



Pest fish – freshwater

Animal pests

Pest fish threaten New Zealand's streams, rivers, lakes and wetlands, and are increasing their range in New Zealand. Unfortunately, once they have invaded a waterway they can easily spread throughout a whole catchment and become difficult or impossible to remove. Because pest fish live under water, it can also be very hard to detect them before they reach large numbers and become a serious problem. Preventing pest fish from establishing new populations is the best way to protect our waterways and native species.

There are as many as 22 introduced fish species in New Zealand; compared to nearly 40 native freshwater fish species. Like all introduced plants and animals, some cause more problems than others. Some introduced fish species, like trout, are also recognised as sports fish and are highly valued by anglers.

Other freshwater fish have been formally classified as pests, with koi carp, gambusia, rudd and catfish causing the most concern.



Why are they a problem?

Pest fish are threatening New Zealand's freshwater plants and animals and environments by;

- Stirring up sediment and making the water murky
- Increasing nutrient levels and algal concentrations

- Contributing to erosion
- Feeding on and removing native aquatic plants
- Preying on invertebrates, native fish and their eggs
- Competing with native species for food and space

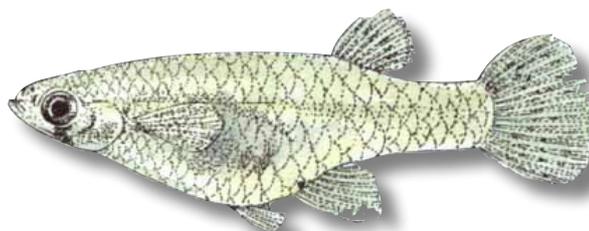
All of these factors make waterways less desirable for native species, and may also affect how the water can be used.

Which fish are pests?

In New Zealand, these introduced fish are considered major pests;

Gambusia (mosquitofish)

Gambusia (below) were introduced to control mosquito larvae, but ironically, they are not very good at it. These greenish-silvery fish are small; mature females grow to 6 cm and males to 3.5 cm. Despite their size, these fish are aggressive and attack the fins and bodies of much larger fish – including whitebait. Gambusia mature at six weeks old and are unusual because they give birth to live young. This means that only one pregnant female is needed to start a new population. They prefer shallow, vegetated margins of slow flowing ponds, wetlands and streams. Found only in the northern half of the North Island.

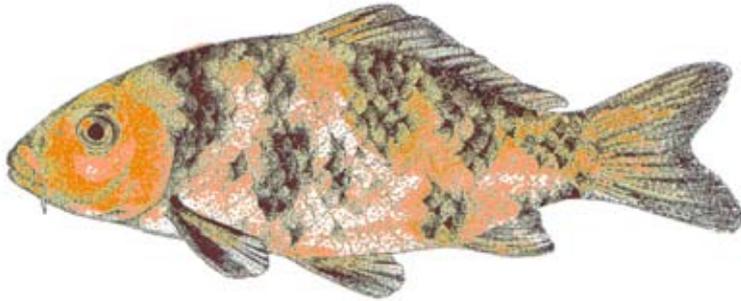


Working to control the spread of rudd.



Koi carp

Koi carp look like goldfish except that they have two pairs of barbels (feelers) at the corners of their mouth. They vary in colour, often with irregular red, gold, orange or pearly white blotches. Koi carp are long-lived fish and grow to about 75 cm in length. They prefer still waters in lakes, or backwaters in rivers. Koi carp feed like a vacuum cleaner, sucking up everything and blowing out what isn't wanted. They stir up and muddy the bottom of ponds, lakes and rivers, destroying native plant and fish habitat. They are widespread in the Waikato.



Rudd

(Note: Rudd are classified as sports fish in the Auckland/Waikato Fish and Game region but are classified as noxious species elsewhere)

Rudd is a stocky deep-bodied fish with a small mouth. Its back is golden olive, paling through silvery-green to silvery-white on the belly. It has rosy-pink snout and lips, and bright red fins. Rudd grow about 25

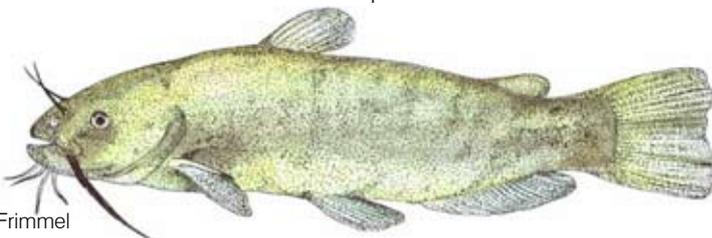
cm long and prefer ponds, lakes and slow-moving streams.

Rudd feed voraciously on insects, aquatic plants and other fish; compete for food and

damage native fish habitat. They are common in Auckland and Waikato with only a few populations elsewhere.

Catfish

Catfish have distinctive whisker-like barbels (feelers), and sharp spines at the front of the pectoral and pelvic fin. In New Zealand they often grow to 30 cm and weigh up to 2 kg. Catfish prefer slow-flowing streams and the edges of lakes, often amongst aquatic plants. They stir up sediment and prey on small native fish and fish eggs. They eat and compete with koura (native freshwater crayfish) and are common in Waikato and Lake Taupo.



Drawings: Sonia Frimmel

What is being done?

It is very difficult to remove fish from waterways once they have become established. DOC works with other agencies such as Fish and Game New Zealand and local councils, to raise awareness of pest fish and to prevent accidental and deliberate introductions.

DOC has conducted pest fish surveys to monitor changes in pest fish distribution, but also relies on reports from the public. Management of new pest fish populations can include containment or eradication, but it is much better to prevent their spread in the first place.

How can you help?

- It is illegal to move fish around or release them to new waters without a permit.
- If you know of people who are spreading these fish around please contact the closest DOC office.
- Likewise, if you see fish in places where you haven't seen them before, we'd really like to know – please contact your local DOC office.
- Wash fishing gear, boats and trailers down carefully after use to prevent pest fish from hitching a ride.
- Don't collect aquatic plants from the wild or from friends as fish and fish eggs can catch a ride.
- If you have pest fish on your property, stop them spreading further by putting screens at pond inlets and outlets. Contact DOC for help or information.
- Aquarium species that have escaped into the wild are also of growing concern. Please empty your aquarium into your garden, **not** the local stream.

For more information

Contact your local Department of Conservation Office or visit www.doc.govt.nz

Regional councils also have roles in freshwater pest fish management and Biosecurity New Zealand take the lead role for *new* freshwater pests into New Zealand. Fish and Game www.fishandgame.org.nz and Ministry of Fisheries www.fish.govt.nz also have more information.

There is a variety of legislation that governs freshwater fish in New Zealand. These include the Conservation Act 1987, Biosecurity Act 1993, Freshwater Fish Regulations 1983 and Whitebait Fisheries regulations 1994.



STOP THE SPREAD

Protect our waters from aquatic pests
Do not release plants and fish
into waterways