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SHORT NOTE

Adelie penguins (*Pygoscelis adeliae*) in New Zealand

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Before 2021, there had been only two reports of Adelie penguin (*Pygoscelis adeliae*) reaching New Zealand shores (Kennington 1963; Cossee & Mills 1993). We here report three additional records from late 2021, bringing the total number of New Zealand records of Adelie penguins to five.

An adult Adelie penguin came ashore at Birdlings Flat, Canterbury, on the evening of 11 November 2021. Harry Singh reported the event on Facebook, and notified Christchurch Penguin Rehabilitation, as he was concerned for the penguin's well-being. The bird was taken into care overnight, and released at Magnet Bay, Banks Peninsula (3 km east of the capture site) the following morning (Fig. 1) by Allanah Purdie and Anita Spencer, Department of Conservation (DOC). The bird swam out to sea, and was not reported subsequently. An Unusual Bird Report (UBR) was submitted by Anita, and accepted by the Birds New Zealand Records Appraisal Committee (RAC), as UBR 2021-065.

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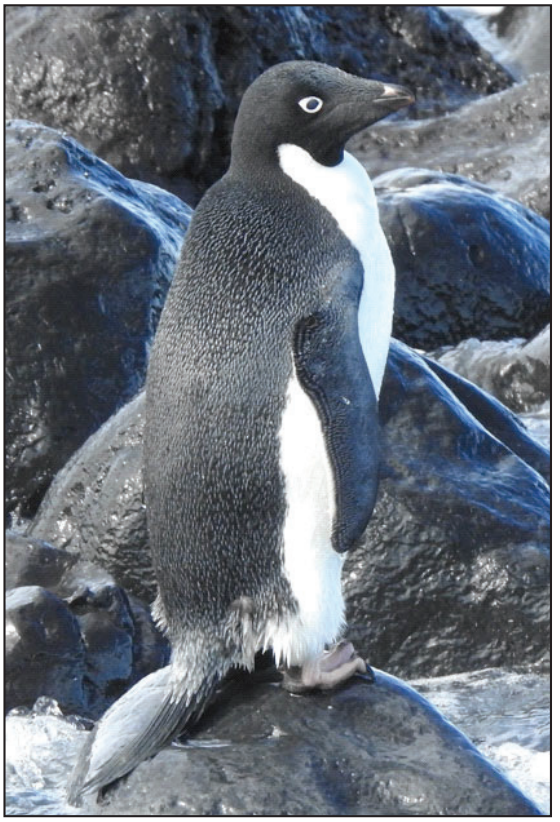

Figure 1. Adult Adelie penguin (*Pygoscelis adeliae*) after its release at Magnet Bay, Banks Peninsula, 12 November 2022. Photograph: Allanah Purdie, Department of Conservation.

Later that day (12 November 2021), an adult Adelie penguin was photographed north of the Rangitikei River mouth, Manawatu (Fig. 2). This is approximately 445 km north-east of Magnet Bay, and 470 km by the most direct swimming route. The bird was not handled, and was not reported subsequently. Michael Szabo submitted a UBR for the bird based on an image (by Kelsi Walker) posted on Facebook by Malcolm Dellow, and this record was also accepted by the RAC, as UBR 2022-001.

The third record of an Adelie penguin from New Zealand in 2021 was a headless corpse found on Masons Bay beach, Rakiura/Stewart Island, by Colin Miskelly on 31 December. The bird was estimated to have been dead for at least two weeks, and was recognised at the time as being either an Adelie penguin or a chinstrap penguin (*P. antarctica*), based on its relatively large size (larger than a crested penguin *Eudyptes* spp.), black dorsal plumage, and long tail. A flipper and the tail were retained, and are now in the Te Papa bird collection (NMNZ OR.031108). DNA extracted from these confirmed the identity of the bird as an Adelie penguin (Lara Shepherd *pers. comm.* to CMM, and see Te Papa blog 'Whose body is that? The case of the missing penguin head', published 5 May 2022). The record was accepted by the RAC, as UBR 2022-044. This was the second Adelie penguin recorded in the Ornithological Society of New Zealand's Beach Patrol Scheme (Powlesland 1984).

Adelie penguins have a mean swimming speed of 2.1 $m.s^{-1}$ (=7.6 $km.h^{-1}$; Sato *et al*. 2010). If sustained for 24 hours, this equates to a straight line distance of 181 km. Based on this swimming speed (and without allowance for tidal currents through Cook Strait), it would take at least 2.6 days for an Adelie penguin to swim directly from Magnet Bay to the Rangitikei River mouth. Therefore, the Adelie penguin photographed near the Rangitikei River mouth must have been a different individual from the Canterbury bird. Unfortunately, no genetic samples were retained from these two birds, and so it is not possible to determine whether the Stewart Island corpse was of one of the live birds seen seven weeks earlier.

The two previous records of Adelie penguins from New Zealand were a dried corpse of an adult bird found north of the Flaxbourne River mouth,

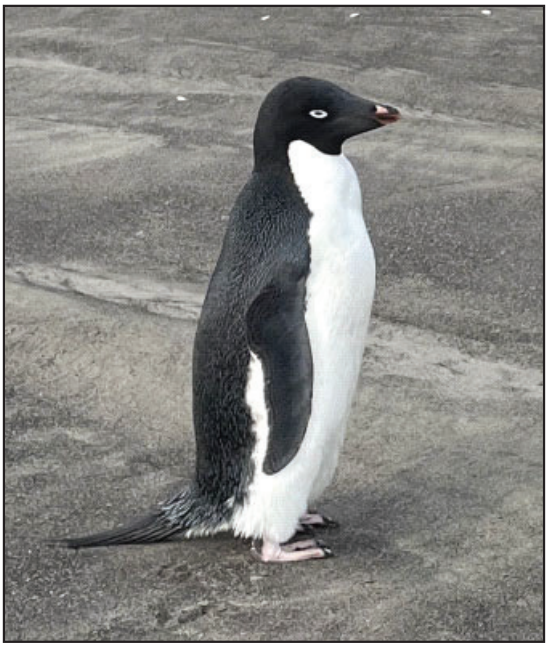

Figure 2. Adult Adelie penguin (*Pygoscelis adeliae*) at Scotts Ferry, Rangitikei River, Manawatu, 12 November 2022. Photograph: Kelsi Walker.

Marlborough, on 22 December 1962 (Kennington 1963; Powlesland 1984), and a live adult on Kaikoura Peninsula on 30 December 1992 (Cossee & Mills 1993). The only Australian record was a second-year bird from Fortescue Bay, Tasmania, in late December 1983 (Tuffy & Fazackerly 1984; Woehler 1992).

There is no obvious explanation for why two or more Adelie penguins would have reached New Zealand in late 2021. Sea surface temperatures south of New Zealand were warmer than average during October to December 2021 (NIWA data, https://niwa.co.nz/climate/sea-surface-temperature-update/, viewed 14 July 2022), and the 2021 Antarctic sea ice cover was considered 'normal' (Ocean and Sea Ice Satellite Application Facility data, https://www.eumetsat.int/state-arctic-and-antarctic-sea-ice-2021, viewed 14 July 2022). There has been no reported correlation in the occurrence of vagrant Antarctic penguins and seals in New Zealand in the past (Miskelly *et al*. 2012; Miskelly 2015), and there were no known occurrences of vagrant Antarctic seals from New Zealand in November or early December 2021 (Hannah Hendriks, DOC, *pers. comm*.). A total of four crabeater seals (*Lobodon carcinophaga*) and three Weddell seals (*Leptonychotes weddellii*) were reported from New Zealand during February 2020 to April 2022. The nearest occurrences to the Adelie penguins chronologically were a Weddell seal on Rangatira Island, Chatham Islands on 16 September 2021, and a probable crabeater seal at Titahi Bay, Wellington, on 21 December 2021 (Hannah Hendriks *ibid*.). However, we note that both of the live Adelie penguins were found by non-birders, and reported via social media. As with vagrant Antarctic seals, it is possible that higher reporting rates of Antarctic penguins in recent years has been driven more by the ease of reporting them rather than by any increase in actual rates of vagrancy (Miskelly 2015; Hannah Hendriks *ibid*.).

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We thank Peter & Kelsi Walker for permission to reproduce their photograph of the Scotts Ferry bird, Harry Singh and Malcolm Dellow for reporting the Adelie penguins that they encountered on social media, Hannah Hendriks (DOC) for information on vagrant Antarctic seals recorded in New Zealand since 2015, and Lara Shepherd, Te Papa, for genetic identification of the headless penguin from Stewart Island.

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