Seabirds that breed on braided rivers

Tarapiroe/black-fronted tern

Status: Endangered

The tarapiroe/black-fronted tern (*Sterna albostriata*) lives and breeds inland, only visiting the coast to feed in autumn and winter. Black-fronted terns nest in colonies on open shingle or on small islands in the river. Their eggs and chicks are well camouflaged.

Unlike many other river birds, young terns must remain near the nest, relying on parents to bring them food. To defend their eggs and chicks from intruders, they dart at them, calling loudly while swooping past. Terns often abandon their nests if people or predators disturb them leaving their young to die.

Tara-nui/Caspian tern

Status: Nationally vulnerable

The tara-nui/Caspian tern (*Sterna caspia*) is the largest tern in the world. Caspian terns breed mainly around the coast, although some nest inland near Lake Rotorua and on riverbeds in Canterbury.

Scientists are not sure why, but Caspian terns that nest along our coasts tend to nest in large colonies, unlike their river nesting counterparts that are solitary nesters.

Tara/white-fronted tern

Status: Vulnerable/gradual decline

Tara/white-fronted tern (*Sterna striata*) is the most common tern found in New Zealand. In autumn, most young terns and some adults fly to Australia, returning in spring for the breeding season. They nest from October to January in large colonies on beaches, shingle banks or rock stacks.

Kawau/black shag

Status: Sparse

The kawau/black shag (*Phalacrocorax carbo*) is the largest shag in New Zealand waters. It can be seen on rivers, lakes and coastal waters throughout New Zealand.

Along rivers, small colonies of black shags will nest in the tops of trees or on rocky bluffs.

The black shag is the most widespread of the four species of black-footed shag (*Phalacrocorax* genus) that lives in New Zealand.

Unlike most seabirds, black shags have feathers that absorb water, which is why you will often see shags drying themselves by sitting on rocks and spreading their wings.

Tarāpunga/black-billed gull

Status: Endangered

The tarāpunga/black-billed gull (*Larus bulleri*) only visits the coast in the winter. The rest of the year black-billed gulls can be found in colonies on shingle islands in rivers. Colonies vary in size and location, because the gulls do not choose the same sites or the same rivers for breeding each year.

Black-billed gull population devastated by predators

Over a two-month period in 2006, one cat and a ferret had killed hundreds of black-billed gull chicks on the Aparima River in Southland. That's what Otago University PhD student Rachel McClellan captured on infrared camera as part of a three-year research programme to determine why the region's black-billed gull populations are in such rapid decline.

In Southland the black-billed gull population has declined by as much as 80 per cent over the last 30 years.

Other birds that depend upon our braided rivers...

Banded dotterel

At least 26 bird species, including wrybills, South Island pied oystercatchers, kaki/black stilts and banded dotterels feed and breed on our braided rivers.

The ngutuparore/wrybill has adapted to feeding on braided rivers in the Canterbury region by being the only bird in the world to have a bill which curves to the right. The curve allows wrybills to more easily catch insects on the underside of river stones. Found only in New Zealand, there are only about 4000–5000 wrybills left in the wild. The threatened species spends winter on the North Island where it feeds in flocks in estuaries and mud flats.

Tuturiwhatu/banded dotterel breed on shingle riverbeds on both the North Island and South Island. After breeding most banded dotterels migrate to the northern part of the North Island or to Australia.

Pied oystercatcher

Wrybill

Life on a braided river...

Photos: DOC

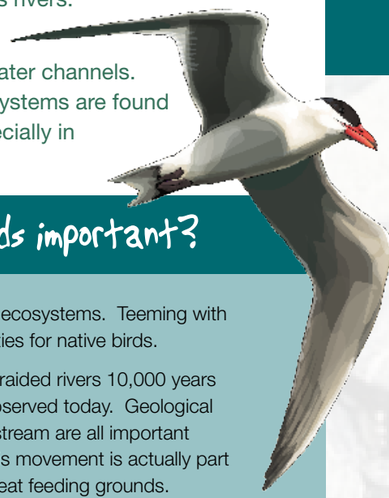
Department of Conservation
Te Papa Atawhai

Seabirds found on New Zealand's braided rivers

New Zealand is the seabird capital of the world with over 85 species known to breed here. Although each species is unique, they share a common trait in that they all spend some of their life at sea.

Many seabirds breed in colonies on offshore islands, rock stacks and isolated locations in New Zealand. A few seabird species such as the black-fronted tern and black-billed gull join numerous other New Zealand birds in breeding along New Zealand's rivers.

New Zealand's braided rivers feature shingle bars, along with winding and ever-changing water channels. Some of New Zealand's largest braided river systems are found on the eastern side of the Southern Alps, especially in Marlborough and Canterbury.



Why are New Zealand's riverbeds important?

New Zealand's braided rivers are incredibly productive ecosystems. Teeming with insects, braided rivers provide great feeding opportunities for native birds.

Many of the geological processes that created these braided rivers 10,000 years ago, at the end of the last glacial period, can still be observed today. Geological uplift, erosion and water carrying sedimentation downstream are all important features of New Zealand's braided river systems. All this movement is actually part of the reason the rivers are so productive and make great feeding grounds.

Instability is one of the hallmark features of braided river systems. A braided river ecosystem is in constant movement – with small shingle bars appearing and disappearing, river channels shifting and water flows varying. Riverbed nesting birds have adapted to these changes. For example, since flooding is a constant threat, many birds that breed on braided rivers are able to rebuild their nests within a few days of a flood destroying their nest. This adaptation is an enormous expenditure of energy for the parent birds however, and it comes at physical cost to them.

The threats

Very few river systems in the entire country remain unmodified and free of introduced species. With a mounting demand for water use, for both electricity and agriculture, our water resources are facing increased pressure. Only a small percentage of New Zealand's freshwater ecosystems – especially lowland river systems – are in protected conservation areas.

"For braided river ecosystems the sum of threats is truly greater than the individual danger. For example, if water flow is reduced it might not only lead to an increase in weeds, but it also means feral cats, ferrets, rats and other predators are more easily able to get to nests. To successfully protect our native species we need to be holistic in our conservation management actions."

Colin O'Donnell, Department of Conservation

Habitat loss

Development, farming and hydro dams have impacted many of our rivers. Much of this habitat loss and alteration has been incremental, but the overall impact on native species has been significant.

Gravel extraction from riverbeds can also contribute to nest site flooding and reduces the amount of nesting habitat available.

Predators

Predation of riverbed nesting birds by introduced mammals is one of the major factors in the population decline of several species. These predators may eat the eggs, chicks and even adult birds. Mammalian predators of riverbed nesting birds include feral cats, rats, weasels, ferrets, stoats and hedgehogs. Off-lead dogs pose another danger to nesting birds not only because they will eat eggs and chicks, but also because they may force breeding adults to abandon their nests.

Breeding colonies face dangers from the sky too, with harrier hawks, black-backed gulls and magpies known to eat eggs and chicks.

Human disturbance

Off-road vehicle use, fishing and even picnicking can disturb nesting birds. Beyond the physical threat of accidentally stepping on or running over eggs or chicks, prolonged disturbances may cause breeding adults to desert their nests.

Most riverbed nesting birds breed between August and February. Try to be aware of nesting birds and keep your distance from breeding colonies and individual nests.

Weeds

Willows, lupin, broom, gorse and other introduced weeds often limit available nesting spots and provide cover for predators. Nationwide, it's estimated that over 60 per cent of potential riverbed nesting sites have been destroyed because of weed encroachment.

Black-fronted terns and black-billed gulls are considered at particular risk because of the spread of weeds on braided riverbeds. Forced to nest closer to the water, their nests are much more vulnerable to being swept away by the river.

Communities in action

The Department of Conservation (DOC) is working to protect and restore braided river systems around the country. Our efforts include working with energy companies, gravel extraction companies and agricultural interests to reduce impacts on river ecosystems; advocating for legal protection of certain rivers or sections of rivers; and working with local community groups on predator control, weed pulls and restoration activities.

Many communities have groups that are involved in protecting and restoring our braided rivers. If you'd like to learn about volunteer groups in your area talk with staff at your local DOC area office.

What you can do

River care code

Riverbed birds nest between August and February and need your special consideration during this period.

So please . . .

- Keep clear of nests and watch out for eggs and chicks. They are hard to see and very fragile.
- Be aware of birds you have disturbed. Move on within five minutes so that birds can return to their eggs and chicks or they will die.
- Avoid driving any vehicle on riverbeds. Vehicles unsettle birds and run over eggs and chicks so park on the bank and walk to your destination.
- Keep dogs on a lead, or strictly to heel from August through to February. A dog running loose on a riverbed can scare away birds and destroy eggs and chicks.
- Boats disturb birds and wash away nests. The speed limit for boats is 5 knots within 200 metres of the bank. The NZ Jetboat Association can supply more information about jetboating in rivers.
- Obtain any necessary resource consents from regional councils for riverbed works. Discuss with Department of Conservation staff about minimising the impact of activities on river birds.

Above all . . . respect braided riverbeds. Many plants and animals need your help to survive.

Life on a braided river

Tara/white-fronted tern

Tara-nui/Caspian tern

Tōrea/pied oystercatcher

Kāwaupaka/little shag

Illustration: Lisa Paton/Morphological