



Koura / New Zealand's freshwater crayfish

Native animals

The koura, or freshwater crayfish, is endemic to New Zealand. It can be difficult to spot as it is often the same colour as the rocks at the bottom of its stream. It also stays hidden during the day, preferring to move around at night. Although genetic research is ongoing, there are two currently recognised species of koura found in New Zealand. The larger species (80 millimetres long) has very hairy pincers and is found in the east and south of the South Island and on Stewart Island. Koura in the North Island and in Marlborough, Nelson and the West Coast of the South Island are slightly smaller (about 70 millimetres long) and have less hairy pincers.

Where is it found?

The koura lives in freshwater streams, lakes, ponds, and swamps. Koura typically shelter between stones but they also can burrow into mud. Koura living in swamps will sometimes burrow deep into the mud when the swamps dry out over summer, waiting until the water returns to re-emerge. Some koura can live on the bottom of very deep, clear lakes in the South Island at depths of up to 60 metres.

Koura facts

- The koura belongs to a group of animals called 'crustaceans', which all have a hard, shell-like covering. This covering eventually gets too small for the koura, and the animal must then shed the old layer in a process called moulting. The old shell-like skin splits and is left behind, while the new skin underneath hardens. During moulting, crayfish are very vulnerable to predators.
- Koura, also known as kawai, use their four pairs



of walking legs to get around quite quickly. They do not crawl as their common name 'crawly' suggests! When alarmed, the koura will switch into reverse gear, flicking its tail forwards violently to shoot backwards into shelter.

- The koura's first pair of legs are pincers, which are used mainly for catching food and fighting or warning off invaders.
- Instead of hunting for their food, koura are scavengers that feed on old leaves and small insects that float by in the water or settle onto the lake or river bottom.
- Trout and shags are the koura's major predators. They are also eaten by eels.
- Female koura produce eggs between April and December (mostly in May and June). She carries between 20 to 200 berry-like eggs under the side flaps of her abdomen, when she is said to be 'in berry'. Small koura hatch about 3 to 4 months later, looking exactly like their parents in miniature. They cling to their mothers with their pincers until they are nearly 4 millimetres long. By their fourth year they are 20 millimetres long and become adults.
- Māori have long prized koura as a delicacy and many people can remember catching 'crawlies' as a child.



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Did you know?

Koura have a crucial part to play in our freshwater lakes and streams. They are important to the structure of these communities because they recycle leftover materials through their scavenging. In addition, koura

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filter fine sediments, which improves conditions for other organisms living in that freshwater environment.

Koura also act as an indicator species, signalling to scientists when conditions have become unhealthy for a range of organisms in that habitat. Scientists can therefore monitor koura populations in order to determine the overall health of a lake or river system. If freshwater crayfish are present in a stream, that is a good sign that the stream is clean.

Threats

New Zealand freshwater animals such as the koura are in danger because their habitats are disappearing. Less than 9% of New Zealand's wetlands remain; most have been drained for farming. Many streams, rivers and lakes are now highly polluted, and the loss of riverbank vegetation can lead to erosion, making the water muddy and killing the food source for aquatic insects.

Other threats include:

- Illegal harvesting: koura may legally be gathered for personal consumption up to a limit of 50 crayfish per day. However, the selling, trading or possession of koura for the purposes of sale or trade is illegal.
- Introduced mammals: Although not a lot is known about the effects of land mammals on freshwater ecosystems, research has detected crayfish in the guts of trapped stoats, which suggests that land mammals may pose a threat to koura.

How can you help?

Please do not move koura from one place to another.

If you have a river or lake on your property, take an interest in preserving or restoring this habitat by:

- planting vegetation to prevent erosion along riverbanks or lake shores,
- preventing the spread or introduction of exotic fish, and
- preventing fertilisers and other pollutants from draining into the lake or river.

Please limit your own consumption of koura and keep an eye out for possible illegal harvesting. You can report any misconduct to your local Department of Conservation office.

Further information

To learn more about koura and freshwater ecosystems, contact your local Department of Conservation office or visit www.doc.govt.nz