

Australian Longfin Eel

Anguilla reinhardtii

OTHER COMMON NAMES

Speckled longfin eel, marbled eel, spotted eel

THREAT RANKING

Non-resident native: Migrant

Sharing Pastoral Streams with Native Fish

New Zealand's long isolation has created a unique freshwater fish fauna with many species found nowhere else on earth. Our freshwater fish are taonga (treasures), and some species play an important role as mahinga kai, holding significant cultural, ecological and environmental value. In our streams, native fish rely on healthy, connected habitats that extend from shaded headwaters through to lowland waterways. This is important not only for species that live within pastoral environments, but also for those that need a clear pathway between freshwater and the sea to complete their life cycles. Farm waterways are a key part of this network, providing habitat for spawning, feeding and growth, as well as the connections between these areas. Understanding which fish live in your waterways is a rewarding first step toward sharing these spaces and supporting healthy, thriving fish communities.

Eels will travel over damp ground, breathing through their wet skin to move between waterways

The Australian longfin eel has self-colonised in New Zealand from Australia. It looks very similar to the New Zealand longfin eel, except it is speckled with black blotches along the top of its body (Figure 1). Their



Figure 1: Speckled black blotches on Australian longfin eel.

dorsal (back) fin starts well forward of the anal fin (underside), giving them the "longfin" name and helping distinguish them from shortfin eels (Figure 2).

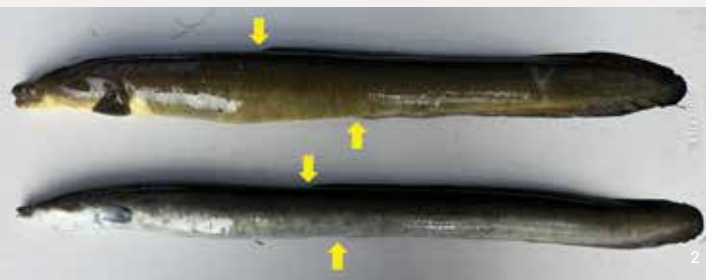


Figure 2: Comparison of fin location on the New Zealand longfin eel (top) and New Zealand shortfin eel (bottom), noting the larger difference in starting positions of the dorsal fin of the longfin eel.

Lifecycle of the speckled longfin eel

The lifecycle of the speckled longfin eel is similar to our native shortfin and longfin eels. It is found across tropical to temperate waters along the east coast of Australia and only occasionally reaches New Zealand. Like our longfin eel, it is catadromous, meaning it grows in freshwater but migrates to the sea to spawn (Figure 3).

Its larvae (called leptocephali) drift on ocean currents and may occasionally reach New Zealand. They then transform into transparent "glass eels," named for their see-through bodies. After entering freshwater, they develop into darker juveniles known as elvers, which move into suitable habitats to feed and grow.

This growth phase can last for several decades before the eels mature and begin their migration back to the ocean to spawn. Before migrating, they stop feeding and undergo physical changes: their bodies become more streamlined, their bellies turn silvery, and their eyes and fins enlarge to prepare for the sea.



Figure 3: Lifecycle of Australian longfin eel.

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Where do speckled eels live?

The Australian longfin eel is not very common in New Zealand. It has been physically captured at a small number of sites, mainly in the Waikato River and nearby catchments. Additional captures occur along the west coast of the North Island, from Northland south to Taranaki, with a few isolated records on the Coromandel Peninsula and in the upper South Island. However, recent detections using eDNA suggest it may be more widespread than these observations indicate (Figure 4).

What speckled eels need in streams

The Australian longfin eel uses similar habitats to the New Zealand longfin, living in a wide range of freshwater environments including creeks, streams, rivers, swamps, dams, lagoons, and lakes.

Eels are habitat generalists, meaning they can live in a wide range of environments, including pastoral streams. Large New Zealand longfin eels (over about 1.3 m long) are commonly found in these modified systems, and the Australian longfin is also well suited to these conditions.

Eels are mostly active at night and hide during the day, so they rely on instream cover for shelter. This includes tree roots, undercut banks, overhanging stream edges, logs and debris dams, and boulders. Streams with a mix of these features provide better shelter and feeding opportunities.

While juvenile eels can climb many barriers, perched culverts that sit above the water surface can block upstream movement. This can prevent young eels from reaching suitable habitats where they can feed and grow.

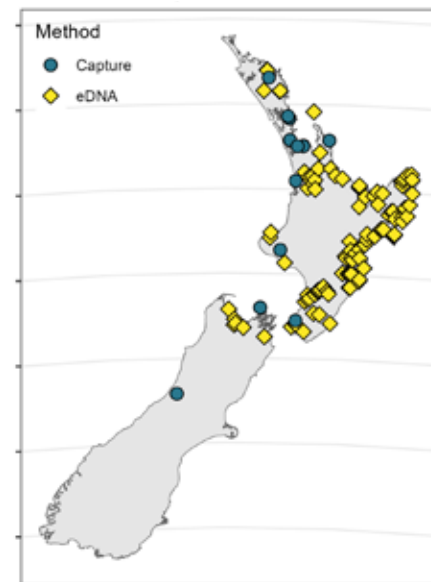


Figure 4: National distribution of the Australian longfin eel. Data in blue represent capture records held in the New Zealand Freshwater Fish Database (NZFFDB) April 2026, while data in yellow represent eDNA records held by Wilderlab April 2026 (Note: eDNA data depicted is a minimum of 3-replicates).



Photo credits: Fern Kumeroa, Peter Williams, DairyNZ

» Actions you can take to make your local stream a better place for eels

- Fence streams to exclude stock and reduce bank erosion and damage to streambeds.
- Plant and maintain native riparian vegetation to provide shade and keep stream temperatures cool. Riparian planting also stabilises banks, adds habitat complexity (such as roots and woody debris), and supplies organic matter. Shading can also reduce nuisance weed growth and the need for mechanical channel maintenance, which can disturb benthic habitats used by eels and other species.
- Retain logs, boulders and undercut banks as these provide important refuges for eels.
- Improve fish passage at instream structures such as culverts, weirs and floodgates. Ensure structures are correctly sized and installed so they do not create drops, barriers, excessive water velocities or scouring that restrict eel movements.

Refer to regional DairyNZ guidance & NZ Fish Passage Guidelines for more information