

Enhancing waterways for native fresh water fish

What is important to native fresh water fish?

- Good habitat.
- Clean water.
- Free passage between rivers and the sea.
- Adequate water flows.

The major threats to native fresh water fish are:

- Loss of habitat.
- Loss of spawning grounds.
- Stock damaging margins of streams and rivers.
- Polluted waterways.
- Badly designed culverts, dams and weirs that prevent fish migration upstream.
- Reduced flows.

Two main ways to assist native fish are:

1. Protect and enhance suitable habitat.
2. Provide fish passage to suitable habitats.

How do I enhance waterways on my property for native fish?

Generally, if the health of a stream is good it will provide a suitable habitat for native fish life.



A Malvern Hills stream planted to provide good habitat for native fresh water fish.

Actions you can take include:

- Preventing stock access to rivers and estuarine rush areas (eg fencing).
- Protecting and enhancing stream margin vegetation, especially sedges, rushes and native bush.
- Not introducing exotic fish, such as trout, if possible. Trout feed on native fish.
- Restoring and enhancing existing wetlands.
- Renovating or removing badly designed culverts, dams or weirs which prevent fish migration.
- Maintaining stream flows at levels which fish can survive and breed in.
- Being careful not to spread exotic waterweeds which can take over waterways and destroy fish habitat.
- Enhancing passageways to preferable fish habitats as this is as important as creating the habitats themselves.
- Considering the habitat needs of fish when clearing water weeds.

Whitebait

The whitebait catch is made up of a number of the native fish species. Predominant in the catch are the young of inanga, koaro and banded kokopu. Maintaining habitat for the adults of these species is essential for continued whitebait fishing.

Native fish species commonly found in Canterbury



Inanga.
Photo G. A Eldon.

Inanga

- Inanga live in lowland, sluggish flowing streams.
- They spawn in estuarine and marginal rush areas.



Canterbury Mudfish.
Photo G. A Eldon.

Canterbury mudfish

- Canterbury mudfish occur only in Canterbury and are a threatened species.
- They are found in waters of the Canterbury Plains at low to moderate elevations.
- They live in mainly weedy, overgrown streams and ponds. Mudfish are well camouflaged and therefore seldom seen. However, the fry can be seen shoaling in October and November.
- Canterbury mudfish are unique in that they can survive for short periods when water dries up. This is an advantage as such conditions may exclude potential predators.

Common bully, upland bully, shortfinned eel and longfinned eel

- These four fish species exist in a wide range of waterways. Cover, such as overhanging sedges or grasses, is important.
- Upland bully tend to be found in inland waterways.

Less common native fish species in Canterbury

Koaro and banded kokopu

- Koaro and Banded Kokopu tend to be found on Banks Peninsula. A population of Banded Kokopu exists in the Waimate area and Koaro are relatively common in Kaikoura Hill streams.
- They require the presence of marginal bush and resulting canopy cover.



Banded Kokopu.
Photo G. A Eldon.

What about fish in Canterbury's large rivers?

There are a number of native fish species that live in the large rivers characteristic of the region. These include the:

Torrentfish, bluegilled bully, alpine galaxias, Canterbury galaxias and longjawed galaxias.

- The habitats of these species range from the alpine reaches through to the braided sections of Canterbury rivers.
- Maintenance of water flows is important for these fish species, however at present flows are adequate.

For more information see; Environment Canterbury (2001) *Caring for streams of the Canterbury Plains - a guide to riparian management.*

McDowall R.M. (1980) *Mobil New Zealand Nature Series Freshwater Fish in New Zealand*, Auckland, Reed Books;

Department of Conservation (1998) *Protecting fish passage in our waterways*, DoC Fact Sheet No. 68.

Department of Conservation *Under Water Under Threat*, 20 minute video.

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