

# Dispersal of young Tasman Masked Boobies *Sula dactylatra tasmani*

P. D. Coyne

PO Box 3296, Belconnen DC ACT 2617, Australia. Email: petaurus@gmail.com

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The Tasman Masked Booby *Sula dactylatra tasmani* has the southern-most breeding locations of the six recognised Masked Booby sub-species, which have a discontinuous range around the world mainly over tropical oceans. The Tasman Masked Booby breeds at Lord Howe, Norfolk and the Kermadec Islands in the south-west Pacific. A long-term banding study of more than 11 000 Tasman Masked Boobies at Norfolk Island, principally of birds reared on Nepean Island (approximately 10 ha), was described by Coyne *et al.* (2015). Thirty-two recaptures of birds banded as chicks on Nepean Island occurred away from the Norfolk Island Group. Taking account of birds banded on Phillip Island, five kilometres from Nepean Island (Pridell *et al.* 2010), 13 birds from these two islands were recaptured in the Kermadecs, 30 in Vanuatu and 12 in New Caledonia out of a total 63 overseas recaptures. Marchant & Higgins (1990 – cited in Department of the Environment 2017) stated that most birds from the Kermadec Islands had been recovered in Vanuatu and New Caledonia. Five young Masked Boobies banded at Lord Howe Island were recovered elsewhere: one each on Cape York and Tonga and three in New Caledonia (O'Brien and Davies 1990; Carlile 2003). Thus, birds of this subspecies from the Norfolk Island group overlap substantially spatially with birds of the subspecies from the Kermadecs and Lord Howe Island (Figure 1), although apparently not when breeding.

Three birds banded as chicks on Nepean Island on 16 November 1980 were recovered on Tanna Island, Vanuatu (1060

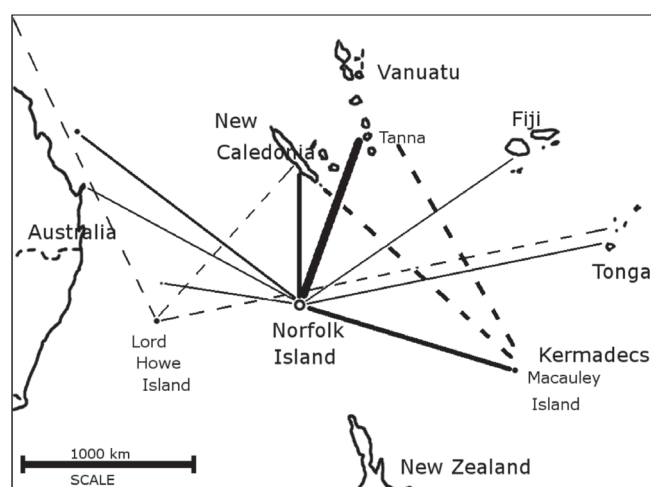
km from Nepean Island) 318 days later on 30 September 1981. Their band numbers were within a sequence of 27, suggesting close proximity when banded. Five birds were recovered on Macauley Island in the Kermadec group (1300 km from Nepean Island) on 22 December 1988, four of which had been banded as chicks on Nepean Island 429 days earlier on 30 September 1987. Bands on these four birds were from discontinuous sets, but two of them were separated by only one band number and so these two birds are likely to have been spatially close when banded. These two groups of recoveries constitute 25% of all overseas recoveries of birds from Nepean Island.

It could be postulated that the birds recovered together had reached their recovery points separately. However, that seems highly improbable given the number of birds which potentially could have dispersed to these locations, as outlined below:

The three boobies recovered on Tanna were the only ones recovered there in 1981. Nominating a conservative potential recovery population up to three years old, the key numbers are: in 1978–80 1795 chicks were banded on Nepean Island on 17 days, 819 were banded on six days during 1980, and 98 were banded on 16 November 1980. The five Nepean Island birds recovered on Macauley Island on 2 December 1988 comprised the four banded on 30 September 1987 and one banded on 6 April 1986. The key numbers in assessing the potential recovery population are: 1985–87, 794 birds were banded on Nepean Island on 13 days; 490 birds on three days in 1987 and 386 birds on 30 September 1987. These records suggest that young Masked Boobies often disperse with their cohorts rather than solitarily.

## REFERENCES

- Carlile, N. (2003). Lord Howe Island seabird research update. *Albatross* **29**: 6.
- Coyne, P., Evans, B., Evans, O. and McCoy, H. (2015). The Tasman Masked Booby *Sula dactylatra tasmani* of Nepean and Phillip Islands in the Norfolk Island Group. *Corella* **39**(3): 61–66.
- Department of the Environment (2017). *Sula dactylatra* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed: Fri, 17 Feb 2017 11:55:03 +1100.
- O'Brien, R.M. and Davies, J. (1990). A new subspecies of Masked Booby *Sula dactylatra* from Lord Howe, Norfolk and Kermadec Islands. *Marine Ornithology* **18**: 1–7.
- Pridell, D., Carlile, N., Evans, O., Evans, B. and McCoy, H. (2010). A review of the seabirds of Phillip Island in the Norfolk Island Group. *Notornis* **57**: 113–127.



**Figure 1.** Dispersal of Tasman Masked Boobies from Norfolk (continuous lines) and Lord Howe and Kermadec Islands (broken lines). Line thickness gives indication of numbers of birds recovered.