

THE STATUS OF THE ROYAL PENGUIN AND FAIRY PRION AT  
MARION ISLAND, WITH NOTES ON FERAL CAT PREDATION ON  
NESTLINGS OF LARGE BIRDS

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*Received 16 October 1981, accepted 21 October 1981*

Macaroni Penguin *Eudyptes chrysolophus* and Royal Penguin  
*E. schlegeli*

The Royal Penguin *E. schlegeli* is usually considered to be a subspecies of the Macaroni Penguin *E. chrysolophus* (Shaughnessy 1975, Falla & Mougin 1979), but the status of these two forms is controversial (Watson 1975, Barre *et al.* 1976). The Royal Penguin is endemic to Macquarie Island (54°30'S, 158°57'E) whereas the Macaroni Penguin is widespread in the Subantarctic. The Royal Penguin differs from the Macaroni Penguin in being slightly larger (Watson 1975), and in having more white on the face and throat in the majority of individuals (Shaughnessy 1975).

Several whitefaced Royal/Macaroni Penguins have been recorded at Marion Island (46°54'S, 37°45'E) (Voous 1963, Van Zinderen Bakker Jnr. 1971, Williams & Burger 1978). During September 1980 - May 1981, 14 whitefaced individuals were recorded at Marion Island, including the first two breeding records (Figs 1 & 2, Table 1). Birds recorded since 1965 had white throats and were predominantly white on the face; and would include birds in categories C and D of Barre *et al.* (1976); all birds classed as White and some of the paler birds classed as Intermediate by Shaughnessy (1975).

All the birds seen were recorded singly, with the exception of a group of 20 recorded by Voous (1963). This record requires careful evaluation as it contains several errors. Crawford Bay lies on the south, not west, coast of Marion Island. Macaroni and Royal Penguins are far smaller than the reported size "height as that of the King Penguin". The upperparts (presumably back) are described as brownish-yellow (more brown than yellow), which is at best a poor description, as the back is blackish even in faded plumage. The temperature given (*c.* 21°C) is very high for Marion Island, although it is possible (Schulze 1971).

The occurrence of 20 birds together might suggest that the birds originated from Macquarie Island. However, the throat and facial colour of Royal Penguins varies from black to white: the proportion of whitefaced birds in 11 colonies at Macquarie Island varying from 13 - 90% in males and 2 - 55% in females (Shaughnessy 1975). The remaining birds comprised mainly intermediate birds with a small number of darkfaced birds. It is unlikely that any group of 20 Royal Penguins would all have white faces and throats, but there is no mention of any colour variation by Voous (1963). Furthermore, vagrant penguins seldom, if ever,

occur in groups (Serventy *et al.* 1971, Cooper *et al.* 1978, Williams & Burger 1978). The identification was based primarily on the colour slide of one individual, and is best accepted as the first record of one whitefaced bird at Marion Island. In view of the inaccuracies in the report, it is suggested that the rest of the group consisted of juvenile Macaroni Penguins in faded plumage prior to moult. Juveniles have lighter crests and throats, and stand separately from breeding birds. It is now apparent that whitefaced birds, and birds with intermediate colouration, occur regularly and breed at Marion Island, and possibly occur in higher proportions at the west coast colonies at Kaalkoppie and Swartkops (Table 1).

Are the whitefaced birds at Marion Island derived from Macquarie Island stock? A definite answer cannot be given yet. Shaughnessy (1975) and Falla & Mouglin (1979) found that there was no agreement on morphological characters separating an individual Royal or Macaroni Penguin away from the breeding ground. The occurrence of whitefaced birds at the island group closest to Marion Island, the Crozet Islands (46 30S, 51 00E) is similar to that at Marion Island. Whitefaced birds comprised less than 1 % of the Macaroni Penguins breeding there, but were found to be larger than the darkfaced birds (Barre *et al.* 1976). However, this was regarded as insufficient evidence for a Macquarie Island origin for these birds (Barre *et al.* 1976). There is another explanation for this observed size difference. Male Royal and Macaroni Penguins are larger than females (Shaughnessy 1975, A.J. Williams pers.comm.) and male Royal Penguins tend to be whiter than females (Shaughnessy 1975). The observed size difference may be ascribed to a preponderance of larger males in the sample of whitefaced birds. Until proven otherwise, whitefaced Macaroni Penguins at Marion and Crozet Islands are best regarded as rare colour variants within the local population.

Two new colonies of Macaroni Penguins were discovered in 1980 - 81. One colony of about 200 pairs was found between Kaalkoppie and Fur Seal Bay, and was located in a site previously occupied by Rockhopper Penguins *Eudyptes chrysocome*. The new colony was probably formed by birds prevented from breeding at Kaalkoppie by the 1980 volcanic eruption (Berruti in prep.). A second colony discovered on the seaward side of Kaalkoppie consisted of 200 - 300 pairs, thought to be an old established colony, since this site was inaccessible and hidden from view prior to the volcanic eruption.

#### Fairy Prion *Pachyptila turtur*

This species was previously regarded as a relatively rare breeding species, with a population numbering only hundreds of pairs (Williams *et al.* 1979). However, many birds were seen along the coastal cliffs between Cape Davis and Triegaardt Bay in October 1980, and along the west coast in November 1980. Birds were seen to land on loosely consolidated volcanic material sandwiched between more massive lava, and occasionally entering holes in this material. The breeding population numbers thousands of pairs, and if the Fairy Prion breeds on the southern cliffs between Cape Hooker and Cape Crozier, the

TABLE 1  
RECORDS OF WHITEFACED EUDYPTES CHRYSOLOPHUS AT MARION ISLAND

Date	Details of observation	Source
mid-December 1960	20 birds at Crawford Bay. A colour slide of one bird (not seen).	Voous (1963)
15 December 1965	One bird at Kaalkoppie. Colour slide published.	Van Zinderen Bakker Jnr. (1971)
1974-1977	Several birds at various colonies.	Williams & Burger (1978)
Feb. 1977	One bird moulting at Bullard.	Williams & Burger (1978)
18 November 1980	One bird incubating egg at Bullard (Fig. 1)	this paper
26 November 1980	One bird in company of darkfaced bird; the latter incubating an egg, at Swartkops. On 26 March 1981, a bird moulting in company of darkfaced bird on same nest site.	this paper
March 1981	Two birds at Kildalkey Bay	this paper
26 March 1981	Four birds moulting at Kaalkop Cave, and one at Kaalkop cone.	this paper
26 March 1981	Two birds moulting at Swartkops.	this paper
Summer 1980-81	Two birds at Macaroni Bay (Fig. 2), one in company of darkfaced bird.	this paper



Figure 1

Whitefaced *Eudyptes chrysolophus* incubating an egg at Bullard,  
Marion Island, 18 November 1980



Figure 2

Whitefaced *Eudyptes chrysolophus* at Macaroni Bay, Marion Island,  
late summer, 1980-81

population may number tens of thousands.

#### Feral Cats *Felis catus*

A Feral Cat carrying an apparently freshly killed Gentoo Penguin *Pygoscelis papua* chick was seen at night by torchlight in October 1980. In January 1981, a cat was seen carrying a living Rockhopper Penguin chick (G. Kerley pers.comm.). Another cat was found feeding on the carcass of a Lightmantled Sooty Albatross *Phoebetria palpebrata* chick in March 1981. The chick had died or had been killed shortly before. It is possible that cats had actually killed the chicks in one or all of these instances. Previously, cats have preyed upon live burrowing petrels as their major food source, but have been known to scavenge the remains of penguins (Van Aarde 1980). Should these observations indicate a shift in the prey taken by cats, possibly because petrel numbers have been markedly reduced, then the populations of some larger surface nesting species such as Gentoo Penguins and Lightmantled Sooty Albatross could become severely reduced.

#### ACKNOWLEDGEMENTS

I thank G. Kerley for unpublished data, and A.J. Williams for advice. The financial and logistical support of the South African Department of Transport, the South African Scientific Committee for Antarctic Research and the University of Cape Town is gratefully acknowledged.

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