

# TUNA FROM WAIRARAPA MOANA



## Human exploitation of Wairarapa Moana eels

The longfin eel species is 80 million years old, with oral traditions suggesting that humans have been eating eels since people first discovered the Wairarapa lakes. With no large land-based mammals available and only two other freshwater native fish weighing more than three pounds, the eel quickly became an important food source.

Over the centuries, Māori caught tuna from Wairarapa Moana, Ōnoke Moana and nearby rivers. During the 19th century up to 30 tonnes per annum were being caught. To maintain extraction of these quantities a stringent management system was developed. This saw the maintenance of habitat, orders to reduce the numbers caught and the periodic banning (rahui and tapu) of fishing in places deemed of extreme importance.

*Only go fishing in months that have an 'r' in them.* Russell Broughton, 2001

The above quote recognises that eels are less active in the winter months and therefore not in the best condition at those times. Although a simple statement, it also illustrates part of the management practices of Māori.

## Tuna heke

The term 'tuna heke' refers to a migrating eel. Over hundreds of years, each year Māori waited for the Ōnoke Moana sandbar to close at the end of summer. Once this happened those observing the lakes knew that eels from throughout the Ruamāhanga River catchment would be moving down the river through Wairarapa Moana and towards Lake Ōnoke. With the sandbar closed, water would back up and the lake levels would rise, an event known to Māori as 'hinurangi'. This also meant that eels would be trapped and it was a good time to catch them.



Hira Nutira (left) and Tiemi Whaitiri trapping eels at Lake Forsyth, Canterbury. May 1948. Alexander Turnbull Library, Wellington



The drying out of eels at Lake Forsyth. Original caption: Every morning the drying eels are hung out and returned indoors at night. Wind is the drying agent. May 1948. Alexander Turnbull Library, Wellington



Peter Buck (Te Rangī Hīroa) (1877-1951) studying the making of a hinaki or eel basket. The tutor is Paratene Ngata (1851-1944) – father of Sir Apirana Ngata. Ramsden Papers, Alexander Turnbull Library, Wellington

*Piripi Te Maari used to ride along the lake shore looking for the right time to fish for eels. When the message was received everybody use to take off to the lake; the setting of the hinaki was highly tapu and a lot of ceremony was laid down for this task. The hinaki were always set during the day and when the chief gave the order to lift the hinaki they were always filled to capacity.*

Mita Carter, 1993

The annual tuna heke occurred between January and April. People from as far north as today's Masterton would set up camp around the lakes to catch, eat and preserve eels. The male shortfins came first, then the female shortfins, followed by the male longfins and finally the female longfins.

*Here in the Wairarapa, goodness gracious I've never seen so many eels, that many over here that the drains at Te Hōpai use to be 8 feet deep, just a mass of eels going out to sea. I've seen that, and we just put in a big wire, no barb and just pulled them out, out of the drains. Big wide drains, about 12 feet wide. The drains were thick with eels. You could hear them at night like ducks taking off and you know they're running.* Wiremu Aspinall, 2001

At various stages throughout history, factors such as natural phenomena, that reduced the availability of other food sources. Expanding human populations and events like the Great Depression of the 1930's saw a greater emphasis placed on the nutritional importance of Lake Ōnoke and Wairarapa Moana eels.



A poha, leading net for use with a hinaki or eel trap, made by Arapata te Hiwi of Ngāti Tūkorehe hapū, 11 April 1937. G. L. Adkin Collection, Alexander Turnbull Library, Wellington

## How Māori caught, used and preserved eels

Māori used a number of methods to catch eels. These included pā tuna (eel weir), hinaki (eel pot with net attached) koumu (a combination of trenches and pots strategically placed to trap fish), matarau (spear), patu (club), toi (bobbing), rapu (by hand and foot), rama (by torchlight and spear).

From oral records the blind trench was a favourite method employed at the Wairarapa lakes. This involved digging a shallow trench several feet long, away from the water's edge. At the end of the trench a hole was dug down into the sand or shingle. The trench and hole were allowed to fill with water so that the migrating eels would be tricked into thinking they were heading out to sea. When the hole was full of eels the end of the trench would be blocked off so that the water would drain. The stranded eels would then be put into sacks.

Once caught, eels were preserved by drying on lines or being smoked over fires or cooked straight on embers. Farming and reseeded were common. This meant restocking waterways or holding eels in specially built enclosures.

A man weaving a fish trap. From Wanganui River Expedition Album, Alexander Turnbull Library, Wellington



## The Dominion Canning Company Ltd

During the 1920's, the Acclimatisation Society viewed eels as a pest that through predation was restricting the spread of introduced trout. Part of its plan to address what it saw as a problem was to undertake large scale culling of eels or perhaps export eels to England.

Following research and several trials, The Dominion Canning Company Ltd of Greytown was registered in 1933 to export jellied eels to London. The Greytown-based business had a contract with an English firm which required processing 500 to 600 eels per day.

The English only required small eels, which was an immediate concern to older Maori, as was the possible disruption to traditional practices.

By 1937 the company had proven to be financially unviable and closed. One reason for the lack of success was a shortage of eels.

## Customary fishing today

Today, few Maori fish for eels in the Wairarapa lakes. Those who do are required to either attain a permit from an approved kaitiaki (person responsible for managing a defined area) or to follow North Island regulations set by the Minister of Fisheries. These direct that a person who is eel fishing recreationally can catch no more than six per day.

*You know the road below Kohunui Marae? Well in the old days the eels used to be hung out on the fences to dry. The eels used to go for a couple of miles on both sides of the road. There would be thousands of them. When you were going towards the marae all you could see were the eels and all you could smell was the rotten corn (a Maori delicacy) cooking at the marae.*

Interview with Sonny Te Maari, 2003

## Commercial fishing

Since the 1960's commercial eeling has become a large industry across New Zealand. Commercial eel licence holders have fished the Wairarapa lakes for both species of eel in the past but now have to apply for a concession to fish on Department of Conservation managed land.

Commercial, customary and recreational fishers can fish on private land with the permission of the landowner, although with noticeably less eels more people are restricting or banning fishing on their properties.

## Declining eel numbers

Eel populations throughout the country have declined after decades of habitat loss and intensive commercial fishing, especially the longfin eel population. Numbers of longfins are now at the same levels as the great spotted kiwi, and no one is sure whether the long-term survival of the species is guaranteed.

The shortfin has a greater capacity to regenerate owing to its earlier maturity and closer proximity to the sea but its population has also noticeably decreased.

No one factor can be blamed for the decline of both eel species. But the fact that 90% of Wairarapa wetlands have been destroyed since 1840 and various forms of water pollution have contributed equally. In addition manmade barriers restrict the eel's passage to and from the sea, which greatly inhibits its ability to migrate.

While the eel is New Zealand's top freshwater predator it cannot compete with the most efficient killer of all – man.

## SPECIES COMPARISONS

### New Zealand Longfin eel

Māori name : Tuna kuwharuwharu

Scientific name : Anguilla dieffenbachii

Female age to maturity : 34 years

Male age to maturity : 23 years

Some females won't migrate until they are 80 years old. Migrating females can have between 1-20 million eggs.

Females can live over 100 years

Any eel that is over a metre long, has dark skin and has a bulgy head is a female Longfin.

The dorsal (top) fin extends about two-thirds along the back.

Males are smaller than females, never over a metre long and are more likely to be found near the coast.

### Shortfin eel

Māori name : Tuna hao

Scientific name : Anguilla australis

Female age to maturity : 25 years

Male age to maturity : 15 years

Shortfin eels do not grow over a metre long, with females being bigger than males.

Females can live over 60 years

Shortfin eels are usually silver-green or grey, hence the name silver belly.

The dorsal fin stops about halfway along the back.

Shortfin eels are more abundant owing to a higher breeding rate, a younger maturity age and shorter distance to the sea, which means less obstacles to contend with when migrating.