

AFRICAN PENGUINS *SPHENISCUS DEMERSUS* ALONG THE KWAZULU-NATAL COAST, 1981–1999

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SUMMARY

WILKINSON, C.P., ESMONDE-WHITE, D.A., UNDERHILL, L.G. & WHITTINGTON, P.A. 1999. African Penguins *Spheniscus demersus* along the KwaZulu-Natal coast, 1981-1999. *Marine Ornithology* 27: 111–113.

The African Penguin is rare east of Algoa Bay, Eastern Cape, South Africa. Ninety-nine penguins were found onshore along the coast of KwaZulu-Natal in 1981–1999, mostly in a state of starvation. Of these, 77% were between June and October during, and immediately after, the ‘sardine run’ of Sardine *Sardinops sagax*; 95% of birds that were aged were first-year birds; 96% were in the southern half of KwaZulu-Natal, south of Mtunzini (29°S) where the sardine run is strongest. The observations suggest that juvenile penguins from the nearest breeding colonies, in Algoa Bay, are drawn eastwards by the migrating Sardines; when these shoals dissipate, a lack of food leads to them coming ashore.

At the start of the 20th Century, the African Penguin *Spheniscus demersus* was described as being ‘only occasionally found’ east of Algoa Bay (Stark & Sclater 1906). Quicquelberge (1989) considered it a non-breeding visitor to the coast of the Transkei ‘with dead or incapacitated individuals not infrequently found washed up ashore’; Shelton *et al.* (1984) reported 12 records of penguins along the Transkei coast. Based on atlas fieldwork between 1970 and 1979, Cyrus & Robson (1980) showed seven records of African Penguins along the KwaZulu-Natal coast. Prior to 1970, there were 22 records for KwaZulu-Natal, with the earliest being in 1894 (Shelton *et al.* 1984). However, no reports were made during the 1987–1991 fieldwork for the Southern African Bird Atlas Project; the easternmost record shown is in the Transkei (Crawford & Whittington 1997). North of KwaZulu-Natal the species is a vagrant to southern Mozambique: two penguins were captured on Inhaca Island in 1918, and one was caught in fishing nets at the Limpopo River mouth in November 1994, the northernmost record for the species on the east coast of Africa (Pinto 1958, de Boer & Bento 1999, Parker 1999).

In this note we report on 99 penguins found along the KwaZulu-Natal coast over the period 1981–1999 and brought to Sea World Durban, which functions as a seabird rescue station for this region. Two of the stranded birds had been flipper banded as nestlings, and there are two other recoveries of banded African Penguins on the KwaZulu-Natal coast.

SAFRING V0617 was banded on St Croix Island, Algoa Bay, on 1 March 1982, and was found on Sezela Beach, southern KwaZulu-Natal, on 26 October 1983, 18 months later, and taken to Sea World Durban. S12267 was banded on Bird Island, Algoa Bay, on 31 May 1994 and found, apparently healthy, on Salt Rock Beach, Durban, six weeks later, on 18 July. Prior to this study, P8797 was banded as an immature at St Croix Island on 4 November 1976, and found dead at Scottburgh seven weeks later, on 11 December. In addition, there is a recovery in Durban of an adult penguin from Robben Island, Table Bay; S0641 was released there on 22 June 1990

after rehabilitation at the rescue station of the Southern African National Foundation for the Conservation of Coastal Birds and recovered on 11 November 1990. There is no record of the site of capture of this bird. It cannot be presumed to be from a colony on the Atlantic Ocean coast, because there have been numerous records of oiled penguins which were transported from the breeding colonies in Algoa Bay to Cape Town for rehabilitation, released at Robben Island and which have returned to their breeding colonies (Morant *et al.* 1981). These recoveries suggest that most penguins stranded in KwaZulu-Natal are from the nearest breeding colonies, in Algoa Bay.

Thirty-one percent of all strandings occurred in August, 52% of all strandings were in July or August, and 77% were between June and October (Fig. 1). The ‘sardine run’, when Sardines *Sardinops sagax* migrate rapidly north-eastwards along the Transkei and KwaZulu-Natal coasts, occurs in June–July (Baird 1971, Armstrong & Thomas 1989). The Sardine migration takes place in a narrow band of cold water that sporadically forms inshore along this section of coastline during winter; presumably the penguins (and other Sardine predators) migrate in pursuit of the prey (Heydorn *et al.* 1978). When the shoals of Sardines dissipate, the penguins are apparently unable to find an alternative food source, and come ashore. This is supported by the fact that peak strandings lag the peak of the sardine run by about a month, and that 51% of the stranded penguins were emaciated or dehydrated when captured, indicating a lack of food.

Ninety-five percent (93 out of 98 that were aged) were first-year birds (recognizable on plumage characteristics). Randall *et al.* (1987) found that 17% of 72 recoveries of penguins banded as chicks on the Algoa Bay islands moved eastwards; the median distance for the 12 that moved eastwards was 235 km, compared with 468 km for those that moved westwards. This suggests that it is a minority of inexperienced, recently fledged juveniles that follows the Sardine migration eastwards, and thereby gets drawn into a generally unsuitable environment.

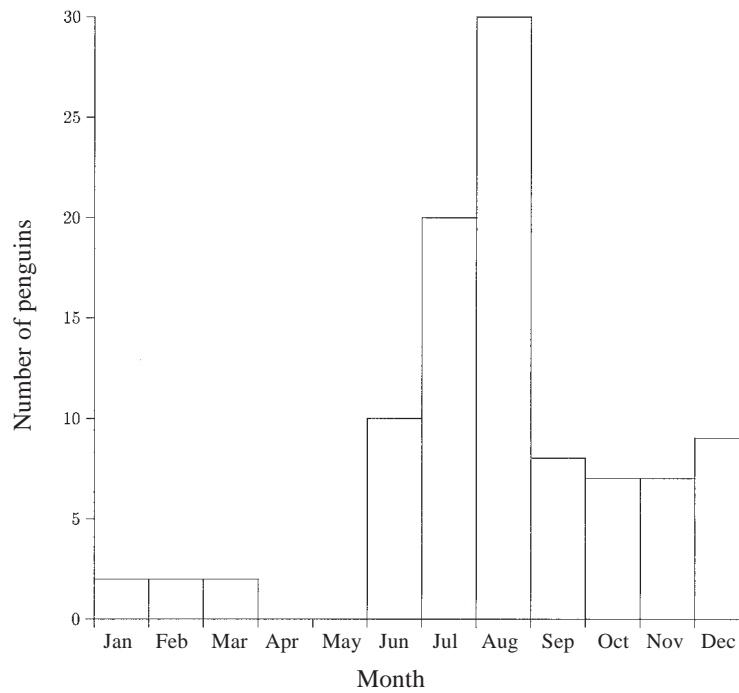


Fig. 1. Monthly numbers of stranded African Penguins recorded along the KwaZulu-Natal coast, 1981–1999.

Of the 82 penguins for which the stranding locality in KwaZulu-Natal is known, 95% were from Mtunzini (29°S) southwards; the remaining four occurred at Sodwana Bay (27°32'S, November 1982, healthy bird in moult), Cape Vidal (28°08'S, July 1994, dead) and two at Richards Bay (28°18'S, December 1995, ill, and March 1998, oiled) (Table 1). African Penguins occur regularly as far north as Durban, 30°S, which is approximately the limit of the sardine run (Baird 1971, Armstrong & Thomas 1989); north of 29°S they are vagrants (Table 1).

Because there is a predominance of records in winter-spring (Fig. 1), the calendar year is a satisfactory period with which to examine the annual pattern of strandings (Fig. 2). The number of birds reported stranded each year ranged from one to 17; the mean numbers of strandings for the periods 1981–1989 and 1990–1999 were 3.0 and 7.2, respectively (Fig. 2). Given that the total African Penguin population is decreasing (Crawford *et al.* 1995), the increase in the number of birds reported is more likely to be due to increased public awareness that stranded penguins can be taken to Sea World Durban rather than to an increased frequency of occurrence.

In 1984, 1992, 1994 and 1996, the numbers of strandings

approached three times the average of the numbers in adjoining years. Explanations for these apparent outliers can only be speculations; the underlying factors may differ in each case and may even operate in other parts of the range of the African Penguin. In 1984, anomalous winter weather conditions appear to have been the cause of the stranding of exceptional numbers of seabirds along the south and east coasts of South Africa (Ryan *et al.* 1989, Jury 1991). In early winter 1994, there was a collapse of the food supply in Algoa Bay, and penguins from this area dispersed widely (Oatley 1995). Unusually large numbers of Cape Cormorants *Phalacrocorax capensis* occurred in northern KwaZulu-Natal in winter 1994 (Kyle 1996); this species is also associated with the sardine run in KwaZulu-Natal (Crawford 1997).

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TABLE 1

Strandings of African Penguins along the KwaZulu-Natal coast, 1981–1997. Numbers of penguins per degree of latitude sectors; these subdivide the coast into sections of nearly equal length

Sector	Number	Percentage
North of 28°S – Kosi Bay – Lake St Lucia	1	1
28° S – 29°S – Lake St Lucia – Mtunzini	3	4
29° S – 30°S – Mtunzini – Isipingo Beach	31	38
South of 30°S – Isipingo Beach – Port Edward	47	57

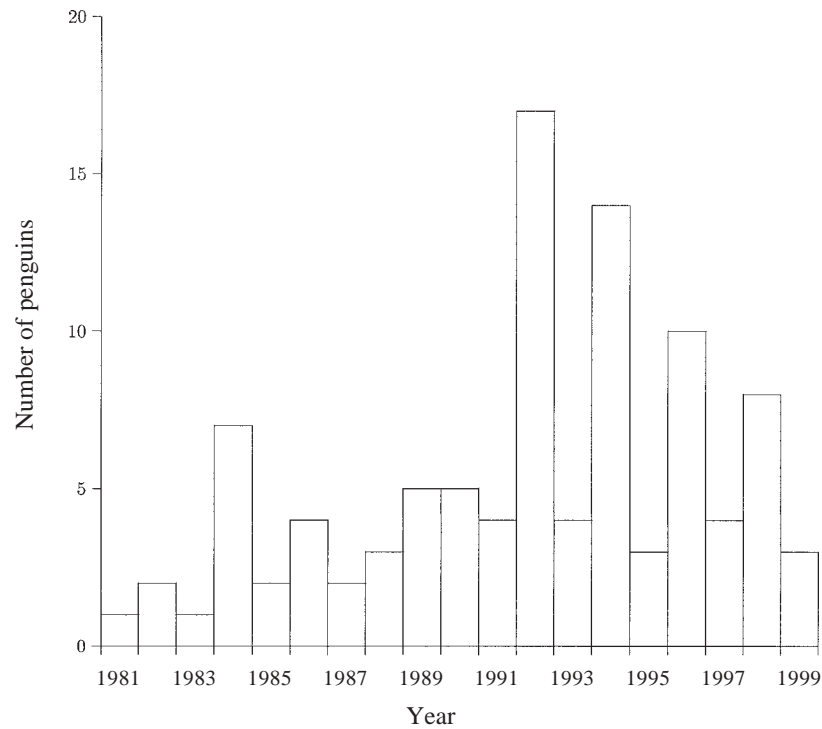


Fig. 2. Annual numbers of stranded African Penguins recorded along the KwaZulu-Natal coast in each calendar year, 1981–1999.

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