

Canterbury galaxias

Galaxias vulgaris



THREAT RANKING

At Risk: Naturally uncommon

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 some species 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 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 male Canterbury galaxias is responsible for preparing the spawning site under rocks in fast-flowing habitats.

Canterbury galaxias are one of New Zealand's non-migratory galaxiid species, meaning they do not migrate to the sea and are not part of the whitebait catch.

Adult Canterbury galaxias vary from grey to brown to olive green in colour, with irregular mottled patterns along the body (Figure 1). Their

eyes appear large and angled inward when viewed from above.

They can be difficult to distinguish from other species, particularly kōaro when viewed from the streambank, and are often only reliably identified when viewed up close. They can also be confused with dwarf galaxias.



Figure 1: Canterbury galaxias colouration.

Lifecycle of the Canterbury galaxias

Canterbury galaxias are non-diadromous, meaning they do not migrate to sea and complete their entire lifecycle within freshwater. Populations remain within the same river system throughout their lives, which limits their ability to disperse compared to migratory species.

Spawning occurs in fast flowing stream habitats, where eggs are laid beneath large cobbles or boulders. Males prepare simple spawning sites but, unlike bullies, do not actively guard the eggs as they develop.

Once hatched, larvae and juveniles are swept downstream from spawning areas into slower-flowing habitats, where they form small shoals. As they grow, they move into faster-flowing habitats and use the spaces between cobbles and boulders as refuge.

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Where do Canterbury galaxias live?

Canterbury galaxias are endemic to New Zealand and are restricted to the eastern South Island, where they are widespread across Canterbury and northern Otago (Figure 2).

Populations are often fragmented and occur at low densities across a largely modified agricultural landscape.

Canterbury galaxias are most commonly found in side-braids, headwaters, and tributaries rather than main river channels. This is largely due to the presence of introduced trout in larger rivers, which restrict their distribution.

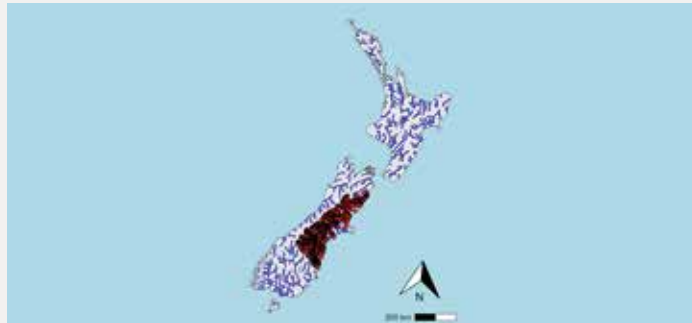


Figure 2: National distribution of the Canterbury galaxias. Data represent records held in the New Zealand Freshwater Fish Database (NZFFDB) April 2026.

What Canterbury galaxias need in streams

Canterbury galaxias prefer clear, cool, fast flowing streams with cobble and boulder substrates. They are most commonly found in smaller streams, side-braids, and tributaries, and are not common in large braided rivers where introduced trout are present.

They rely on coarse substrates that provide refuge among the spaces between cobbles and boulders. These habitats are sensitive to fine sediment, which can fill these spaces, reducing shelter and food

availability, and making them unsuitable for spawning and egg development.

Canterbury galaxias are nocturnal and solitary, spending the day hidden within the substrate before actively feeding at night. They feed mainly on aquatic invertebrates such as mayflies and stoneflies, but will also take drifting and terrestrial insects.



Photo credit: Peter Williams, Robert McDowall, DairyNZ

» Actions you can take to make your local stream a better place for Canterbury galaxias

- 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 habitat for aquatic insects and refuges for fish species.
- 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 Canterbury galaxias movements.

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