

Giant kōkopu

Galaxias argenteus

OTHER COMMON NAMES

Whitebait

THREAT RANKING

At Risk: Declining

Sharing Pastoral Streams with Native Fish

New Zealand's long isolation has created a unique freshwater fish fauna with many species found nowhere else on earth. Our freshwater fish are taonga (treasures), and species that constitute our whitebait play an important role as mahinga kai, holding significant cultural, ecological and environmental value. In our streams, native fish rely on healthy, connected habitats that extend from shaded headwaters through to lowland waterways. This connectivity is important not only for species that live within pastoral environments, but also for those that need a clear pathway between freshwater and the sea to complete their life cycles. Farm waterways are a key part of this network, providing habitat for spawning, feeding and growth, as well as the connections between these areas. Understanding which fish live in your waterways is a rewarding first step toward sharing these spaces and supporting healthy, thriving fish communities.



The star-like markings of giant kōkopu inspired the name *Galaxias*, meaning “galaxy.”

Giant kōkopu are one of five migratory galaxiid species found in New Zealand. Along with īnanga, banded kōkopu, shortjaw kōkopu and kōaro (as well as common smelt in some regions), their juveniles make up what is commonly known as the whitebait catch.

Adult giant kōkopu are easy to recognise as they have striking golden-olive spots, lines and rings over their body (Figure 1). However,

young giant kōkopu can sometimes be confused with banded kōkopu, as their patterns are less distinctive when small.

Giant kōkopu are the largest member of the galaxiid family, generally growing between 300 – 400 mm in length, however, have been recorded over 500 mm.



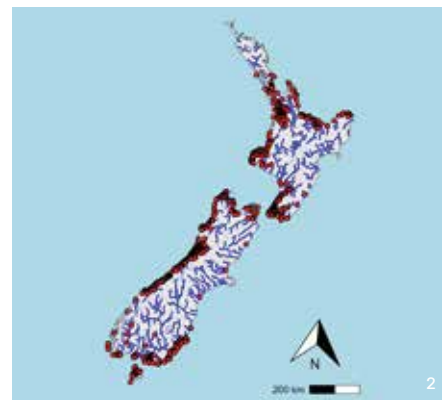
Figure 1: Giant kōkopu colouration out of (left) and in (right) water.

Where do giant kōkopu live?

Giant kōkopu are only found in New Zealand and are widespread across the country, occurring in streams, rivers, wetlands, and lakes across both the North and South Islands, as well as Stewart Island and the Chatham Islands (Figure 2). However, their distribution is patchy. They are largely absent from Northland and are less common along the east coasts of both islands, although they are more widespread in parts of Otago.

In pastoral catchments, giant kōkopu are most often found in small, shaded streams. Adults are not strong climbers, so they predominantly occur in lowland habitats and do not travel as far inland as other kōkopu species. Access to suitable habitats can easily be blocked by instream structures such as dams or perched culverts that sit above the water surface.

Figure 2: National distribution of the giant kōkopu. Data represent records held in the New Zealand Freshwater Fish Database (NZFFDB) April 2026.



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Figure 3: Lifecycle of the giant kōkopu.

Lifecycle of the giant kōkopu

Giant kōkopu are amphidromous, meaning their larvae are washed out to sea soon after hatching and return to freshwater a few months later as juveniles, known as “whitebait” (Figure 3). This lifecycle is shared with banded kōkopu, shortjaw kōkopu, and kōaro. Īnanga follow a similar pattern but use different spawning habitats.

Once back in freshwater, juveniles migrate upstream to find suitable habitat where they grow to adulthood. Eggs are laid in streambank vegetation during periods of elevated flow, where they develop out of the water. Subsequent high flows are then needed to inundate the eggs and trigger hatching.

Spawning takes place wherever adults are present, from pastoral reaches in lowland streams through to bush covered areas.

Giant kōkopu can also complete their entire lifecycle within freshwater. In these cases, larvae rear in lakes before juveniles migrate back into streams to grow to adulthood. This flexibility helps giant kōkopu persist in catchments where access to the sea has been lost or restricted.

What giant kōkopu need in streams

Giant kōkopu prefer cool, lowland habitats with deeper pools and slow-flowing water. They are most often found in shaded streams, wetlands, and lake margins where there is plenty of cover.

They rely on instream features such as undercut banks, overhanging vegetation, logs, and debris to provide shelter. Deep pools are particularly important, offering both refuge and feeding habitat.

Giant kōkopu are mostly active at night and hide during the day, so instream cover is essential for protection from predators and conserving energy.

Giant kōkopu feed on aquatic insects and small fish, along with terrestrial invertebrates that fall or are washed into the water from surrounding vegetation. They have been described as a “skulking predator” meaning they ambush prey rather than actively chasing it. Similar to banded kōkopu, giant kōkopu locate prey using a sense we do not have, the lateral line (Figure 4), which detects the small ripples made by insects struggling on the water surface.

Healthy riparian margins are especially important, as overhanging vegetation provides both cover and a steady supply of food.

Figure 4: Giant kōkopu showing the lateral line, visible as a faint groove running along the side of the body.



Photo credits: Cindy Baker, Dave Allen, Michele Melchior, DairyNZ

» Actions you can take to make your local stream a better place for giant kōkopu

- Fence streams to exclude stock and reduce bank erosion and damage to streambeds.
- Plant and maintain native riparian vegetation to provide shade and keep stream temperatures cool. Riparian planting also stabilises banks, adds habitat complexity (such as roots and woody debris), and supplies organic matter. Shading can also reduce nuisance weed growth and the need for mechanical channel maintenance, which can disturb benthic habitats.
- Retain logs, boulders and undercut banks as these provide important refuges for giant kōkopu.
- Improve fish passage at instream structures such as culverts, weirs and floodgates. Ensure structures are correctly sized and installed so they do not create drops, barriers, excessive water velocities or scouring that restrict giant kōkopu movements.

Refer to regional DairyNZ guidance & NZ Fish Passage Guidelines for more information