

## SHORT NOTE

### Common diving petrel (*Pelecanoides urinatrix*) breeding at 1 year old

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Petrels and albatrosses (Procellariiformes) exhibit features of extreme *K*-selection, with low annual reproductive output, long lifespan, and (typically) extremely delayed sexual maturity (Warham 1990). Diving petrels are, however, exceptional in the group in their relatively quick maturation. Some diving petrels return to natal colonies when only 1 year old, and most start breeding at only 2 or 3 years old (Richdale 1965; Marchant & Higgins 1990; Warham 1990; Miskelly & Taylor 2004).

Common diving petrels (*Pelecanoides urinatrix*) have recently become re-established as a breeding species on Mana I (217 ha; 41°06'S 174°46'E) off the west coast of Wellington, southern North I, New Zealand, as a result of chick translocations, acoustic attraction, and natural re-colonisation (Miskelly & Taylor 2004; Miskelly *et al.* 2005). Diving petrels returning to, and colonising, Mana Is since 1997 have been monitored frequently (Miskelly & Taylor 2004; Taylor & Miskelly 2007). In addition to 118 chicks that fledged after being transferred from colonies elsewhere, 38 parent-reared chicks were banded at the main study colony on Mana I between 1999 and 2005. Of the 156 chicks, 31 had been recorded back at the colony by the end of 2005. Most returning chicks were first captured at 1 year old ( $n = 12$ ) or 2 years old ( $n = 14$ ).

Diving petrel eggs on Mana I hatch mainly in Oct and the chicks fledge in late Nov or early Dec. One-year-old diving petrels were recovered at the colony mainly about 13 months after they had hatched (Table 1), and after laying had finished

**Table 1** Dates of 1st recorded returns of 1-year-old common diving petrels (*Pelecanoides urinatrix*) on Mana I, Wellington, New Zealand. Most chicks hatched in Oct and fledged in late Nov to early Dec. Age, age in months.

Band no.	Fledged	Status	Recovered	Age
D-154315	1998	Transferred	3 Nov 1999	13
D-154377	1998	Transferred	3 Nov 1999	13
D-154399	1998	Transferred	3 Nov 1999	13
D-154418	1998	Transferred	17 Nov 2000	13
D-154489	1998	Transferred	17 Nov 2000	13
D-170734	1998	Transferred	2 Nov 2000	13
D-170877	1999	Natural	8 Nov 2001	13
D-170879	2000	Natural	20 Sep 2001	11
D-176718	2000	Natural	13 Nov 2002	13
D-176727	2001	Natural	26 Oct 2003	12
D-176752	2003	Natural	20 Oct 2004	12
D-176798	2004	Natural	13 Sep 2005	11

for the season. The exceptions to this were 2 birds recovered in Sep, only 11 months after hatching. One of these, a male (sex determined by call), was banded as a chick on 17 Nov 2004, and recovered in a burrow with a known breeding female, about 100 m from its natal burrow, on 13 Sep 2005. On 9 Oct and 6 Nov the female was found on an egg in the same burrow during the day, and both it and the 1-year-old male were in the nest chamber on both nights. The male was confirmed as incubating the hatching egg on the night of 6 Nov. We banded the resulting chick during the day on 2 Dec 2005, when no adults were present. Based on the average time to fledging at this colony, we estimate that this chick would have fledged about 31 Dec. This was the latest presumed breeding

attempt recorded in the study colony in 2005, as all other chicks had fledged by 2 Dec. The only later egg was a 2nd egg laid by a pair following failure of their 1st egg (Taylor & Miskelly 2007).

This is the 1st instance documented of any of the c.130 species of the Procellariiformes breeding at only 1 year old (Croxall 1981; Marchant & Higgins 1990; Warham 1990).

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