# SHORT NOTES

## SEEDS FROM A TUI

On 14 September 1976 a female Tui *(Prosthemadera novaeseelandiae novaeseelandiae)* was found dead in the grounds of the Forest Research Institute, Whakarewarewa, Rotorua. It had apparently hit a window of a building close to Silviculture House.

On 15 September, I dissected the Tui to ascertain what it had been eating. The digestive tract contained eleven totara seeds *(Podocarpus totara)*, two still attached to the receptacles, which appeared little altered except for colour. From the bright red of fresh totara receptacles they had turned to a bright yellow. There were also seven other receptacles in the gut. Little difference was apparent between the receptacles in the gizzard and those in the cloaca and all the seeds appeared unaltered.

The crop and oesophagus were damaged in the dissection.

Near the place where the Tui was found there is a totara tree approximately 11 metres high which was still bearing many seeds in September 1976. Some of the seed had undeveloped green receptacles but much of it had fully developed red receptacles.

When several of the seeds on red receptacles were cut in half they were found to contain no embryo.

The same tree had carried seed late in the previous year as well and although the seed was apparently inviable, tuis nevertheless made use of the fleshy receptacles available late in the season.

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## AN UNUSUAL PETREL NEAR THE CHATHAM ISLANDS, NEW ZEALAND

### INTRODUCTION

While trolling for tuna from f.r.v. *James Cook* 80 km west of the Chatham Islands on 8 March 1975, the vessel was accompanied by a peculiar petrel for about 15 minutes. Field observations supplemented with 35 mm colour slides taken with the aid of a 300 mm telescopic lens indicate that the bird was either a light-phase Kermadec Petrel, *Pterodroma neglecta* (Schlegel, 1863), or a light-phase Herald

Petrel, *P. arminjoniana heraldica* (Salvin, 1888). Colour notes follow the system proposed by Smithe (1975) and are based on the colour slides.

Without the initial stimulus of Mr M. J. Imber this note would not have been written. I thank him and W. R. P. Bourne, D. E. Crockett, Sir Robert Falla, F. C. Kinsky and W. King for examining and commenting upon the colour slides, and also J. A. Bartle for use of his *Naturalists' Colour Guide* and constructive criticism of the text.

## OBSERVATIONS

The bird was about the same size as a Grey-faced Petrel *P. macroptera* (Smith, 1840). The bill was black. The head was generally a pale neutral grey (colour 86 of Smithe 1975) with some blackish neutral grey feathers behind and above the bill. A small patch of dark neutral grey formed a mottled eye ring. There was a dark greyish brown or blackish neutral grey chest collar separating head from pure white underparts. Undertail coverts were white mottled with brown, while the undertail was probably dark greyish brown or fuscous. The underwing was fuscous in the axillary and underwing covert regions, with an extensive subterminal white primary patch. At the base of the primaries there was a series of alternating burnt umber, white and tawny areas, giving a rather mixed colour pattern (Fig. 1). There appeared to be less white under the left wing compared with the right although this difference may have resulted from poor light conditions. The upper body behind the neck, and the upperwing were uniformly dark greyish brown to fuscous in colour.

In flight the short squarish tail was a prominent feature. The flight pattern consisted of a long, low glide followed by a sharp banking flight to 10-15 m above the sea. In wind speeds of force 6 (Beaufort Scale, 40-50 km hr) the bird was not seen to beat its wings during the observation period.

The petrel was seen between 1750 and 1805 hrs (NZST), 8 March 1975, at 43° 40′ S, 178° 00′ W. Sea-surface temperature was 16.8°C and sea-surface salinity 35.05‰. The sky was overcast, wind NW at force 6, and with rough seas.

## DISCUSSION

The " relatively short and squarish tail . . . and an underwing pattern which includes a highly conspicuous, elongate subterminal patch formed by the white . . . inner webs of the primary quills " (Murphy & Pennoyer 1952: 26) distinguish the Kermadec Petrel from all allied species except light-phase Herald Petrels. The Kermadec Petrel *(Pterodroma neglecta)* has a widespread breeding distribution throughout the subtropical Pacific (OSNZ 1970). It is rarely reported at sea in the New Zealand region away from the northern breeding

FIGURE 1 — View of underbody of the ? Kermadec Petrel observed near Chatham Islands. *Note:* the extensive subterminal underwing patches, distinct collar separating breast from belly and dark undertail coverts.

Photo: P. E. Roberts

grounds (Jenkins 1967, 1970 and pers. comm.) and even more rarely elsewhere (e.g. Nakamura & Tanaka 1976). Only 2 specimens have been recorded as beach-wrecked (Oliver 1955) since regular beach patrolling began in New Zealand.

Other ornithologists to whom the series of 35 mm colour slides have been shown have suggested that the petrel did not look like Kermadec Petrels seen by them. The specimen photographed was

" very dark and brown for *neglecta,* with a darker head and upper breast, and trace of a paler chin " (W. R. P. Bourne, pers. comm.). Also the primary patches in the underwing look too extensive to other observers who have seen the bird at the breeding colonies. · Kermadec Petrels usually have a single small patch, although one study skin at the National Museum, Wellington, does have patches similar to those shown in the colour slides. The Kermadec Petrel is extremely variable in colour with dark-and-light-phase birds " linked by a series of intermediates representing nearly every possible blend " (Murphy & Pennoyer 1952: 25).

The closely related Herald Petrel *(Pterodroma arminjoniana heraldica* Salvin, 1888) can only be distinguished from *P. neglecta* " in having dark shafts on the wing quills " (Murphy & Pennoyer 1952: 38). This latter species also has a wide breeding distribution across the South Pacific Ocean between 8°S and 27°S latitudes and has never been reported at sea in the New Zealand region. The closest known breeding ground to New Zealand is in the Tongan Islands (Murphy & Pennoyer 1952). The field notes and colour slides taken do not allow positive identification.

An alternative suggestion, made by M. J. Imber (Wildlife Service, Department of Internal Affairs, Wellington), that the bird was a Chatham Island Taiko (*P. magentae* (Giglioli & Salvadori, 1868 *fide* OSNZ 1970) was also considered. Despite several trips to the Chatham Islands to search for Taiko over the last few years, no definite sightings have been made. Single " head-less " (i.e. dark-headed and white-bellied) birds were observed by spot-lighting in 1974 on two occasions (D. E. Crockett, pers. comm.). However, this species was described as having a white belly and dark head (Bourne 1964), whereas no mention was made of white underwing patches. Recently, a petrel thought to have been a Taiko was seen north of Chatham Islands — but in this specimen the underwing was " completely dusky except for a very pale central stripe " (Bourne & Dixon 1975: 69). Hence, it is unlikely that the petrel seen by me was a Taiko, while the identification as a Kermadec (or Herald) Petrel seems more acceptable.

**LITERATURE CITED**

BOURNE, W. R. P. 1964. The relationship between the Magenta Petrel and the Chatham Island Taiko. Notornis 11: 139-44.
BOURNE, W. R. P.; DIXON, T. J. 1975. Observations of seabirds 1970-72. The Sea Swallow 24: 65-88.
JENKINS, J. 1957. Sightings of Kermadec Petrels at sea. Notornis 14: 113.
JENKINS, J. 1970. Sea records. Black-capped and other petrels near the Kermadecs. Notornis 17: 130-1.
MURPHY, R. C.; PENNOYER, J. M. 1952. Larger petrels of the genus **Pterodroma.** American Museum Novitates 1580: 1-43.
NAKAMURA, K.; TANAKA, Y. 1976. A record of the Kermadec Petrel **Pterodroma neglecta.** Miscellaneous Reports of the Yamashina Institute for Ornithology 8 (1): 108-12.
OLIVER, W. R. B. 1955. " New Zealand Birds." 661 pp. Wellington: A. H. & A. W. Reed.
OSNZ 1970. " Annotated Checklist of the Birds of New Zealand. 96 pp. Wellington: A. H. & A. W. Reed.
SMITHE, F. B. 1975. " Naturalists Colour Guide." New York: The American Museum of Natural History.

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