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BIRDS OF THE NORTHERN PRINCE CHARLES MOUNTAINS ANTARCTICA

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INTRODUCTION

An Australian National Research Expedition in the summer of 1989–1990 made possible a reconnaisance of the avifauna of the Prince Charles Mountains, Mac.Robertson Land, Antarctica. Sixteen scientists, scattered widely throughout the range, were moved periodically by helicopter to new sites. A staff of nine people was located at Dovers Field Base near the base of Farley Massif. These people made opportunistic observations of birds from 26 December, 1989 to 18 February, 1990. The present report summarizes their collective findings.

STUDY AREA

The Northern Prince Charles Mountains are located in East Antarctica, midway between Mawson and Davis bases; 300 km inland is the Dovers Field Base (70°14′S, 65°51′E) (Fig. 1). In all, 30 localities were visited by one or more parties.

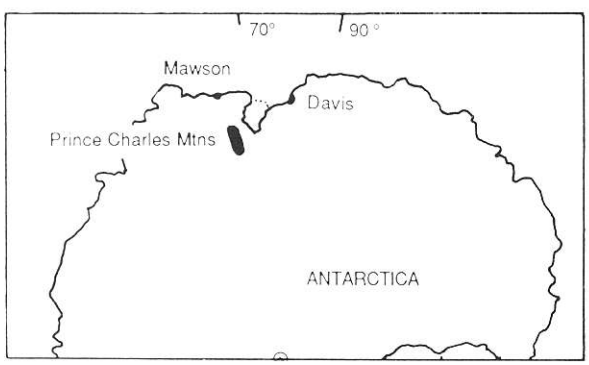

Figure 1. *Location of Prince Charles Mountains in Antarctica.*

RESULTS

The avifauna consisted of two species which nested in the area. These were the South Polar Skua *Catharacta maccormicki* and the Snow Petrel *Pagodroma nivea*. A third species, Wilson's Storm Petrel *Oceanites oceanicus* was present but evidence of nesting was not found.

Snow Petrel *Pagodroma nivea*

The Snow Petrel was the most common bird in the Prince Charles Mountains. It nested in three main areas: (1) the northern Amery Peaks; (2) Pagodoma Gorge, Radok Lake and environs; and (3) the northern part of Flagstone Bench. All of these are in the large ice-free region collectively known as the Amery Oasis.

In the Amery Peaks, Snow Petrels were seen high up on Mt Seaton, on Sandilands Nunatak and in the northwestern Manning Massif. All three locations feature steep, north-facing cliffs. Because the Amery Group sandstones are particularly susceptible to salt wedging, cliffs in these rocks are often honeycombed with small cavities. These appeared to be preferred nesting sites for Snow Petrels. The majority of nests observed were in such cavities although several were among boulders in scree slopes at the base of cliffs. Relatively few petrels nest in the Precambrian basement gneisses that make up the majority of the rock outcrop in the northern Prince Charles Mountains.

The site where Snow Petrels seemed to be most abundant was in Pagodroma Gorge. Many birds were seen flying above the northern cliffs of the

western part of the gorge and disappearing into crevices in the rocks. Two nests were found there and one on the southern cliffs. In Bainmedart Cove, adjacent to the western end of Pagodroma Gorge, nests were observed both in the cliffs on the northern side and at several locations on the southeastern side. There were also nests in the cliffs along the eastern side of Radok Lake both to the north and south of Bainmedart Cove. A single nest was seen high up on the Dragon's Teeth Cliffs to the west of Radok Lake. On Flagstone Bench, the cliffs along the northern edge had at least three readily accessible nests, although only one was in use.

In places, old nest sites, identified by thick guano deposits, have been exposed by rockfall, particularly along the northern cliffs of Pagodroma Gorge. These probably indicate a long history of petrel nesting in the gorge as the cliff is not retreating rapidly at present and there is little fresh rockfall at its base.

Breeding records for the area were: one nest with eggs at Pagodroma Gorge on 10 January, and unfledged chicks in one nest at Pagodroma Gorge (22 January), two nests at Bainmedart Cove (29 January) and one nest at Flagstone Bench (3 February). Some of the nesting sites clearly had been used over many years as there were deep accumulations of guano. One nest halfway up a steep, south-facing scree slope on the northern wall of Pagodroma Gorge was in a cavity under large boulders. There were two entrances into a chamber 1.5 m long, 0.5 m wide and 0.5 m high. A soil pit dug in the floor of the chamber revealed guano mixed with feathers and rock chips to a depth of at least 15 cm. A large, mummified chick was wedged in a rock crevice.

In addition to known nesting areas, Snow Petrels were seen flying past Dovers Field Base on 26 December 1989 (4 birds), 27 December (3), 2 January 1990 (2) and 6 January (1).

Wilson's Storm Petrel *Oceanites oceanicus*

This species was not found nesting in the area although it cannot be stated with certainty that it did not. Further observations may add it to the list of breeding species. There were three sightings: at Dovers Field Base on 1 January (elevation 1 100 m), Mt Lanyon to the south-east in the first week of January (700 m) and on Else Platform on 28 January (near sea level).

South Polar Skua *Catharacta maccormicki*

Three skua nests were found in areas inhabited by Snow Petrels, the skua's prey. One nest was found in the northwestern part of the Amery Peaks, close to the junction of Walker Valley with the McKinnon Glacier. Another was on the southeastern side of Bainmedart Cove. Below this nest over 60 wings of adult petrels were counted. Away from the nest, very few wings were seen and it seems likely that petrels were captured and flown back to, or close to, the skua nest to be dismembered. The separated pairs of wings were probably then blown short distances from the nest; one such pair was observed blowing in the wind on one occasion.

The third nest was at the western end of Pagodroma Gorge on a sandstone hill about 30 m high, on a platform in a steep face about 20 m above the valley floor. The nest was in a small depression in rocks, exposed overhead. A large, downy chick was present on 23 January. The top of the hill was littered with bones and skulls of adult Snow Petrels but there were no wings. However, five pairs of adult wings were on the floor of the gorge. Regurgitations were found near the nest and at the base of the hill.

A fourth skua's nest found at Else Platform was not near known nests of Snow Petrels. The only bird species observed there, other than skuas, was Wilson's Storm Petrel.

Skuas were seen outside their known nesting areas at Dovers Field Base, (one bird on 1 January and another on 8 January), central Jetty Peninsula and along the cliffs at Flagstone Bench. The latter two records may have been of birds that flew down from the nest at Else Platform.

DISCUSSION

All three species from the Prince Charles Mountains are known to nest on various Antarctic islands, on the Antarctic Peninsula and around most of the perimeter of continental Antarctica, including East Antarctica (Watson 1975; Furness 1987). Most nesting records are from coastal areas but all three species have been noted at some inland sites and have been reported as using rock cliffs and/or scree slopes as nesting habitats. The most southerly nesting record for any bird is in the Theron Mountains, 250 km inland from the

Weddell Sea (79°S), where South Polar Skuas, Antarctic Petrels and Snow Petrels have all been reported. Non-breeding skuas go even farther south, and have been recorded from the South Pole and from Vostock Station (3 488 m elevation) near the pole (Furness 1987).

Watson (1975) gives the breeding season for Snow Petrels as: egg laying from late November to mid-December, hatching from early to mid-January and fledging about mid-March but notes that in inland mountains the cycle may be delayed as much as a month. Our breeding records are consistent with the delayed schedule.

Our observation of a large skua chick in late January is in better accord with the fledging dates of late January to February reported for this species by Harrison (1983) than those of late February to mid-March given by Watson (1975).

Except for the dependence of the skuas on Snow Petrels as prey, food relations of the species in the Prince Charles Mountains are uncertain. Snow Petrels and Wilson's Storm Petrels both feed on marine organisms and the former have also been reported scavenging (Watson 1975). The nearest open water is 250 km away and carrion is unavailable in the Prince Charles Mountains. The only birds seen scavenging during the present study were skuas that came to the Glossopteris Gully campsite. This area has been occupied by humans sufficiently frequently in the last few years for them to regard it as a supplemental food source. Detailed observations on the diet and daily movements of all three species of birds would be rewarding.

ACKNOWLEDGMENTS

We are grateful to the other members of the 1989–1990 Prince Charles Mountains expedition for supplementing our observations.

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RECOVERY ROUND-UP

This section is prepared with the co-operation of the Secretary, Australian Bird and Bat Banding Schemes, Australian National Parks and Wildlife Service. The recoveries are only a selection of the thousands received each year; they are not a complete list and should not be analysed in full or part without prior consent of the banders concerned. Longevity and distance records refer to the ABBBS unless otherwise stated. The distance is the shortest distance in kilometres along the direct line joining the place of banding and recovery; the compass direction refers to the same direct line. (There is no implication regarding the distance flown or the route followed by the bird). Where available ABBBS age codes have been included in the banding data.

Recovery or longevity items may be submitted directly to me whereupon their merits for inclusion will be considered.

Hon. Editor.

The following abbreviations appear in this issue:

ANARE — Australian National Antarctic Research Expeditions.

NSW NPWS GP — New South Wales National Parks and Wildlife Service, Gull Project.

Little Penguin *Eudyptula minor*

(a) 190-13804. Nestling banded by M. H. Waterman on Troubridge Island, SA on 29 Dec. 86. Recovered dead at Barwon Heads, Vic. on 10 Feb. 91. 690 km ESE.

(b) 190–20124. Adult banded by R. P. Gales on Albatross Island, Tas. on 15 Sep. 85. Recovered, later died at Portland, Vic. on 12 Apr. 90. 340 km NW.

(c) 190-61829. Nestling banded by H. Battam on Big Island, Five Islands, NSW on 4 Dec. 90. Recovered dead at Forrestier Point, Tas. on 12 Feb. 91. 970 km SSW.

Wandering Albatross *Diomedea exulans*

(a) BS4111*. Adult female (+1) banded on Crozet Islands Indian Ocean (46°25′S, 52°12′E) on 9 Jan. 71. Recaptured at sea off Bellambi, NSW (34°20′S, 151°00′E) by H. Battam on 16 Jul. 89, over 18 years 6 months after banding. 7 921 km ESE.

(b) BS7563*. Adult (+1) banded on Crozet Islands, Indian Ocean (46°25′S, 52°12′E) on 30 Jan. 77. Recaptured at sea off Bellambi, NSW (34°20′S, 151°00′E) by H. Battam on 16 Jul. 89, over 12 years 5 months after banding. 7 921 km ESE.

*French Banding Scheme Band.