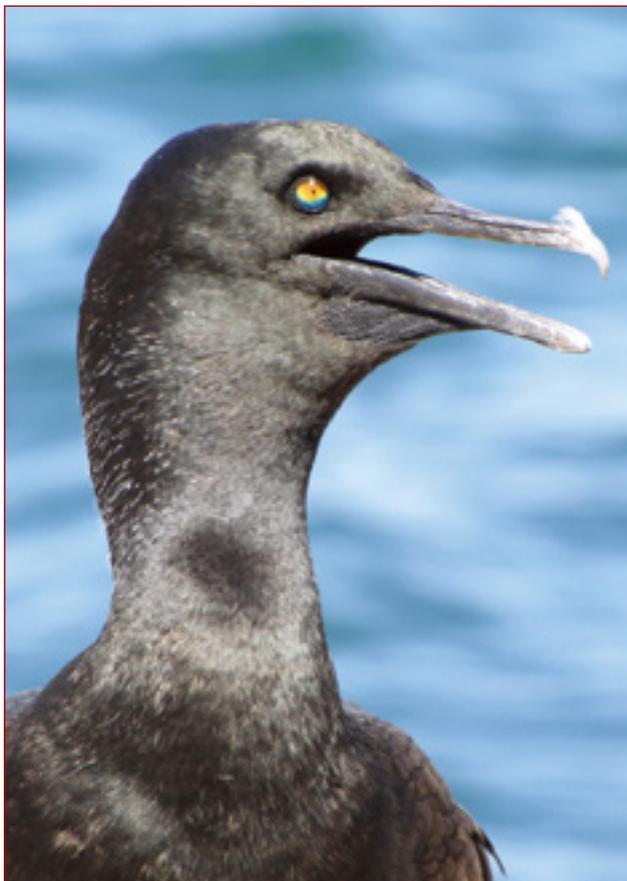
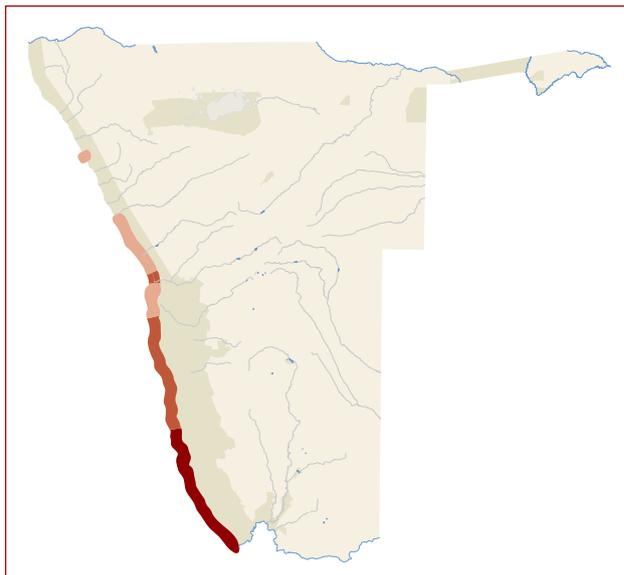


# BANK CORMORANT | *Phalacrocorax neglectus*

J-P Roux; J Kemper | Reviewed by: T Cook; K Ludynia; AJ Williams



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## DISTRIBUTION AND ABUNDANCE

Of the three marine cormorants endemic to the southern African oceans, this species is the most threatened. Globally, Bank Cormorants breed in small colonies between Hollamsbird Island, Namibia, and Quoin Rock, South Africa (du Toit *et al.* 2003, Kemper *et al.* 2007b). In Namibia, Bank Cormorants breed on 14 islands and rocks, in one coastal cave and on one mainland jetty (Cooper 1981, Crawford *et al.* 1999, Bartlett *et al.* 2003, Roux *et al.* 2003, Kemper *et al.* 2007b). Small numbers of Bank Cormorants in breeding plumage carrying nesting material have been observed at the Mile 4 Salt Works north of Swakopmund; however, breeding there has not been confirmed (M Boorman pers. comm.). The non-breeding distribution in Namibia extends north to Hoanibmond (Cooper 1984, Williams 1987a, Crawford 1997a). The Bank Cormorant occupies an area of 23,300 km<sup>2</sup> in Namibia.

In 2010, the Namibian breeding population numbered between 2,600 and 3,100 breeding pairs (Table 2.6), comprising about 86% of the global population; Mercury Island supported 81% of the Namibian and 72% of the global breeding population. Between 1993 and 1998 the Namibian breeding population is estimated to have declined by 68%, a loss mainly attributable to the population crash after 1994/95 at Ichaboe Island, once the most important breeding locality for the species. Numbers there continue to decline. The population at Mercury Island has increased since the late 1990s, but in 2010 the overall population was between 47% and 49% of that prior to 1993.

<b>Conservation Status:</b>	Endangered
<b>Southern African Range:</b>	Coastal Namibia, South Africa
<b>Area of Occupancy:</b>	23,300 km <sup>2</sup>
<b>Population Estimate:</b>	2,600 to 3,100 breeding pairs in Namibia
<b>Population Trend:</b>	>50% decline in the last three generations
<b>Habitat:</b>	Coastal islands and rocks, protected mainland sites, inshore marine waters
<b>Threats:</b>	Lack of quality prey base, extreme weather events, disturbance, predation by gulls and seals, pollution from oiling, entanglement in lobster traps, competition for space, disease

**TABLE 2.6:**

Number of Bank Cormorant breeding pairs at individual breeding localities in Namibia (listed north to south), estimated from annual peaks of monthly nest counts at Mercury and Ichaboe islands, and elsewhere from opportunistic counts, not necessarily done at peak breeding (Crawford *et al.* 1999, Bartlett *et al.* 2003, Kemper *et al.* 2007, MFMR unpubl. data, J-P Roux pers. obs.).

Breeding locality	Number of breeding pairs	Date of most recent estimate
Hollamsbird Island	19	1996
Oyster Cliffs	20	2002
Mercury Island	2,505	2010
Neglectus Islet	34	2002
Hottentot Bay jetty	20	2007
Ichaboe Island	217	2010
Dagger Rock	50	1996
Seal Island	18	2010
Penguin Island	70	2010
Long Islands	36	1995
Lady's Rocks	37	2000
North Reef	14	2010
Albatross Rock	25	2008
Pomona Island	6	2008
Plumpudding Island	9	2008
Sinclair Island	9	2008



## ECOLOGY

The Bank Cormorant breeds in colonies throughout the year. South of Lüderitz, where breeding localities mostly support small numbers of birds, the timing of breeding is erratic, but breeding tends to peak during winter. North of Lüderitz, breeding activities peak during summer. There is some inter-annual variability in the timing of breeding within localities (MFMR unpubl. data). Differences in breeding seasonality are probably related to seasonality in food availability. Age at first breeding is two to three years (Crawford *et al.* 2001). Clutch size is one to three eggs (Cooper 1987), although four-egg clutches have been reported at Mercury Island (Jones 2000). Up to three clutches may be initiated in one season, but only one brood is usually raised (Cooper 1987). Incubation lasts, on average, 27 days per egg (Cooper 1987). Breeding success is considered low compared to that of other cormorant species (Sherley *et al.* 2011). After leaving the nest, fledglings may still be under parental care for up to three months (Cooper 1985a). Breeding birds are sedentary, with a foraging range of less than 10 km (Siegfried *et al.* 1975, Cooper 1981, Ludynia *et al.* 2010b). Movement of breeding adults between Mercury and Ichaboe islands (a distance of about 65 km) has been recorded (Crawford *et al.* 1999). Juvenile birds may disperse beyond the foraging

range of adults (Cooper 1981, MFMR unpubl. data). Adults and non-adults tend to occur and forage in different areas (Cooper 1981, 1985b).

Bank Cormorants feed inshore (Ludynia *et al.* 2010b), often among kelp beds, either solitarily or sometimes in small groups (Cooper 1985b). They feed demersally; dives to 47 m depth have been recorded near Mercury Island (Ludynia *et al.* 2010b). Bearded Goby *Sufflogobius bibarbatus* dominates the diet in Namibia, but Cape Rock Lobster *Jasus lalandii*, Sole and Klipvis are also taken (Cooper 1985b, Crawford *et al.* 1985, Ludynia *et al.* 2010b).



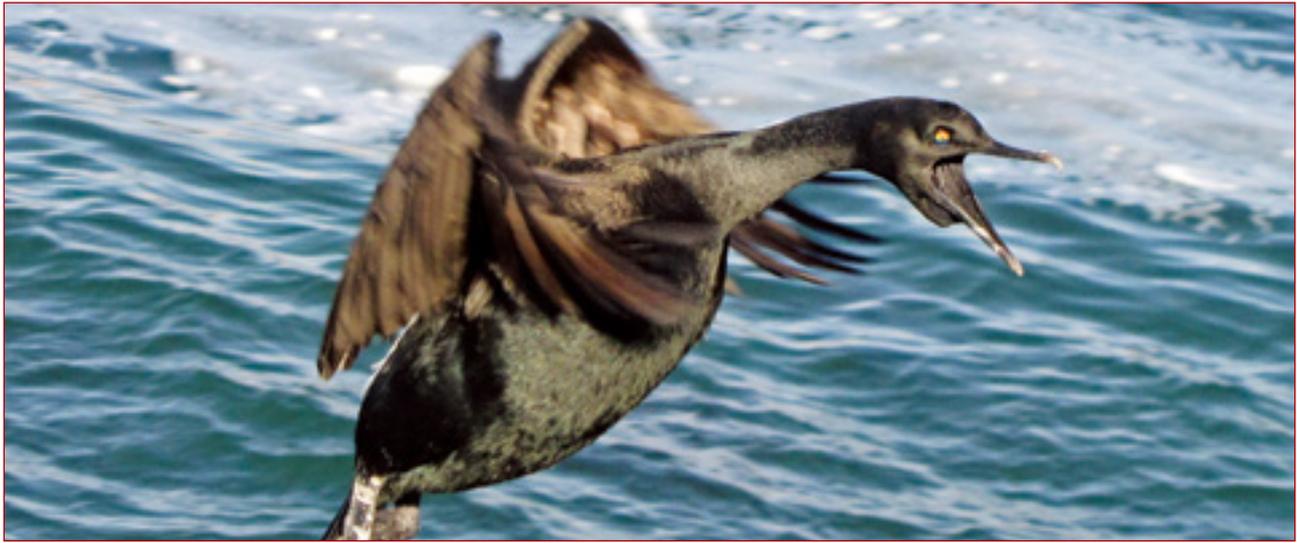
## THREATS

The lack of sufficient energy-rich prey is thought to be a main threat (Crawford *et al.* 1999, Ludynia *et al.* 2010a, 2010b). Extreme weather events, particularly heat waves, may cause large-scale breeding failure; nest failure following storms and high wave action appears to be less common in Namibia than in South Africa (Sherley *et al.* 2011). Climate change, along with expected increases in the frequency or intensity of extreme events (Roux 2003) are likely to further limit breeding success, recruitment and possibly adult survival rates. Bank Cormorants are sensitive to disturbance, including guano scraping, and may abandon their nests (de Villiers & Cooper 2002, MFMR unpubl. data); nest contents are then vulnerable to predation by Kelp Gulls *Larus dominicanus* (Cooper 1987, du Toit *et al.* 2003). Nesting birds are sometimes displaced by Cape Cormorants *Phalacrocorax capensis* (MFMR unpubl. data). Cape Fur Seals *Arctocephalus pusillus pusillus* prey upon Bank Cormorants at Ichaboe Island (du Toit *et al.* 2004). Oiling of Bank Cormorants in Namibia is rare, but an oil spill close to Mercury Island could put the future of the entire species at risk. Lobster trapping takes place in and around the kelp beds where birds from Mercury, Neglectus and Ichaboe islands forage and dive for nesting material, and entanglement and subsequent drowning in lobster traps has been reported (Cooper 1985b). At Mercury Island, competition with Cape Fur Seals led to displacement from breeding sites at Mercury Island during the 1980s (Crawford *et al.* 1989); after the implementation of a seal displacement programme, the breeding population increased again (Crawford *et al.* 1994). Catastrophic diseases such as avian cholera have affected other cormorants in South Africa and potentially pose a serious risk to the population (Crawford *et al.* 1992, Williams & Ward 2002, Waller & Underhill 2007). Poisoning, probably from toxic algal blooms, has been recorded (MFMR unpubl. data).



## CONSERVATION STATUS

This species is categorised as *Endangered* in Namibia following IUCN criteria A2(a) and A2(c) (IUCN 2012a),



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because of an estimated decline of 51% to 53% of breeding adults in the last three generations. It is also considered *Endangered* globally (IUCN 2012a) and in South Africa (Taylor *et al.* in press). In the late 1970s, the population of Bank Cormorants in Namibia numbered about 7,500 breeding pairs. Numbers declined in the mid-1980s following a major Benguela Niño event, but accurate population counts from this period are lacking until the early 1990s (Crawford *et al.* 1999). Low oxygen conditions in 1994 and a Benguela Niño event and low upwelling in 1995 (Gammelsrød *et al.* 1998, Hamukuaya *et al.* 1998) affected many fish stocks, including the Bearded Goby. During that time, the Namibian Bank Cormorant population declined dramatically, particularly at Ichaboe Island, where numbers were reduced by 86% in the five years between 1992/93 and 1997/98, from 5,182 to 732 pairs (MFMR unpubl. data). This decline suggests not only poor recruitment, but also increased adult mortality during this period. Although the species breeds at many localities throughout its range, about three quarters of the global population currently breeds at the species' last stronghold, the diminutive Mercury Island. Catastrophic events such as an oil spill or anomalous environmental events in this highly variable system could bring about a population collapse in Bank Cormorants.

All Namibian islands were declared nature reserves in 1987 while under South African control, but this status lapsed in 1994 when they were transferred to Namibia. All breeding islands, rocks and the Hottentot Bay jetty became part of the Namibian Islands' Marine Protected Area in 2009 (Currie *et al.* 2009). One of its main aims is to protect the breeding and foraging habitats of key threatened seabirds, including the Bank Cormorant (Currie *et al.* 2009, Ludynia *et al.* 2012) and access to these localities is strictly controlled. Four of the breeding islands (Mercury, Ichaboe, Seal and Penguin islands) have global Important Bird Area

status (Simmons *et al.* 2001b); Mercury and Ichaboe islands are permanently staffed by personnel from the Ministry of Fisheries and Marine Resources. Oyster Cliffs, a cave site inaccessible to land predators, falls into the Namib-Naukluft National Park. The Bank Cormorant should be given *Specially Protected* status in revised or new Namibian Parks and Wildlife legislation because of its rapid recent decline; it has been included in Annex 2 of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA).



## ACTIONS

The enforcement of regulations relating to the Marine Resources Act (Act 27 of 2000) and the Namibian Islands' Marine Protected Area are crucial. Management plans need to be developed for each Bank Cormorant breeding locality to ensure that conservation management strategies are implemented. These should include island-specific oil contingency plans and measures to limit disturbance. Guano harvesting on islands where Bank Cormorants breed should be prohibited (Currie *et al.* 2009). The National Oil Spill Contingency Plan needs to be revised and effective, and realistic measures must be put in place to be prepared in the event of a catastrophic spill. Oil pollution legislation should be reviewed for vessels illegally discharging oil at sea and existing legislation should be strictly enforced. Population monitoring efforts should be continued. Key demographic parameters, such as adult survival, juvenile recruitment, post-fledging movements and aspects of Bank Cormorant foraging ecology, particularly at Ichaboe Island, need to be investigated. Monitoring of seal populations at and near breeding localities should be continued and individual seals specialising in seabirds should be removed. Captive rearing efforts in order to boost population numbers have to date not been successful, but could be reconsidered as a last resort (Cook 2011).