FIRST SIGHTINGS OF THE NORTH ATLANTIC (CORY'S) SHEARWATER *Calonectris diomedea* (Scopoli, 1769) IN AUSTRALASIAN SEAS

By GEOFFREY A. TUNNICLIFFE

ABSTRACT

The first sightings of the North Atlantic (Cory's) Shearwater, *Calonectris diomedea* (Scopoli, 1769), in the Australasian region were made 47-78 km off the Canterbury Bight on the east coast of the South Island, New Zealand. These birds were probably vagrants, and the species may also occur sporadically in Australian waters.

INTRODUCTION

The North Atlantic Shearwater *(C. diomedea)* has previously been recorded from the Australasian region only as a single dead specimen washed ashore in January 1934 near Foxton on the west coast of the North Island (40°27'S, 175°7'E) (Oliver 1934). This paper reports observations of *C. diomedea* from a research fishing vessel at sea off the Canterbury Bight on the east coast of the South Island on 7-9 June 1979.

From 27 May to 9 June 1979 I was on the Ministry of Agriculture and Fisheries research fishing vessel, the *W. J. Scott,* during a deep-water aimed trawling programme (ATP 13 project 9/1979) off the east coast of the South Island, an area where little information is available on the species composition, abundance or distribution of seabirds (see Bartle 1974). The *W. J. Scott* fished during daylight hours on 29 May-3 June and 7-9 June. Oceanographic data were recorded by the ship's crew during tows. On the first section of the cruise I spent 44 hours observing seabirds, and on the last three days at sea (when North Atlantic Shearwaters were under intermittent observation) 26 hours. Binoculars (8 x 30 mm and 16 x 50 mm) aided identification.

RESULTS

The weather was fine (Table 1) during the sightings, which enabled me to follow the birds' movements and to take photographs through a 135-mm lens (see Figures 1-3).

Field observations

North Atlantic Shearwaters were watched on three consecutive days for about 1.5 hours. I estimate that four birds were in the survey area and that I saw them altogether on at least 20 occasions.

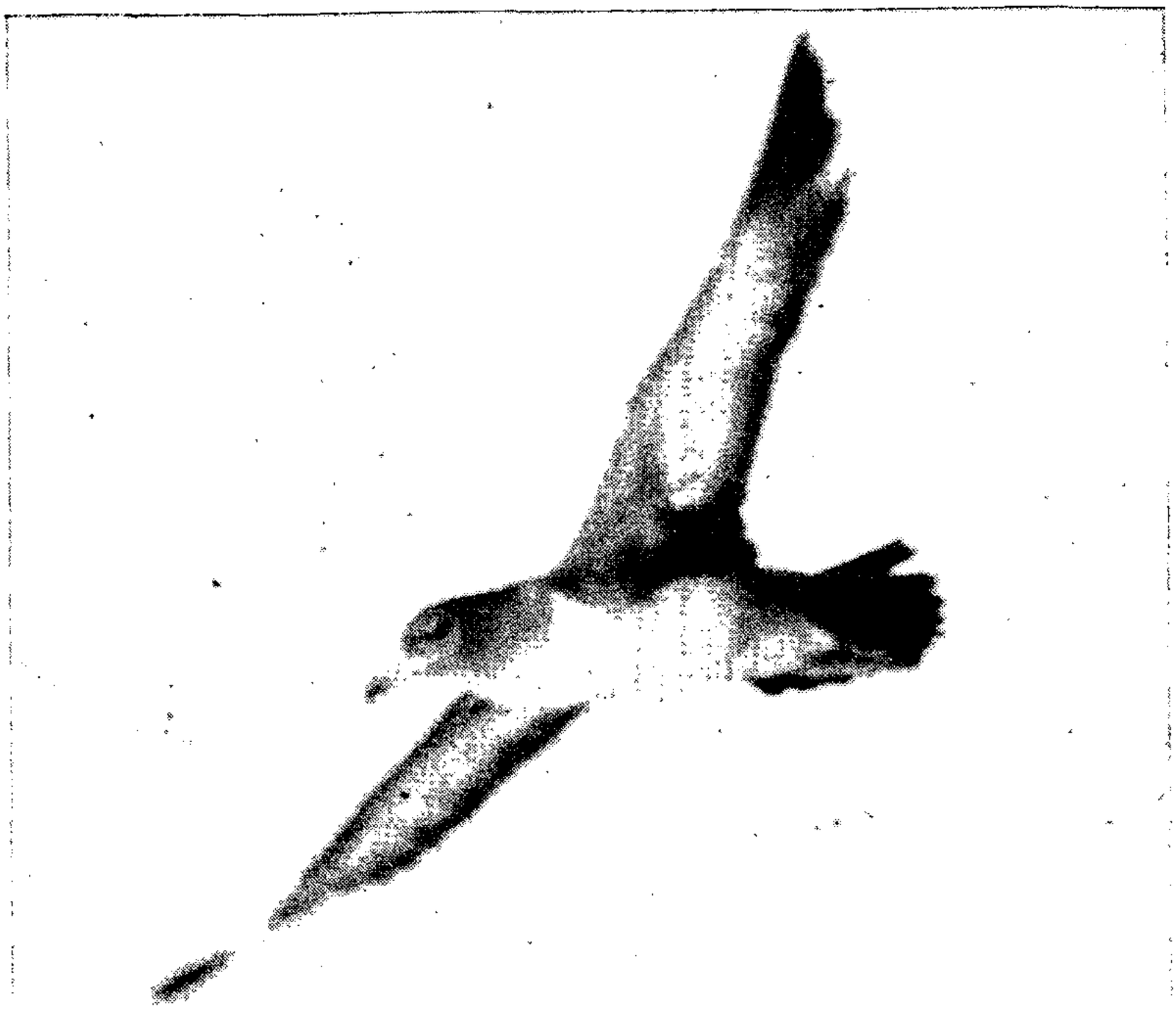

Figure 1: Note the inner underwing markings.

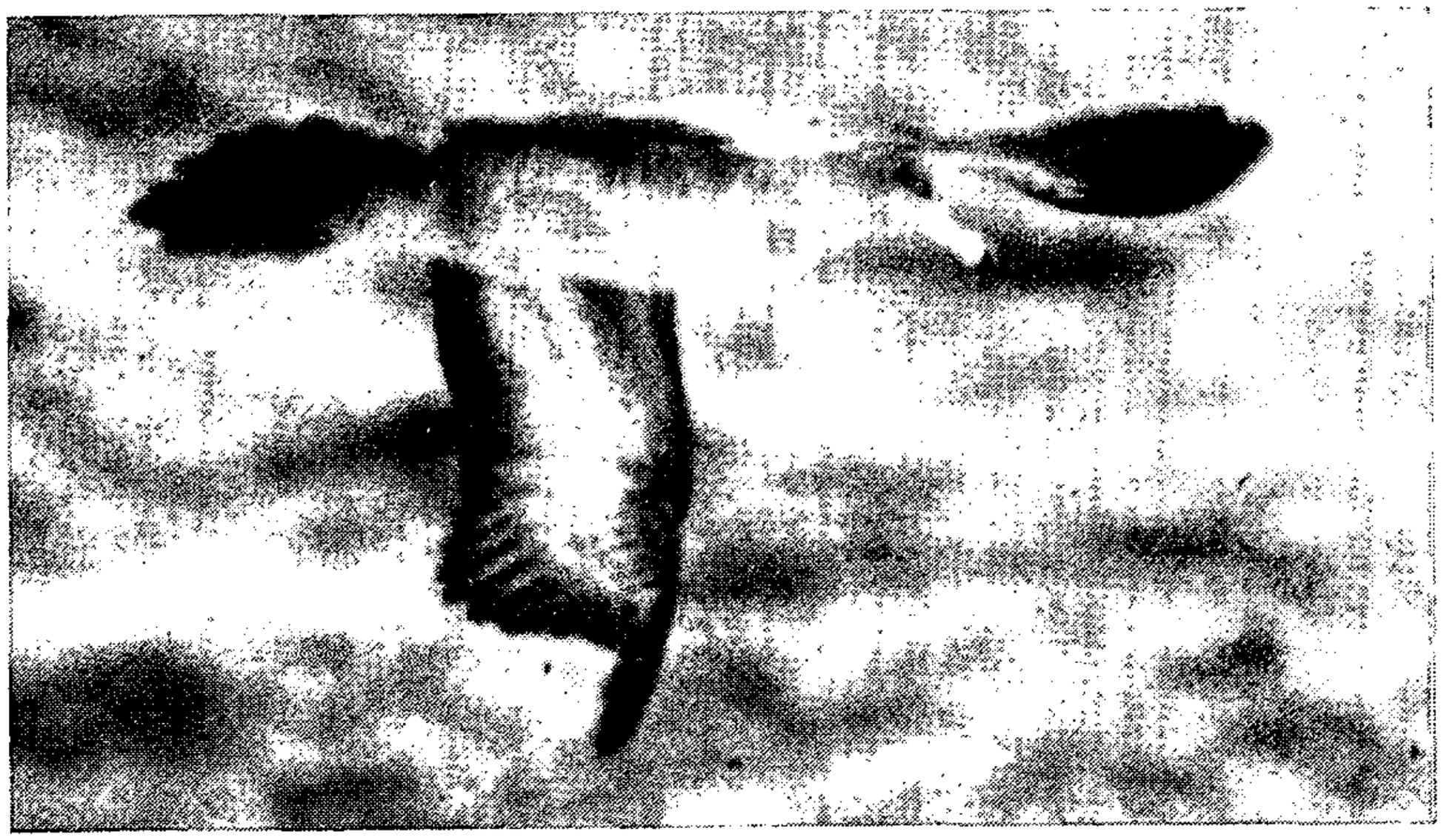

Figure 2: Note the barring on the neck and upper body.

FIGURES 1 & 2 — North Atlantic Shearwater **(Calonectris diomedea)** photographed in the Canterbury Bight, June 1979.
Photos: G. A. Tunnicliffe

The first single large shearwater was watched from 1325 h to 1345 h on 7 June 1979 at 44°41′ S, 172°29′ E (i.e. 51 km east of Waimate) as close as 6 m off the ship's stern. The following day a similar shearwater was seen at 1145 h at 44°17′ S, 173°17′ E (i.e. 78 km east of the Opihi River mouth), and from 1152 h to 1300 h, four further sightings were made. The birds' flight path was mostly confined to the ship's wake, where they often moved in twos. When about 20-30 m from the ship's stern they usually veered away 400 m or more behind the ship before rejoining it. Twice they fed on discarded offal 3-5 m from the stern. The ship was then about 47 km south-east of Akaroa Heads, the nearest to land the birds were seen. At 1050 h on 9 June 1979 a lone shearwater was seen briefly at 44°21′ S, 173°13′ E (i.e. 75 km east of Washdyke).

The first sightings provided limited opportunity for observation and photography and the following field information was assembled.

Description: Similar in size and appearance to the Grey Petrel *(Procellaria cinerea)*, but underparts of wings predominantly white. Back, throat and sides of neck, grey.

Behaviour: Unhurried effortless flight, gliding for long periods low over the sea with intermittent easy shallow wing-beats. The wings were held somewhat bowed, and the action was reminiscent of that of an albatross.

Closer observation and photography were possible on the four birds seen on 8 June, particularly when they fed on the ship's discarded offal. At close range the bill was pale yellow with a dark tip; feet light yellow; under surfaces of wing dark-edged; primaries dark with a hint of paler flecking on the back. In flight the wing tips dipped lower than the body (Fig. 2).

Colour photographs reinforced and extended the field description already assembled. Extra features recorded from the transparencies were as follows.

Underparts: Belly and centre of throat pure white; under tail-coverts white with some barring; rectrices, primaries and axillaries dark; leading and trailing margins of wings dark; dark band on trailing margin of wing uniform in width and merging with dark on remiges; feathers on patagium dark; anterior margin of wing between carpal

TABLE 1 — Oceanographic trawl data recorded on the fishing vessel W. J. Scott on Aimed Trawl Programme 13 Project 9/1979

Date	Sea surface temperature (°C)	Weather	Sea	Cloud	Wind direction	Wind speed $(m.s^{-1})$	Swell direction	Swell height (m)
7 June 1979	11.1	Fine	Moderate	2	SW	7.7	S	5
8 June 1979	11.0	Fine	Slight	1	NW	2.6	S	4
9 June 1979	10.7	Fair	Slight	7	SE	2.6	S	4

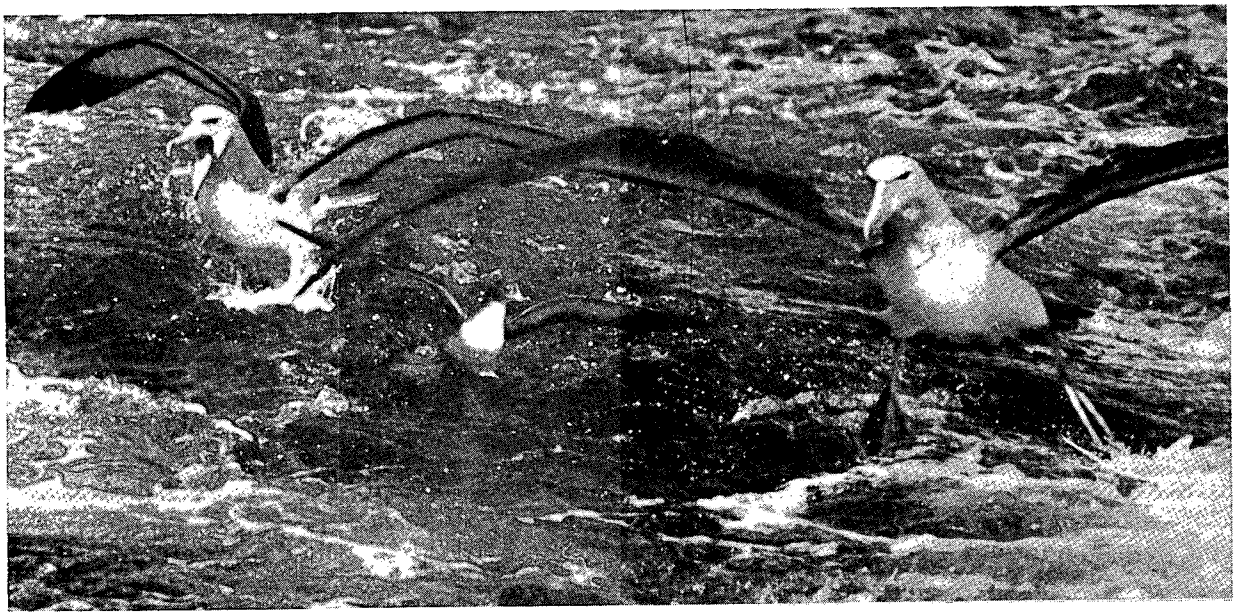

FIGURE 3 — North Atlantic Shearwater (centre) and Salvin's Mollymawk **(Diomedea cauta salvini)** on the stern wake of the **W. J. Scott.** Photo: G. A. Tunnicliffe

joint and flight feathers a narrow dark border which narrowed and shaded into the dark flight feathers; dark on trailing margin of wing shading into lightly streaked central coverts.

Sides: Darker upperparts merged gradually with white underparts; sides of chin, lower neck, throat and upper body barred; lower flanks barred; lores and feathers around eyes mottled.

Upper parts: Forehead mottled; head, mantle and neck greyish brown; back darker sooty brown; primaries dark.

Identification

While at sea I tentatively identified the birds as North Atlantic Shearwaters from the photographs and description in Harper & Kinsky (1978). Comparison of my colour transparencies with study skins in the Canterbury Museum's collection (AV 1306, AV 1307) substantiated this identification, which was later confirmed by P. C. Harper, Peter Hayman (a British ornithologist well acquainted with North Atlantic Shearwater), and the OSNZ Rare Birds Committee. The birds could not be positively assigned to any one of the three subspecies of *C. diomedea.* It is likely, however, that they were either *C. diomedea diomedea* or *C. diomedea borealis,* subspecies which, according to Roux & Jouanin (1968), are inseparable in the field. The third subspecies, *C. diomedea edwardsii* can be distinguished by the darker coloration of its upper parts, its predominantly black bill, and its square-cut tail (Roux & Jouanin 1968), features which were not apparent on the birds I saw.

Two conspicuous features of the shearwaters seen, the markings on the inner underwing (Fig. 1) and the barring along the upper body (Fig. 2), are not noted or illustrated in several texts, e.g. Cramp & Simmons (1977) and Harper & Kinsky (1978). The Canterbury Museum's study skins confirmed the presence of barring on the lower neck but unfortunately the wings of these specimens are folded and fixed rigidly against the body, and so the plumage could not be fully examined. A suggestion of barring on the upper sides of the body is present in a sketch in Watson (1975, p. 143) but this is not clear because most of the body is concealed by the wing. An inner underwing pattern resembling that shown in Figure 1 is suggested in sketches of North Atlantic Shearwaters in Gibson-Hill (1976).

The plumage of the bird shown in Figure 1 is very like that of the Cory's Shearwater in Plate 20 of Roux & Jouanin (1968), which is photographed from a very similar angle. Noticeable differences are that in my figure the axillaries and upper sides of the body are dark, whereas in Plate 20 of Roux & Jouanin they are predominantly white but with a hint of dark on the plumage of the posterior flank. Roux & Jouanin, however, stated that Cory's Shearwater " never have dark markings on the axillaries or flanks." These discrepancies may in part be attributable to the position of the wing with respect to the sun, giving different patterns of shading in the photographs. Examin-

ation of a series of slides taken by J. Warham near the Salvage Islands of *Calonectris diomedea borealis* and discussion with P. Hayman convinced me that the underwing plumage markings shown in Figures 1 and 2 are within the range of variation of this species.

The birds reported here were probably prebreeders as the breeding season is from April to October (Zino 1971).

Discussion

Oliver (1934) predicted that the North Atlantic Shearwater may reoccur in New Zealand waters as he attributed its presence to prevailing mid-latitude westerly winds carrying the birds east from the Cape of Good Hope, where it had been occasionally recorded. Other records of Atlantic shearwaters and petrels in Australasian waters have also been attributed to these winds (e.g. Spencer 1962, Kinsky & Fowler 1973), and I believe this factor best explains the occurrence of North Atlantic Shearwater in New Zealand seas. Oliver's evaluation of North Atlantic Shearwater as a vagrant or straggler in New Zealand waters is therefore confirmed.

Although Mathews (1946), cited by Serventy *et al.* (1971), stated that the North Atlantic Shearwater's distribution includes south-western Australian seas, Serventy *et al.* (1971) noted that the birds have not been recorded in southern Australia.

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APPENDIX

Bird species recorded in Canterbury Bight from 29 May to 3 June 1979 and on 7-9 June 1979

Oceanic species

Wandering Albatross	***Diomedea exulans***
Royal Albatross	**D. epomophora**
White-capped (Shy) Mollymawk	**D. cauta cauta**
Salvin's Mollymawk	**D. c. salvini**
Black-browed Mollymawk	**D. melanophrys**
Buller's Mollymawk	**D. bulleri**
Northern Giant Petrel	**Macronectes halli**
White-chinned Petrel	**Procellaria aequinoctialis**
Westland Petrel	**P. westlandica**
Grey Petrel	**P. cinerea**
Sooty Shearwater	**Puffinus griseus**
Hutton's Shearwater	**P. huttoni**
Cape Pigeon	**Daption capense**
North Atlantic Shearwater	**Calonectris diomedea**
Fairy Prion	**Pachyptila turtur**
Storm Petrel	Species undetermined

Inshore species

White-flippered Blue Penguin	**Eudyptula minor albosignata**
Spotted Shag	**Stictocarbo punctatus**
Red-billed Gull	**Larus novaehollandiae**
Southern Black-backed Gull	**L. dominicanus**
Black-fronted Tern	**Sterna albostriata**
White-fronted Tern	**S. striata**

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SHORT NOTE

BIRD DISPERSAL OF *Pseudowintera* SEED

Since the publication of my note (Norton 1980, Honeyeaters feeding on *Pseudowintera* — a new record, *Notornis* 27: 99-100) that Tuis *(Prosthemadera novaeseelandiae)* and Bellbirds *(Anthornis melanura)* feed on the fruits of horopito *(Pseudowintera axillaris)*, I have received additional unpublished reports of birds feeding on *Pseudowintera*. I thank those who have allowed me to record their observations here.

Of particular interest is that the Stitchbird *(Notiomystis cincta)*, now severely endangered and restricted to Little Barrier Island, was seen in late March 1978 eating ripe fruits of *P. axillaris* along the Herekohu-Hauturu ridge at or above 2000 ft (M. J. Imber, NZ Wildlife