

TURBOTT, E.G. (Convenor) 1990. Checklist of the Birds of New Zealand, and the Ross Dependency, Antarctica. Random Century, Auckland.

CHRIS SMUTS-KENNEDY, *c/o Department of Conservation, Waikato Conservancy, Private Bag 3072, Hamilton, New Zealand*

TIM LOVEGROVE, *47 Pupuke Road, Birkenhead, Auckland 10, New Zealand*

Received 29 July 1995

Accepted 14 December 1995



## The calls of Murphy's Petrel (*Pterodroma ultima*)

Described in 1949 on the basis of specimens obtained in 1922 by the Whitney Expedition (Murphy 1949), Murphy's Petrel *Pterodroma ultima* is one of the less well-known gadfly petrels. The first detailed account of the breeding biology of this central south Pacific species was based on studies in the Pitcairn Islands by Brooke (1995) who did not, however, provide information on the species' calls.

The usefulness of calls as an aid to understanding petrel relationships is being increasingly recognized (Bretagnolle 1995). However, although Imber (1985) used calls as one character in his major study of *Pterodroma* phylogeny, he did not document Murphy's Petrel calls, and did not mention Holyoak & Thibault's (1984) description of calls they had heard in French Polynesia. "During display, the voice of the birds is less resonant than that of *P. neglecta* or *P. arminjoniana*. It consists of a series of fairly rapid notes: *Ouin-bi-bi-bi*, *Hou-hou-hou-hou*, *Ki-ki-ki*, this last call being fairly shrill" [My translation from the French].

This description does not match closely those calls I heard on the Pitcairn Islands during the 1991 breeding season (Brooke 1995), and therefore this note describes the calls of Murphy's Petrels heard on the breeding islands of Ducie, Henderson and Oeno.

Two calls were heard, recorded, and then analysed using a Kay DSP Sonagraph (Model 5500-1). Examples are provided in Figure 1. The first call was a soft owl-like hoot (Williams 1960; Fig. 1a) that was usually uttered on the ground, often while a pair was allopreening in the pre-breeding period. To make the sound the petrel did not open its bill, although the throat pulsed in time with the call. When the call was given in the air, the bird arched backwards and flew with characteristic shallow fluttering wingbeats. This call might be rendered *hoo-hoo-hoo-hoooooooooooo*, the final syllable lasting about 3 seconds. In my opinion, it would not be termed "fairly rapid" (see above). I have no definite observations of both members of a pair giving this call simultaneously, and therefore the call may be given by birds of only one gender.

The second call (Fig. 1b), given with an open bill, was a tri- or quadri-syllabic yelping cry, usually with the stress on the first syllable. This call was heard both from

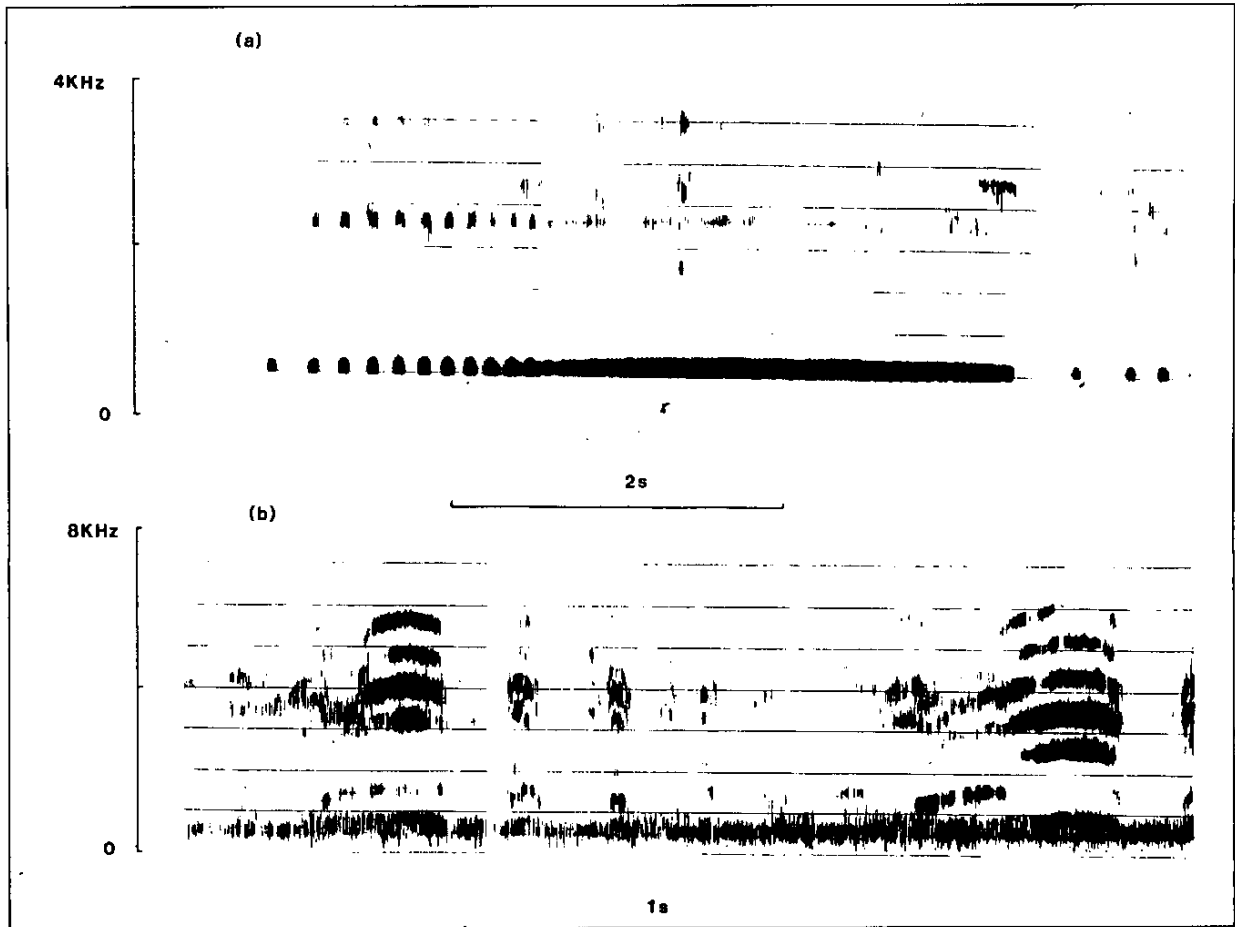


FIGURE 1- Sonograms of two commonly-heard calls of Murphy's Petrel. Call (a) is an owl-like hoot (this example recorded on Henderson Island in May/June 1991), (b) a yelping cry (this example recorded on Ducie Atoll in August 1991).

flying birds and those on the ground. In the latter case it often appeared associated with intrusions into the pair's nesting space. The call was sometimes seen to be given by both members of a pair at a nest site including, in one case, immediately after copulation. I conclude that this call is uttered by both sexes.

Since the calls from the Pitcairn Islands do not closely match those described from colonies further north-west in the species' breeding range by Holyoak & Thibault (1984), there is the possibility of intercolony differences in call. Such geographical differences have been described for other petrel species (Bretagnolle 1989, 1995). They perhaps reflect very limited dispersal between colonies, and possibly also genetic differentiation.

#### ACKNOWLEDGEMENTS

This note is Paper no. 55 of the Sir Peter Scott Commemorative Expedition to the Pitcairn Islands. I thank Jim Jolly, Les McPherson and Juliet Vickery for providing tape recordings.

### LITERATURE CITED

- BRETAGNOLLE, V. 1989. Calls of Wilson's Storm Petrel: Functions, individual and sexual recognitions and geographic variation. *Behaviour* 111: 98-112.
- BRETAGNOLLE, V. 1995. Systematics of the Soft-plumaged Petrel *Pterodroma mollis* (Procellariidae): new insight from the study of vocalizations. *Ibis* 137: 207-218.
- BROOKE, M. de L. 1995. The breeding biology of the gadfly petrels *Pterodroma* spp. of the Pitcairn Islands: characteristics, population sizes and controls. *Biol. J. Linn. Soc.* 56: 213-231.
- HOLYOAK, D.T.; THIBAUT, J.-C. 1984. Contribution à l'étude des oiseaux de Polynésie orientale. *Mém. Mus. Nat. Hist. Naturelle* 127: 1-209.
- IMBER, M.J. 1985. Origins, phylogeny and taxonomy of the gadfly petrels *Pterodroma* spp. *Ibis* 127: 197-229.
- MURPHY, R.C. 1949. A new species of petrel from the Pacific. Pp. 89-91 in Mayr, E.; Schuz, E. (eds). *Ornithologie als biologische Wissenschaft*. Carl Winter, Heidelberg.
- WILLIAMS, G.R. 1960. The birds of the Pitcairn Islands, central south Pacific Ocean. *Ibis* 102: 58-70.

M. DE L. BROOKE, *Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ, United Kingdom*

Received 31 August 1995

Accepted 20 November 1995



### **Tui (*Prosthemadera novaeseelandiae*) mimic parakeet calls at Raoul Island**

The Tui (*Prosthemadera novaeseelandiae*) is an accomplished mimic throughout its range and is a plentiful species at Raoul Island, Kermadec Group (Merton 1970). At Raoul Island the Kermadec Red-crowned Parakeet (*Cyanoramphus novaezelandiae cyanurus*) is seemingly now only a rare visitor, though it occurs on the Herald Islets, 3-4 kilometres away. Stragglers to Raoul usually fall prey to cats (Merton 1970; Taylor 1985).

During a brief visit to Raoul Island with the Royal New Zealand Navy on 21-22 March 1992, Tui were immediately evident on arrival and were calling regularly during the morning about the Hostel buildings. At the same time as the Tui were calling, a distinctive parakeet chattering call was heard regularly. In spite of extensive searching only Tui were seen.

A close-up video and recording was made of a Tui perching and calling in a bush during the late afternoon of 21 March, while on a visit to the North Beach campsite of the 1966/67 OSNZ Expedition to Raoul Island. The calls of this Tui were similar to those heard earlier in the day, starting with two separate 'clop' calls, a short melodic cascade of notes, followed by a burst of 'parakeet chattering', before closing with a single 'clop' call. This was repeated a number of times before the bird flew off. Later in the evening and again the next morning Tui round the base accommodation continued to include a 'parakeet chatter' at the latter parts of their calls. All Tui making full calls included this phrase. No Tui were seen on Meyer Islet during a short visit on 22 March, but parakeets were plentiful (six individuals seen in 30 minutes) and all calls heard resembled the short chattering sequence given by the Tui on nearby Raoul.

Ward (1969) made sound recordings of Tui during the 1966/67 OSNZ Expedition. Ward as well as Merton (1970) remarked, as had others earlier, on the relative quietness, lack of raucous calls and significant bell notes of Tui at Raoul Island when compared to those on mainland New Zealand. Other than the usual Tui calls, Merton (1970) noted one unusual individual with a call of a (Indian) Common Myna (*Acridotheres tristis*), a species which seems not to have been reported on Raoul.

Because the Raoul Island Hostel and North Beach are so close to the Herald Islets, it is possible that both Tui and parakeet are occasionally in contact. It is significant that a good number of Tui there in 1992 had a parakeet component included in their calls, when this was not apparent to observers and sound recordists in 1966/67. Having acquired the habit of 'parakeet chatter' this seems to have become a significant component of the Tui's dialect near the base accommodation. It would be interesting to know how far this has spread among other Tui elsewhere on Raoul Island.

#### ACKNOWLEDGEMENTS

My thanks to the Royal New Zealand Navy and HMNZS Monowai for transport as their guest; the Department of Conservation for permission to land at Raoul Island and Meyer Islet during this visit and Ralph Powlesland for reviewing the manuscript.

#### LITERATURE CITED

- MERTON, D.V. 1970. Kermadec Islands Expedition Reports : a general account of birdlife. *Notornis* 17 : 147-199.
- TAYLOR, R.H. 1985. Red-crowned Parakeet. p. 248 *in* Complete Book of New Zealand Birds. Readers Digest, Sydney.
- WARD, W.V. 1969. Kermadec Islands Expedition Reports : bio-acoustics on the expedition. *Notornis* 16 : 163-171.

CHRISTOPHER J.R. ROBERTSON, *P.O. Box 12397, Wellington, New Zealand*

Received 25 July 1995

Accepted 10 January 1996