

SHORT NOTE

Survival and dispersal of mohua (*Mohoua ochrocephala*, Pachycephalidae) after transfer to Ulva Island, New Zealand.

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The mohua, or yellowhead (*Mohoua ochrocephala*), is an insectivorous forest passerine endemic to South Island and Stewart Island, New Zealand (Heather & Robertson 1996). Due to loss of habitat and introduced predators, the species disappeared from 75% of its former range over the last century (Gaze 1985; Elliott 1990; O'Donnell 1996; O'Donnell *et al.* 2001). Mohua nest and roost in tree cavities, and are therefore especially vulnerable to predation by introduced mammals such as rats (*Rattus* sp.) and mustelids (*Mustela* sp.) (O'Donnell *et al.* 2001).

Since 1999, several key mohua populations have declined after two successive rat population irruptions (O'Donnell C, pers.comm.). This decline highlights the need for island refuges to ensure the long-term survival of mohua. Mohua have been transferred successfully to three predator-free islands - Centre, Pigeon and Breaksea Islands.

In October 2001, 27 mohua were transferred from Blue Mountains, Otago, to predator-free Ulva Island (267 ha), 800 m off the coast of Stewart Island, New Zealand (46°56' S, 168°07' E). All birds were individually colour-banded and, four months following release, 24 (88%) remained alive. Breeding did not take place during this period.

Mohua spread quickly over the entire island, and did not settle in any particular area. Flocks of up to 19 birds were seen on several occasions moving across the island. Identification of individual birds revealed that mohua flew several kilometres within very short time frames. Ulva Island stretches 3.5 km from east to west, and this distance was covered by some birds within one day.

One flock was observed to travel from East End to the island's centre (1.8 km) in approx. 90 minutes. Several birds flew from the island's centre to East End and back within one day. These movements could not be explained by habitat differences on the island, or by foraging strategies.

Tamihau Island (2 ha) lies 800 m south-west of Ulva Island, and is connected to Ulva by three vegetated rock stacks each approx. 300 m apart. It is almost entirely covered with coastal scrub (*Brachyglottis rotundifolia* and *Olearia colensoi*) and occasional rata (*Metrosideros umbellata*) trees up to 15 m in height. In late December 2001, five mohua were discovered on Tamihau Island. These birds stayed, surviving the winter, and bred successfully during the 2002/2003 summer. The colonisation of Tamihau Island was unexpected because mohua have not been reported to fly across open spaces exceeding 100 m (Elliott 1990), and they are generally regarded as tall forest specialists (Read 1988; Elliott 1992). The persistence and successful reproduction of mohua on a predominantly scrub-covered island and utilizing habitat not used for foraging on adjacent Ulva Island (Oppel & Beaven unpubl. data), suggests a much wider spectrum of predator-free islands could be considered for future transfers.

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