

Kia ora, gday and welcome to the History of Aotearoa New Zealand. Episode 15: AND MY ADZE! Before we start, I just have a quick announcement to make. As you may or may not know, HANZ is currently funded by one person. Me, I do this as a hobby funded from my full time job and I love it. I want to make HANZ bigger and better but to do that does cost money, money I don't exactly have due to also trying to live and have a house and all that. So to help with that I have started a Patreon. For those of you who don't know, Patreon is a website where you can donate to all sorts of creators on a monthly basis. I have thought long and hard about this, I have always been apprehensive to accept money for something that I absolutely believe should be free to access. As such, no matter if you decide to donate or not, I always keep making this, for free, in my spare time, for you to learn and enjoy. This is just an optional extra if you wish to support us further. There are \$1, \$5, \$10 and \$20 tiers that are charged monthly so if you can only give a buck a month, it's no problem at all! At this stage all the tiers have the same rewards, I'll flesh out some more for the higher tiers later but at this stage I thought you can give what you think it's worth to you. The two rewards so far are that I will give a shoutout to each Patron in the next episode after they sign up and you get access to the Discord server, which is where you can talk to other Patrons, as well as myself! So if that is something you would be interested in, I'll chuck a link on the website or can just search for History of Aotearoa New Zealand on patreon.com. Thanks for your consideration!

Last time we talked about Matariki, the Maori new year, what that meant and how it was celebrated. Before that we heard the great demi-god Maui and his early years ultimately leading to him gaining the jawbone of his grandfather which will become central to his most famous feats. This episode we are going to move onto our next major topic that is probably one of the more famous parts of Maori culture as it is still heavily practiced to this day and almost everyone who lives or has visited Aotearoa has had some sort of experience with it, carving. Before we talk about the carvings themselves though, we are going to spend some time talking about the tools they used and how these tools were made.

What we are going to spend most of our time talking about is toki, adzes, which were arguably the most important tool in the traditional Maori toolkit. We have talked about adzes briefly before and I gave a very quick description of what they are. I'll put up some photos under this episode on the website but to give you a brief idea, imagine a modern woodcutting axe, shorten the handle until it's two hand widths long, flip the blade to be horizontal and make it totally straight rather than flared out. That is the very rough shape of an adze, if you imagine it without modern materials. Like many aspects of Maori life, the origin of tools like adzes and chisels comes from myth. The first toki were given to Tanemahuta by Uru-te-ngangana, the personification of light, as part of his efforts to separate his parents given some versions of the myth tell that Tane wanted to use four pou, one for each compass direction, to hold Rangi and Papa apart. The only thing was that Uru only gave Tane the blades, the stone bit that does the cutting on an adze so handles were needed to make them effective. What happened next is a chicken or the egg sort of problem I suspect, in that it's like the Jewish myth of blacksmith tongs. You need tongs to pull anything from a forge, even if you are making more tongs so the myth goes that God gave man the first of tongs to get them going so that they could then smith. In our case, Tane would need wood to make handles for the toki so he would need to cut down a tree. With a toki. Of which he held the first two blades in existence. Seeing the problem here? Given the predicament Tane decided to default to the next most obvious solution: murder. It was decided that the bones of one of his brothers would be used as handles for the blades and Tumatauenga ended up doing the deed. This was the first instance of killing in Maori culture and the reason Tu became the fearsome god of war. Now complete with handle and blade the toki were named Te Awhiorangi and Te Whironui. These two adzes appear over and over in Maori mythology to fell trees and create waka, some tales even saying they helped make the waka

of the Great Fleet with another saying one was used to calm a storm on their way to Aotearoa by cutting up the waves. In many of these stories they also appear with a certain character, Rata. Rata isn't a god but he is legendary character in that he is credited as being the one who passed down the knowledge of how to build waka and use adzes to fell trees. Te Awhiorangi is said to have been brought to Aotearoa and was apparently found in a tree by a woman in 1887, immediately being recognised by local kaumatua for what it was. I'm unsure what happened to the adze after this but it is possible it is currently held by Nga Rauru, the iwi that initially hid and then refound the adze.

Te Awhiorangi and Te Whironui aren't the only two toki that are famous, there are a number of well known adzes throughout history and mythology that did a variety jobs, especially the adzes that built the Great Fleet. One such toki, Tutauru, which is said to have helped carve Te Arawa waka is currently claimed to be held by the Rotorua Museum, however it seems the museum is currently closed due to the building not being up to safety standards following the 2016 Kaikoura earthquake so I'm not sure if it is still there or if there is currently any way to see it. In any case, I've been unable to find any evidence that it actually was an adze used to carve Te Arawa and it may be one of those things that we won't really get a complete answer on. Some versions of the Kupe and Te Wheke story have Kupe killing the great octopus with an toki as well. Adzes, as you can probably tell, had a huge amount of importance placed on them in Maori culture, part of this is due to the reliance on adzes to cut, build and create both in the practical sense, for survival and the spiritual sense for carving. The latter especially so as adzes were used to carve not only the visage of their ancestors but waka which was all part of the theme of Hawaiki and migration also found throughout Maori culture and stories. Adzes were the beginning of Maori arrival in New Zealand by building the waka that would carry them across the ocean from their homeland.

Another aspect of the mythology around adzes is the sandstone used to sharpen them, which was personified in Hine-tua-hoanga, the lady of sandstone. She is part of a whole lineage of stones and rocks that are represented by their own personifications and descended from Rakahore, the personification of all rocks. Hine-tua-hoanga was given to Tane as part of his quest to separate his parents and he sharpened Te Awhiorangi and Te Whironui upon her back, explaining why sandstone is used to sharpen adzes. As we have already seen, Maori used myth, marriage and offspring to explain the world around them and in the case of sandstone, all the other rocks were afraid of her ability to cut them down and fled all over to escape her. This was used as a device to tell others where to find certain rocks such as in the following excerpt from the book *Te Toki me te Whao* by Clive Fugill, who in turn got it from the recounts of Elsdon Best, an ethnographer in the late 19th and early 20th centuries. The story tells of a battle between the pounamu people and the people of sandstone, with pounamu being defeated and having to flee to find a new place to live, "On arriving at Tuhua (Mayor Island) they found it occupied by the offspring of Whatuaho (obsidian). Poutini's followers (greenstone) carried on to the East Coast, but there they found the offspring of Hine-tua-hoanga (sandstone) and Whatuaho residing at Hikurangi and Waiapu (chert) residing at the mouth of the Waiapu River. The pounamu fled again, coming on Waipiro where they found the offspring of Hine-tua-hoanga living at Pokurukuru." The story continues on like this, naming places and whose offspring lived there but the main takeaway is this is how Maori communicated not just ideas and beliefs but real-world knowledge and locations. These stories are more than just, well, stories, they were useful, perhaps even vital to their survival and are one of the fascinating parts of Maori culture that survives to us today. Anyway, going quickly back to sandstone, when adzes were being sharpened, especially if it was an important or famous adze, karakia were often said to help sharpen them and to pray for them to perform their duties well. We actually see deep grooves on various sandstone outcrops or rocks near rivers indicating spots where Maori frequented to sharpen their tools.

So, let's take a quick look at what kind of rocks were being used to make tiki and other tools. Obsidian is one of the flashier ones, found where volcanoes are present, which was throughout the Pacific, Maori were likely somewhat familiar with it already and its presence in Aotearoa may have been a deciding factor in settling in Aotearoa. Obsidian was knapped, that is chipped with a smaller stone, to produce a fine edge for cutting which could be serrated if needed by pressing a stick to the edge and pushing along it. These knives would be used for things like cutting open and skinning animals or scraping their skins of meat. One of the other interesting things about obsidian is its colour being associated with rank, black for commoners, grey and green for children and higher ranks and red for ariki. Maori women had a custom of cutting themselves in mourning and when someone died, their rank would determine what type of obsidian they would cut themselves with, if they had access to it, otherwise they might just use paua or mussel shells.

Basalt was another volcanic rock with the best apparently being found in Opito Bay in the Coromandel. Apparently that deposit was found or at least was known to be there by Kupe himself when he passed through the area on his adventures. Basalt was widely used for adzes in the northern half of the North Island with every archaeological site found thus far containing basalt adzes or at least the beginnings of them and looking at the Coromandel extraction site, you can kinda see why. The quarry is 11 acres in size with about one metre of material removed from the surface with chips, hammer stones and even some pre-adze forms left behind. This was a massive operation, granted it was a centuries long timescale but this was no mean feat. In a similar vein (heh) argillite was also used widely throughout New Zealand with the main source being d'Urville Island, Aotearoa's eighth largest island, situated in the Marlborough Sounds. As d'Urville was an island, it had easy access via waka to transport adzes, which were made into pre-forms there to allow for easy transportation and sale. This site was so prolific that it is estimated that about 15,000 adzes were made there over the period it was active, likely a couple centuries. Again, this was a large-scale operation despite the timescale.

In what we have already discussed, we have missed one crucial step. What I mean is, we have rocks in the ground and we have rocks that are now tiki, or at least the beginnings of them so at some point we have to get the rocks out of ground. Maori had a couple of different ways of doing this, depending on the situation and they were all rather ingenious. The most straight forward method was if the desired stone was part of an outcrop, a large boulder would be rolled onto it to weigh it down and break outcrop, hopefully making it shatter or least reduce its size. Another method would be to light a fire under the cliff face to heat the rock up as much as possible. Once it had reached the desired temperature, water would be thrown on to rapidly cool which would cause it to crack just like if you did the same thing to your plates. Large stones made of a harder stone like granite would then be thrown at the cliff face to breakaway workable pieces to turn into adzes or other tools. Some of these stones have been found to weigh whopping 25-50kg! This would shatter the surface layer to the point it was unusable but that wasn't a problem, the stone underneath is what they were after to turn into tools. The final neat method they would use is instead of throwing rocks at the heated/cooled cliff face was to hammer wooden pegs into the cracks and soak them in water. This would expand and split the rock more, release those precious workable pieces.

The other important rock that was used widely by Maori was pounamu, greenstone or jade as it is called in other parts of the world. Pounamu was worked slightly differently to other rocks with the three stages being sawing, drilling and grinding. Sawing involved cutting the stone from large boulders into carryable pieces. This could be done by straddling the rock and using a handheld piece of sandstone to start the cut before transferring to a greywacke cutter to continue, using water to cool and quartz sand as an abrasive or my personal favourite, getting a three metre length of pirita,

supplejack, vine and using it to tie together a series of sandstone or greywacke teeth to create a saw with wooden handles at either end. I'll put a diagram up on the website cause these things looked so cool! The teeth would have worn out quickly though so multiple saws were likely made before work began. You could alternately use just the pirita vine with water and sand but that wasn't as fun. Once the piece was carriable, it would be further made smaller by drilling holes along the natural cracks and faults. Sand was placed into the holes along with pegs then covered in water causing the pegs to swell and the pounamu to break. These pieces would then be ground down with sandstone into mere, hei tiki, toki, or whatever else was needed.

Once you had the nicely sized rocks you could work them into the desired shape by using a hammer stone to flake off the excess. This would further be refined with some finer flaking to reduce the harsh marks left behind from the hammer stone to give you the vague shape. I'll put up some images of what I mean on the website under this episode to give you a better idea. Up until this point, the toki would still be at the quarry but now it would be transported to its destination, maybe bought and sold a bit before it would get into the hands of someone that would refine the pre-form further. Smaller hammer stones made of quartz and other hard material would be used to chip and peck the adze to refine its shape and get rid of the rough edges even further until it was more or less the final product. This would leave a pockmarked finish though so the final step was to use a sandstone to grind it down to a nice, smooth surface. It would also be at this point that the cutting edge of the toki would be form, giving that nice bevelled edge. Usually this stage was done at a river or stream, as we have mentioned, as water aided in the sanding process, just like modern grindstones. A slight variation on this was that sometimes green wood from lacebark, or houhere, was rubbed on the toki blade to polish and sand them down. The main thing with this though was that you had to ensure to dip the bark in water occasionally so it didn't become too hot or dry out and become ineffective.

Now that you had a nice blade, you needed a handle to complete your toki. What you wanted would depend on what you wanted to use it for, such as larger, heavier toki for dressing timber or cutting out waka, one handed toki for making paddles and weapons and there were even smaller adzes, about 3-6cm in width to give them their final finish. Once you decided what kind of adze you wanted, you would need to find some wood for the handle. Like many parts of Maori material culture, this relied somewhat on what was available to them. Tuhoe, an iwi whose rohe, boundaries, are in the eastern part of the North Island between Taupo and Gisborne, favour wood such as matai, black pine, tawa, a type of broadleaf or tawhero. Kauri was also a favourite in regions where it was present with manuka and kanuka potentially also being used in various areas as well. Even pohutokawa, New Zealand's Christmas tree, was taken for carving on the coasts. The handle of a toki would be made from the end of the branch connected to the trunk of the tree, with the more basal part eventually forming the foot where the blade would sit, sitting at an angle. I'll put a picture up of this on the website too to give you a better idea of what I mean. The handle would be smoothed out, so you could hold it properly and not get splinters, before placing the blade on the foot. Houhere bark or raupo would be placed on top of the blade and then the whole thing would be bound up with cord and the houhere or raupo doused in water to make it swell and tighten up the bindings. The toki was now ready for use! If the bindings ever became loose, however, more bark would be placed in with the blade and saturated to tighten them up again. I find this really curious as I would have thought a more obvious answer to this issue would be to just tighten up the cord or get more. I guess it was due to cord being sort of hard to make, it was made by braiding together three or more strands of muka or sometimes cabbage tree fibre which would make the cord stronger and minimise breakage. Perhaps it was just easier to chuck some wood in the gap and

splash some water on it rather than make more or they were unable to tighten it due to the types of knots.

The shape of the toki handle was also important, again depending on what you wanted to use it for. This varied from region to region but there are four examples of different handles from Wairarapa which I will put an image up for on the website as well to help you get a better idea of what I am trying to describe. Tahimaro was a simple, straight handle to give maximum strength to the tool making it less liable to break, making it good for heavier work. Tuke rangi were curved more at the blade end and usually gripped with one hand on the straight part and the other at the curved part and was a general purpose handle, except the heaviest jobs. Kaukaurangi were shaped more like an S with each end heavily curved, specifically being used to hollow out timber, such as for a waka. A ruku was straight but had a sharp curve at the handle end of the adze, similar to a walking stick or umbrella. It was designed for chipping off wood for tree felling or hollowing out waka as well.

Next time we will talk more about toki, specifically we look at toki poutangata, ceremonial adzes that were highly decorated with carvings of their own, as well as other adornments, that weren't really for everyday use. We will also talk about some other neat little tools and devices Maori used to aid in their carving such as chisels and drills. From there into future episodes we will discuss the mythological origins of carving as a whole, what images Maori were and are carving and a bit about how carving has changed from its East Polynesian ancestry.

If you want to send me feedback, ask a question, suggest a topic or just have a chinwag you can reach me through email at historyaotearoa@gmail.com or Twitter at History Aotearoa or Facebook at History Aotearoa New Zealand Podcast. Remember there is now a Patreon if you would like to support HANZ even more! Don't forget to rate us on iTunes or your preferred podcast platform and to tell your friends to help us grow and teach more people about the history of our island nation! As always, haere tu atu, hoki tu mai. See you next time!