

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 63: Casting a Wide Net. This podcast is supported by our amazing Patrons. If you want to support HANZ go to [patreon.com/historyaotearoa](https://patreon.com/historyaotearoa). Last time, we started our discussion on kupenga, Māori nets, from huge nets that would require thousands of people to operate, to small nets that only needed one or two. We also talked a bit about the tapu surrounding kupenga and what that involved. Today we are going to continue talking about nets and get a bit more into the specifics of each net and what they were used for and how they were operated.

The mātauranga around nets and fishing in general was passed down over many generations of observing fish habits in rivers, lakes and the sea and testing what tools and methods did and didn't work. As such, the European method of just dropping a line wherever you feel and hoping for the best was seen by Māori to be kūware, ignorant or naive. One of the aspects of this mātauranga was of course maramataka, the lunar calendar and Hiroa potentially implies that the European solar calendar may not have been very effective as a method to track when to fish for what. The sort of things they were looking at were the rains in autumn indicated the start of the eel migrations from the rivers to the seas, "Thus from Nature's calendar the neolithic fishermen received their orders as to what traps, nets or hooks to select and what spot to seek on inland river, coastal reef or deep sea fishing ground. The careless leaving to chance marks the degradation of barbaric culture and the advent of a higher civilisation" I can't tell if that last sentence is meant to be sarcasm or not but it definitely feels like a dig at Europeans!

Before we get into the different types of kupenga I'd like to talk a bit about what they were made of. Which I know we have talked about before and I probably sound a bit like a broken record but I think it's important to keep these ideas in your mind. Harakeke, flax, was the main thing that was used to make nets. Someone who was skilled at making nets would select leaves based on their thickness just from feeling them with their fingers. The harakeke would then be hung up and dried for a couple of days before being woven into a net which would help the knots to not loosen as would happen if fresh cut leaves were used. It would then be split down into small strips, with the middle rib being discarded. The harakeke part would form the bulk of the net by being the actual netty bit, but as we talked about last time, some nets had hoops in them to give them some more structure and rigidity. These hoops were usually made from supplejack, which was easy to split. They were also used as elastic spreaders on some traps and arched handles for crayfish pots, so that's nice. Mānuka was another popular material that gave long, tough poles for handles on scoop and bag nets. Tanekaha, celery pine, was used for similar purposes as well as fishing rods to catch warehou. Makomako also made for half decent handles but it was bit more fragile so wasn't used as often. We won't go too much into how each net was made but hopefully we all know vaguely what a net looks like and can work from there. Plus, by and large, the way Māori made nets was actually quite similar to how Europeans made nets, though sometimes they did things in reverse.

So lets crack into some specific nets, starting with the scoop net. Korapa, scoop nets, were unbaited nets with a wooden handle that were used sideways to scoop up fish, hence the name. Their similar to European landing nets for trout, if anyone is familiar with those. From korapa we can divide them into three further types based on their target species, kehe, kahawai and warehou. Kehe or granite trout, were plentiful on the rocky shores of the East Coast of the North Island, feeding mostly on seaweed. As such, their seasonal movements are influenced by the growth of seaweed throughout the year which in turn affect how and when kehe are caught. Catching kehe can be even further broken down into three types of scoop nets across seven catching methods. At this point you might be thinking 'oh shit, this is getting complicated' don't worry too much, we won't go super in depth into the different kehe scoop nets but we will talk a bit about each of the different catching methods

as those are pretty interesting. These methods are called tu, rama, kōkō, hura, taki and ruku. The seventh is a bit different so we won't talk about it in this list.

Tu is Te Reo for 'to stand', such as e tu which many of you may have heard at school when your teacher wants you to get your butt off the ground. It takes its name from the fishermen being stationary as they stood in a channel. During the spring tides an area would be cleared, with stones being used to make a sort of track to a rock that had been preselected due to the amount of seaweed on it. The men would then use the rock to conceal the net, Hiroa noting that this was especially needed if the net wasn't dyed. The channel would be left for three or four tides so that the fish would get used to travelling up and down it. A stake would also be placed at the location of the channel to make it easier to find again. Upon returning, the fishermen would take up position when the tide was coming in, fixing the net at the channel with the open end towards the current. He would then wait until he feels a fish bump against the net to twist the handle and bring the net upwards and out of the water. He could then thread the fish onto a line through the gills via a bone needle before dropping the fish in the water, meaning it would still be alive but couldn't escape. Hiroa doesn't say why this was done but I assume it was to store the fish until they were done fishing and keep it alive so it would still be fresh. The net could then be reset with subsequent fish being threaded on as well. The bone needle was sometimes used to kill sharks too by striking them on the nose. You may have actually heard this somewhere before, that to stun a shark you should punch it in the nose, and that's actually true. They have some little pores in there that allow them to detect electrical currents, which is part of how they hunt so when you punch them in the nose you're essentially disrupting that sense, kinda like if you poked someone in the eyes. When killing a shark, they would make sure not to spill blood in the water as best they can as this would attract other carnivorous animals. Sting rays could also get into the net but they would be released straight away as they were usually more hassle than they were worth. Sting ray was sometimes eaten but these channels were set up in fairly deep water some distance from shore so it wasn't an ideal spot to get into a tussle with a ray. Additionally, sting rays were known to break nets and the fishermen wouldn't have something to actually kill it with so it was a losing fight all round. As the sting ray was released, they would often give it a poke to get them moving. Other fish that were caught with the tu method were kahawai, tāmure and moki.

Rama, meaning torch, was when fish were caught by torchlight at night. Although when I say torch, I obviously don't mean little glass bulbs powered by batteries. Usually they were made of strips of kahikatea, white pine, cause they had a lot of flammable resin. The kehe would be attracted towards the light, which would lead them straight into the net. Sometimes when trying to find the kehe they would be found sleeping, so the net would be placed in front of it and the fish prodded with another person's foot, scaring the fish into the net.

Kōkō was the most popular method used by Māori as it could be used at any time of the year. This required two men, one with a pointed net and the other with a pole just over two and a half metres long. The person with the net would be the one with the most experience, knowing all the channels and best spots for catching fish as well as the fact that the job of using the net was a bit more technical than the pole. As such they would lead the way so as not to step anywhere to scare the fish away. Once in position, he would put the net in the water and the person with the pole would stand away from the channel. When he was ready the netter would yell to their partner for them to advance. The one with the pole would walk across the channel and prod it in front of them, gradually walking towards the net. This would naturally startle the fish towards the net until they bump into it, which is when it would be twisted up like they do in the tu method. The netter would instruct the poler to stop until they had threaded the fish onto the line and would then tell them to resume. This

process would continue until the poler reached the netter. This would usually allow three or four fish to be caught until the team moved onto the next channel. This method was also best used after it had been raining when the water was a bit dirty and the fish couldn't see what was going on or where they were going.

Hura was used during the day, especially when the water was a bit rougher or discoloured from rain. Rocks that had lots of seaweed were marked and the fishermen would walk amongst them. They would place the net on the side of the rock and push the fish into it by feeling around with his foot and turning over any small stones which the fish may be feeding from to get them to swim into the net. This is the reason it is called hura, meaning to reveal or turn over.

Taki is similar to hura but it's at night. The same kinds of rocks are selected during the day, usually in March which is when the seaweed would be plentiful. Night is when the kehe would be out feeding on the algae and as the waves rose, they would rise with them to feed on the higher up algae on the rocks. When the water recedes, they would sometimes be seen clinging onto the seaweed by their teeth before letting go. This one observation is what led Māori to figure out the taki method of catching them. The fishermen would bring the net up behind the fish as they rose on the wave and kept it there, waiting for the wave to recede and the kehe to let go of the seaweed, landing in the net. This was apparently a really good method.

Ruku was used in deeper water and used a lot by Te Whānau-Apanui but it wasn't known to Ngāti Porou, which are the two iwi that most of this information comes from. Since this was used in deeper water the nets would have much longer handles and beaters would also be used like the kōkō. The way this worked was that the netter would dive down and put the net in position on the channel. He would then work his way back up the long handle to the surface, making sure to put pressure on the net to keep it in place. At the same time the beaters would take up positions on nearby rocks in an arc facing towards the net. Someone would call out 'rukuhia', meaning dive, to begin. The beaters furthest away from the net would dive first and the others would follow not long after, heading towards the net. The first person to reach the net would grab it and bring it up with the opening facing up. Given the amount of coordination needed for this, when ruku was done it would be a bit of an event, with onlookers. Sometimes it would also be done in honour of a future child, with the fish eaten in a feast for the child.

We mentioned channels quite a lot in those different methods and you might be wondering what those are. Their geological formations where the rocks have been tilted and channels been worn between them by the flowing water. This is where kehe would often feed and so Māori would come along and alter the channel to suit their fishing needs. Such as altering one end so that a net could neatly fit and building up the sides so fish don't escape.

As we have mentioned, catching kehe was somewhat seasonal to get the most out of them, dependant on when their food source was most available, namely the parengo and kohuwai seaweeds. The former is most abundant between July and March, though Hiroa wrote that Ngāti Porou said this season had shortened to January. He doesn't say why but it could be down to things like climate change. Kohuwai would increase in abundance when the parengo wasn't around as much between March and June. It was apparently these months that the kehe were the best tasting, particularly in March, but they were still good to eat outside these months even if they were a bit thin. This actually led to a saying 'Tupuhi kaka ki uta, tupuhi kehe ki te moana' meaning 'a thin kaka on land, a thin kehe in the sea'. Kaka were also good eating when they weren't at their plumpest. So there wasn't really an off season for kehe, just seasons where fishing for them was favoured with the kōkō method being used year round and other methods being used at various parts of the year

when it was more favourable. This wasn't the case in the Bay of Plenty though. Surprisingly contrary to its name, there was a closed season for deep fishing grounds. This seems to have been done in part to increase the mana of the rangatira that presided over those areas, if you can proclaim a rahui over an area and you have the mana for people to comply with it, that's a pretty big power move. This may seem rather cruel, denying people food for basically political gain, but it wasn't as bad as you might think. They only put a rahui on the deeper fishing grounds where most people didn't actually end up going anyway, since it was a bit too far out, so it didn't really impede any whānau from being able to feed themselves. As such it gave the rangatira an opportunity to exercise their mana without any real detriment to their people and also allowed them to stress the importance of the ruling family when the rahui was lifted.

In terms of eating, kehe would be eaten fresh as the flesh would turn yellow if it was kept, though it was sometimes preserved by cutting it in half and drying it in the sun. Hiroa says the flesh was firm and when cooked in a hangi you didn't need to wrap it up in leaves, as this was mostly needed for softer fleshed fish. Older kehe, called katirimu or bull kehe, although large would be too tough to eat. The guts of the kehe were also highly sought after, sometimes more so than the flesh, which led to another saying 'hoatu ki te kainga. Kotaku ika ki a koe. Ko te ngakau ki au' meaning 'on to my home. My fish will be for you. And the entrails for me'.

Kahawai, called Australian salmon in Australia, was another common fish caught in the North Island. The most common way of catching them was actually with a trolling lure, like the ones we discussed a couple of episodes back but interestingly, they preferred duller hooks rather than shinier ones, which Hiroa found rather weird. He also says "its vagaries in this respect are embodied in the cynical saying, 'He kahawai ki te moana, he wahine ki uta' (As a kahawai in the sea, so is a woman on land)". The large seine nets were also very popular for catching kahawai which were often hauled through or set in river estuaries. However, we are talking about scoop nets today but these were less popular depending on the region and the environment. For example, nets were better in areas with less rocks for them to be caught on and currents would help hooks spin and be a bit more shiny. The way scoop nets would be used to catch kahawai was the fishermen would stand on the shore of a river mouth and wait until they spotted a shoal approaching. Once spotted, they would run into the water. Upon reaching the deeper water, he would dive and start swimming so as not to lose speed. . As such there was a saying in regards to children born with large heads, "E rahi te mahunga o tamaiti nei hei tukituki i nga ngaru o Waikaka" meaning 'the head of this child is big to break through the waves at Waikaka' Waikaka being a beach in the area. The net would be held horizontally in front of him and perpendicular in front of the fish with the handle against the fisherman's thigh to take the impact of the fish when they entered the net. The net would then be swept through the shoal to catch them and the net upturned to pull them out of the water, at which point the fisherman would run back to shore and empty the net. This process would be repeated until the desired amount of fish was caught. Usually this type of fishing wasn't done alone, multiple men would be lined up on the shore of the river mouth, turning it into a bit of a competition and spectacle that would attract a crowd. Sometimes a fisherman would get a bit too eager and catch so many fish in their net that they would start to be dragged out to sea, but that was all part of the excitement. As the men fished, the women would hang any up that couldn't be eaten fresh to dry on a crossbar between two tripods, called whata.

In terms of seasonality, kahawai would often chase fish fry, that is really young fish, up rivers in shoals to eat them. This mostly happened in November, which was the start of the season, though they wouldn't be at their fattest until December. They were said to be good eating in January but would head back out to sea in February. It was also thought that when spotting a shoal of kahawai,

one should use a closed fist or bend their elbow when pointing. The thought being that a pointed finger of unbent arm is a similar action to what is done when expelling someone or something, so if done to the fish they may take offence and run away if they see it.

As for eating, kahawai were described as rather dry and improved in flavour when they were fat. However, due to their abundance and as such the ease they could be caught, this made them rather important for the Māori diet.

Warehou are found around the South Island and lower North Island, tending to prefer cooler waters. Hiroa says it is a good eating fish and often caught with a hook on a rod and line and a bait of crayfish. Ngāti Porou told Hiroa that the warehou south of Gisborne were too tender in the mouth to allow them to be picked up with a hook once they were close to the waka, so instead they used a landing net to finally get them in the boat. Landing nets were also called korapa the same as scoop nets, which can cause some confusion. Warehou were caught using two methods. The first method was called tararo which used a hand line about six maro in length. And no, I didn't mispeak there, a maro is "The distance of a full span of the arms" or if you want to be more accurate, about a fathom. Which is also not super helpful so a fathom is about 1.8m, or for those of us who still use imperial units, six feet. Or alternatively, the length of a tapir, the striking distance of a coiled diamond back rattlesnake, five bowling pins, 18 chihuahuas or one HANZ podcaster. Anyway, the other method is called tihengi which used the same amount of line as just described, on a rod, sometimes with carved leads lashed onto the end of the rod with a thread of shells. This method was similar to modern fishing in that the fishermen would have a couple or more rods on the go, laying one down while he worked on the other. As the line was pulled by the hooked fish, the shells would rattle to alert the fisherman that the rod was live. He would use a wooden hook to help pull the line into his hand and reel the fish in. Later tin matchboxes would be used in the place of shells.

When using a landing net, if the fish was particularly angry that it had been caught it would be left in the water in the net to tire itself out before being lifted in. Apparently, if there was another fishing vessel nearby, "the correct thing is to jam the fish against the outside of the canoe with the net and let its flappings be heard by the rival fisherman, who are further annoyed by the exultant yells of their successful neighbours". Love it.

Next time, we will continue talking about nets with bag nets, set trap nets as well as discussing a bit about freshwater species and what was involved with catching them!

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