



African Penguins

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THE BENGUELA IS ONE OF THE WORLD'S FOUR MAJOR COASTAL UPWELLING REGIONS. Cold, nutrient-rich bottom water is carried to the surface, supporting extremely productive ecosystems that are characterised by vast populations of small pelagic fish, such as anchovies and sardines. These fish in turn attract large numbers of predators, which in the case of the Benguela include seven seabird species found nowhere else. Arguably the most iconic of these is the African Penguin *Spheniscus demersus*, which is also the most threatened species. Quite how one of the most abundant birds in the Benguela has been brought to the brink of extinction makes for sobering reading.

AFRICAN PENGUINS have had a long history of human exploitation. Once Europeans reached the Cape, the penguins' offshore breeding islands became accessible and the birds were collected for food. Penguins soon died out on Robben Island and, as settlers increased in number and range across the Cape, huge numbers of eggs were harvested from other colonies. By the turn of the 20th century more than 250 000 eggs were collected each year, roughly half of all the eggs the penguins

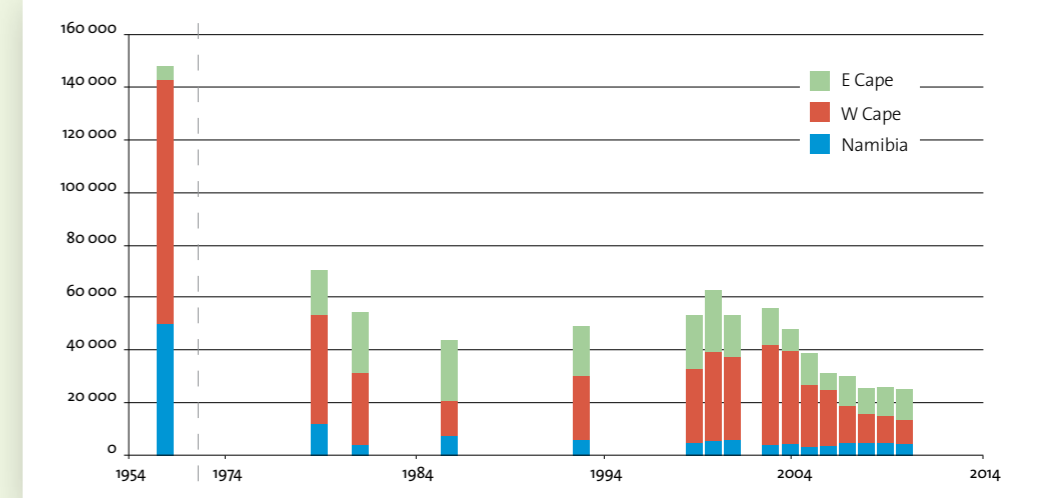
laid. Guano scraping caused additional disturbance and further reduced breeding success. Customarily, African Penguins nest in burrows that provide protection from extreme weather events as well as from predators such as Kelp Gulls. Once the accumulated guano cap was removed from the breeding islands, most penguins were forced to nest in the open, reducing their breeding success.

We don't know how many African Penguins there were before

humans began to have an impact on their populations. At the beginning of the last century Dassen Island alone still supported about one million penguins. By 1956, when Bob Rand conducted the first penguin census, the number of birds on the island had dwindled to fewer than 75 000 pairs, and the total population was less than 150 000 pairs. Despite a ban on egg collecting and the cessation of guano scraping at South African islands, penguin numbers continued to fall. By the late 1970s, fewer than 70 000 pairs survived. The Namibian population suffered the most severe decrease, falling to less than one quarter of its size in 1956 following the collapse of sardine stocks as a result of overfishing. Even in South Africa, where an increase in anchovies partly offset the reduction in sardines as a food source, penguin numbers still decreased.

Oil pollution was at least partly to blame. Penguins, being flightless, are particularly vulnerable to oil spills. With the closure of the Suez Canal in 1967, the number of ships rounding the Cape grew dramatically, increasing the incidence of both catastrophic oil spills and chronic oiling. The Southern African National Foundation for the Conservation of Coastal Birds (SANCCOB) was formed in the late 1960s to counter this threat and it has been remarkably successful in developing cleaning protocols to rehabilitate oiled penguins. But the attrition continued; between 1979 and the early 1990s the Western Cape population halved, making the population in the Eastern Cape increasingly important. By 1993, when the total population of African Penguins was 44 000 pairs, St Croix and Bird islands in Algoa Bay supported more than half of all breeding African Penguins, compared to only four per cent in 1956.

In the late 1990s a series of exceptionally good years of fish recruitment along the west coast of South Africa saw the penguin population in the Western Cape recover somewhat; breeding numbers more than doubled to peak at 38 000 pairs in 2004. This good news was tempered by a 50 per cent decrease in breeding numbers in Algoa Bay between 2001 and 2003, with no apparent cause. Since 2004, numbers of penguins breeding in Namibia and Algoa Bay have remained fairly constant at roughly 4 000 to 6 000 and 8 000 to 12 000 pairs per year respectively, but numbers in the Western Cape have fallen dramatically to around 10 000 pairs, and the total population now stands at barely 25 000 pairs. Given the recent rapid decrease in African Penguin numbers, its threat status was raised from Vulnerable to Endangered in 2011.



What caused the recent collapse of the Western Cape population? Breeding success dwindled at west coast colonies, but this alone couldn't account for the rapid decrease in this area. Resightings of ringed adults at Dassen and Robben islands suggest that adult mortality increased from around 20 per cent per year in 2002–04 to more than 40 per cent by 2006.

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This is very worrying, particularly in a bird like the African Penguin. Seabirds typically are long-lived; rather than investing heavily in reproduction, they defer breeding when conditions are tough, ensuring they live to breed another day. So when adult survival falls, you know times are exceptionally difficult. Why are adults dying? Part of the problem relates to shifts in the distribution of pelagic fish. Since the late 1990s, stocks have moved from the west coast to the south coast, making it difficult for penguins to find sufficient food. The

situation is exacerbated by fishing pressure around breeding islands. Banning fishing within 20 kilometres of some breeding islands temporarily reduced the foraging effort for breeding penguins, but larger buffer zones are necessary to reverse the species' negative population trend. The formation of a new penguin colony along the south coast would go a long way to ensuring the persistence of the species. However, given the lack of suitable breeding islands, it would require the creation of a predator-free environment by fencing off a headland, such as Robberg off Plettenberg Bay.

Multiple factors typically combine to drive a species to extinction and, as a population shrinks, new threats emerge. For example, as colonies contract in size, adults lack sufficient numbers to collaborate in corralling fish schools. Predation by fur seals, sharks and Kelp Gulls, which had little impact on large penguin populations, becomes a significant threat as numbers dwindle. We have already seen the demise of some penguin colonies, such as at Lambert's Bay, and more colonies are teetering on the brink. Urgent action is needed if we are to ensure the survival of African Penguins in the wild.

The graph indicates the decrease in the total number of African Penguin breeding pairs from the 1950s to the present.

REVISED EDITION

The revised edition of *The Eskom Red Data Book of Birds of South Africa, Lesotho, and Swaziland* will be launched at Flock at Sea in March 2013. The new edition of this book, which measures the extinction risk faced by species within the region, has more than 200 species included in the initial assessment. Approximately 112 species have made their way onto the regional Red List for 2012. Experts are in the process of finalising the species accounts, while Martin Taylor, the project manager, is completing the main body of text and the analysis based upon the revised list. The artwork and draft layout have been concluded, and activities between November 2012 and March 2013 will focus on the final proofreading of text, as well as the publication of the book.

BirdLife South Africa, on behalf of the Animal Demography Unit, Percy FitzPatrick Institute of African Ornithology, Endangered Wildlife Trust and the South African National Biodiversity Institute would like to thank all the participants who have contributed to the revision.

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