

SHORT NOTE

Homing over 56 km by a North Island tomtit (*Petroica macrocephala toitoi*)

KEVIN A. PARKER
School of Biological Sciences, University of
Auckland, Private Bag 92019, Auckland.
fernbird74@yahoo.com

BARBARA HUGHES
6 Jubilee Ave, Onehunga, Auckland

ROSE THOROGOOD
44 Grange Road, Mt Eden, Auckland

RICHARD GRIFFITHS
Department of Conservation, P.O.Box 474,
Warkworth

Thirty-two North Island tomtits (*Petroica macrocephala toitoi*) (13 females, 19 males) were moved from the Hunua Ranges to Tiritiri Matangi Island on 14-15 April 2004. The birds were captured on individual territories using mist nets and banded with a single metal band and a unique combination of three colour bands. They were transported to Tiritiri Matangi Island by helicopter and released at pre-determined sites on the island within seven hours, and on the same day, of capture. Following release on Tiritiri Matangi Island, nine individual tomtits were observed between 16 April and 20 June 2004, and other sightings of tomtits for which a band combination was not obtained.

On 20 June 2004 the capture sites in the Hunua Ranges were revisited. Most of the territorial vacancies created by the captures had been filled by other tomtits. In one of the territories, a banded male tomtit was observed. Its band combination (RM-GB) identified it as a bird first captured and banded on 12 January 2004, subsequently recaptured on 14 April 2004, and moved to Tiritiri Matangi Island on that day. A second visit to the Hunua Ranges capture sites on 26 June 2004 confirmed the sighting. All

other territories in which birds had been captured and translocated were checked but no other banded birds were observed.

At initial capture RM-GB weighed 10 g and was moulting. Two chicks successfully fledged from his territory on 17 January 2004. He was consistently observed in the same territory until recapture in April 2004, when his weight was the same and moult was completed.

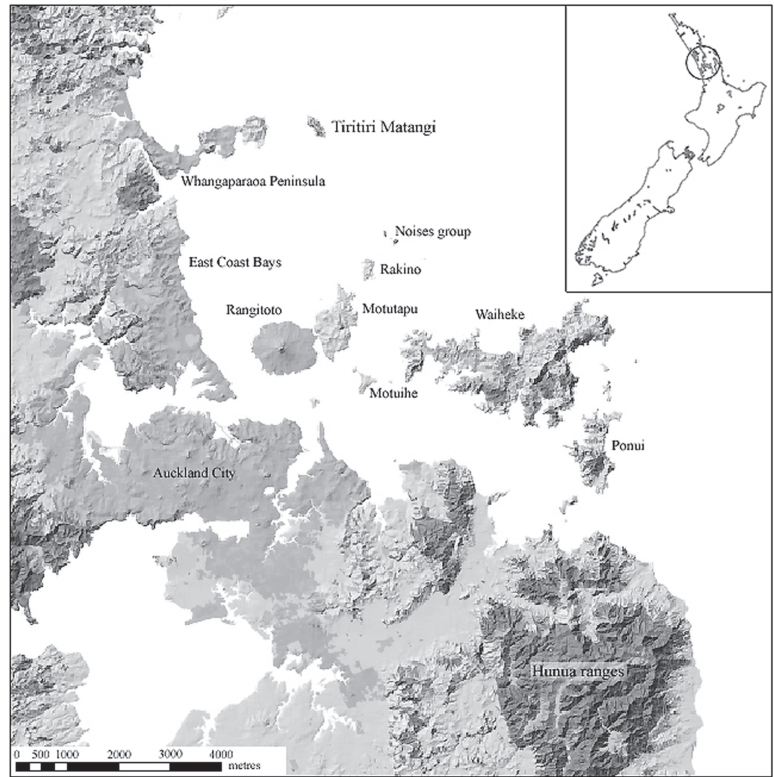
RM-GB was not seen on Tiritiri Matangi Island after release, and the route he took on the return journey is unknown. It is approximately 56 km in a straight line from the release site on Tiritiri Matangi Island to his site of capture in the Hunua Ranges (Fig. 1). A direct route would have required flying over at least 10 km of open water before reaching the Noises Islands and then shorter stretches of water between Rakino and Waiheke Islands. A less direct route in the same general direction would offer Motutapu, Rangitoto, Motuihe and Ponui Islands as resting sites but still require long flights over water. A more overland route would have required crossing 3.5 km of open water to the Whangaparaoa Peninsula and then a long southward journey through Auckland's suburbs and city centre.

The dispersal abilities of New Zealand tomtits are not well known. Anderson (2003) reported a pair of tomtits on Rangitoto Island, approximately 30 km from the nearest source population. There have also been infrequent sightings of solitary male tomtits on Tiritiri Matangi (Supporters of Tiritiri Matangi bulletin 36, summer 1998/99), and on Mokoia Island in Lake Rotorua (D.P. Armstrong pers. comm.). These sightings suggest strong powers of dispersal and an ability to cross large water gaps.

Evidence of homing has been reported in another *Petroica* species. At least five Stewart Island robins (*P. australis rakiura*) of 16 translocated from Stewart Island to Ulva Island returned to the site of capture 40-86 days after release (Oppel & Beaven 2002). These birds travelled a minimum of 20 km including water crossings of at least 800 m. Four were males who returned to their original territories.

Oppel and Beaven (2002) suggested translocating birds after the breeding season in order to reduce the likelihood of return. Despite such timing for this tomtit translocation RM-GB still returned to his territory. The propensity to home is less clear in this situation, given that only one of 32 translocated birds has been located at the point of capture. Beaven and Oppel (2002) also suggested that non-territorial juvenile birds are less likely to return to the capture

Figure 1 Location of Tiritiri Matangi, the capture site in the Hunua Ranges and various islands that may have been used as rest points by RM-GB when returning to his home territory.



site. We support this suggestion. However, we note that non-territorial birds are more difficult to capture than territorial adults, and there are likely to be benefits in translocating birds of mixed age and sex (Lovegrove and Veitch, 1994).

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