

## SHORT NOTE

Records of macaroni penguins (*Eudyptes chrysolophus*) from Mirny Station, East Antarctica

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The macaroni penguin (*Eudyptes chrysolophus*) is the southernmost species of crested penguin (*Eudyptes* spp.), breeding in subantarctic regions of the Atlantic and Indian Oceans. There is also minimal breeding on the Antarctic continent, along Western Antarctic Peninsula (Naveen *et al.* 2000; Gorman *et al.* 2010). Tracking studies have revealed that birds from South Georgia (Atlantic sector) range between 43° to 66° S in winter (with most occurring within 51° to 62° S; Ratcliffe *et al.* 2014), while birds from the Kerguelen Islands (Indian Ocean sector) mostly winter between 47° and 49° S (maximum for 12 birds 57° S; Bost *et al.* 2009). Macaroni penguins are rare vagrants to South Africa, Australia and New Zealand (Warham & Keeley 1969; Harrison 1983; Cooper 1988; Marchant & Higgins 1990; Hockey *et al.* 2005; Miskelly *et al.* 2013), and occasionally range as far south as the coast of mainland Antarctica (Marchant & Higgins 1990; Woehler 1992; Bernstein & Tirrell 2008), with the southernmost record being

from Cape Hallett in the western Ross Sea (72°20' S; Marchant & Higgins 1990).

Here, I report the first 3 records of macaroni penguins from the vicinity of the Russian Mirny Antarctic research station (66°33' S, 93°01' E), Davis Sea, Queen Mary Land (Fig. 1). The nearest known macaroni penguin breeding sites to Mirny are Heard Island (1,830 km to the north-west) and the Kerguelen Islands (2,340 km to the north-west), holding ~1.0 million and 1.8 million pairs, respectively (Woehler 1993). The opportunity to make and compile these observations arose through my participation in the 57<sup>th</sup> and 60<sup>th</sup> over-wintering Russian Antarctic Expeditions (RAE) during 2012 and 2015, and includes information from the 44<sup>th</sup> RAE.

The first report of a macaroni penguin from Mirny was a single adult among 12 moulting Adelie penguins *Pygoscelis adeliae* at Mabus Point during 20-26 February 2000. The bird was caught, ringed and then released (Mizin 2000). A second macaroni penguin was ashore 2 m from the water's edge at Mabus Point on 7 February 2012, 5 days after N.M. Suhovarov (*pers. comm.*) had seen a 'red-billed' penguin swimming nearby (on 2 February 2012). The bird had a relatively massive bill, short golden

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Received 6 October 2016; accepted 22 October 2016

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feathers on its head, and a grey chin; there was no evidence of moulting (Fig. 2A). The bird had a small wound on its lower right flank, creating a 10 cm diameter blood stain; this had stopped bleeding 2 days later. The macaroni penguin was last seen on 11 February 2012, when it was standing next to 8 moulting Adelie penguins. A third macaroni penguin was ashore at Hill of the Winds, 3 km to the south-west of Mirny Station, on 17 February 2012. This bird was smaller, with a smaller (and darker) bill, and a fuller crest than the bird that was present at Mabus Point on 7–11 February 2012 (Fig. 2B). When found, it was among moulting Adelie penguins 4 m from the shore.

No macaroni penguins were seen in 2015. Based on crest length and facial coloration, both of the 2012 birds were likely to be 1-year-old. The larger bill of the first bird found suggests that it was a male, while the second bird was most likely a female. Their appearance at Mirny was preceded by a storm (which ended on 30 January 2012) which broke up a large area of fast ice west of Mabus Point, facilitating the arrival of penguins from the open sea about 5 km away. Winds and currents pushed broken ice to the west during early February, clearing much of the ice east of Mabus Point by 16 February 2012 (observations of ice conditions are contained in the annual report of the 57th RAE at Mirny Station). The bird observed in February 2000 was also found during a period when much of the sea-ice had disappeared from the vicinity of Mabus Point.

Mirny Station has been occupied continuously since 1956. The birds reported here are apparently the only macaroni penguins reported over the subsequent 59 years (previous wildlife observations summarised in Korotkevich 1958; Korotkevich 1959; Kamenev 1968; Pryor 1968; Starck 1980). All 3 birds were found among moulting Adelie penguins on coastal nunataks free of snow and ice, and were in pre-moult condition. The occurrence of these birds on the Antarctic mainland may be related to adjacent sea-ice cover, and could be a sensitive indicator of changing sea-ice conditions over time.

#### ACKNOWLEDGMENTS

I thank N.M. Suhovarov for reporting the original 2012 sighting, M.V. Gavrilov for access to the unpublished report of Y.A. Mizin (44<sup>th</sup> RAE), C.M. Miskelly for his assistance with preparing this manuscript for publication and anonymous reviewers for helpful comments on previous versions of the manuscripts.

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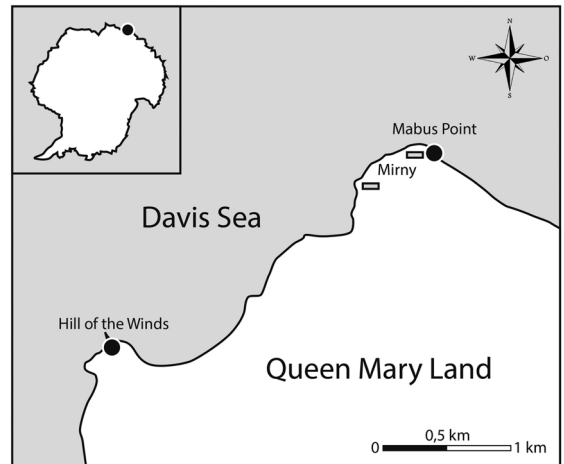
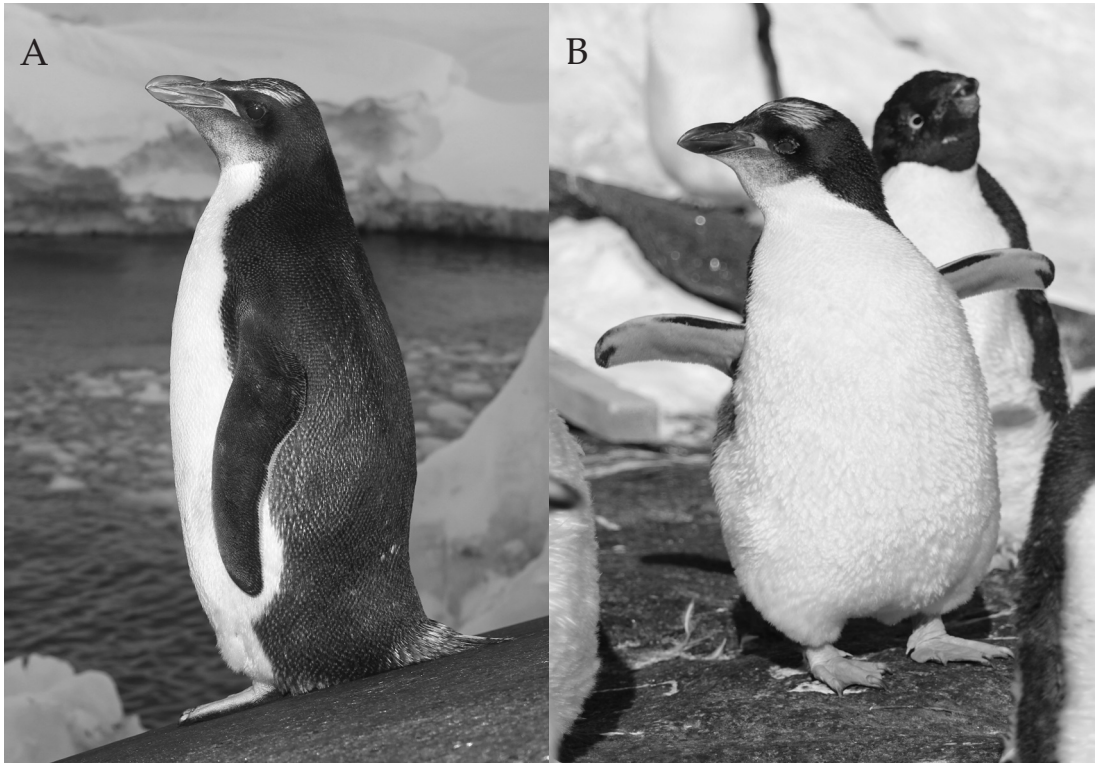


Fig. 1. Location map of Mirny Station. Black circles show sites where macaroni penguins were seen; rectangles represent buildings.

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**Fig. 2.** The 2 macaroni penguins recorded at Mirny during February 2012. A: the bird at Mabus Point; B: the bird at Hill of the Winds. Photo: Sergey Golubev.

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**Keywords** macaroni penguin; *Eudyptes chrysolophus*; Mirny Station