

eggs at a high latitude in New Zealand may be due to the parental stock being from N.S.W. or further north, as suggested by Van Tets & Brathwaite (1975), based on plumage characteristics. I wish to thank Drs A. A. Martin and G. F. Van Tets for their valuable criticisms in the preparation of this note.

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FIRST RECORD OF THE CHRISTMAS ISLAND SHEARWATER IN NEW ZEALAND

A specimen of the Christmas Island Shearwater (*Puffinus nativitatis*) was found on the Dargaville West Coast by members of the Northland Branch of the Ornithological Society of New Zealand during a routine beach patrol on 29 February 1976.

The Christmas Island Shearwater is a little known seabird of the Central Pacific Ocean. King (1967 *Seabirds of the Tropical Pacific Ocean*, U.S. Natn. Mus., Washington, D.C.) summarised its present distribution:—

“Breeds on the Hawaiian, Line, Phoenix, Henderson, Ducie, Tuamotu and Austral Islands. Although this species breeds at many localities its total population is not large. It is observed most frequently offshore of its breeding islands. No post breeding migration is known to occur, although it is known to be absent from its subtropical breeding areas during the contra-nuptial season. It may be present all year near its Tropical breeding islands.”

This is apparently the first record for the Australasian Region and its presence on Dargaville Beach is no doubt a case of long distance vagrancy as elaborated by Bourne (1967 *Ibis* 109 (2): 141-167) rather than evidence of migration.

On 22 January 1972 a tropical storm formed in the Northern New Hebrides, the centre passing New Caledonia on 24 January and Norfolk on the 26th, before moving into the South Tasman Sea and losing intensity. During the following day a westerly airstream developed and winds from this quarter continued for several days. The above conditions would be consistent with the finding of a well-dried corpse

on the beach at Dargaville on 29 February 1976. Murphy (1936; *Oceanic Birds of the South America*. New York: Macmillan) describes similar cases. The *Annotated Checklist of the Birds of New Zealand* (OSNZ 1970) lists Blackfooted Albatrosses (*Diomedea nigripes*), Leach's Storm Petrel (*Oceanodroma leucorhoa*) and Hawaiian Wedge-tailed Shearwater (*Puffinus pacificus cuneatus*) as other examples of tropical or North Pacific species which have occurred as stragglers to New Zealand.

The Christmas Island Shearwater, which has a sooty brown plumage, shiny black beak and dark brown legs, was recognised from other dark shearwaters by the following characters:

1. The Sooty Shearwater (*Puffinus griseus*) and Flesh-footed Shearwater (*Puffinus carneipes*) by its smaller size.
2. The dark phase Wedge-tailed Shearwater (*Puffinus pacificus*) by its short round tail.
3. The Short-tailed Shearwater (*Puffinus tenuirostris*) by its slender body, shorter, less pointed wings, and a stouter shiny black beak.

Measurements of the Dargaville specimen (in mm) are as follows: Bill 31.4, Wing 243, Tarsus 45.5, Toe 46.8, Tail 84.5. These relate closely to measurements recorded by Ashmole & Ashmole (1967, *Bull. Peabody Mus. Nat. Hist.*, 24).

The specimen was forwarded to the National Museum of New Zealand and is now included in its collection.

I would like to thank the members of the Beach Patrol on 29 February 1976 for their effort and co-operation, the staff at the N.Z. Meteorological Service, Wellington, for details of weather in the Tasman Sea during January and February 1976, Mr F. C. Kinsky for his assistance and confirmation of identification and Mr A. T. Edgar for reading this paper and making helpful comments.

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THE RELATIONSHIP OF SPRING MORTALITY PATTERNS IN THE SHORT-TAILED AND SOOTY SHEARWATERS

Imber & Crockett (1970, *Notornis* 17 (3): 223-230) described a much greater than usual mortality of the Short-tailed Shearwater (*Puffinus tenuirostris*) in New Zealand in the spring of 1968. This was accompanied by a large mortality of prions (*Pachyptila* spp.). The mortality of Sooty Shearwaters (*Puffinus griseus*) was considered to be less than usual.

These observations were mainly attributed to the weather, for there was an unusually protracted period of strong westerly winds from mid-September to late November. A food shortage was considered but dismissed on the assumption that *P. tenuirostris* and *P. griseus* take very similar foods. Their explanation was that as *P. tenuirostris* is an Australian breeding species and *P. griseus* mainly a New Zealand species,