

# Chapter 25

## Population estimates and trends of seabird species breeding in Namibia

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### Introduction

Of the sixteen seabird species (including the African Black Oystercatcher *Haematopus moquini*) breeding in the Benguela Ecosystem, fourteen breed in Namibia, mostly on islands and rocks along the Namibian coast but also on coastal cliffs, in dune fields, salt pans and estuaries and at localities further inland. Eight seabird species and two subspecies breeding in Namibia are endemic to the Benguela Ecosystem.

Coastal seabirds in Namibia face a number of threats mainly because of human activity and its consequences. Although many of these species breed at relatively protected sites such as islands, away from the direct effects of human development, they are not immune to these pressures and a number of them are in serious need of better conservation measures. A number of seabirds in Namibia are considered threatened, following major population declines in recent decades (du Toit et al. 2003). Other species appear to be benefiting from an increased food supply near towns (e.g. Kelp Gulls *Larus dominicanus vetula*) or through the spread of an alien invasive mussel species (*Haematopus moquini*) (Hockey et al. 2005).

The main risks facing seabirds in Namibia include:

- a lack of prey availability, because of competition with commercial fisheries, other seabirds and seals (e.g. Crawford et al. 2001, 2006)
- past and current habitat alteration and loss, for example from guano scraping on islands, displacement by other species, diamond mining on land (breeding habitat) and at sea (feeding habitat), housing and harbour developments (e.g. Crawford et al. 1989, Braby et al. 2001, Simmons 2005, Kemper 2006)
- human disturbance, from guano scraping, uncontrolled tourism or recreation (e.g. Braby et al. 2001, Crawford et al. 2006)
- small-scale chronic oil pollution from ships discharging waste oil and sunken wrecks leaking oil. This mainly affects flightless African Penguins. An oil spill between Mercury and Ichaboe Islands would put 80% of the Namibian penguin population at risk (Kemper 2006). Fish oil pollution from factories and fishing fleets mainly affect Cape Gannets and gulls (du Toit and Bartlett 2001)

- other pollution; this includes entanglement in fishing gear, particularly during demersal trawls or longline fishing activities (e.g. Ryan and Boix-Hinzen 1998), but also from discarded fishing tackle at recreational beaches (JK pers. obs.), entanglement in lobster traps (Cooper 1985) and in aquaculture structures (MFMR unpubl.data)
- predation by other birds, by seals and by land-based predators such as Brown Hyena *Parahyaena brunnea* and Black-backed Jackal *Canis mesomelas* (e.g. Marks et al. 1997, Simmons and Kemper 2003)
- displacement of breeding colonies by other birds or seals (e.g. Shaughnessy 1984, Crawford et al. 1989)

Climate change, including any changes in upwelling intensity, are likely to exacerbate threats faced by seabirds in Namibia, particularly with regard to prey and breeding habitat availability (Roux 2003, Simmons et al. 2004).

This report summarises latest population size estimates for the fourteen seabird species breeding in Namibia and provides recent population trends (where feasible). Census information mainly stems from data obtained from island staff of the seabird section of the Ministry of Fisheries and Marine Resources, and was augmented with information from other sources, e.g. from counts done by staff of the Ministry of Environment and Tourism, independent individuals and from counts reported in the literature. Population trends were calculated from estimates of the number of breeding pairs based on nest counts (and, in the case of the African Penguin, from counts of moulting individuals in adult plumage) using exponential curves fitted by least-squares regression.

### Population estimates and trends of seabirds breeding in Namibia

#### 1. African Penguin *Spheniscus demersus*

African Penguins breed on ten islands between Hollamsbird Island and Sinclair Island as well as on two mainland sites in Namibia. In addition, one breeding attempt was noted at Penguin Island in January 2006, where breeding had ceased more than a century ago (Kemper 2006).

Between 1996 and 2006, the number of individuals in adult plumage decreased at a rate of 3.1% per year from c. 30 000 individuals in 1996 to c. 21 000 individuals in 2006. Between 2004 and 2006, nearly 4 000 individuals were lost from the Namibian population; emigration by these individu-

als to South African localities is unlikely, because movement between the two regions has been shown to be infrequent (Whittington 2005a, b). The breeding population, estimated from counts of active nests, has decreased from 7 580 pairs in 1992 to 3 288 pairs in 2006 at a rate of 4.0% per year.

## 2. Great White Pelican *Pelecanus onocrotalus*

Approximately 75 000 pairs of Great White Pelicans breed in Africa. In Namibia the species breeds at the artificial Bird Rock guano platform, in Etosha National Park, at Lake Oponomo and at the Hardap dam. Great White Pelicans may not breed if conditions are unsuitable. The number of breeding pairs at Bird Rock and Hardap dam, where they tend to breed annually, totals c. 500 pairs, although up to 1 376 pairs have been recorded at Hardap dam (van Zyl et al. 1995). Recent breeding population estimates from Etosha National Park are lacking, but numbers of individuals average 622, with a maximum of 3 000 individuals (Williams and Borello 1997). Population numbers appear to be stable in Namibia.

## 3. Cape Gannet *Morus capensis*

The Cape Gannet breeds at six islands globally, of which three are located in Namibia. In 1956, the population in Namibia was estimated at nearly 204 000 breeding pairs. By 1978 the population had decreased to 80 000 pairs and by 2004 to 10 500 pairs (Crawford et al. 2007a). This is an annual population decline of 6.3% since 1956, 7.4% since 1978, and 10.5% since 1992. The decline is mainly attributable to losses from Ichaboe Island. The breeding population at Mercury Island has remained relatively stable over the last decade. The colony at Possession Island numbered c. 200 pairs in 2006 and is likely to become extinct in the near future.

## 4. Cape Cormorant *Phalacrocorax capensis*

This cormorant breeds at numerous sites in Namibia. It is particularly sensitive to fluctuating environmental conditions and may not breed in some years or may abandon breeding activities. Estimates of numbers of breeding pairs therefore tend to fluctuate. The breeding population increased in Namibia with the erection of artificial breeding platforms (Crawford et al. 2007b). At most localities, estimates stem from aerial censuses as ground counts of large colonies tend to be inaccurate. The largest number of breeding pairs since comprehensive censuses were first done in 1956 was recorded in 1978/79 (143 000 pairs). Numbers have remained stable during the last decade with an estimated 60 000 to 70 000 pairs breeding in Namibia.

## 5. Bank Cormorant *Phalacrocorax neglectus*

Of the three cormorants species endemic to the Benguela Ecosystem, this species is the most threatened. In Namibia, Bank Cormorants breed at 17 localities (Roux and Kemper in press). In 1978, the breeding population in Namibia was estimated to consist of 7 144 pairs. The most recent estimate of the Namibian breeding population is 2 196 breeding pairs in 2006, comprising 87% of the global population. Mercury and Ichaboe Islands support more than 80% of the Namibian breeding population. Between 1993 and 2006 the Namibian breeding population is estimated to have declined by 65%. This loss is mainly attributable to the population crash at Ichaboe Island after 1994/95. Since then, numbers at Ichaboe Island have continued to decline and although numbers at Mercury Island are increasing, the population has not shown any recovery to pre-1993 levels.

## 6. Crowned Cormorant *Phalacrocorax coronatus*

In Namibia, Crowned Cormorants breed at 16 localities between Bird Rock guano platform to Sinclair Island. The erection of the Walvis Bay guano platform and the subsequent use of its supports has extended its breeding range (Crawford et al. 1982a). A relatively poorly defined breeding season, as well as low colony fidelity (and probably low locality fidelity) make it difficult to obtain accurate population size estimates. Between 1977 and 1981 an estimated 977 pairs bred in Namibia (Crawford et al. 1982a). In 2005/2006 there were roughly 1 010 pairs, with a maximum of 1 070 pairs recorded during 2000/2001. Between 1996/1997 and 2005/2006, the population increased at 2.8% per year. The population in Namibia appears to be stable or slightly increasing.

## 7. Whitebreasted Cormorant *Phalacrocorax carbo*

Whitebreasted Cormorants breed at a number of localities along Namibia's coast from Moewe Bay to the Orange River mouth, as well as at inland localities. The breeding population was estimated to number 1 400 pairs in Namibia between 1977 and 1981, with the majority of birds breeding at Bird Rock guano platform (Crawford et al. 1991). Recent counts from Hottentot's Bay, Ichaboe Island and Penguin Island estimate a total of 77 pairs at these three localities, but no recent counts are available from localities north of Walvis Bay, where the majority of the Namibian coastal population breeds. It is therefore not possible to evaluate trends for the Namibian population of Whitebreasted Cormorants.

## 8. African Black Oystercatcher *Haematopus moquini*

Between 1996 and 2006, the number of individuals occurring along the coast of Namibia averaged 1 726 individuals between Walvis Bay Lagoon / Saltworks and Sinclair Island. Counts may include subadults. This estimate is likely to be an underestimate as a number of sites which could potentially support individuals, such as stretches of rocky shore, could not be counted because of their inaccessibility. An estimate of 323 breeding pairs (based on nest counts) is also likely to be too low, because of the difficulty of finding nests. The population of African Black Oystercatchers was estimated at 1 200 individuals in the early 1980s (Hockey 1983). Unless the population in the 1980s were also underestimated, the apparent population increase since then is likely to be related to an increased availability of the alien invasive Mediterranean mussel *Mytilus galloprovincialis* throughout the species' range (Hockey and Van Erkom Schurink 1992).

## 9. Kelp Gull *Larus dominicanus vetula*

Kelp Gulls breed at a number of localities along the entire coast of Namibia. The number of breeding pairs has almost doubled from 2 300 pairs in 1978/1979 (Crawford et al. 1982b) to approximately 4 000 pairs in 2006. This trend is mainly due to an almost seven-fold increase in the numbers of breeding pairs at Possession Island from 297 pairs in 1978/1979 to 1 992 pairs in 2005/2006. An additional 1 800 pairs breed at the three main islands near Lüderitz (i.e. Seal, Penguin and Halifax Islands). Between 1999/2000 and 2006/2007, the population of Kelp Gulls has increased at a rate of 2.1% per year.

## 10. Hartlaub's Gull *Larus hartlaubii*

In Namibia, Hartlaub's Gulls breed between the Swakopmund Saltworks and Possession Island, although it is pos-

sible that the breeding range includes Plumpudding and / or Sinclair Islands. Breeding activities at these two localities need to be verified. The breeding population from 1976 to 1983 numbered between 1 260 and 1 425 pairs (Duffy et al. 1987); from 1984 to 1989 it numbered between 1 200 and 1 400 pairs (Williams et al. 1990). Breeding in Hartlaub's Gulls tends to be opportunistic and therefore is not strongly seasonal (JK pers. obs). Locality fidelity is poor, e.g. at Shark Island, where the development of Lüderitz harbour led to the extinction of the Shark Island colony. It is likely that these birds now breed at Penguin or Seal Island, but annual counts at these two harbour islands take place when Hartlaub's Gulls do not breed. In addition, recent breeding population estimates for localities north of Mercury Island are lacking. Between 2000 and 2006 the Namibian breeding population numbered between 420 and 600 pairs; this is likely to be an underestimate.

#### 11. Grey-headed Gull *Larus cirrocephalus*

This species is widely distributed throughout southern Africa. Relatively few pairs breed along the coast of Namibia. Scant information on numbers breeding along the coast in Namibia exist for the period 1973 to 1984, from the areas around Walvis Bay and Swakopmund (with two breeding pairs reported for Shark Island in 1977) (du Toit et al. 2003). Counts of breeding pairs are lacking since 1984. It is therefore not possible to provide estimates for the coastal population in Namibia.

#### 12. Caspian Tern *Sterna caspia*

The southern African population of this widely distributed species numbers between 1 000 to 1 500 individuals (Hockey et al. 2005). The breeding population in Namibia is limited to c. 40 pairs, which breed at the Swakopmund Salt Works, the Walvisbay Sewerage Works and Sandwich Harbour (Cooper et al. 1992). No recent counts of breeding pairs in Namibia are available.

#### 13. Swift Tern *Sterna bergii bergii*

In Namibia, Swift Terns mainly breeds around Lüderitz, from Ichaboe Island in the north to Possession Island in the south. The number of pairs breeding as well as the breeding localities vary between years. The Swift Tern colony on Shark Island supported up to 800 breeding pairs in 1986, the largest number was reported from Possession Island, where 1 476 pairs bred in 1989 (Cooper et al. 1990). Swift Terns stopped breeding at Shark Island after 2000, when harbour and housing developments (accompanied by an influx of feral cats and dogs to the area) adjacent to their breeding site caused excessive disturbance. It is likely that breeding activities moved to nearby Penguin or Seal Islands, but no counts are done there during the Swift Tern breeding season. In May 2007, roughly 1 000 pairs of Swift Terns bred at Halifax Island, ca. 10 km west of Shark Island. Whether these are the same birds which previously bred at Shark Island is unclear. An additional 250 pairs bred at Ichaboe and Possession Islands during May 2007.

#### 14. Damara Tern *Sterna balaenarum*

The Namibian population of Damara Terns numbers c. 800 breeding pairs, comprising 87% percent of the global breeding population of the species. The population is presumed to be stable. Breeding occurs along the coast in suitable habitat between the northern Skeleton coast and Elizabeth Bay as well as on Possession Island. The highest density of

breeding pairs occurs along the central Namibian coast. The status of Damara Terns in Namibia has recently been revised from "Endangered" to "Near Threatened" (Hockey et al. 2005).

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