

UNWARY BIRDS

Make for an Easy Meal

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Poor conservation may doom the Cape gannet

What happens when a top predator species' survival is being threatened due to lack of effective conservation? A possible extinction of multiple species? Decreased diversity in the ecosystem? A system that is out of balance? Or all of the above?

This is ultimately what Zanri Schoeman, currently a PhD student at the Nelson Mandela University investigated during her Master's degree through studying the influences of both fish biomass and predation on the Cape gannet *Morus capensis*, an endangered and endemic seabird species breeding at Lambert's Bay gannet colony. The study, under the supervision of Dr Jan Venter, aims at identifying various factors that influence Cape fur seal (*Arctocephalus pusillus pusillus*) and Kelp gull (*Larus dominicanus*) predation probability on both Cape gannet eggs (in the colony) and fledglings (at sea). To answer the research questions Zanri used CapeNature's focal sampling data, conducted her own observations, and obtained hydro-acoustic survey data from Department of Environment, Forestry and Fisheries (DEFF). This project is funded primarily through the National Research Foundation.

Easy targets

The Afrikaans name for gannet is "malgas" which means "silly goose". As a pelagic species, their

big feet are webbed to aid swimming but makes it difficult to walk on land. It thus goes without saying that their awkward movements on land gave rise to their local name.

Gulls and seals have learned to predate on gannets which are easy targets. Moreover, the seals predate on the unwary juveniles at sea and the gulls predate on eggs in the colony. Anthropogenic and environmental change encourages the varied diet of the gulls and seals, and this is one of the

reasons why these predators' populations, unlike specialist species, are avoiding marked decreases.

Why be concerned about predation?

In the 2005-2006 breeding season, the Cape gannet population deserted Lambert's Bay gannet colony due to predation by Cape fur seals. The Cape gannet population has subsequently recovered

but the reason for concern is the Cape gannet's breeding range currently extends to only on six islands globally where formerly it used to breed on four additional islands. However, due to seal predation, they now avoid those four islands for breeding purposes. The impact of predation on Cape gannets on Lambert's Bay gannet colony has not yet been studied. To prevent this Cape gannet population from declining further, the predation had to be studied to act as a guideline for the future management of this species.

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ABOVE TOP LEFT: Zanri Schoeman monitoring Kelp gull predation in the Cape gannet nests.
ABOVE TOP RIGHT: A Kelp gull walking with a Cape gannet egg before breaking it on a rock to devour it.
ABOVE: Zanri Schoeman scanning for Cape fur seal predation on Cape gannet fledglings
BELOW: Cape gannets bonding by mutually preening on Penguin (Bird) Island

What are the benefits of the study?

The study identifies the spatial and temporal aspects of predation at the island which improves management decisions as it identifies when and where management focus should be to minimize predation as best possible. Moreover on temporal management, by determining the influence of predator control on predation probability, the study guides future management decisions on how to limit predation from each predator species individually.

The study indicates the importance of fish biomass conservation in both reducing Cape fur seal predation and in increasing Cape gannet breeding success which indicates why management effort should be focussed on fish conservation when attempting to conserve this seabird species. The above-mentioned improves the efficiency and effectiveness of management, in terms of cost and time, of the predation on the Cape gannet to ensure the persistence of the colony. The study thus ultimately promotes the conservation of this top predator in the ecosystem to prevent a possible tragedy.

"Being a women, I feel empowered through this study as it led to the understanding of predation dynamics at Lambert's Bay gannet colony and it also identified where management thereof could be improved to ultimately promote the persistence of the Cape gannet," explained Zanri. "As a future scientist studying seabirds, I am determined to further promote the conservation of pelagic fish populations and I am hopeful that the odds of survival for the Cape gannet can be turned".