

Gannets starve because parents too polite to travel into another colony's territory

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Gannets are refusing to travel into another colony's territory to find food, affecting their breeding, according to new Deakin University research which offers insight into how the seabirds are responding to climate change.

The Deakin research found that as few as 10 chicks from 116 eggs laid during one recent breeding season survived because of a lack of nearby food, despite the gannets having the capacity to travel distances up to 550km.

The high death rate was revealed during a three-year study by Deakin's School of Life and Environmental Sciences' PhD candidate Lauren Angel, who investigated the impact of variable environmental conditions on food supply and subsequent breeding patterns at the Pope's Eye colony near Queenscliff.

"In order to manage and protect seabird populations we need to understand how they will respond to [climate change](#)," Ms Angel said.

"Bass Strait is one of the fastest warming regions in the world in terms of [sea surface temperatures](#), as a result of climate change. There has already been evidence of lower-trophic species, including invertebrates and coastal fish moving further south to cooler waters.

"If the gannet's prey (mainly pilchard and barracouta) start moving south but this colony cannot extend its foraging range the birds cannot adapt

and we may see very low breeding success become normal, or the birds may abandon this colony all together and head further south to gannet colonies around the Tasmanian coast."

The research, eating locally: Australasian gannets increase their foraging effort in a restricted range, has been published in today's edition of *Biology Open*.

Ms Angel said seabirds were known to travel further for their food when [environmental conditions](#) are poor. But this is not how Australasian gannets (*Morus serrator*) at Pope's Eye, off Victoria's Bellarine Peninsula coast, behaved during the study.

"There were two other larger colonies in Bass Strait, and over the three years it became apparent that the birds would not travel within zones where another colony was potentially feeding," Ms Angel, who monitored the birds via GPS tracking devices, said.

"It seems nature has its own version of a no fly zone and this one unfortunately has disastrous consequences for breeding success."

Deakin's Associate Professor John Arnould, who supervised the research, said the highest survival rate during the three years was 64.7 per cent (77 chicks), but this fell to 8.6 per cent, when just 10 out of 116 chicks survived in a year in which [food supply](#) nearby was low.

"Usually seabirds would simply fly further, but they didn't in this colony, spending more time looking locally for less available [food](#), rather than travel further for more options," Associate Professor Arnould said.

"So when this happened, the gannets fed themselves first and gave up on [breeding](#)."

"We think that because [gannets](#) breed for quite a long time, up to the age of 30, they prioritise maintaining their body condition over feeding their offspring, increasing the likelihood of future reproductive success."

Provided by Deakin University

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