

# SOOTY SHEARWATER | *Puffinus griseus*

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<b>Conservation Status:</b>	Near Threatened
<b>Southern African Range:</b>	Waters off Namibia, South Africa
<b>Area of Occupancy:</b>	Unknown
<b>Population Estimate:</b>	More than 20 million birds globally
<b>Population Trend:</b>	Declining
<b>Habitat:</b>	Islands off South America, Australia, New Zealand, continental shelf, open ocean
<b>Threats:</b>	Longline, trawl and driftnet fisheries, climate change, harvesting of chicks, marine debris

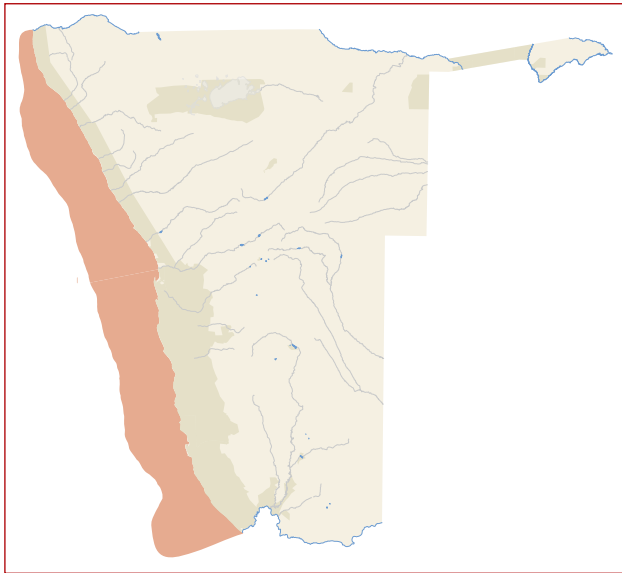


## DISTRIBUTION AND ABUNDANCE

This large, abundant and migratory shearwater breeds on the Falkland Islands, as well as on islands and some headlands off southern Chile, Australia and New Zealand; few also breed on Tristan da Cunha islands (Ryan 2005f, IUCN 2012a). During the non-breeding season, between April and September, it disperses throughout the Pacific, Atlantic and southern oceans, as far north as Alaska and Japan, and as far south as the Antarctic Polar Front. The Sooty Shearwater can travel exceptional distances. Birds monitored at breeding colonies in New Zealand spent the breeding season relatively close to the breeding colony, but also foraged along the Antarctic Polar Front (Weimerskirch 1998b, Shaffer *et al.* 2006) and wintered in the North Pacific, undertaking migration distances of 64,000 km and travelling up to 910 km a day (Shaffer *et al.* 2006). Tagged individuals from the Falkland Islands moved

more than 15,000 km in about three weeks on their northward migration and after spending the austral winter months in shallow, warm continental shelf waters undertook a two- to three-week return journey (Hedd *et al.* 2012).

Mostly juvenile or non-breeding birds (Brooke 2004) commonly occur along the western and southern coasts of southern Africa throughout the year, particularly during winter (Ryan 2005f). They occur singly in oceanic waters, but may be found in large flocks over the continental shelf (Ryan & Rose 1989, Ryan 1997d). Although reliable population estimates are lacking from most breeding colonies (Newman *et al.* 2009), the world population is estimated at more than 20 million birds (Heather & Robertson 1997). Population declines at several breeding colonies and localities where non-breeding birds are monitored (e.g. Veit *et al.* 1996, Gaze 2000, Scofield



& Christie 2002, Scott *et al.* 2008) suggest that the overall population is declining. In Namibia, the species is most common in waters off the central and southern coast (Ryan 2005f), but still occurs in substantial numbers in northern Namibia (Roux *et al.* 2007). Between 320,000 and 750,000 birds are roughly estimated to visit Namibian waters in summer and winter, respectively (Crawford *et al.* 1991).



## ECOLOGY

Like most shearwaters, albatrosses and petrels, the Sooty Shearwater is a long-lived, monogamous species with a low reproductive output (Warham 1996). It breeds in large colonies, nesting in burrows dug up to three metres into the ground. Incubation of the single egg takes about 53 days; the chick fledges roughly three months after hatching (Warham *et al.* 1982). Age at first breeding is five to seven years (Richdale 1963); adult annual survival rate is about 0.96 (Clucas *et al.* 2008).

It forages over large areas, even when provisioning chicks (Weimerskirch 1998b, Shaffer *et al.* 2006, 2009). It feeds mostly by surface-seizing and shallow-diving, but also actively pursues prey (Ryan 2005f); dive depths of 67 m have been recorded (Weimerskirch & Sagar 1996). Diet includes small fish, squids, euphausiids, mantis shrimps and other crustaceans (Brown *et al.* 1981, Jackson 1988). It readily scavenges fishery discards (Jackson 1988, Watkins *et al.* 2008) and may feed in flocks on schooling fish, including in association with seals, dolphins or whales (Jackson 1988).



## THREATS

Historically, Sooty Shearwaters were caught deliberately for food by southern African fishers, and this practice might continue occasionally. Tuna pole fishers often hit and kill

shearwaters attempting to scavenge their bait (B Rose pers. comm.). Accidental bycatch in trawl, longline and driftnet fisheries pose a threat to the species throughout its distribution (Uhlmann *et al.* 2005, Robertson *et al.* 2006, Scott *et al.* 2008). In southern African waters, an estimated 17% of seabird catch mortality in the demersal longline fishery between 2000 and 2006 consisted of shearwaters and included mainly Great Shearwaters *P. gravis* (Petersen *et al.* 2008b); catches of Sooty Shearwaters have not been quantified and remain speculative. In the trawl fishery in South Africa, Sooty Shearwaters accounted for 3% of associated seabird mortalities in 2004 and 2005 (Watkins *et al.* 2008). A male bias in fisheries bycatch (Ryan & Boix-Hinzen 1999, Scott *et al.* 2008) intensifies the impact on Sooty Shearwater population dynamics.

Climate change, induced by increases in sea surface temperatures and changes in ocean currents, are thought to have caused a 90% decline of numbers of Sooty Shearwaters between 1987 and 1994 along the west coast of North America during the non-breeding season (Veit *et al.* 1997).

The traditional harvest of up to 360,000 chicks per year from islands off southern New Zealand (Newman *et al.* 2009) is not thought to play a major role in the global decline of the species (IUCN 2012a), but could contribute to the decline of some populations (Scott *et al.* 2008). Ingestion of synthetic materials poses a further threat (Petry & Fonseca 2002), with 51% of birds sampled off southern Africa in the 1980s found to contain ingested plastics (Ryan 1987b).



## CONSERVATION STATUS

Numbers of Sooty Shearwaters are thought to be declining, particularly because of high mortality rates in longline, trawl and driftnet fisheries. Although the extent to which fishing activities in Namibian waters have contributed to this decline has not been quantified, the species is classified as *Near Threatened* in Namibia and should be given *Specially Protected* status there. Despite its large global population, the species is listed as globally *Near Threatened* because of a perceived moderately rapid decline (IUCN 2012a); it is also listed as *Near Threatened* in South Africa (Taylor *et al.* in press).



## ACTIONS

Namibian conservation efforts should concentrate on the continued gathering of reliable statistics on the extent of fisheries-induced mortalities of Sooty Shearwaters in Namibian waters. The National Plan of Action (NPOA) for seabirds and its accompanying regulations need to be ratified by the Namibian government, and mitigation measures outlined in the regulations associated with the NPOA need to be strictly enforced.