascension is a young volcanic island 88km² in size, lying 1,504km from the African coast and 2,232km from Brazil. It supports 11 species of nesting seabird in internationally important numbers, gaining recognition as an Important Bird Area (IBA) by the RSPB in 2006¹.

The number of breeding seabirds and the proportions of the nesting species have changed dramatically since the arrival of man in 1501. Various shipwrecks introduced rats and mice onto the island and in 1815 feral cats were introduced to control the rodent population. Cats were the principal cause of the elimination of all but one species of breeding seabirds from the main island with birds reduced to offshore stacks and nearby Boatswainbird Island^{2,3}. Boatswainbird became the only nesting site for the endemic Ascension Frigatebird (*Fregata aquila*) and supported hundreds of other seabirds during the reign of the cat.

In 2002-2004, the RSPB and partners conducted a feral cat eradication programme on the main island. This was successful in removing over 1,000 feral cats and allowed suitable nesting habitat to be reclaimed by seabirds previously restricted offshore⁴. In 2004, the Masked Booby (*Sula dactylatra*) began nesting on the mainland and since then their local population has increased annually.

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

The grant received from the Seabird Group allowed continuation of long-term monitoring of this species using a mark-recapture programme with plastic coloured leg rings. The Seabird Group grant bridged a funding gap, allowing the purchase of 300 coloured rings. These have been deployed on masked booby pullus in the 2023-2024 breeding season.

The colour rings purchased through this grant were used to assist with productivity monitoring of this species. Individual nests are marked and followed throughout the season to determine breeding success. Once the chicks become mobile they can creche which makes following individuals impossible without colour rings. The colour rings have also been useful for marking individuals that carried satellite tags purchased through other funding schemes. The ambition is to satellite tag the juveniles of these nests to identify feeding patterns across the Atlantic. Again, without the coloured leg rings, we would not be able to identify individuals used in this research.

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

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3. Hughes, B. J., Martin G. R. and Reynolds S. J. (2008) Cats and seabirds: effects of feral Domestic Cat *Felis silvestris catus* eradication on the population of Sooty Terns *Onychoprion fuscata* on Ascension Island, South Atlantic. *Ibis*, 150, 122-131
4. Ratcliffe, N., Bell, M., Pelembe, T., Boyle, D., Benjamin, R., White, R., Godley, B., Stevenson, J. and Sanders, S. (2010) The eradication of feral cats from Ascension Island and its subsequent recolonization by seabirds, *Oryx*. 44, 1, 20-29



The Seabird Group grant purchased colour rings for Masked Boobies on Ascension Island.