



Seabird ecology

Seabirds and their environment



Seabirds are a bit like gardeners in the areas where they nest. Some seabirds disperse seeds and spores from their feathers and droppings (guano). Scientists also believe that the way seabirds disturb the soil as they're building their nests may be important to island plants.

Seabirds' guano along with spilt regurgitations for their chicks and even unhatched eggs provide rich fertilisation for many of our native plants.

Seabirds also help other animals. The burrows that seabirds like petrels and shearwaters build create safe, sheltered and humid homes for lizards, tuatara and insects.

Key words

guano, regurgitation, ecosystem

rāhui – ban or restriction put in place to protect an area or its resources

Manu moana – Seabird

tītī wainui – fairy prion

What is an ecosystem?

The word ecosystem is short for ecological system. An ecosystem is the sum of all the relationships between plants, animals and their surrounding environment in a specific area. What types of things do you think affect ecosystems (i.e. soil type, weather) and what happens if something changes in an ecosystem?

Seabirds used to breed across New Zealand. Scientists believe that many mainland New Zealand ecosystems were part of a vast ecosystem that seabirds were an important part of. The loss of millions of seabirds over the last 1000 years means that the ecosystem is now broken up.

Weird neighbours

Scientists have studied tuatara on Takapourewa/Stephens Island in Cook Strait and found that this endangered reptile will frequently live with nesting tītī wainui/fairy prions in the same burrow.

Tuatara eat fairy prion eggs and chicks – sometimes even the ones they're sharing a burrow with! Still, tuatara don't seem to have much of an impact on fairy prion numbers. Studies show that the number of chicks that die in seabird colonies where tuatara are present isn't any greater than in seabird colonies without.

Buller's shearwater in burrow with tuatara, photo courtesy DOC, Rod Morris



Prospecting guano

Did you know that guano is rich in phosphate and is considered some of the best fertiliser in the world? Beginning in the 18th Century phosphate rocks made up of guano and limestone were mined on many islands and atolls in the Pacific like Nauru.

The smallest independent republic in the world, Nauru's main industry since 1907 has been phosphate mining. Much of the mined guano-rich fertiliser ended up in New Zealand and Australia where it was used for growing crops.

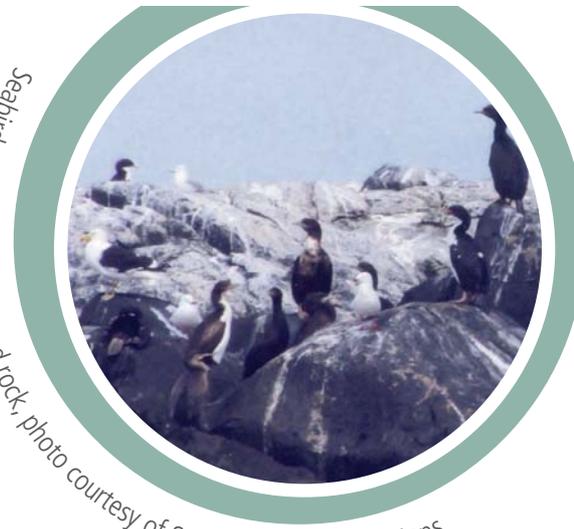
Nauru, like many of the islands that were mined for phosphate, has had most of its soil and vegetation stripped away as a result of the mining. This means that people in Nauru are not able to grow their own food and the loss of vegetation means that the interior of the island gets very hot and is now prone to droughts.

Ngā Motu/Sugar Loaf Islands

The Ngā Motu/Sugar Loaf Islands are the only offshore islands in the Taranaki and Manawatu regions. Nineteen different species of seabirds use the islands with approximately 10,000 seabirds nesting there.

The islands and surrounding waters are protected as the Sugar Loaf Islands Marine Protected Area and supported by a traditional Māori rāhui/temporary ban or restriction over the area.

Seabirds on a guano-covered rock, photo courtesy of Southern Seabird Solutions



Chatham Islands

In 2006 a group of researchers led by Department of Conservation botanist Peter de Lange found several plants on the Chatham Islands that had never been recorded there before.

One of the plants discovered was a daisy that's commonly called muttonbird groundsel. The flowering plant has been described as "guano-loving" and was found in an area where seabirds are found. The daisy is just one of many coastal plants that seem to depend on seabirds for its survival.

Things you can do to protect our seabirds...

- When on a boat – keep our islands safe. Observe landing restrictions on island sanctuaries. Check boats and luggage for rats before coming ashore.
- If you find a sick or dying bird on the beach, it's usually best to leave it alone. If a bird is obviously injured you could take it to your nearest Bird Rescue Centre. If you see a seabird that's tangled up in plastic and you can safely capture it, ask an adult to help you remove the plastic.
- Little blue penguins shed their feathers between late December and March, which takes 10-18 days. They don't eat during this time because they lose their water-proofed feathers and are unable to go to sea to fish until they grow new ones. Moulting penguins look quite scruffy. If you come across one let it rest and keep your dog and other predators away from it.
- Off-road vehicle users – don't drive on riverbeds or beaches where birds are nesting or roosting – this can upset colonies and destroy nests.
- Care for the coast – projects such as planting and fencing coastal areas can help provide habitats for nesting birds.
- If you find a dead bird with a band on its leg, return the band to: The National Banding Office, Department of Conservation, Box 10-420, Wellington.