Antarctic Science 25(1), 69–70 (2013) © Antarctic Science Ltd 2012 doi:10.1017/S0954102012000946

Short Note
Kerguelen petrel (*Lugensa brevirostris*): a 'new' breeding species for South Georgia

ANDY BLACK[1], GRAHAM PARKER[1,2], KALINKA REXER-HUBER[1], ERICA SOMMER[3] and RICHARD J. CUTHBERT[3]

[1]*Government of South Georgia and the South Sandwich Islands, Government House, Stanley, Falkland Islands, FIQQ 1ZZ*
[2]*Falkland Islands Fisheries Department, PO Box 598, Stanley, Falkland Islands, FIQQ 1ZZ*
[3]*Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, SG19 2DL, UK*
seabirds@gov.gs

Received 27 June 2012, accepted 7 September 2012, first published online 31 October 2012

Introduction

The island of South Georgia is well known for its abundant and diverse wildlife with 29 species of bird known to breed on the island (Clarke *et al*. 2012). Burrowing petrels are the most abundant and diverse group of birds present on South Georgia with 11 species confirmed as breeding and populations numbering in the tens-of-millions. In addition, a wide range of other birds occur at South Georgia either as vagrants or as non-breeding visitors (Clarke *et al*. 2012). Among the latter group the Kerguelen petrel (*Lugensa brevirostris* Lesson, 1831) is a regular visitor.

Observations

On 15 March 2012, a team of five was deployed in Shallop Cove on the Nuñez Peninsula (Fig. 1) to undertake bait acceptance trials for house mice (*Mus musculus* L.). From 16 March, and every other evening until leaving the site on 28 March 2012, the calls of Kerguelen petrels were heard at night both from birds flying overhead and from within burrows.

Species identification was confirmed by capturing an individual, which was brought down from flight by use of a spotlight. Subsequent searches found a bird occupying a burrow during the daytime and birds calling from burrows at night. Along with photographs, morphometric measurements were taken to confirm species identification (Table I), and match measurements for the species on Crozet (Jouventin *et al*. 1985), Marion (Schramm 1983) and Gough Island (R.J. Cuthbert, unpublished data). Examining the plumage of three birds indicated that they were adults with freshly moulted body and flight feathers.

Burrows that were thought to belong to Kerguelen petrels were typically very wet around the entrance, many with

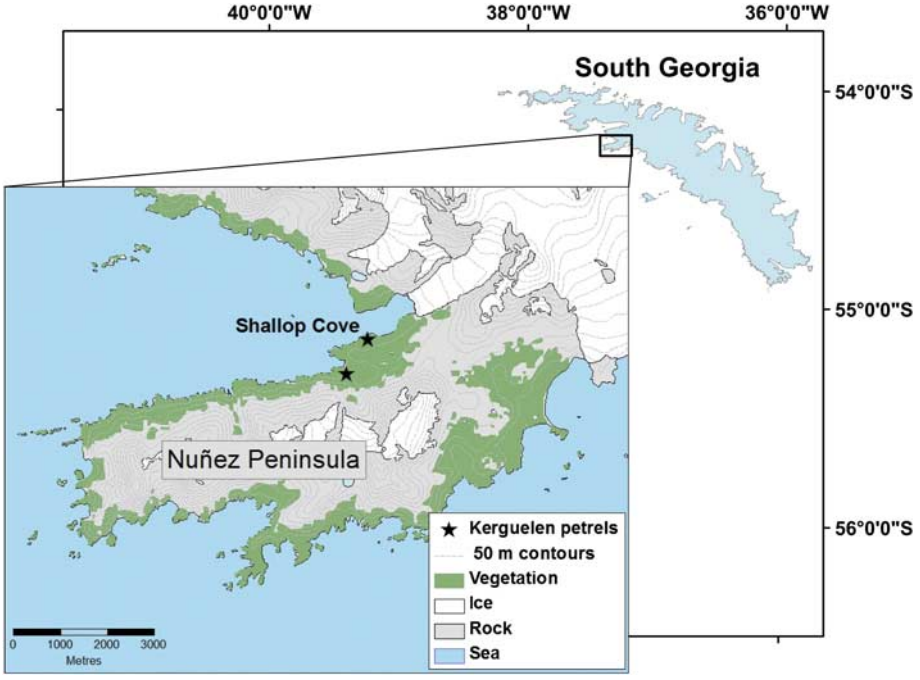

Fig. 1. Map showing the location of the study site and the position of Kerguelen petrel burrows at Shallop Cove.

Table I. Morphometric measurements (mean ± 1 standard deviation) for Kerguelen petrels from South Georgia and from three other breeding localities, sample size in parenthesis.

Location	Weight (g)	Wing length (mm)	Culmen (mm)	Tarsus (mm)	Source
South Georgia	337 ± 40 (3)	260 ± 6 (3)	27.6 ± 1.5 (3)	39.4 ± 1.4 (3)	This study
Iles Crozet	331 ± 40 (29)	259 ± 8 (33)	27.0 ± 1.4 (33)	38.5 ± 1.5 (33)	Jouventin *et al*. 1985
Marion Island	357 ± 43 (126)	257 ± 6 (121)	26.7 ± 1.5 (121)	39.5 ± 1.2 (121)	Schramm 1983
Gough Island	344 ± 34 (20)	261 ± 5 (22)	27.5 ± 1.1 (22)	39.4 ± 1.5 (22)	R.J. Cuthbert, unpub. data

substantial moats. A sample of 25 burrows was measured, mean height 161 mm (SD 30.0) and width 176 mm (SD 36.5). These burrows were usually situated in areas with a sparse cover of tussac grass (*Parodiochloa flabellatae* (Lam.) Hubb.) and greater burnet (*Acaena magellanica* (Lam.) Vahl.), on slopes *c.* 20–30 m a.s.l. Although fieldwork was carried out throughout most of the vegetated areas of Shallop Cove and Holmestrand on the Nuñez Peninsula, burrows of the type attributed to Kerguelen petrels were only found in two relatively small areas (Fig. 1).

Discussion

Although no eggs or chicks were found, the behaviour of the birds (pairs calling from burrows, calling at night overhead and on the ground and actively digging in burrows) is typical of many burrowing petrels and strongly suggests that they breed on South Georgia. At their main breeding islands, Kerguelen petrels are recorded to lay eggs in October with chicks fledging by late January to early February (Swales 1965, Schramm 1983, Jouventin *et al*. 1985, Ryan 2007) and if (as is likely) the timing of breeding on South Georgia is the same as on these islands then our observations would coincide with the post-fledging period of these birds. Kerguelen petrels appear to be unusual as they frequently return to burrows during the non-breeding period (Jouventin *et al*. 1985, Weimerskirch *et al*. 1988). Similarly on Gough Island, Kerguelen petrels were most often heard calling and seen at night from February to May (R.J. Cuthbert, unpublished data) despite birds fledging in late January (Swales 1965). Kerguelen petrels differ from *Pterodroma* species in the short duration of their chick-rearing period (*c.* two months for Kerguelen petrels on Marion Island versus three months for the smaller soft-plumaged petrel *Pterodroma mollis* Gould at the same site; Schramm 1983). This short breeding period enables adults to moult and then return to the colonies in late summer to court and prospect for burrows prior to returning to breed in the following spring.

The first record of Kerguelen petrel at South Georgia occurred in April 1973 (A. Clarke, personal communication 2012, mistakenly given as 1974 in Prince & Payne 1979), when a bird was dazzled by ship's lights in Rosita Harbour, Bay of Isles. However, the observations reported here are the first to provide evidence that these birds are likely to be breeding on the island. Future visits to the Shallop Cove area should attempt to confirm the breeding status of the birds reported here. Fieldwork was also undertaken in areas with apparently similar habitat at Cape Rosa, but no burrows matching the size or description were seen and no birds were observed. Surveys elsewhere on South Georgia that were undertaken in the late 1980s at Cape Rosa, Cooper Island and Annenkov Island found no evidence of Kerguelen petrels (S. Poncet, personal communication 2012). Their absence from other areas suggests that on South Georgia this species is confined to small and/or infrequently visited sites.

The discovery of Kerguelen petrels on the Nuñez Peninsula increases the number of species breeding on South Georgia from 29 (Clarke *et al*. 2012) to 30 species, and extends the breeding range of this species by more than 2500 km.

Acknowledgements

The observations reported here were made while conducting fieldwork on mice on the Nuñez Peninsula which was funded by the UK Government's Darwin Initiative and managed by the Royal Society for the Protection of Birds (RSPB). Further support for the project was provided by the Government of South Georgia and South Sandwich Islands and the RSPB. We would like to thank the captain and crew of the FPV *Pharos SG* for their logistical support in safely transporting us and picking us up from the field. Thanks to Sally Poncet, Peter Ryan and Andrew Clarke for useful comments on the species distribution and earlier surveys. The constructive comments of the reviewer are gratefully acknowledged.

References

Clarke, A., Croxall, J.P., Poncet, S., Martin, A.R. & Burton, R. 2012. Important bird areas: South Georgia. *British Birds*, **105**, 118–144.

Jouventin, P., Mougin, J.L., Stahl, J.C. & Weimerskirch, H. 1985. Comparative biology of the burrowing petrels of the Crozet Islands. *Notornis*, **32**, 157–220.

Prince, P.A. & Payne, M.R. 1979. Current status of birds at South Georgia. *British Antarctic Survey Bulletin*, No. 48, 103–118.

Ryan, P.G., *ed*. 2007. *Field guide to the animals and plants of Tristan da Cunha and Gough Island*. Newbury: Pisces Publications, 162 pp.

Schramm, M. 1983. The breeding biologies of the petrels *Pterodroma macroptera*, *P. brevirostris* and *P. mollis* at Marion Island. *Emu*, **83**, 75–81.

Swales, M.K. 1965. The seabirds of Gough Island. *Ibis*, **107**, 17–42.

Weimerskirch, H., Zotier, R. & Jouventin, P. 1988. The avifauna of the Kerguelen Islands. *Emu*, **89**, 15–29.