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Short Note

Blue Petrels *Halobaena caerulea* discovered breeding on Gough Island§

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The Blue Petrel *Halobaena caerulea* breeds at five subantarctic island groups and at islands off southern Chile in a narrow latitudinal band from 47° to 56° S on either side of the Antarctic Polar Front. We found a colony on Gough Island (40° S, 10° W), central South Atlantic Ocean, more than 700 km north of its known breeding range. Breeding appears to take place later than at colonies farther south. Although the colony is in a fairly frequently visited part of the island, it might have been overlooked rather than representing a recent range extension.

Keywords: Blue Petrel, Gough Island, northward expansion, subantarctic

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The Blue Petrel *Halobaena caerulea* breeds at five subantarctic island groups (South Georgia, the Prince Edward, Crozet and Kerguelen archipelagos, and Macquarie Island), and at Diego Ramírez and other islands off southern Chile (Marchant and Higgins 1990). These islands span a relatively narrow latitudinal band from 47° to 56° S, on either side of the Antarctic Polar Front (Brooke 2004). We report the discovery of a colony on Gough Island (40° S, 10° W) in the central South Atlantic Ocean, well north of their previous known breeding range.

Blue Petrel calls were heard emanating from a burrow at c. 400 m elevation at 40°20.5′ S, 9°56.5′ W on the western slopes of Low Hump, Gough Island, on the late afternoon of 15 September 2014. PGR is familiar with Blue Petrel calls from extensive field-work at the Prince Edward Islands, including a survey of the species on Marion Island using their vocalisations in 2012. The burrow was partially excavated to confirm the presence of a pair of Blue Petrels. No Blue Petrels were observed flying in the area that night and the burrow was deserted the following day. However, a further visit to the site on 21 September 2014 located birds calling from at least 20 burrows over an area of more than 1 ha, and another pair was extracted from a freshly refurbished burrow (Figure 1). Both pairs lacked eggs or brood patches, but this would be expected at this time of year as they are cleaning out burrows prior to laying (Marchant and Higgins 1990; Brooke 2004).

Searches on 8 and 30 October failed to elicit any response to playback of Blue Petrel calls, suggesting that the petrels were on their pre-laying exodus at this stage. Two occupied burrows were located on 9 November (one pair and a singleton), but neither contained an egg. Blue Petrels were more responsive to call playback on 7 December, when four burrows excavated contained birds incubating eggs and one burrow contained a single bird with no egg. All eggs were white, not stained with mud, suggesting that egg laying took place at the end of November or early December, about a month later than at colonies farther south (Marchant and Higgins 1990; Brooke 2004).

Most Blue Petrel burrows were found in short *Scirpus bicolor–Acaena sarmentosa* vegetation, but some occurred under sparse *Spartina arundinacea* tussock grassland and a few were in taller wet heath vegetation where *Scirpus sulcatus* replaced *S. bicolor* as the dominant sedge. Based on the approximate density of calling birds and the extent of seemingly suitable habitat it was crudely estimated that there were hundreds of pairs in the area. Subsequent checks in similar habitat at adjacent ridges farther south on Green Hill and other possible locations on 23 September 2014 failed to locate further calling birds, but other colonies may exist elsewhere on the island.

The area where the Blue Petrels were found is the site of the most accessible breeding colony of Southern Giant Petrels *Macronectes giganteus* on Gough Island. This colony has been the subject of an intensive breeding study since 2009, so it might seem that the failure to detect the species prior to 2014 indicates a recent colonisation event. However, despite periodic studies dating back to the 1950s (Swales 1965), the burrowing petrels of Gough Island continue to deliver surprises, including the recent discovery of two morphs of prions *Pachyptila* sp., the most abundant breeding seabird on the island (Ryan et al. 2014). Unless one is cued in to their calls, small numbers of Blue Petrels would be fairly easy to overlook. The area also supports

§ This paper is part of a special memorial issue commemorating the work of the late Phil Hockey

large numbers of Broad-billed Prions *P. vittata*, and burrow entrances of the two species are superficially similar. Prions also predominate in Subantarctic Skua *Stercorarius antarctica* prey remains in the area, and unless examined closely, wings (the most obvious prey remains left by skuas) of Blue Petrels are easily confused with those of prions.

Figure 1: A Blue Petrel on the west coast of Gough Island, 21 September 2014 (photograph PG Ryan)

Our record almost doubles the latitudinal breeding range of the species, extending its range well north of the Antarctic Polar Front; Gough lies just south of the Subtropical Front. It brings the total number of petrel species (Procellariidae) breeding on Gough to 12, and the total number of seabird species on the island to 23 (Ryan 2007; Ryan et al. 2014). Unfortunately, the newly discovered population is likely threatened by predation of petrel chicks by introduced House Mice *Mus musculus*, because similar-sized petrels breeding at the same time of year on Gough Island (e.g. prions) suffer low breeding success (Cuthbert et al. 2013).

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