

## LITERATURE CITED

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## SHORT NOTE

## HOMING BEHAVIOUR IN THE YELLOW-EYED PENGUIN

On 29 September 1977 I was asked by W. J. Baguley, master of the Lyttelton to Diamond Harbour launch, to remove a Yellow-eyed Penguin (*Megadyptes antipodes*) from Diamond Harbour, Banks Peninsula (172°44'E 43°37'S). A Yellow-eyed Penguin had been seen regularly in Diamond Harbour since September 1976 (B. N. Norris, pers. comm.). Mr Baguley was concerned for the penguin's life as it had recently started to swim alongside the launch into Diamond Harbour, even during berthing, with a risk of being crushed against the wharf.

On the morning of 29 September, R. A. Savill and I found the Yellow-eyed Penguin crouched under a car parked 20 m from the wharf. The penguin was captured, taken to Birdlings Flat (172°42'E 43°49'N), about 87 km by sea from Diamond Harbour, and liberated at 1430 hours on the beach, 1 km from the base of Ellesmere Spit. It was hoped that the penguin might become integrated with other Yellow-eyed Penguins known to breed on the southern coastline of Banks Peninsula (see Harrow 1971, *Notornis* 18: 199-201). Two days later, on the morning of 1 October 1977, a Yellow-eyed Penguin was reported in Diamond Harbour (B. N. Norris, pers. comm.). This was assumed to be the same bird as there had been no report of Yellow-eyed Penguins in Diamond Harbour from 29 to 31 September.

On 8 October B. N. Norris captured the penguin in Diamond Harbour. A Wildlife Service officer then took it to Otago where it was flipper-banded (J-1480) and released on 10 October 1977 at Pilots Beach, Otago Peninsula (173°43'E 45°47'S).

On 8 October B. N. Norris found a Yellow-eyed Penguin egg about 100 m south of the Diamond Harbour wharf. It was on bare ground under scrub, just above the uppermost limit of the rocky

shoreline. The egg was brought to the Canterbury Museum. It weighed 130 g and measured 77.2 mm x 56.2 mm. It was fresh and there were no obvious signs of an embryo, which suggested that it had been laid by an unmated female, or that it had just been laid.

On 27 October, 17 days after its release on Pilots Beach, the banded penguin was seen in Diamond Harbour. There had been no reports of Yellow-eyed Penguins in the harbour over this 17-day period. The bird had travelled about 350 km back to Diamond Harbour, at an average of at least 21 km/day. This penguin was last seen in Diamond Harbour on about 10 November 1977 (W. J. Baguley, pers. comm.). Seven weeks later, on 27 December 1977, it was found dead by Sally Symes in Sandy Bay, Motunau, North Canterbury (172°04'E 43°03'S), about 70 km north of Diamond Harbour. In reporting the details to the National Museum, Sally Symes noted that the bird had a broken neck and that the skeleton was partly exposed, although the plumage and flippers were intact.

At the end of the breeding season, fledgling and juvenile Yellow-eyed Penguins disperse mostly north (Richdale, L. E. 1957. *A population study of penguins*. London: O.U.P.). A few return to the place where they were hatched but as the birds get older this tendency to disperse decreases. Richdale reported one fledgling that was picked up 282 km north of the nearest known breeding place. A pullus banded on 17 January 1978 at Owaka was recovered dead on 14 May 1978, 620 km further north on Paekakariki Beach (C. Mahoney, pers. comm.). However, these two recoveries are of birds that covered unusually long distances. Of fifteen tagged fledglings recovered, only four moved more than 160 km from their point of capture (Richdale 1957).

Therefore the distance covered, the northerly direction of movement and homing behaviour of J-1480 are generally consistent with Richdale's (1957) observations. However, based on his study and on banding data received from the Wildlife Service, there are no previous reports of Yellow-eyed Penguins covering a comparable distance in the time recorded for J-1480.

If J-1480 did lay the egg in Diamond Harbour, its homing behaviour could have been due to nest-site attachment. Because of insufficient data it is not yet possible to assess the merits of shifting this species to other localities.

I am grateful to the Wildlife Service for the banding data and to Mr R. A. Savill for help in the field.

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