PETER RYAN (3)

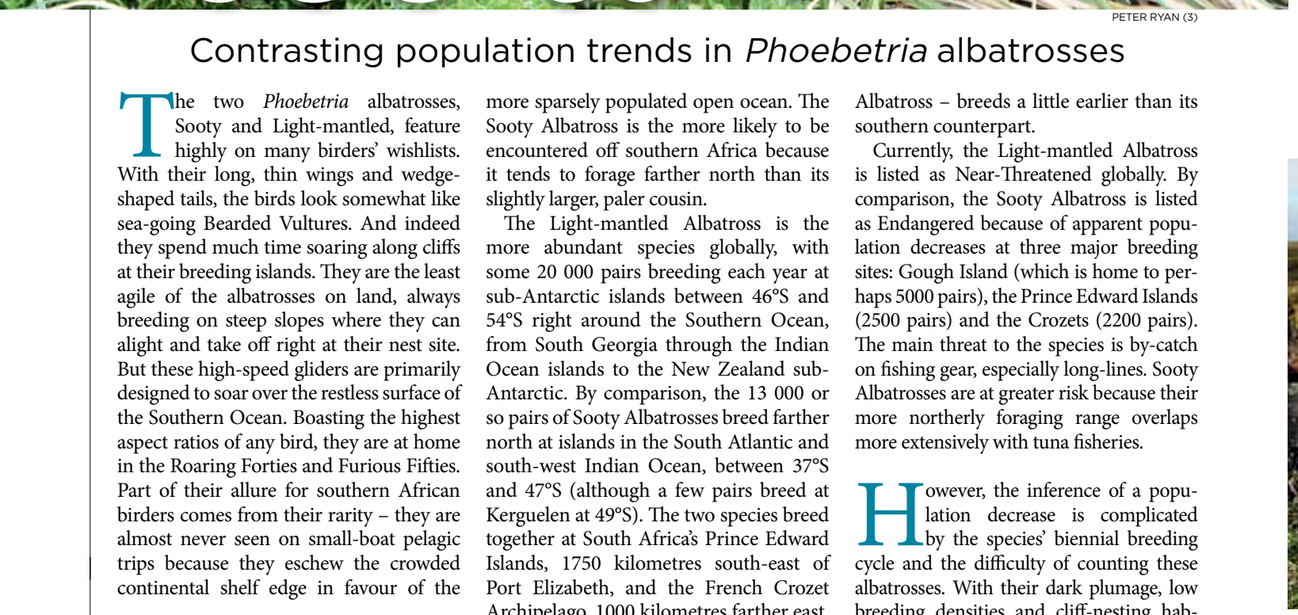
see-saw

Contrasting population trends in *Phoebetria* albatrosses

The two *Phoebetria* albatrosses, Sooty and Light-mantled, feature highly on many birders' wishlists. With their long, thin wings and wedge-shaped tails, the birds look somewhat like sea-going Bearded Vultures. And indeed they spend much time soaring along cliffs at their breeding islands. They are the least agile of the albatrosses on land, always breeding on steep slopes where they can alight and take off right at their nest site. But these high-speed gliders are primarily designed to soar over the restless surface of the Southern Ocean. Boasting the highest aspect ratios of any bird, they are at home in the Roaring Forties and Furious Fifties. Part of their allure for southern African birders comes from their rarity – they are almost never seen on small-boat pelagic trips because they eschew the crowded continental shelf edge in favour of the more sparsely populated open ocean. The Sooty Albatross is the more likely to be encountered off southern Africa because it tends to forage farther north than its slightly larger, paler cousin.

The Light-mantled Albatross is the more abundant species globally, with some 20 000 pairs breeding each year at sub-Antarctic islands between 46°S and 54°S right around the Southern Ocean, from South Georgia through the Indian Ocean islands to the New Zealand sub-Antarctic. By comparison, the 13 000 or so pairs of Sooty Albatrosses breed farther north at islands in the South Atlantic and south-west Indian Ocean, between 37°S and 47°S (although a few pairs breed at Kerguelen at 49°S). The two species breed together at South Africa's Prince Edward Islands, 1750 kilometres south-east of Port Elizabeth, and the French Crozet Archipelago, 1000 kilometres farther east. As is often the case where a latitudinally segregated species-pair overlaps, the more northerly species – in this case the Sooty Albatross – breeds a little earlier than its southern counterpart.

Currently, the Light-mantled Albatross is listed as Near-Threatened globally. By comparison, the Sooty Albatross is listed as Endangered because of apparent population decreases at three major breeding sites: Gough Island (which is home to perhaps 5000 pairs), the Prince Edward Islands (2500 pairs) and the Crozets (2200 pairs). The main threat to the species is by-catch on fishing gear, especially long-lines. Sooty Albatrosses are at greater risk because their more northerly foraging range overlaps more extensively with tuna fisheries.



above *Sooty Albatrosses are hard to count, especially on Gough Island where they breed on rocky outcrops throughout the island.*

However, the inference of a population decrease is complicated by the species' biennial breeding cycle and the difficulty of counting these albatrosses. With their dark plumage, low breeding densities and cliff-nesting habits, Sooty Albatrosses are hard to count, especially on islands (like Gough) that have large, inaccessible cliffs. In truth, the estimate of 5000 pairs on Gough is very much a thumb suck. We know there are lots of Sooties at the island and on a calm day it is not unusual to see hundreds spiralling together around the island's peaks. But the island is so rugged that no attempt has been made to estimate their numbers with any accuracy. Population trends at Gough are based on counts at 16 sites close to the island's weather station where 220–240 pairs breed each year. The most recent analysis of these counts (Cuthbert et al. 2014) suggests that the population has remained stable over the past decade or so, but only a tiny fraction of the island population is monitored.

At the Crozet Archipelago, only the population on Île de la Possession is counted regularly; estimates for the four other islands in the group date back to the 1970s and 1980s. The numbers breeding at Possession decreased from some 300 pairs in 1980 to about 70 pairs in 2005, but have since recovered to more than 110 pairs. However, if the numbers breeding at the other Crozet islands have followed the same trend, the total population for this island group may now be less than 1000 pairs.

On South Africa's Prince Edward Islands most Sooty Albatrosses breed on relatively low sea cliffs, where they are easier to count than on the much larger sea cliffs and inland valleys at Gough and Tristan da Cunha. However, counts of Sooties on sea cliffs depend greatly on the extent to which researchers are prepared to descend to the very edge of the cliffs to peer down. The population estimate for Prince Edward Island almost doubled when a more adventurous observer conducted the count in 2008!

Sooty Albatross chicks on their nests on Marion Island. Accurate counts are possible along most of the island's low cliffs.

Sporadic counts on Marion Island in the late 1970s and during the 1980s suggested an annual breeding population of almost 2000 pairs. Counts from 1996 onwards showed numbers decreasing to perhaps 1400 pairs by 2008 (Ryan et al. 2009). However, a new paper analysing counts until 2014 shows that this decrease has been reversed in the past few years, with the population increasing on average at four per cent per year since 2006 (Schoombie et al. 2016).

It was recommended that a dedicated count be made specifically for Sooty Albatrosses in mid-October, when most pairs have just laid. Traditionally, counts have been conducted in late November, by which time some pairs have already failed. In 2015, the count yielded at least 2250 pairs on Marion, the highest ever count for this island. Caution is needed when interpreting annual counts, however, because Sooty Albatrosses typically take a year off after having bred successfully. As a result, the numbers breeding in a given year depend in part on success in the preceding year. A poor breeding year results in a bumper incubator count the following year, whereas a good breeding year will tend to reduce breeding numbers. However, there was nothing to suggest that breeding success in 2014–15 was unusually low.

The most recent estimate for neighbouring Prince Edward Island dates back to 2008, when 1500 pairs were reckoned to be breeding there. Ignoring the possibility that this population might also have increased over the past few years, this gives a total South African population of 3750 pairs, at least one quarter of the global count. Coupled with the apparently stable population at Gough Island, the recent findings from Marion Island suggest that the threat status of the Sooty Albatross should be down-listed from Endangered. However, the rapid proliferation of mouse attacks on Sooty Albatross chicks on Marion Island over the past two years is cause for concern.

Light-mantled Albatross breeding success at Marion Island is very low and its numbers have halved in the past decade.

What about Light-mantled Albatrosses? Ryan et al. (2009) found that their numbers increased at Marion Island between 1996 and 2008, mirroring a similar trend at Île de la Possession in the Crozets. But in recent years their numbers have decreased rapidly from about 500 pairs in 2009 to 250 pairs in 2014 (Schoombie et al. 2016). This species is harder to count accurately at Marion because most of the population breeds at very low densities on inland cliffs, where they are difficult to locate. However, we might expect their population to dwindle as rapid climate warming in the region favours the more northerly Sooty Albatross. Breeding success of Light-mantled Albatrosses on Marion Island has been abysmal in recent years, suggesting that this species is struggling at the northern edge of its range as the Southern Ocean warms.

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