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Huanui College Whitebait  
Connection Term One, 2011 Photo  
Album

by WBC coordinator Kim Jones







# THE NZ LONGFINNED EEL



**FACTS:** The New Zealand longfinned eel is the world's largest and longest freshwater eel. It is a creature of great significance to our culture and country. It is one of the native freshwater eels found in New Zealand. It is also endemic to New Zealand. Eels that are not only native to our country but originally evolved in here 80 million years ago and therefore cannot have elsewhere else. The other species of eel is the Short finned eel.

**DIET:** Long finned eels feed on various invertebrates and are opportunistic feeders. Their diet as small eels mainly consists of insect larvae. When eels become larger they also feed on small fish including gizzard shad and trout.

**REPRODUCTION:** The eels migrate to fresh waterways 20-30 km from the sea, usually in late spring/summer. The waterways themselves are generally quite shallow for them. Migration for eels begins when their bodies are full of eggs and the moon and weather is just right. They start off their journey in our waterways and make their way to the open sea. Scientists suspect that they travel at great depths, because it is hard to track them during migrations. Migrations deep underwater would probably protect them from other underwater egg predators. They lay their eggs and fertilise them somewhere near Samoa but it is not certain. The fertilised eggs make it all the way back to the New Zealand waterways and begin their lives as eels.

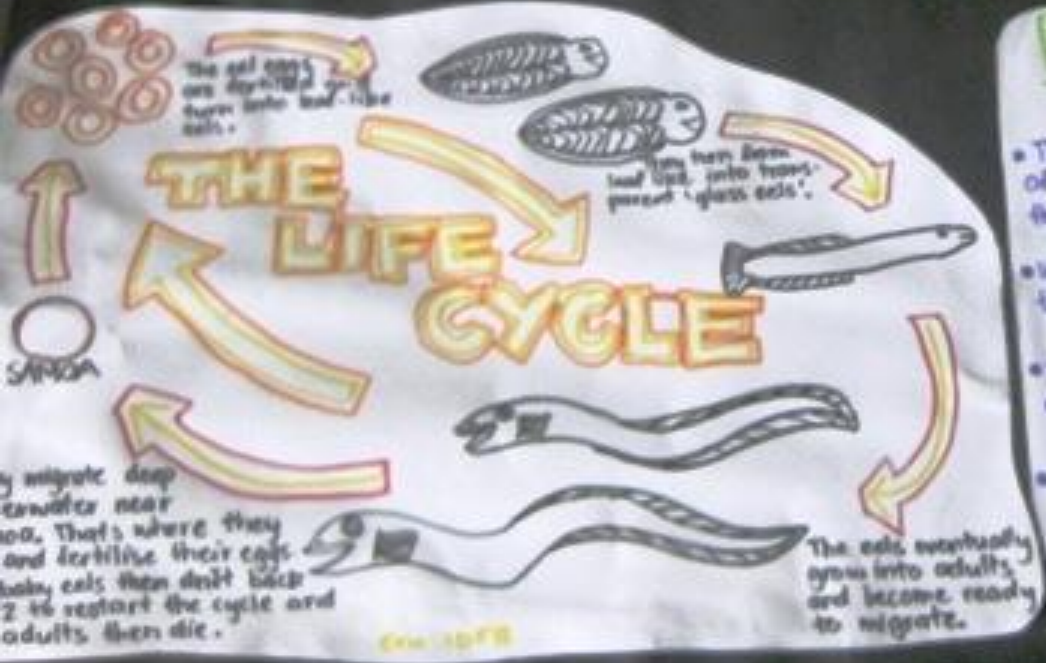
**THREATS:** Long finned eels are at risk of extinction due to commercial fishing. They are caught in many numbers and sold worldwide to places like Asia and Europe. Catching of the eels is not discouraged but it is the huge amounts being taken that is threatening the species. Other threats are things such as a lack of habitat for the eels to stay within during migration. Introduced species such as the salmon or trout make the eels compete for space food which is often not good for the eels sustainability.



## FACTS

- The longfin eel is one of the largest eels in the world.
- When eels begin life, they are 1mm in length.
- They can grow up to 2 metres long.
- Longfin eels breed only once, at the end of their life.

**How to improve their situation:**  
 - You must make everyone more aware of the fact that these eels are endangered and of the importance of these creatures. These eels are important to our country and our culture so let's look after them.





Kaitiaki  
The Ministry of the Environment  
and Conservation  
www.mta.govt.nz

Where is it?  
Why is it important?  
What is it used for?

### New Zealand's Freshwater Fish

Species	Characteristics	Conservation Status
Bluegill	...	...
Common Carp	...	...
Goldfish	...	...
Rainbow Trout	...	...
Sea Trout	...	...
Shiner	...	...
Sliphead	...	...
Weka	...	...

## THE LONGIN REEF

Longin Reef is a small, rocky island in the Bay of Plenty, New Zealand. It is a popular spot for birdwatching and fishing. The reef is home to a variety of native birds, including the New Zealand falcon and the New Zealand sea eagle. It is also a good place to see seals and dolphins. Longin Reef is a beautiful and scenic area that is well worth a visit.



LONGIN REEF



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# Long Finned Eels



# EELS

By Lynlee

10 PB.

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## Facts:

during their life, they can grow up to two metres long. compared with many other fish, eels are slow growing - a long fin may grow only between 15-25mm a year. Large long fins have been estimated to be at least 60 years old

◀ eels are voracious, mainly nocturnal and prefer habitats with plenty of cover.

◀ The ancestors of modern New Zealand eels (like *Anguilla dieffenbachii*) had been swimming up and down New Zealand waterways since at least the early Miocene (23 million years ago).

◀ The long fin eel is one of the largest eels in the world and it is found only in the rivers and lakes of New Zealand.

◀ The long fin eel is named so because the top portion of the fin is longer than the bottom fin.

◀ While they have the appearance of being scaleless, tiny scales are embedded deeply within their thick, leathery skin. The eel's skin is very sensitive to touch. This helps it to 'see' in its watery environment.

◀ The heaviest long fin reported was 50 kilos.

## Reflection:

At first I wasn't that keen on learning about long finned eels as they always disgusted me. I related them to the deformed creatures group along with slugs, snails, caterpillars, and others and they always went around thinking that when they are actually really amazing creatures. I have learnt so much about long finned eels and I am so glad to have had the opportunity to research about the way that they live and that they need our help to prevent them from becoming extinct. I want to help spread the word about our long finned eels because I think that they are important creatures to New Zealand and its wildlife, and I believe that if more people around our community know about them and are aware about them then they will think exactly the same as I'm thinking now. They need our help, let's do something about it.



Eel for dinner?

extinction due to commercial...  
ought in mass numbers and sold...  
like Asia and Europe.  
aged but





Long finned eel

## Introduction:

Eels. Slimy deformed creatures lurking in places where you least expect. That's what I thought of eels before I started finding out about them. Not many people know much about them but they are quite amazing creatures.

Eels are in danger as it is said that they are as endangered as the kiwi and we need to spread the word to keep them from becoming extinct. They are being commercially fished so that they can be exported to other countries for food.

Did you know that there is only 3 percent of fresh water left in the world and only 0.0002 of that is drinkable? That means that the long finned eel are spending most of their time in the 3 percent of water that's left on our planet. We need to watch out for our long finned eels as they are native to New Zealand and we don't want another native creature slipping out of our hands.

## Food:

Small long fin eels living amongst the river gravels will feed on insect larvae, worms and water snails. When they get bigger, they begin to feed on fish. They will also eat fresh water crayfish and even small birds like ducklings.

During the day, eels are in hiding, they lie under logs and boulders or under riverbanks. Occasionally they may be seen out hunting for food but most of their hunting takes place at night. Eels hunt by smell rather than sight. Long fin eels have a well developed sense of smell. They have tube nostrils that stick out from the front of their head, above their upper lip. They also have a very large mouth with rows of small, sharp, white teeth. The top teeth form an arrow shape on the roof of the eel's mouth.

## Life cycle

**Larvae drifting to land**  
Fertilised eggs hatch at the surface of the sea and become leaf shaped larvae. Feeding on ocean currents (plankton) the eels in sea to absorb nutrients, as researchers have not found food in the larvae.

**Adult eels spawning at sea**

Adult eels spawn at some depth in warm seas. The long finned eel produces between 1-20 million eggs which the male fertilises. After spawning, the adults die.

**Strong swimming upriver**

After 400 days the eels are grown and in the form they are taken to rivers. They migrate upriver after a period usually at night. They eels can also migrate, but not the eels in the river.

**Adult eels**

The eels become adults, which become bigger eels and better looking. After many years in fresh water, the eels migrate back down the waterways to the sea. The males fertilise the eggs once the females spawn out at sea.



## Migration and habitat:

Long finned eels are native to New Zealand. They are found throughout the country mainly in rivers and inland lakes, but almost every water as long as it's inland from the coast, will contain eels.

They are well known for their climbing - the eelers (which are the young eels) climb waterfalls and even dams by wriggling over the damp areas of the climb. As they are slimy, the eels can climb up a waterfall of about 20 metres to carry on with their journey.

Hydro dams stop eels moving freely up and down some rivers. To get around this problem eel passes have been built across some dams to help the eels complete their journey. Young eels may also be moved across the dams by hand.

Adult long finned eels migrate downstream when they reach sexual maturity in an attempt to reach and eventually breed around the Coral Sea near New Caledonia. Eels reach sexual maturity at different times, even at 80 years of age. A mother eel may carry millions of eggs inside her. After spawning (producing eggs), the adult dies.

## Threats:

It is said that the long finned eel is as endangered as the kiwi. They are commercially fished and this is the reason of their extinction.

Have you ever heard of *unagi sushi*? The Japanese *sushi* with *unagi* on top which is extremely popular and expensive in their country. *Unagi* is the Japanese word for freshwater eel and they are a country in Europe which commercially fishes them. Another country in Europe which is known for their rise in eel catching over the years. This big increase in fishing effort led to significant stock reductions in some areas, with a marked drop in the average size of the eels caught.

Water also affects eels. Changes caused by hydro development, drainage and irrigation schemes and river diversions affect eels by reducing their habitat and the water available for spawning etc. We need to do something about our eels because their habitats are also in danger because of our pollution. Sewage and reject excess from meat works and pulp and paper plants are discharged into rivers which can remove large quantities of oxygen from the water. The result of this oxygen depletion is that the fish will either die or move away.

## What can we do to prevent the long finned eel from facing extinction?

The Ministry of Fisheries has imposed a quota on the eel catch, but scientists say commercial fishing of them needs to be stopped altogether before it is too late. Ecologist Mike Joy says "continued commercial fishing will spell the end for the long finned eel". "With eels, each one of them that are taken out, is one that won't breed, because that's the last thing they do in their life - go off and spawn," he says. Spawning sometimes does not happen until the eels are 100 years old - a long time to avoid a fisherman's net. Spokesman Tom Chatterton says "we've reduced catch limits significantly, we've put in place a maximum size limit for eels and all these measures are designed to leave more eels in the water." The Ministry of Fisheries says it will take some time for its restrictions to have a positive impact on the eel population, but others say that the new restrictions will never work because if they did, we would have seen a difference in the population levels by now.

Since there is lots of complication between the new restrictions being made, we need to do something about this problem. As a community, we can spread the word about the long finned eel so that we are aware of the consequences that the long finned eels are facing. Not many people at all know about the danger that the eels are in and if our community is knowledgeable about the eels we will have lots of people wanting to make a difference. If we clean up our waterways and communicate with the Ministry of Fisheries we can save the long finned eel that is native to our country.

## Appearance:

In shape, eels are elongate, slender-bodied fishes, almost tubular. When they are small, they have relatively smooth heads but as they grow the head becomes bulbous, with a prominent muscular dome behind the eyes.

They change shape again when they get ready to migrate to their breeding grounds. The head becomes much more slender and tapered, almost bullet-like and the eyes enlarge to up to twice their normal size. Like all fish, eels have scales and fins. The long fin eel is so named because its top (dorsal) fin is longer than its bottom fin. While they have the appearance of being scaleless, they scales are embedded deeply within their slick, leathery skin. The eel's skin is very sensitive to touch. This helps it to "feel" in its watery environment.

In colour, long fins are usually dark brown to grey black. Very occasionally, long fin eels found in the wild are partially or even wholly bright yellow in colour.



...due to the importance of a place ...



The eels naturally grow into adults and become ready to migrate.

Eels breed only once at the end of their life.

How to improve their situation - You must make everyone more aware of the fact that these eels are endangered and of the importance of these creatures, and our culture so lets look after them.























