

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 62: Plenty of Fish in the Sea. This podcast is supported by our amazing Patrons, such as Danelle and Daniel. If you want to support HANZ go to patreon.com/historyaotearoa. Last time, we talked about hooks, specifically trolled lures as well as what Europeans thought of Māori fishing techniques. Along with maybe a rant or two from me about the modern fishing industry. This week we are going to move onto another key piece of equipment in the tackle box of pre-European Māori, kupenga, nets.

We have talked about nets in the past in our weaving episodes in regards to how they were made and what they were made of so if you want a bit more information you can go back and listen to those but they more focus on clothes rather than other uses for harakeke. In those episodes we discussed the huge nets that Europeans recorded, describing seines as being several thousand feet, 1000 yards or more or well over a mile in length. These were the big, community owned nets that were intended to feed a large group of people and required potentially a hundred people or more to operate. The way they would work is they would be used to encircle a shoal of fish while the ends of the net were tied to waka, and then pulled ashore. These waka were often double hulled, until those fell out of use, then two waka would be tied together with logs put across them to perform the same function. Sometimes though the catch would be far too large so in that case the ends would be pulled in and tied to stakes in the ground. Once the tide had gone out, leaving the fish stranded on the shore, they could then be retrieved.

Best also talks about an account from Captain Gilbert Mair, who talks about a huge net. Best calling it a “vertiable taniwha of a net”, which was made in Maketu in 1885 under the local rangatira, Te Pokiha. I’m going to quote directly from Best, who I believe quotes Mair in talking about how this net was made and how it was used, which I find to be a really interesting insight into Māori life at this time, “Some hundreds of persons were engaged in the task of manufacture, and it was, as usual, made in many sections. These numerous sections, when completed, were assembled and joined together, a process termed toronga, which task was carried out under old time conditions of tapu and ceremony. The result was a huge seine 2090 yards in length, well over a mile”. He then talks a bit about how it was made from tī kouka and harakeke before continuing “Two large canoes were placed together and secured as described above, and a crew of thirty men managed the vessel and net. An old expert, from a point of vantage, was to give the signal for operations to commence. He allowed shoal after shoal of fish to pass, to the disappointment of many observers; when an apparently small shoal appeared, he gave the word. ‘Haukotia mai!’ (which Best translates too ‘intercept it’) The waka taurua swung out across the front of the advancing shoal as the seine-tenders payed out the huge net, whihch, however, was not wholly expended. The spetators, not less than a thousand persons, were unable to haul the net. The spare ends of the seine had to be doubled back to reinforce the centre, and twice the net had to be lifted in order to allow a large part of the catch to escape. At full tide the great net was hauled in as far as possible and secured to stout posts until the receding tide left it and the multitudes of Tangaroa out of the water.” According to Mair 37,000 fish were caught that day with this net, not including anything that was really small and sharks, which is absolute shit load! Though you do need to keep in mind that these nets weren’t used as often as modern commercial vessels so it was far more sustainable. Best also mentions that this net was likely one of the last large nets of its kind. This admiration for Māori nets is pretty universal among Europeans, or at least the ones that Best talks about, often complimenting them for their size, effectiveness, skill in using them, and how complex they were, one person even comparing the knots Māori used to those of European ones. Cook also makes the comment that Māori were “extremely expert in fishing and displayed great ingenuity in the form of their nets.” Adding that Māori had so many nets that they could be placed all over the show.

Before you could get out onto the water to catch some fish though, you had to actually make the net first. Order of operations and all that. Making a net was a very tapu task with no one allowed to enter the area that the net was being made in unless they were actually working on the net. They would even go so far as to block any nearby paths or waka route to ensure that no one would just randomly stumble upon their work and ruin everything by incurring the wrath of the gods by their very presence. As such, anyone who did break this tapu could be severely punished, with the offending waka being destroyed or the person being killed among the possible options. Along with this basic tapu of who was and wasn't allowed access, no fires could be made and no food prepared within these areas, with Best even making the distinction that not even missionaries were exempt from this rule. Not until the net was finished would the tapu be lifted with a ceremony. Polack had the thought that the reason for such strict tapu was to minimise distractions and to make the workers a bit miserable so that they would stay focussed and work harder so the tapu could be lifted sooner. Interestingly, even Best recognises that this is a pretty limited view from a Pākehā on the outside of Māori culture looking in. Best then goes a bit further and takes an actually kinda reasonable approach by looking at what Māori believed and why that would mean they made the area tapu. Essentially, Māori did this to ensure the aid of the gods. The gods wouldn't descend and help unless a strict tapu was observed. One interesting fact about net making itself is that it was a man's job, which is a bit strange given that almost all other weaving was seen as a job for women. But when you take into account the tapu nature of the task and how women weren't generally involved with that stuff as they were regarded as noa, it makes a bit more sense.

Nets wouldn't just be made for their general use though, they could also be made if a feast was being organised for some esteemed guests. The idea behind this is that older nets had already been used to take fish for tapu members of their own community and were made under the influence and power of particular spirits, tūpuna or atua. This was a bit of a problem as, in the case of spirits and tūpuna, the guests may not have any relation to them. So if an old net was to be used it may result in some misfortune later down the line. Or in other words, they didn't want to cross the whakapapa streams and piss off everyone's ancestors or local spirits, making those in the realm of the living cursed or something worse. Māori don't seem to have thought that this would be guaranteed but they certainly subscribed to the philosophy of better safe than sorry in this case.

So if a new net did need to be made a tohunga would go to the regular place that flax was gathered and pull off two of the young central leaves at the base, which if you remember back from our weaving episodes was a bit of a no-no in normal circumstances. As he did this he would repeat, "Tangaroa whitia, Hui-e! Taiki-e!" I don't quite have a direct translation on this but as far as I can tell is a sort of call to action for Tangaroa aid in the net making. One of the leaves that were taken would represent the men of the community and the other the women. If a screeching sound was heard as they were pulled out, this was seen as a good sign that the net would be a good one. Naturally if this sound was not heard, then it was thought that the net wouldn't be any good. Additionally, if the base of the plucked leaves were jagged, it was said that the spirits of the fish yet to be caught had nibbled on them, though whether this was a positive or negative sign, I'm not really sure. Depending on the region, men would do the first day of weaving and the women would do the second and once the net was completed, the tohunga would give it a look. They would cut any loose or protruding ends of the knots, which the net makers weren't allowed to do themselves. Two ropes were then made and deposited, along with the ends of the knots, to a tapu place by the tohunga as they recited a karakia to bring good luck to the fishermen with the new net. Two additional ropes were also made and attached to the net before the tapu was lifted with some ceremony and karakia, which was all slightly different depending on the region. Once the net had been taken out and used for the first time, and hopefully caught some fish, the tohunga would take one of the fish in his left hand and

hold it underwater as he said, “Haere mai, haere ki tai nui no Whiro ki te whakataka mai i to tini, to mano”, which roughly translates to ‘come, go to the great coast of Whiro to bring down your many, many thousands’. So he was essentially asking the fish to bring more fish to the area, I assume for them to catch. The fish would then be released. In other, similar rituals the first fish would be burned or deposited in a sacred place as an offering to the gods. Then the ceremonial work began to prepare the feast from the first catch from the net. This would involve those who worked on the net, as well as the tohunga with the fish being cooked in separate hangi based on sex and rank. So there would be one hangi each for the high ranking males, high ranking females, low ranking males and low ranking females, four hangi in total. After this the net could be used in the normal manner.

Speaking of spiritual matters, there was of course a story of how net making came to be in Aotearoa and how Māori learned how to do it. I won't go into the full detail but here is a brief synopsis of the story, “In olden times it was that one Kahukura acquired the art from a strange people, the Turehu folk. He chanced to come upon them as they were hauling a net under cover of night, and, owing to the darkness, he managed to join them and take part in their tawsk. His aim was to so delay them that they would be overtaken by daylight before their work was completed; by these means he hoped to secure their net or a knowledge of its construction. The Turehu folk performed all tasks during the night, for in olden times the activities of many abnormal beings and supernormal objects had to cease when darkness passed. Kahukura effected his object by his deceitful manner of stringing the fish. He did not secure the cord so that it would retain the fish; hence, having strung a number, when he lifted the string all the fish slipped off it. He repeated this deceitful performance several times thereby gaining his object. He so delayed operations that by the time the task of stringing the fish was completed day dawned, whereupon the Turehu folk fled in haste to their home among far forest ranges, abandoning fish and net. This is how the Māori folk acquired the art of net making; they had but to observe the fabric left by the Turehu folk in order to acquire that art.” This story is said to have taken place in Aotearoa, specifically in a place called Rangiawhia but we do see other Polynesian cultures telling similar stories, so it may actually be one that Māori brought with them from across the Pacific.

Although large nets are what Europeans most often commented on, since they were the most obvious and grandiose nets, each net was built for purpose, meaning there were lots of smaller nets that Māori used. These smaller nets are actually what survive more often in the archaeological record and in fact harakeke nets were used right into the 20th century. In saying that though, what does survive is mostly fragments given that it's plant matter which degrades easily unless in the right conditions, such as swamps. Due to this we don't have as much info as we would like on the knots that were used and generally how these nets were made, much of what we do know comes from comparing the fragments we have with other Polynesian nets. Nets were made from undressed flax leaves that were split, semi-dried and then knotted together. Smaller nets were made of twine, which in turn was made from muka, as we have discussed in the past. Occasionally a gauge made of wood or whale bone would be used to help the weaver with the knots but a skilled weaver would be able to use their fingers. Floats could also be put on the nets, usually made of wood, pumice stones or raupo leaves, though they were a bit less durable than the first two. On the flip side, sinkers would be placed on the lower parts of the net. These were often long stones that were made smooth by the water running over them. They would be put into a flax bag that would then be attached to the bottom of the net. Along with harakeke, kiekie was also a very popular material to make nets from, perhaps even the most popular. The downside to this was that kiekie nets and pots only tended to last 5-7 years. Vines like akatea, white rātā, tororaro, wire vine and climbing fern were highly sought after for nets and pots for their strength and durability. When making the net, kiekie and vines would be steeped in water until they were soft and pliable, to make them easier to

bend and weave into the desired shape. Kareao, supplejack and mānuka were generally preferred to make frames for crayfish pots as they could withstand the buffeting of the water in the reefs, where they would be placed. We also find that many of these hīnaki, eel and crayfish pots, in museums are black from the tanning process that was used to extend their life. A special trough called a patua would be made of the inner bark of a totara tree due to the fact that it wouldn't absorb the tanning solution in the way that other wood or dirt would. To do this, the bark would be cut with a tōki to the required length and then peeled from the wood using a lever with a fire hardened point that was made just for this job. The whole time ensuring the bark didn't split. The ends of the bark would then be softened by steam until they were pliable and could be bunched together and tied to form a trough. As the patua was being made, bark from māire raunui, black māire and hīnau would be wrapped in leaves and steamed in a hangī. This would also make the bark very soft to the point where it could be crumbled into the trough in very small pieces. It would then be covered in water and soaked in the patua to extract the tannin. Bundles of vines that were intended to make hīnaki were then soaked in the solution for one or two nights, depending on how thick the vines were, giving them some extra protection to extend their life as well as the distinctive black colouring.

We will get a bit more into the details of each type of net from the next episode but for now let's just get your brain primed a bit. We see a lot of different nets being used throughout Aotearoa by Māori, from scoop nets to bag nets, drag nets to set nets, all with a different purpose, operation and even where they were used. In tidal rivers for example, kaharoa, drag nets, were often used by stretching them across the awa from bank to bank or large ahuriri, funnel shaped nets, were used at the mouth of rivers and set them horizontally in the water, the current holding them open. Funnel nets actually had a few different forms, depending on their target species and use and could be up to 22m in length and 7.5m in diameter at the mouth. The net would narrow to 45cm leading to a big basket capable of holding "two hogs head" worth of fish, which I think is a fantastic unit of measurement that we should use in our daily lives. If you want an actual measurement though, this apparently meant 500L.

At sea, smaller funnel nets called matarau and tarawa were used, that were held open by hoops and vertically lifted from the seabed to the surface. These were often used around rocky coastlines that drag nets just wouldn't really work in. The hoop would be attached at four points to two cords which in turn were attached to a large rope. Bait would be suspended by small strings inside the trap or tied to the bottom of the net, along with a stone sinker so it would, well, sink. Pāua was often used as bait, which is something that Cook wrote about, though he called them sea ears, a name that I can't decide if it is better or worse than abalone. Cook and Banks actually wrote a fair bit about how these nets worked, saying the act of fishing with these nets was quite simple and graceful as it relied a lot on the fish not knowing what was happening until it was too late. The idea was to lay the kupenga on the sea bed so that it was essentially flat and wait for enough fish to come by and investigate the bait or swim above the net. Once the fishermen was satisfied that the haul would be big enough, he would slowly pull the net up and around the fish, who hopefully wouldn't panic. It kinda reminds me of those tunnels you might have had when you were a kid, or maybe you got them for your kids if your kids are my age, which would lay flat in a bag but when you pulled it out it would spring into shape in quite explosive fashion. These nets were kinda like that except vertical and a lot slower and methodical. This method was used all across Aotearoa and apparently was pretty efficient with Sir Te Rangi Hiroa saying in 1926 that a haul of less than 700 blue maomao was considered bad.

Smaller hand nets were used a lot in shallow reefs and intertidal areas. Kape, scoop nets, were used for taking fish in shallow water, either by placing the net in the water and having some beaters chase

the fish into it or by putting them on poles. In northern areas these nets were used to catch kahawai or mullet whereas on the east coast they would catch marblefish.

We of course also see lots of hīnaki, to catch crayfish on coastal reefs or for eels and lamprey in freshwater. They would often be baited and placed in natural rock channels or in gaps of artificial weirs where fish were swept into them by the current.

Next time, as mentioned we will talk more about these nets in coming episodes in a bit more detail, talking about how they worked and how Māori used some pretty cool little methods to get fish into the nets and, by extension, into their mouths!

If you want to send me feedback, ask a question, suggest a topic or just have a chinwag you can find my email and social media on historyaotearoa.com. You can also find helpful resources there like transcripts, sources and translations for some of the Te Reo Māori we have used. This podcast is a one man band, if you enjoy listening to me talk history, you can support us through Patreon, buy merch or give us a review, it means a lot and helps spread the story of Aotearoa New Zealand. As always, haere tū atu, hoki tū mai. See you next time!