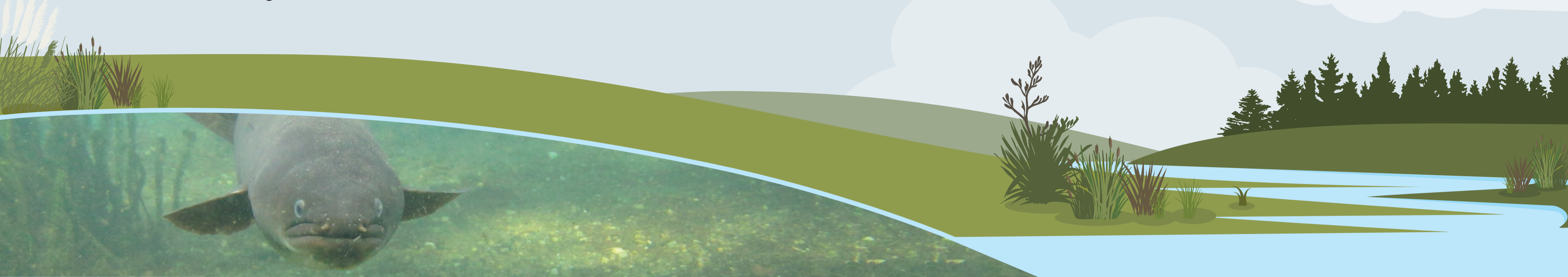


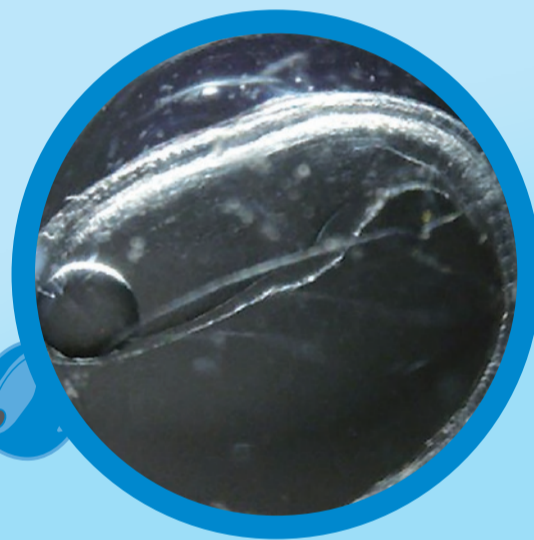
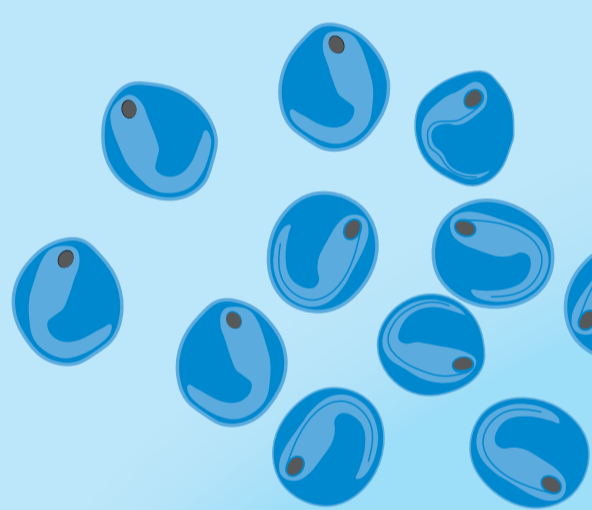
# TUNA: what does science tell us about New Zealand eels?

Tuna are the most widespread freshwater fish in Aotearoa. They also have an unusual life cycle which sees them travelling between the sea, estuaries and freshwaters.



## 1 EGGS

The tuna starts its life as an egg out in the Pacific Ocean.



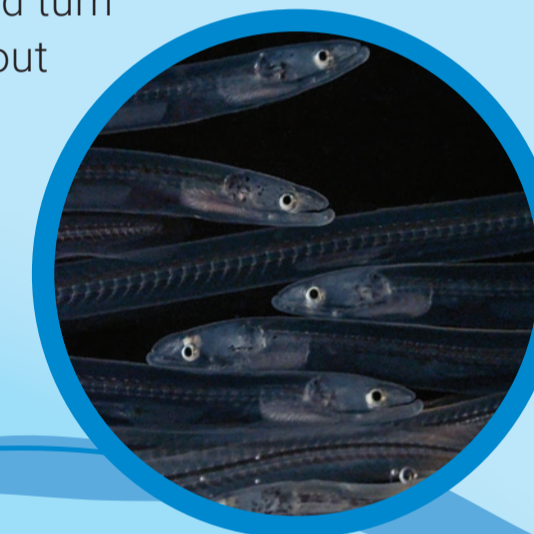
## 2 LARVAE

They hatch at sea into see-through (transparent), leaf-shaped larvae called leptocephali and spend between 9 to 12 months drifting on ocean currents which bring them back to Aotearoa.



## 3 GLASS EEL

When they reach the seabed near Aotearoa (continental shelf) they change shape and turn into colourless eels called glass eels, about 60–70 mm long. In early spring they move into estuaries, rivers and streams where they rest to get used to their new freshwater environment.



## 6 TUNA HEKE (MIGRANT EEL)

After a long life in freshwater (on average between 11 and 52 years) tuna start to change and stop feeding. This is when they are known as tuna heke or "silver eels". During rainy nights in autumn (and sometimes spring) they begin their long migration (or journey) to the Pacific Ocean where they spawn and are thought to die.



## 5 ADULT TUNA (FEEDERS)



The adult tuna live for a relatively long time in rivers, lakes, wetlands, ponds and streams, eating and preparing themselves for when they are ready to begin their migration back out to sea.



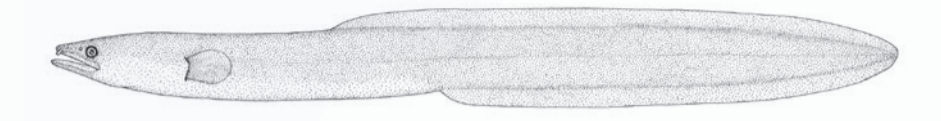
## 4 ELVERS (JUVENILE EEL)

After several weeks, they begin to turn brown (gain pigmentation) and begin their journey as an elver and head upstream. Keep an eye out in your local waterway during summer for elvers travelling up your stream.



KEY  Marine lifestage  Freshwater lifestage

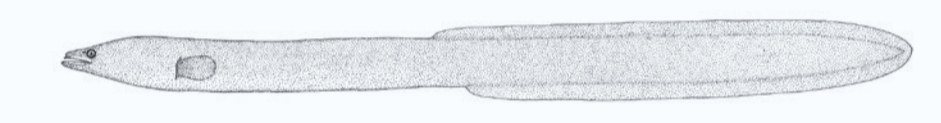
## THERE ARE THREE TYPES OF EEL IN AOTEAROA



Dr R M McDowall

### Longfin Eel (*Anguilla dieffenbachii*)

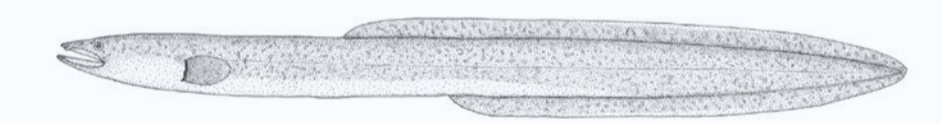
On a longfin eel, the dorsal fin is longer than the anal fin. When you bend the body of a longfin the skin 'wrinkles' on the inside curve. This is not observed in shortfins.



Dr R M McDowall

### Shortfin Eel (*Anguilla australis*)

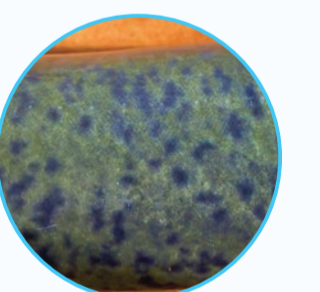
On a shortfin eel, the dorsal and anal fin are almost the same length.



Dr R M McDowall

### Australian Longfin Eel (*Anguilla reinhardtii*)

The Australian longfin looks like the New Zealand longfin but has black blotches along the top of its body.



For more information visit [niwa.co.nz/te-kuwaha/tuna](http://niwa.co.nz/te-kuwaha/tuna)

