FIRST RECORD OF THE KING PENGUIN *APTENODYTES PATAGONICUS*

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INTRODUCTION

The King Penguin, *Aptenodytes patagonicus* is circumpolar in distribution, mainly in the subantarctic zone. It breeds on South Georgia. the Falkland Islands, and Marion, Prince Edward, Crozet, Kerguelen, Heard and Macquarie Islands (Harrison 1983).

Occasionally King Penguins wander north from the subantarctic zone, for example to the New Zealand region (Kinsky 1970) and to southern Africa (Cooper 1978). They also reach southern Australia where most of the records are from the Tasmanian coast. There are some 16 Tasmanian records, the earliest being in 1909 (an unsubstantiated report from a fisherman), the next being in 1956, and eight of them being in the 1980s (Hall 1910; Sharland 1956; Wall 1973, 1976, 1978; Hosken *et al.* 1974; Newman 1974; Patterson & Rounsevell 1984; Ross 1988; Lansley 1989; Patterson 1989). Most of these penguins were alive, and several were moulting while ashore. All but two of them (the 1909 record in December, and the skeletal remains found in July 1956) were found in the months of February to April, and with the exception of one from Strahan on the west coast, all were found on the south or east coast of Tasmania. Elsewhere in Australia King Penguin records are few. One live individual came ashore briefly at Port Fairy, Victoria, in February 1973 (Hosken 1973, Hosken *et al.* 1974). In January 1974 a large egg identified as being of the King Penguin was washed ashore near Augusta on the south coast of Western Australia; it contained a well-advanced, undecomposed embryo (Lodge 1976). Then in September 1979 a live individual, either a sub-adult or immature, came ashore at Busselton, south of Perth, Western Australia (Anon. 1979).

To date there has been no published report of the King Penguin in South Australian coastal regions. This note documents the first South Australian record.

THE RECORD

On a Saturday in early March 1987, one of the authors (D. W., at that time with the Department of Fisheries, Mt Gambier) and his wife found a large penguin just under two km NNW along the coast from the outlet of Lake Bonney, north of Cape Banks and Carpenters Rocks in the South-East of S.A. (37°51'S, 140°21'E). The weather was fine at the time. The bird was still alive and D. W. was able to identify it as a King Penguin. It was quiet and made little movement, and could be approached closely where it stood about 20 m above the water line. The bird appeared to be in excellent condition, with sleek, clean plumage and not emaciated, and there were no apparent injuries. On the following Monday, a fisherman contacted D. W. to say that the penguin had died; D. W. collected it that evening and noted that there was no apparent *rigor mortis*. He labelled the bird, put it in his home freezer and a month or so later handed it on to the National Parks and Wildlife Service in Mt Gambier who telephoned P. H. at the South Australian Museum. Unfortunately, due to staff changes the penguin was mislaid in Mt Gambier but it was eventually relocated and taken to the S.A. Museum in December 1988. Before the specimen reached the Museum the bird's neck was broken and the skin torn. In addition, D. W.'s label was lost; there is therefore no record of the exact date of death and collection.

The identification of the bird as a King Penguin was confirmed, and it was skinned at the Museum by Juliet Davies at the end of June 1989. The study skin, and the trunk, tongue and eyes in spirit, now reside in the South Australian Museum's bird collection, registration number B45918. The following description was taken by P. H. before and during skinning (i.e. after at least 22 months in the freezer):

> Total length 86 cm. Ventral surface creamy white with satin sheen; upper chest suffused with orange-yellow, merging into bright orange at base of throat. Dorsal

surface dark blue-grey, with narrow black lateral band bordering the white between the neck and flipper. Head and throat black, with large orange auricular patches which extend down in a narrow line around the side of the neck to join the orange of the upper chest. Flipper 33.5 cm long, dark blue-grey dorsally; ventral surface mostly white, with dull black anterior margin and distal one-third. Feathers around tarsus mostly blue-grey except for white area antero-laterally. Tail feathers heavily worn; no moult except on crown, where pin feathers present. Bill length 89.1 mm (culmen), 126.8 mm (corner of mouth to tip of bill); upper mandible black, lower mandible with distal third black, proximal two thirds pinkish-orange. Legs, feet and claws dull black. Weight 12.5 kg, moderately small amount of abdominal fat, much subcutaneous fat. Gonads: testes 25 x 10 mm (L), 20 x 6 mm (R). Gizzard lining and contained fluid, bright yellow; contents include numerous fragmented cephalopod beaks, including one relatively intact beak of *Histioteuthis* sp. (K. Gowlett-Holmes pers. comm.). No ectoparasites were found; cause of death unknown.

DISCUSSION

The bright orange auricular patches and the pinkish-orange colouring on the lower mandibles indicate that this King Penguin was a mature individual. The highly worn state of its tail feathers suggest that it had recently spent some length of time on land, which in turn suggests that the bird had been breeding. The breeding colony of King Penguins nearest to Australia is at Macquarie Island, some 1,500 km SE of Tasmania. It seems likely that this is the source of the King Penguins that have reached Tasmania since all but one of these were recorded on its southern and eastern shores. The south-eastern South Australian coast is about 2,400 km NW of Macquarie Island, and since the S.A. bird came ashore during the same time of year as the Tasmanian individuals, it may also have come from Macquarie Island. On the other hand, the prevailing westerly oceanic current would assist a bird from, say, Heard or Kerguelen Islands in drifting eastwards to South Australia, so one of these islands may have been where this individual originated, and also the Western Australian specimens.

The populations of King Penguins on most or all of its breeding islands have recovered dramatically in the mid and latter part of this century, after having been greatly reduced or locally exterminated by the penguin oil and sealing industries (Conroy & White 1973, Gales & Pemberton 1988, Rounsevell & Copson 1982). The apparent recent increase in sightings of King Penguins at Tasmania, and the recent "first records" for Victoria, Western Australia, continental Africa (Cooper 1978), and now South Australia, are probably a reflection of this increased abundance.

Mathews (1910–11) used the extent of blue-grey feathering relative to white feathering around the top of the tarsus to separate subspecies of *Aptenodytes patagonicus*. He described *A. p. patagonica* (sic) of South Georgia and the Falkland Islands as having blue feathers all round the tarsus, thus forming a ring, and *A. p. longirostris* (Crozet and Kerguelen Islands) and *A. p. halli* (Macquarie Island) with "the feathers of the inside on the tarsus white".

Stonehouse (1960), however, doubted Mathews' observations, and close examination of photographs taken by J. K. Ling of numerous King Penguins on Macquarie Island (during the summers of 1962–63 and 1963–64; Ling, pers. comm.) indicated that tarsal feathering is variable within a population. In the majority of these Macquarie Island birds the anterior half of the tarsal feathering is all white, but in some only the antero-lateral quarter is white, and intermediate patterns are evident also. On the six S.A. Museum skins (all from Macquarie Island) the anterior half of the tarsal feathering is white, but on the South Australian specimen only the antero-lateral quarter is white, the remainder being blue-grey. In addition, Viot (1987) has demonstrated significant genetic and morphometric differences between the populations of King Penguins on Kerguelen and Crozet Islands. Therefore it appears that further detailed research is necessary before any subspecific groupings of the King Penguin can be defined.

Reasons for the occasional arrival of King Penguins to southern Australian shores remain speculative. This South Australian specimen was in reasonably good condition, and at 12.5 kg was within the normal weight range for this species given by Stonehouse (1960, 1967): 9–21 kg, mean 15 kg. The presence of squid beaks in its gizzard indicates that it had eaten relatively recently before its death. Most of the beaks were too fragmented for identification, but one was sufficiently intact to be identified as a species of *Histioteuthis*, a group of deep-sea squid that usually dwell at a minimum depth of 300–500 m (K. Gowlett-Holmes, pers. comm.). King Penguins have been recorded as diving to depths of more than 100 m frequently, and occasionally

to more than 240 m (Kooyman *et al.* 1982), therefore it is possible that this individual was feeding at great depth. However, the bird may simply have been scavenging, as *Histioteuthis* have been observed to float to the surface after death (Lipinski & Jackson 1989).

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