

## Bird Island – a year-round cetacean observatory.

George Day

Bird Island is located approximately 0.5km off the NW tip of South Georgia. The island has been occupied on and off since the 1950s. Field biologists from the British Antarctic Survey (BAS) have lived there year-round since 1983 and have been present only during the summer since 1979. The island supports internationally important numbers of breeding seabirds, penguins and seals, for which long-term monitoring (LTMS) has been ongoing since the 1970s.

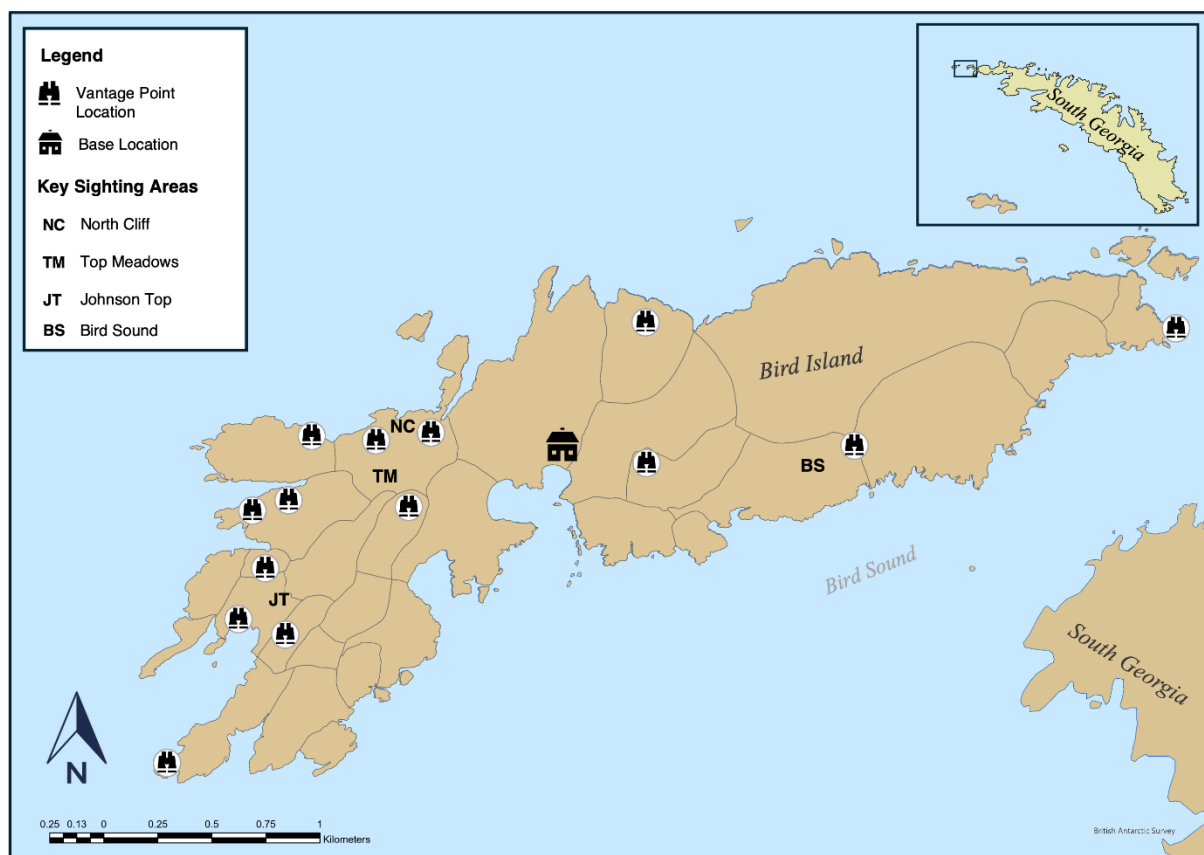


Fig 1 Map showing location of Bird Island, and most common sighting locations (binoculars) on the island.

Bird Island field biologists have been recording incidental cetacean sightings from the island since 1979, with sightings made during their routine LTMS work (Moore et al., 1999). There are limited dedicated cetacean surveys in NW South Georgia. Continuously collected over the last 50 years, the sighting data from Bird Island provide

a valuable window into cetacean diversity, abundance, and inshore habitat use in NW South Georgia (Kennedy et al., 2023).

Throughout the previous 50 years, eight species of cetaceans have been observed from Bird Island (Table 1), with southern right (*Eubalaena australis*), humpback (*Megaptera novaeangliae*), and minke whales (*Balaenoptera acutorostrata* / *bonaerensis*), the most regularly sighted (Table 1).

Table 1 Total number of observations per species from Bird Island between 1983 and present. \* Minke whale observations may be *B.acutorostrata* or *B.bonaerensis*.

Species	Total observation events
Spectacled porpoise - <i>Phocoena dioptrica</i>	1
Blue whale - <i>Balaenoptera musculus</i>	8
Sei whale - <i>Balaenoptera borealis</i>	14
Fin whale - <i>Balaenoptera physalus</i>	20
Killer whale – <i>Orcinus orca</i>	26
Minke whale * - <i>Balaenoptera acutorostrata</i> / <i>bonaerensis</i>	109
Humpback whale - <i>Megaptera novaeangliae</i>	176
Southern right whale - <i>Eubalaena australis</i>	275
Unidentified	88
Total	717

Despite the incidental nature of the sightings, annual variations in effort have remained consistent among-years, enabling for temporal population trends to be extracted. When removing outlier years (2022 – 24) which saw increased effort owing to unprecedented cessation of some monitoring work due to bird flu (Bennison et al., 2024), summed observations of the three-most abundant species showed an overall increase over time (Fig 2). However, this trend was not consistent among species, with the most significant increase being seen in humpbacks only, with southern right and minke whales exhibiting a weak increase and slight decrease respectively over time (Fig 2).

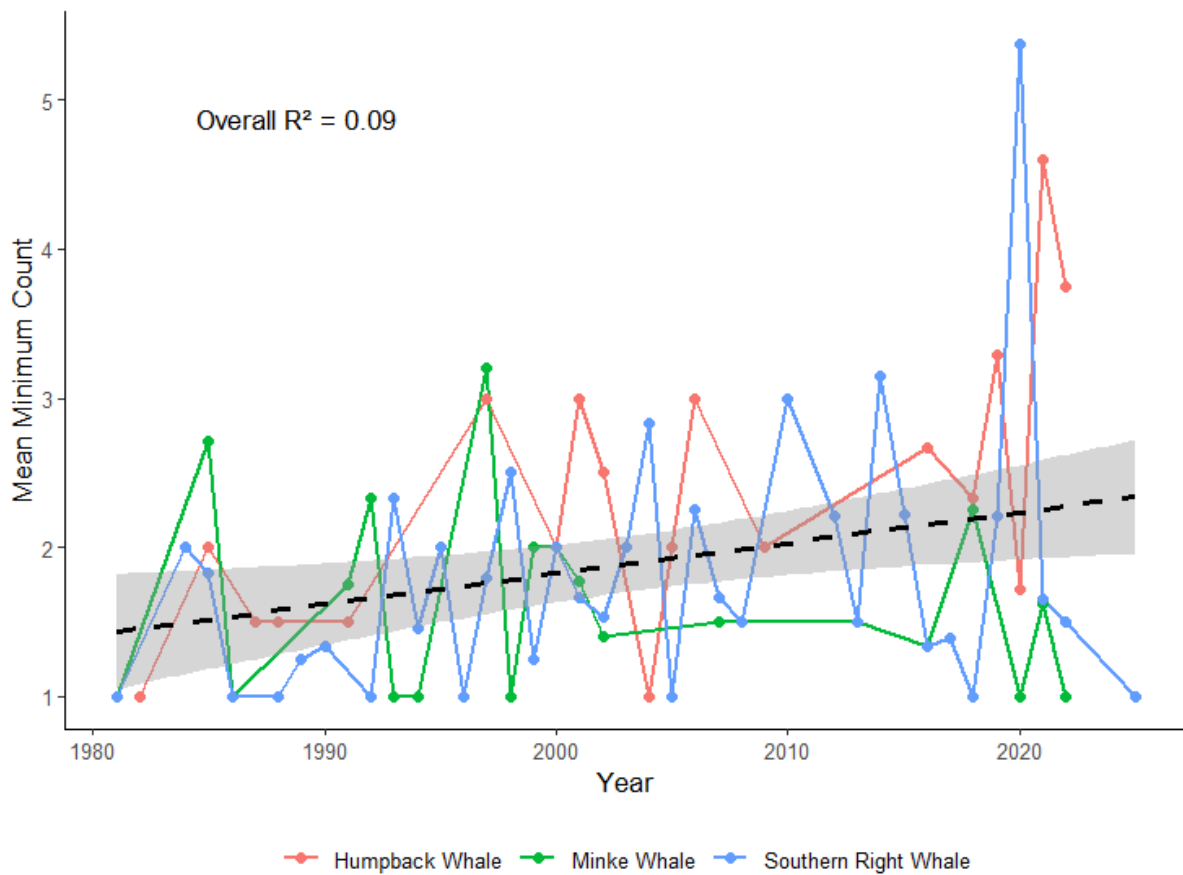


Figure 2 Annual sightings of Southern-right, Minke and Humpback whales from Bird Island 1981 – present. Dashed line represents linear regression of summed observations across the 3-species and time, grey shading are 95% confidence intervals.

The small size of Bird Island enables sightings to be made from almost any direction, effectively providing a near 360-degree observation window. Whales have been sighted in waters surrounding the entirety of the island, although most observations are in inshore waters to the North, West, and South. A current analysis is underway to utilise spatial sighting data to understand seasonal inshore site use among the most common species. Initial results indicated differing spatial patterns in observations across the 3-most common species.

## References

Bennison, A., Adlard, S., Banyard, A.C., Blockley, F., Blyth, M., Browne, E., Day, G., Dunn, M.J., Falchieri, M., Fitzcharles, E. and Forcada, J., 2024. A case study of highly pathogenic avian influenza (HPAI) H5N1 at Bird Island, South Georgia: the first documented outbreak in the subantarctic region. *Bird Study*, 71(4), pp.380-391.

Kennedy, A.S., Carroll, E.L., Zerbini, A.N., Baker, C.S., Bassoi, M., Beretta, N.A., Buss, D.L., Calderan, S., Cheeseman, T., Collins, M.A. and Costa-Urrutia, P., 2024. Photo-identification and satellite telemetry connect southern right whales from South Georgia Island (Islas Georgias del Sur) with multiple feeding and calving grounds in the southwest Atlantic. *Marine Mammal Science*, 40(2), p.e13089.

Moore, M.J., Berrow, S.D., Jensen, B.A., Carr, P., Sears, R., Rowntree, V.J., Payne, R. and Hamilton, P.K., 1999. Relative abundance of large whales around South Georgia (1979–1998) 1. *Marine Mammal Science*, 15(4), pp.1287-1302.