CASPIAN TERN | *Hydroprogne caspia (Sterna caspia)*

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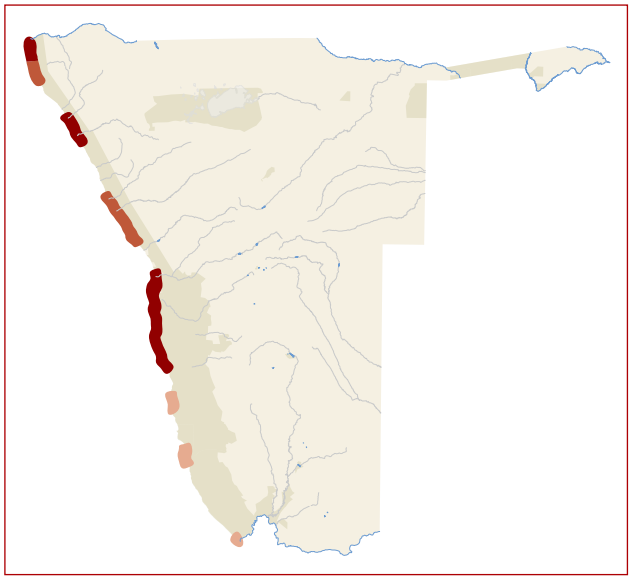
Conservation Status:	Vulnerable
Southern African Range:	Coastal Namibia, South Africa, Mozambique; inland localities in Namibia, Botswana, South Africa, Zimbabwe, Mozambique
Area of Occupancy:	13,100 km^2
Population Estimate:	Mean of 160 birds, limited breeding at coast
Population Trend:	Stable, breeding often unsuccessful
Habitat:	Coastal, river mouths, large inland dams, islands in coastal pans
Threats:	Predators, flooding of breeding islands, human disturbance



DISTRIBUTION AND ABUNDANCE

This species is widespread throughout the world, occurring in the Holarctic, Australasia and Oriental regions (Cooper *et al.* 1992). It is also found in Africa, where it is a breeding resident in western and southern Africa, dispersing over short distances and a Palearctic migrant elsewhere (del Hoyo *et a*l. 1996, Sinclair & Ryan 2003). Its range in southern Africa is highly fragmented both at the coast and inland, with only 28 breeding locations known (Cooper *et al.* 1992). Concentrations occur in South Africa at Saldanha Bay, the Cape Peninsula to Cape Agulhas, Port Elizabeth and at Lake St Lucia – its main breeding ground (Taylor *et al.* 1999). In Namibia, it is primarily found in pockets at Walvis Bay, Sandwich Harbour and the Orange River mouth; smaller numbers are found at the Kunene River mouth and Hardap Dam (Table 2.3). Birds breeding at Ilha dos Tigres, southern Angola (Dyer 2007), probably mix with those of the central Namibian coastline (AJ Tree pers. comm.). Dodman (2002) estimated the African and southern European population at 78,300 individuals. The southern African breeding population, including that in southern Angola, numbers at least 600 breeding pairs; however, but appears to vary annually (AJ Tree unpubl. data). Numbers are thought to have decreased since the 1950s (Tree 2005b). The total Namibian population is small, averaging about 160 birds (Table 2.3), with a maximum of about 770 birds. Population trend analysis suggests that the population is stable (Kolberg 2013c).

ECOLOGY

The Caspian Tern breeds mainly in winter in eastern South Africa (Cooper *et al.* 1992, Taylor *et al.* 1999), but in the summer in Namibia from December (two records), January (five records), February (two records), to March (six records: Prozesky 1963, Clinning 1978c, Cooper *et al.* 1992, P Bartlett, R Braby, AJ Tree, AJ Williams pers. obs.). In Namibia, the species nests as single pairs or in small colonies of up to 48 pairs (mean of 15 pairs, n=12) on small sandy islands in salt

TABLE 2.3:

Summary of Caspian Tern numbers in wetlands throughout Namibia 1977 to 2012. Data from the Avifaunal database, wetland counts (MET), M Anderson, M Boorman, R Braby, T Hall, J Kemper, H Kolberg, RE Simmons, K Wearne unpubl. data.

Locality	Mean number ± 1SD	Maximum count	Number of counts
Kunene River mouth	11 ± 16	50	9
Cape Cross Saltworks	4 ± 5	11	4
Swakopmund (Mile 4) Saltworks	2 ± 1	5	8
30 km beach Swakopmund to Walvis Bay	4 ± 6	12	4
Walvis Bay wetlands	58 ± 44	229	50
Walvis Bay Sewage Works	3 ± 1	8	31
Sandwich Harbour	36 ± 34	181	62
Conception Bay	3 ± 1	4	3
Lüderitz Peninsula	2 ±1	5	18
Lower Orange River and wetlands	7 ± 12	44	12
Orange River mouth	16 ± 36	165	25
Hardap Dam	14 ±16	54	10

works near Swakopmund and Walvis Bay and at Sandwich Harbour. Breeding has also been recorded at Possession Island (one pair in 2011, 2012 and 2014: P Bartlett pers. obs.) and the Orange River mouth (Cooper *et al.* 1992). Mean clutch size from 75 observed clutches was 1.96, with a clutch size of two comprising 56% of observations and clutch sizes of one and three comprising 24% and 20% of observations, respectively. The largest colony was found in March 2004 at the Walvis Bay salt works, comprising 75 nest scrapes, including 48 active nests, in a remote evaporation pond on a sandy island measuring 80 m by 40 m (R Braby pers. obs.). One of the nests contained one Caspian Tern and one Kelp Gull *Larus dominicanus* egg. The colony was later depredated by Black-backed Jackals *Canis mesomelas* that waded or swam through knee-deep water to reach the island (R Braby pers. obs.). Of the eleven colonies for which data are available (Clinning 1978c, R Braby, AJ Tree, AJ Williams pers. obs.), only four produced nestlings, and one probably produced nestlings. Most colonies suffered predation and one was flooded. This information may underestimate success, since a few flighted immatures have been consistently seen with adults in roosting flocks during shorebird counts at Walvis Bay and Sandwich Harbour (R Braby, RE Simmons pers. obs.). Similarly, birds encountered occasionally at the Lüderitz Peninsula are often accompanied by young birds that beg (and sometimes receive food) from adults (J Kemper pers. obs.).

The Caspian Tern prefers coastal wetlands with embayments where most fishing occurs in shallow water (Cooper *et al.* 1992) and immature birds are often found being fed by adult birds (R Braby, J Kemper, RE Simmons pers. obs.). Inland it is found at large water bodies, favouring saline pans and large impoundments (Tree 2005b). It generally feeds on larger fish than other terns (Tree 2005b).

THREATS

Namibia is unlikely to be a significant source of Caspian Terns because of the relatively small numbers of breeding pairs and apparent low breeding success of birds. Success is usually thwarted by terrestrial predators and colonies are known to be highly susceptible to predation by dogs, jackals and humans (Clinning 1978c); extremely high jackal densities on the Namibian coast (M Griffin pers. comm.) are likely to limit Caspian Tern breeding success in all but the most isolated nesting islands. An appraisal of threats throughout southern Africa (du Toit *et al.* 2003) listed predation by feral dogs as the highest threat, followed by climate change raising sea levels and flooding breeding islands, followed by disturbance generated by tourism and research and chemical pollution impacting breeding success. Lesser threats were entanglement in fishing lines, fluctuating water levels in dams and habitat loss.

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CONSERVATION STATUS

This species is classified as *Vulnerable* because of its small population of less than 1,000 individuals and poor breeding record in Namibia. Populations in Namibia are also highly fragmented, although they may still be connected through the large-scale movements this species undertakes (maximum of 900 to 1,100 km: Underhill *et al.* 1999). Inland movement appears to be related to water levels at inland pans (NJ Skinner in Crawford 1997d). There is no evidence for a decline in Namibia, and little evidence from South Africa in recent decades (Barnes 2000a), although the population has declined since the 1950s (Tree 2005b). It is not regarded as globally threatened (IUCN 2012a) but is considered *Vulnerable* in South Africa (Taylor *et al.* in press). The breeding island in Walvis Bay lies within the Walvis Bay Important Bird Area, and the one in Sandwich Harbour within the Dorob National Park. The Caspian Tern is listed in Annex 2 of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) and in Appendix II of the Convention for the Conservation of Migratory Species of Wild Animals (CMS). Revised or new Namibian Parks and Wildlife legislation should afford it *Specially Protected* status.

ACTIONS

Breeding success on islands, for example in the Swakopmund (Mile 4) and Walvis Bay salt works, can be improved by deepening channels around such islands or flooding the evaporation pans to deeper levels to discourage jackal predation (Cooper *et al.* 1992). Human interference, including littering, should be limited at such colonies to reduce the incidence of gulls and terrestrial predators. Research activity should be limited to minimise disturbance and possibly be restricted to boat-based visits such that terrestrial predators cannot follow any obvious tracks or scent. Once secure breeding islands are established, it is likely that successful birds will return to breed. Flights over the colony (through strict enforcement of overflight regulations) must then be reduced to zero.