

## Short Communications

### Adélie Penguins and Antarctic Petrels at Mount Biscoe, Western Enderby Land, Antarctica

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Emu 90, 58-60

Received 18 July 1988, accepted 12 April 1989

#### Introduction and methods

Less than three per cent of the Antarctic Continent is permanently ice-free (Walton 1984). These ice-free areas provide the major breeding and roosting areas for the ten species of seabirds inhabiting Antarctica (Watson *et al.* 1971).

Recent reviews of the present breeding distribution of the Adélie Penguin *Pygoscelis adeliae*, by Horne (1983) for the Australian Antarctic Territory and Wilson (1983) for the entire Antarctic Continent, did not include records from Enderby Land, overlooking the observations of Mawson (1930) and Falla (1937). Cooper (1985) reported Adélie Penguins breeding at Proclamation Island and Cape Batterbee in eastern Enderby Land.

The limited breeding distribution of the Antarctic Petrel *Thalassoica antarctica* was tabled in Brook & Beck (1972), and supplemented by data in Johnstone *et al.* (1973) and Green & Johnstone (1986). Brook & Beck (1972) speculated that a breeding colony existed at Mount Biscoe and Watson *et al.* (1971) indicated that Mount Biscoe was a breeding locality for Antarctic Petrels. Mount Biscoe is the major prominence behind Cape Ann (66°09'S, 51°22'E) and comprises two rock massifs, the eastern reaching a height of 700 m.

The few ornithological reports from earlier visits to the region are those made on the 'Norvegia' Antarctic Expedition, where two Adélie Penguins were seen on the fast-ice near Cape Ann in December 1929 (Riiser-Larsen 1930). Although no landing was made by the 'Discovery' Expedition, Mawson (1930) reported most of the northerly face of Mount Biscoe to be encrusted with guano from countless flocks of Antarctic Petrels and other seabirds present during the nesting season. Falla (1937) added that clouds of birds had been seen flying from discoloured patches on the rocky sides of Mount Biscoe. A short

geological visit was made to Mount Biscoe in January 1977, but no ornithological records were made (R. Tingey pers. comm.).

In this note we present new data collected during two ornithological visits to Mount Biscoe in western Enderby Land, Antarctica. On 27 October 1985, PHE and KRK briefly visited the beach below the western massif for a short period by helicopter from MV Nella Dan, approximately 30 km to the north-east. On 29 October 1985, JAB and EJW spent 1.5 hours examining the northern slope of the western massif. At the time of the visit, numerous grounded icebergs were present along the coast in the vicinity of Cape Ann with a band of fast ice averaging approximately 20 km in width.

#### Results and discussion

**Adélie Penguin *Pygoscelis adeliae*** On the first visit, an area of pebble nests and guano along the lower slopes of the massif suggested the existence of a penguin colony. However, only six adult Adélie Penguins were seen. Two small islets surrounded by fast ice 10 km north-east of Mount Biscoe were overflowed on the return to the ship and one of these, approximately 150 x 75 m, were evenly covered with guano, and is probably a breeding colony for several hundred pairs of Adélie Penguins.

On the subsequent visit to Mount Biscoe, Adélie Penguin numbers had increased dramatically and hundreds of birds were present. The majority were seen in clusters of 50-100 birds on the beach along the fast ice edge, while others were moving up the slopes in small groups.

Vertical bands of old guano and unoccupied pebble nests were found extending from the beach up the northern slope of the massif to an altitude of approximately 200 m, indicating an extensive colony, Figure 1. Aerial and ground photographs enabled the extent of the guano area to be determined and the colony was estimated to contain at least 5000 breeding pairs of Adélie Penguins.

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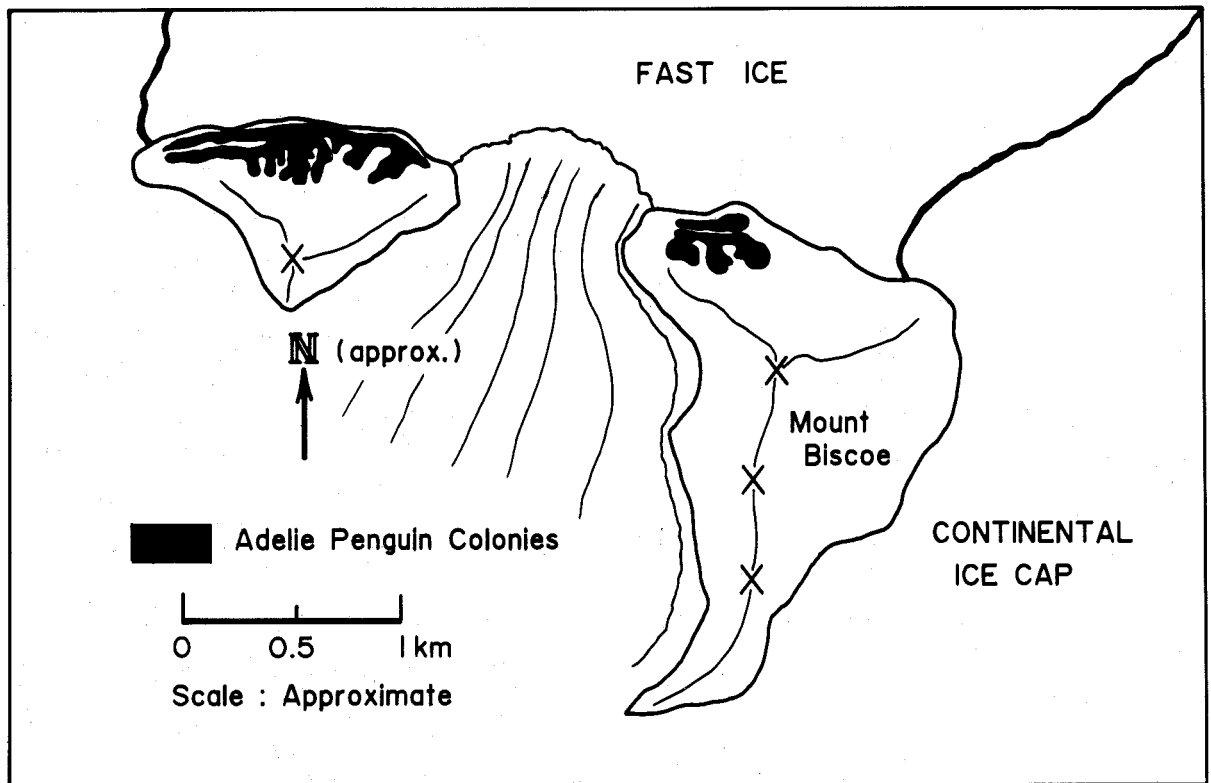


FIGURE 1 Distribution of Adélie Penguins *Pygoscelis adeliae*, determined from aerial and ground surveys, at Mount Biscoe, Enderby Land, Antarctica.

Aerial surveys later the same day located hundreds of Adélie Penguins at the fast-ice edge 80 km to the west of Cape Ann, and several large groups moving in a single file across the fast ice from this point, directly towards Mount Biscoe.

**Antarctic Petrel *Thalassoica antarctica*** Hundreds were observed flying around the eastern massif (on 27 October), particularly around the higher, steeper south-western slopes and near the summit. A large flock of several hundred was also present on the fast-ice at the base of the eastern massif.

On the second visit Antarctic Petrels were numerous above the upper limits of the Adélie Penguin colony on the western massif. Many solitary birds were observed sitting in snow scoops and amongst rocks and others were flying overhead, hovering and frequently landing. Most previous nest sites were still unoccupied but the presence of disturbed snow and fresh guano indicated that these sites had been used for roosting. The green (bile) colour of the guano suggested that the birds had not fed recently. Birds occupying nest sites were generally placid and reluctant to move.

The sites were approximately 1 m apart but closer in places. No territorial display was observed between birds on adjacent nests. Occasional pairs were seen but only four birds were observed displaying. Vast numbers were also observed flying around the eastern massif where they had been observed on the previous visit.

Many nest sites were probably hidden by the aspect and the rocky terrain. Insufficient time was available to assess the area occupied by Antarctic Petrels during the previous breeding season. Our observations suggest that a substantial number may breed in the Mount Biscoe area.

**Snow Petrel *Pagodroma nivea*** One was seen flying near the eastern massif during the first visit and approximately 200 were seen flying in a flock of over 1000 Antarctic Petrels circling over the sea ice near the western massif on the second visit.

No evidence of breeding by Snow Petrels was found at Mount Biscoe. However, their low circling flight, particularly above the rocky slopes of the Antarctic Petrel colony

on the western massif, suggested the presence of nests higher up the slope.

Wilson's Storm-Petrel *Oceanites oceanicus* Not observed at Mount Biscoe during either visit. However, many were recorded from MV Nella Dan whilst beset in the pack ice to the north of Mount Biscoe, flying towards the massifs from 25 November 1985 onwards. Suitable breeding habitat exists at Mount Biscoe.

South Polar Skua *Stercorarius maccormicki* One was seen during the first visit near the eastern massif. Several were observed on the beach and flying above the lower slopes of the western massif on the second visit. The species may possibly breed at Mount Biscoe.

### Conclusions

Visits later in the breeding season are needed to obtain accurate data on the sizes of the breeding populations present. Counts made in late November when male Adélie Penguins were incubating and in January, immediately following the cessation of egg laying by Antarctic Petrels, would provide the required data.

### Acknowledgements

Financial and logistical support was provided by the Australian Antarctic Division. Our thanks are extended to the crew of the MV Nella Dan and the helicopter personnel for their assistance. L.B. Parr and M.D. Whitehead critically reviewed an earlier draft.

### References

- Brook, D. & Beck, J.R. (1972). Antarctic Petrels, Snow Petrels and South Polar Skuas breeding in the Theron Mountains. *Br. Antarct. Surv. Bull.* **27**, 131-137.
- Cooper, J. (1985). Adélie Penguins breeding in eastern Enderby Land, Antarctica. *Emu* **85**, 205-206.
- Falla, R.A. (1937). Birds B.A.N.Z.A.R.E 1929-31. Report. Ser. B, **2**, 1-288.
- Green, K. & Johnstone, G.W. (1986). Breeding distribution and abundance of surface-nesting petrels in the Rauer Islands, East Antarctica. *ANARE Res. Notes* **35**, 1-54.
- Horne, R.S.C. (1983). The distribution of penguin breeding colonies on the Australian Antarctic Territory, Heard Island, the McDonald Islands, and Macquarie Island. *ANARE Res. Notes* **9**, 1-82.
- Johnstone, G.W., Lugg, D.J. & Brown, D.A. (1973). The biology of the Vestfold Hills, Antarctica. *ANARE Sci. Rep.*, **123**, 1-62.
- Mawson, D. (1930). The Antarctic cruise of the "Discovery", 1929-1930. *Geogr. Rev.* **20**, 535-554.
- Rüiser-Larsen, H. (1930). The 'Norvegia' Antarctic Expedition of 1929-1930. *Geogr. Rev.* **20**, 555-573.
- Walton, D.W.H. (1984). The terrestrial environment. In: *Antarctic Ecology*. Vol. 1 (ed. R.M. Laws), pp. 1-60. Academic Press, London.
- Watson, G.E., Angle, J.P., Harper, P.C., Bridge, M.A., Schlatter, R.P., Tickell, W.L.N., Boyd, J.C. & M.M. Boyd. (1971). *Birds of the Antarctic and sub-Antarctic*. Antarctic Map Folio Series. (ed. V.C. Bushnell). Folio 14. American Geographical Society, New York.
- Wilson, G.J. (1983). Distribution and abundance of Antarctic and sub-Antarctic penguins: A synthesis of current knowledge. *BIOMASS Sci. Ser.* **4**, 1-46.

## A Peculiar Observation of Nesting Behaviour in the Southern Fulmar *Fulmarus glacialoides*

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*Emu* **90**, 60-61

Received 25 August 1988, accepted 12 June 1989

Interspecific brood-parasitism is well documented in many avian species (see Yom-Tov 1980 for review) and usually entails the parasite laying one or more eggs in the host's nest. Accidental, or non-parasitic forms of interspecific parental care, however, have rarely been documented in birds.

While conducting a study of Southern Fulmars *Fulmarus*

*glacialoides* and Antarctic Petrels *Thalassoica antarctica* in the Rauer Islands (68°35'S, 77°58'E), East Antarctica, in the austral summer of 1987/88, an example of non-parasitic interspecific parental care was observed. Both species breed sympatrically on these islands (Green & Johnstone 1986) and occasionally nests of one species were found within discrete colonies of the other. Hence, it was not surprising to find a nest occupied by Southern