

cape gannet

Uplisted to Endangered

Perhaps one of the most arresting avian spectacles is that of a flock of Cape Gannets feeding. Like hundreds of white missiles, wings folded back and bodies aligned like arrow tips, they dive head-first into a writhing bait ball. Their cranial anatomy is a wonder of evolutionary adaptation, protecting the brain and body as the bird plunges into a wall of water at 85 kilometres an hour: air sacs in the frontal area of the skull act as cushions, nostrils are reduced to slits and protected by a thick membrane to prevent water from damaging internal tissue, and the bill is long and conical, streamlined to reduce resistance.

But this plunge-diver's population is on its own steep downward trajectory, which resulted in the species being up-listed to Endangered on the IUCN's Red List in late 2017.

The Cape Gannet *Morus capensis*, a breeding endemic in southern Africa, has declined by more than 50 per cent in the past 60 years, with 123 000 breeding pairs remaining. Cape Gannets breed in colonies on six coastal islands, three each in South Africa and Namibia. Two-thirds of all Cape Gannets breed at Bird Island in Algoa Bay, while Malgas Island and Bird Island, near Lambert's Bay, host 21 000 and 8 000 pairs respectively.

In Namibia, previously the population's stronghold, the species is now considered Critically Endangered. Currently some 12 000 pairs remain on Ichaboe Island and 2200 on Mercury Island. The handful of pairs on Possession Island is raising concerns that this colony is close to extinction. The dwindling number of gannets in

Cape Gannets plunge-diving on a school of pelagic fish.

ALLEN WALKER

Namibia has been linked to the collapse of the sardine and anchovy stocks in the 1970s as a result of overfishing. Relying primarily on these two fish species for food, the gannet population has mirrored its prey and declined by more than 90 per cent in the past six decades.

In South Africa, the primary threat to gannets is a shortage of their preferred prey. As with the Namibian population, competition with commercial fisheries is a significant factor. However, there has also been a shift of South African prey stocks to the east, further limiting the food available to the two west coast colonies.

Many birds have taken to scavenging offal from fishing boats to compensate for the lack of their preferred prey, but these demersal fish are often far less nutritious than the birds' sardine and anchovy staples. This 'junk food' lacks the essential omega-3 fatty acids found in the small pelagic fish and is also calorifically less dense. The gannets therefore have to eat more fish to maintain body condition. This increases their energy and time investment in foraging and reduces it from other aspects, such as incubation, preening or rest. Altering their energy balance in this way can have severe consequences

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for breeding birds as self-preservation is prioritised over caring for their young, and chick starvation is a common cause of breeding failure. Chicks fed on a diet of junk food also grow more slowly and have a reduced chance of surviving to breeding age. The energetic stress of a poor diet can also leave the gannets with a compromised immune system, increasing the risk of diseases such as avian cholera, a constant threat when so many birds live in close proximity. All these effects have consequences for breeding success and survival, driving the decline in the population.

While gannets can to an extent compensate for a lack of preferred prey by



ALBERT FRONEMAN

Cape Gannets' white plumage makes them highly visible out at sea.

foraging on fishing discards, this behaviour introduces the additional risk of entanglement and bycatch in the gear behind fishing vessels. Thankfully, interventions by BirdLife South Africa's Albatross Task Force, such as the introduction of bird-scaring lines that deter birds from entering the dangerous areas behind boats, have reduced the risk of seabird bycatch by up to 95 per cent.

Gannets also face predation by fur seals, sharks, gulls and pelicans. While seals and sharks are a threat at sea (and seals sometimes also take gannet fledglings on land), gulls and pelicans are a real menace in the colonies. Kelp Gulls opportunistically prey on eggs and small chicks, while pelicans are renowned bullies and force their way into nesting areas. The threat of egg and chick predation is exacerbated by the inferior diet, as both parents are sometimes forced to forage simultaneously, leaving their nest unguarded. In some colonies, 'pelican monitors' have been employed to reduce this threat.

Other occasional threats include oil spills, guano harvesting and nest flooding after storms. Oil spills in particular can be disastrous; as many as 5000 gannets were killed in one spill in 1993. Luckily, such spills are now less of a threat due to tighter regulation and better rehabilitation facilities, and guano harvesting has mostly ceased.

If the fortunes of Cape Gannets are to be reversed, urgent action needs to be taken. The small pelagic fishery should be managed to take the ecosystem and top predators such as gannets into account, with spatial management – fishing where the most fish are – a good first step. Fortunately each breeding colony is formally conserved, but ongoing monitoring and maintenance are crucial. Stochastic events such as disease outbreaks and oil spills need to be prevented wherever possible and action plans should be drafted in case they do occur.

The news is not all negative, however. The Namibian government has finally taken heed and in December 2017 placed a three-year moratorium on small pelagic fishing to help recovery of the fish stocks and their dependent predator populations. We can take inspiration from the Bird of the Year, the African Black Oystercatcher, which in the same Red List update last year was downlisted to Least Concern. This resounding good news is a powerful indication that with effective and scientifically informed interventions we can conserve our local birds.

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