

FISH

Aotearoa has over 40 native freshwater fish species, and they're as amazing – and endangered – as our birds.

Galaxiids galore

Named for their spotty skins, like galaxies of stars, galaxiids are a very ancient fish family with no scales. In New Zealand we have lots of species of galaxiid – divided into galaxias and mudfish.

Mudfish

Most fish die if their homes dry out in droughts, but mudfish can aestivate for up to two months. Aestivating is the summertime version of hibernating. When waters run dry, mudfish find a still-damp spot under a log, or down a root hole, then slow their body processes right down, and stay there till waters return.

Non-migratory galaxias

Some galaxias species can live all their lives in a single stream. Many of these homebodies are in and around Otago. Most common is the Canterbury galaxias. Others include the dusky galaxias, Teviot galaxias, and Gollum galaxias. (Guess how it got its name.)



Our biggest galaxiid - the giant kōkopu. Photo: Stella McQueen

Migratory galaxias

Other galaxias live in the sea while they're babies, then travel inland, up our rivers and streams, as toddlers.

We call these travelling toddlers 'whitebait', and sadly for them, humans find them delicious. Millions are caught and eaten.

Those that make it through whitebait nets and other dangers grow into fascinating adults. One famous migratory galaxias species is kōaro. With their special grippy fins, these superhero-like fish can climb tall dams and waterfalls!

Eely friendly

Eels (tuna in Māori) are full of personality if you get to know them. Discover more on page 14.

A toothy traveller

There are lots of lamprey species in the world, but Aotearoa has only one: the wide-mouthed lamprey.

Lamprey are long and slippery like eels, but up close they're quite different.

Born without eyes, they bury themselves in the sediment at the bottom of rivers, and filter-feed for a few years. Then they grow eyes, turn blue, and head for the ocean.

They have no jaw – just this toothy sucker that they use to latch onto other fish and suck their blood.

Lamprey come home to freshwater to breed.

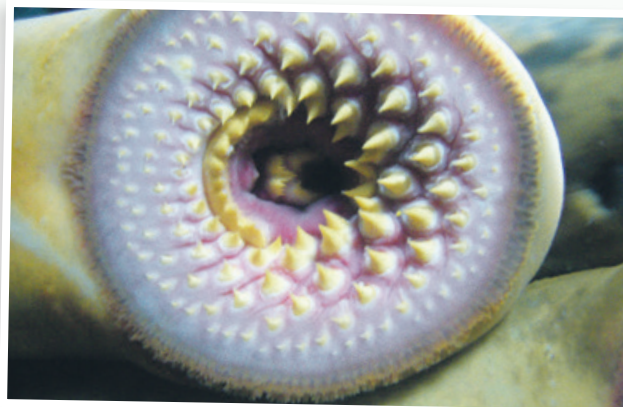


Photo: Drow Male

The best kind of bully

Little fish darting along the bottom in shallow water are likely to be bullies. There are seven species in Aotearoa.



A male red-fin bully. Photo: Stella McQueen

BUGS AND OTHER INVERTEBRATES

When you visit a waterway, how many different kinds of invertebrate can you find? That tells you a lot about how healthy the water is.

Become a water detective

Some invertebrates can live in almost any kind of water – no matter how polluted. Others are more sensitive. They're called 'indicator species'. If there are many different species in the water and under rocks, including some indicator species, they're telling you it's healthy.

If none of them are there, or there aren't many different species around, then the water is probably in a bad state.

To find out more about our precious freshwater invertebrates – and what they tell you – head to the Landcare Research Manaaki Whenua website, and search for their Freshwater Invertebrates Guide.



Our northern kōura, found in the North Island and the north-west South Island.

Night-time nippers

Two species of kōura, freshwater crayfish, live in Aotearoa's lakes and streams. They come out at night to scavenge and feed on whatever they can find.

You can find them in country and forest streams, but they can't tolerate polluted city streams. They grow faster in warm pasture streams with more to eat, but live longer in cool forest streams.



Dolomedes aquaticus. Photo: Craig McKenzie, reproduced with permission from *The Genius of Bugs* by Simon Pollard

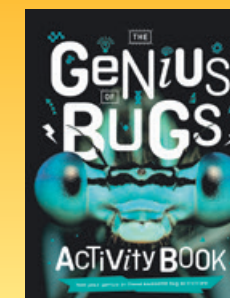
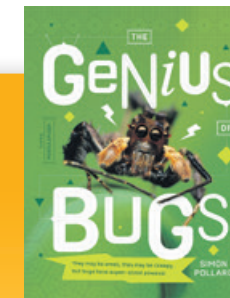
Water runner

After dark, *Dolomedes aquaticus* waits at rivers for its prey, then runs across the water to seize it. These spiders can even catch small fish.

WIN BOOKS!

The Genius of Bugs
by Simon Pollard
Te Papa Press, \$24.99

The Genius of Bugs Activity Book
Te Papa Press, \$14.99



The Genius of Bugs is a new, fresh take on the world of bugs, inspired by the blockbuster science exhibition Bug Lab, brought to Wellington this summer by Te Papa and Weta Workshop.

To enter the draw to win a book, email kcc.competition@forestandbird.org.nz – and be sure to put 'Genius of Bugs giveaway' in the subject line.