

Kororā / little blue penguin factsheet:

Penguin deaths over the summer: how much is normal?

Kororā were once common on the mainland coast. Now, most are found on offshore islands where there is less disturbance from humans, dogs, and introduced predators.

Despite this, kororā can be found on beaches around the country, and their population is increasing in areas where predator control is being conducted.

Every year starting around November, DOC begins to receive reports of dead kororā washing up on beaches, and bird rescue centres get an influx of sick and injured birds to care for.

The summer of 2020/21 is a La Niña year, bringing increased sea-surface temperatures and onshore winds to New Zealand. These conditions can make it more challenging for kororā to nest and feed.

However, some level of mortality is natural and to be expected. You can learn more about penguin deaths and environmental factors below.

Species statistics

New Zealand status: Native

Conservation status: At Risk-Declining

Threats: Dogs, predation, road kills

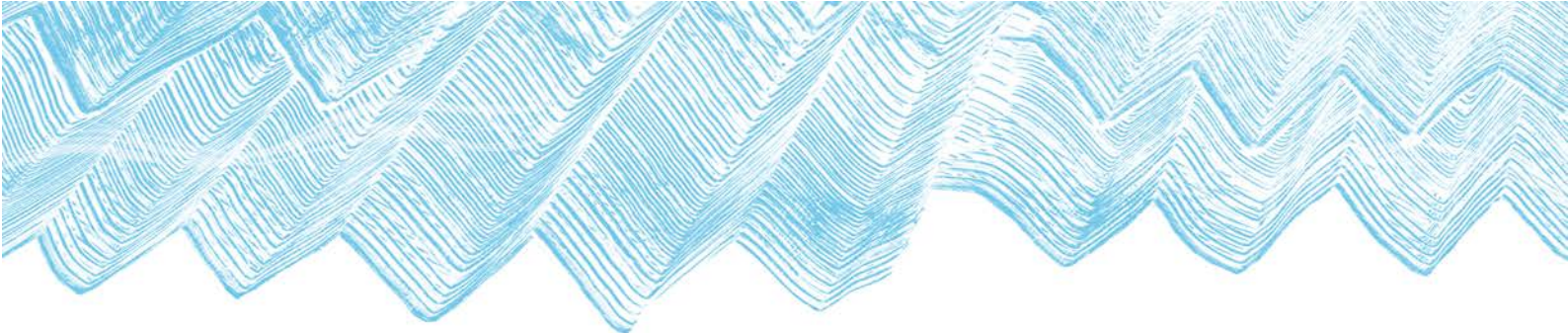
www.doc.govt.nz/nature/native-animals/birds/birds-a-z/penguins/little-penguin-korora/



Kororā / little blue penguin nesting on Moturata / Taiera Island. Image: © Shellie Evans.



Department of
Conservation
Te Papa Atawhai



Are we seeing an unusual number of dead penguins this summer?

It is possible that this will be a high mortality year for kororā / little blue penguin because of the La Niña weather system bringing warmer than average seas to northern New Zealand.

Breeding season is a very stressful time for adult and juvenile kororā. Not all fledging chicks will make it through to adulthood due to predation and lack of food. Breeding during a La Niña year is even more stressful and difficult on seabirds.

Adult birds find breeding stressful due to the need to find food for both themselves and their chicks. This extra stress and exhaustion may make some birds more prone to illness or increase the risk of a predator attack as they dive deeper for food.

Juveniles that have left the nest are independent from their parents and need to learn where and how to find food. A chick's condition at fledging is crucial to their chances of surviving the first difficult month at sea. Body fat reserves give them a chance to learn how to feed. Underweight juveniles may struggle to locate enough food or get caught up in stormy seas with low water clarity and die.

High juvenile mortality is unfortunate but natural for kororā, particularly at this time of year. Often penguins simply need to rest, especially after a storm; however, many are unable to fend for themselves and die of exhaustion or starvation.

Studies in the South Island have shown that typically only 30% of chicks survive to adulthood. During a difficult season, when little food is available, the survival rate can be even lower. Some are found washed up on beaches, but the majority are washed away by the sea currents.

What effects could La Niña have on penguin survival?

La Niña brings warmer waters, which means that the fish that seabirds feed on stay in cooler, deeper waters as surface temperatures rise.

Penguins and petrels respond to these changes by foraging further away and diving deeper to find food. Starvation is a risk for themselves and their chicks if

food is in short supply. The recent reports of starved kororā all points to a lack of small fish on which all these species depend.

Dead penguins can start turning up on beaches as early as November, when the first chicks begin to depart the nest. Reports so far have confirmed that some kororā are dying of starvation.

When will we know if this level of mortality is normal?

Most penguin chicks fledge during November and December. If juvenile kororā are struggling, we will begin to see evidence of this in January. We are monitoring the situation quite closely, as are many conservation groups.

Higher than usual deaths were reported to northern North Island bird rescue centres in the summer of 2017/18, which was also a La Niña year.

Other historical mass die-off events happened in 1974 (4737 penguins), 1985 (5386 penguins), and 1998 (3517 penguins). A mass die-off event (when more than 1000 birds wash up annually) is typical about every decade. While current reports are well below this number, it is early days and may yet occur.

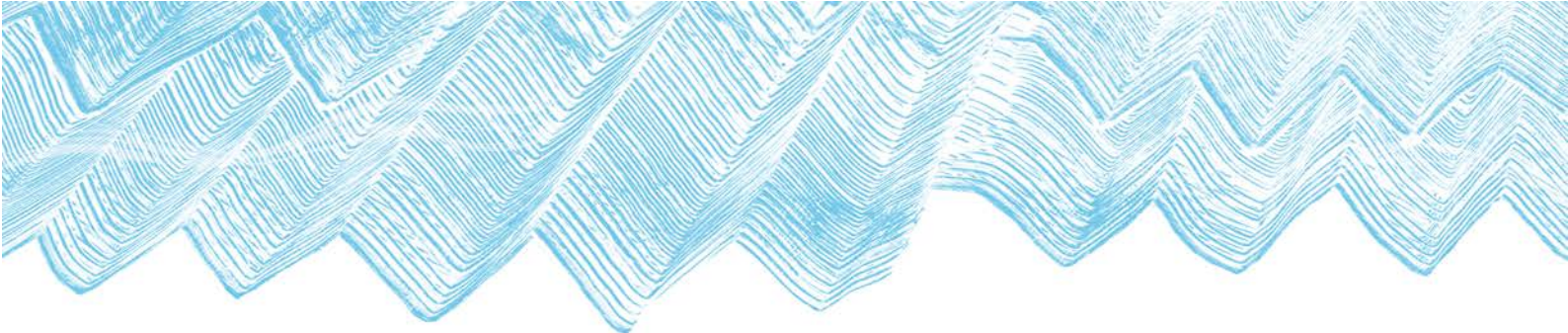
The lack of kororā washed up on beaches does not mean that all is well with this species. Sometimes failure occurs within the nest (lost eggs and small chicks that fail to grow) and so very few healthy chicks make it out to sea. In years when the winds blow offshore away from breeding colonies, dead birds simply float further out to sea and are not noticed by the public.

More work is needed to determine the status and trends of kororā colonies in northern New Zealand

How is climate change expected to affect kororā?

Mass die-offs with more than 1000 dead penguins used to be a once in a decade event. Climate change is likely to increase the frequency of marine heatwaves. These warm water events are likely to increase the number of poor breeding seasons for kororā in northern New Zealand.

Marine heatwaves are a major threat for many other marine species. Localised extinctions following marine



heatwaves have occurred in species such as bull kelp and starfish. As climate change effects continue, heatwaves, and other adverse weather events such as storms, will become stronger and occur more frequently. We may expect to see a corresponding increase in the amount of mass die-offs of penguin and other sea creatures.



Kororā / Little blue penguins. Image: Leon Berard (CC BY-NC 2.0)

How you can help

Kororā breed in the sand dunes, under rock crevices, under houses, or in native bush behind some popular public beaches. These birds mostly come ashore at night but could be nesting or moulting close by during the day in spring and summer.

Give birds plenty of space. Keep dogs away from kororā - they're one of the biggest threats to these penguins on land. Dogs have caused fatal injuries to penguins and seals and should be kept on a leash if any native wildlife is seen.

- Give penguins space and enjoy them from a distance
- Drive carefully around coastal areas
- Put your dog on a leash around penguin areas
- Keep your dog away from nests, and warn others nearby of the location

With the potential food shortages this year, it is possible that people will encounter live penguins that are very weak. These birds are extra vulnerable to dog attacks, making it extremely crucial that people keep their dogs on leashes while in coastal areas.

What to do if you find a dead or injured penguin

The Department recommends that if people find a dead penguin, they should leave it alone as community groups regularly count dead seabirds and will remove them from beaches. If a live but sick penguin is at risk from attack by dogs or other predators, it should be placed under vegetation in the rear-dune well away from passers-by or taken to a local Bird Rescue centre.

Do not offer emaciated penguins food, as the rehabilitation of seabirds requires specialist knowledge and training.

If it is clearly injured or in immediate danger, please contact your local DOC office or the emergency hotline 0800 DOC HOT (362 468).

It is helpful to provide an exact location and take photos of what they have found so a DOC ranger can make an assessment if the matter needs further investigating.