

SHORT NOTE

Common diving petrels (*Pelecanoides urinatrix*) recolonise Mana Island

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Mana Island Scientific Reserve (217 ha; 41°06' S, 174°46' E) off Wellington's west coast is the site of New Zealand's most comprehensive seabird restoration project (Miskelly 1999). Following the slaughter of scrapie-infected sheep (*Ovis aries*) in 1978, removal of cattle (*Bos taurus*) in 1986, and eradication of the only remaining pest mammal (house mice *Mus musculus*) in 1989, efforts to restore seabirds began with the installation of a solar-powered sound system on a south-western clifftop in April 1993 (Miskelly & Taylor 2004). This has broadcast calls of common diving petrel (*Pelecanoides urinatrix*), fairy prion (*Pachyptila turtur*), fluttering shearwater (*Puffinus gavia*), and white-faced storm petrel (*Pelagodroma marina*) during the hours of darkness almost continuously ever since. Over 100 concrete decoys of Australasian gannets (*Morus serrator*) were installed at another clifftop site 1 km to the north-east in December 1997; a solar-powered sound system broadcasting gannet calls was installed at this site in December 1999, and has run sporadically since.

Between November 1997 and December 1999, a total of 239 diving petrel chicks was translocated to the south-western clifftop site and hand-fed to fledging; of the 118 chicks that fledged, 20 returned to the site and 15 bred there (Miskelly & Taylor 2004). A total of 240 fairy prion chicks

was translocated to the same site and hand-fed to fledging over three breeding seasons between January (2002 - 2004); all 240 chicks fledged successfully (Miskelly & Gummer 2004) and so far one has been recovered at the translocation site. Translocation of fluttering shearwater chicks to the site is scheduled to commence in 2006. Justification for these translocations comes from the finding of bones of diving petrels in 15th Century Maori midden deposits on Mana Island, along with bones likely to be from fluttering shearwaters and fairy prions (Miskelly 1999). Three of the target petrel species have been captured near the loudspeakers: 59 unbanded diving petrels (including three captured before the first translocated chicks started to return; Miskelly & Taylor 2004), two unbanded white-faced storm petrels (2 Nov. 2000 & 20 Sep. 2001), and two unbanded fairy prions (21 Sep. & 8 Nov. 2004). All these birds were found within 150 m of the two loudspeakers, and until recently there was no evidence for any of these species coming ashore elsewhere on Mana Island.

On 8 Oct. 2004, Grant Timlin located small petrel burrows halfway down the cliff-face 1.5 km north-east of the known diving petrel colony, and extracted an unbanded diving petrel from one of the burrows on 12 October. This was about 500 m south of the Mana Island trig, at a site known locally as Lance's Gully (grid ref NZMS 26595 60125). We returned to the site on 20 Oct. 2004, both during daylight (with Erica Cammack), and again after dark (CM & RC). CM & GT also visited the site on 17 Nov. 2004 (with Erica Cammack, Scott Carver, Kelly Hare and Graeme Taylor). Thirteen active diving petrel burrows were located, all with eggs or chicks. All of the 22 adults handled were unbanded, indicating that this newly discovered colony had established independently of the study colony, where CM, Graeme Taylor and co-workers banded 57 adult diving petrels, 118 translocated fledglings, and 34 locally-reared chicks between 1997 and September 2004.

There is no evidence that diving petrels were present on Mana Island before mice were eradicated, and it is likely that mice would prevent their establishment (Cuthbert & Hilton 2004). All the cliff-faces were covered with a 25 x 25 m bait station grid during poison-baiting for mice in 1989, and most areas have since been searched systematically during weed control programmes (G. Timlin pers. obs.), and no burrows were found. However,

when at low densities, diving petrel burrows can be difficult to notice among low dense vegetation. Given the sudden influx of unbanded diving petrels at the study colony during 1999-2002 (Miskelly & Taylor 2004), we suggest that it is most likely that the northern colony established during this period or slightly before (if it was a source for birds that colonised the study colony). Sustained control of southern black-backed gulls (*Larus dominicanus*) has been undertaken on Mana Island since 1994 (Miskelly 1999), and the colonising diving petrels at both sites are likely to have benefited from this reduced predation pressure.

There have been records of attempted colonisation by diving petrels of islands where known breeding sites occur immediately adjacent, e.g. Tiritiri Matangi Island from Wooded Island (Taylor & Tennyson 1999), Little Barrier Island from Lots Wife (P. Scofield pers. comm.), and Stanley Island (Mercury Islands) from an unnamed stack north of the island (C. Miskelly pers. obs.). The nearest known colony of common diving petrels to Mana Island is on the Brothers Islands 28 km to the west.

We believe this to be the first documented colonisation or recolonisation of such an isolated site by common diving petrels in New Zealand.

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LITERATURE CITED

- Cuthbert, R.; Hilton, G. 2004. Introduced house mice *Mus musculus*: a significant predator of threatened and endemic birds on Gough Island, South Atlantic Ocean? *Biological conservation* 117: 483-489.
- Miskelly, C. 1999. *Mana Island ecological restoration plan*. Wellington, Department of Conservation.
- Miskelly, C.; Gummer, H. 2004. *Third and final transfer of fairy prion (titiwainui) chicks from Takapourewa to Mana Island, January 2004*. Wellington, Department of Conservation.
- Miskelly, C.M.; Taylor, G.A. 2004. Establishment of a colony of common diving petrels (*Pelecanoides urinatrix*) by chick transfers and acoustic attraction. *Emu* 104: 205-211.
- Taylor, G.A.; Tennyson, A.J.D. 1999. Flora and fauna of Wooded Island, inner Hauraki Gulf. *Tane* 37: 91-98.

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