

## New Zealand's most endangered fish species

The streams and rivers that flow through Otago are home to a group of fascinating native freshwater fish found nowhere else on Earth. These fish belong to an ancient, scaleless fish family called Galaxiidae, named for the galaxy-like gold flecks and patterns adorning their backs.

Unlike whitebait, which migrate to sea, some non-migratory galaxiid species live out their entire life in the stream or river in which they hatched. Over millennia, these populations of galaxiids were isolated by geological events such as earthquakes and glacial movement. They evolved into distinct species, each with their own individual features and stories. Today, Otago is a biodiversity 'hot spot', home to 13 of New Zealand's most endangered non-migratory galaxiids.

*This brochure puts the spotlight on Southern flathead galaxias.*

*See the companion brochures on Eldon's, Dusky, Teviot flathead, Lowland longjaw, Taieri flathead, Clutha flathead, Central Otago roundhead, Canterbury, Gollum, and Nevis galaxias.*

## Help southern flathead galaxiids in your neighbourhood

- When repairing or replacing culverts or structures in streams, talk to someone at DOC to make sure they're compatible with protecting native fish. Barriers can help prevent galaxiids from being eaten by other fish.
- Fence off spawning areas in spring.
- Protect breeding grounds by restoring and protecting vegetation on stream banks and wetlands. Planting alongside streams also helps create shade, which galaxiids love, and reduces nutrient run-off.
- Check, Clean and Dry to prevent the spread of aquatic pests - fish such as koi carp and aquatic weeds such as didymo can wreak havoc on our freshwater environments.

### For more information

Contact your local DOC office

Visit [www.doc.govt.nz](http://www.doc.govt.nz)

Read *A photographic guide to freshwater fishes of New Zealand* by McQueen and Morris (2013), New Holland Publishers (NZ) Ltd

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# Galaxiids – Otago's unique freshwater fish



## Southern flathead galaxias



- *Learn about these fascinating and rare creatures*
- *Find out how you can help save them in your neighbourhood*

Department of  
Conservation  
*Te Papa Atawhai*

## Southern flathead galaxias *Galaxias 'southern'*

Southern flatheads have population strongholds in the Waiau, Aparima, Mataura and Oreti rivers. Incredibly, some populations can even be found on Stewart Island/Rakiura; they are thought to have distributed there during the Pleistocene ice age when a land-bridge was present. Their remaining populations are found in less than 100 hectares of habitat.

### Features

- Grey-brown to olive in colour and covered in dark-brown splotches and speckling, which can appear like mismatched wallpaper down the centre of their backs
- Characterised by flattened heads, fleshy lips and small beady eyes
- Typically grow up to 100 mm in length but can get to 125 mm
- Feed on small stream invertebrates such as mayflies and stoneflies
- Spawn in spring (October to November) laying tiny 2 mm eggs in saucer-shaped depressions beneath large cobbles or boulders in fast-flowing riffles
- Can be especially hard to spot as they're camouflaged amongst the rocks of the riverbed



Southern flathead galaxias Photo: rodmorris.co.nz

These Southlanders buck the trend of galaxiids, which are usually found high up in headwater streams where predators cannot reach them. Instead, southern flatheads are more generally found in the mid-to-lower reaches of gravel- and cobble-laden streams and rivers.



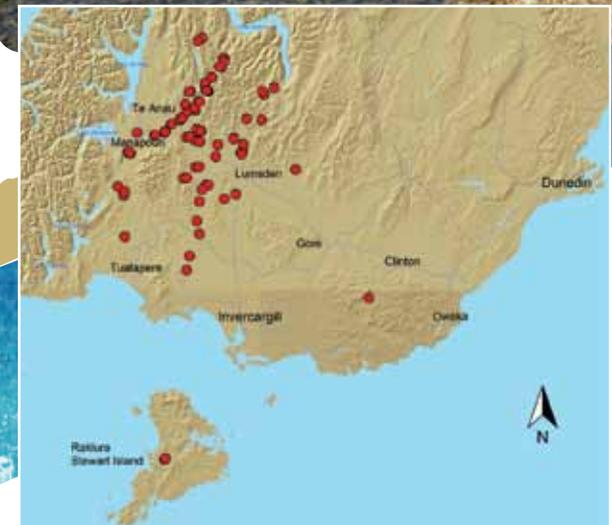
### Threats

Their main threats are habitat loss from land development and water abstraction, and predation by introduced fish species such as trout (although some larger river habitats have enough space for galaxiids and trout to co-exist).

Other threats include stock access to streams, reduction of native vegetation, and forest harvesting. These changes in land use impact on the streams in which galaxiids live, increasing sedimentation, changing natural flows through water abstraction, and reducing habitat available for spawning.



Mararoa River Photo: S Charteris



Locations of Southern flathead galaxias

