

Kia ora, gday and welcome to the History of Aotearoa New Zealand, Episode 16: I Need to Adze you a Question. HANZ is supported by you, the listener, and since the launch of the Patreon two weeks ago we have had some very generous people become Patrons. To Karen (thank you for the tip, I'm not brave enough to try pronounce your last name!), PapaBray, Taylor-Mae and Mum, Alexander, Paul and my dad, tena koutou, thank you. It means a lot that you would donate money to help with the upkeep and improvement of the podcast and that you think this project is something worthwhile. If you would like to join these wonderful people in helping the show out, for even just a dollar a month, you can search for History of Aotearoa New Zealand on Patreon.

Last time we talked about how the materials were obtained and then used to make toki, the adze, which was, and still is, one of the key tools in the Maori carvers kit. Today we are going to continue on that line and talk more about adzes and how they were used, as well as some other tools used by pre-European Maori carvers with some still in use in the modern era.

At the end of the last episode, we talked a bit about the different types adze handles and how those would be used for different tasks. When making a carving the first step was, of course, to find a tree and cut it down. After you did the rites and rituals to ask Tanemahuta, god of the forest, for one of his children, there were a few different methods of bringing down a tree. One way simply cut the roots and push the tree over where it would be left to dry for a month or two. Easy, simple, straightforward. Well, in a manner of speaking, it was still a lot of hard work. This method was typically used with kanuka and other trees that shallower root systems. Trees like totara have a much deeper root system and as such some more inventive methods were used. One way was to use fire by making two deep cuts, one above the other about a metre apart. The material inbetween the cuts would be adzed out and a small fire lit in the new gap, which would burn through the tree and fell it, easy-peasy. The problem with this method, and the reason it wasn't terribly popular, was that most trees were wet due to New Zealand's wet weather and since the trees were still alive, they were green inside, which anyone who knows anything about lighting fires will tell you doesn't burn well. More popular methods were to use some sort of device such as by throwing a stone tied to a rope over the lowest branch of a tree and tying both ends to a large piece of wood with a chisel like stone on the end. The gigantic chisel would then be pulled back and swung in to the tree kinda like a battering ram on a castle door. It's hard to describe what this thing actually looked like as it's such a strange device so I'll put an image up on the website that shows how it worked. Like a lot of Maori culture, this cutting ram is something I've not really seen in other cultures, which makes it all the more fascinating. This ram cutting would be done on one side until about half way through the tree and then repeated on the other side until the tree was felled. Again this was a very labour intensive process, although perhaps easier than cutting up all the roots with an adze, it still required a decent amount of upper body strength to swing the ram. The more adventurous or inventive Maori lumberjack might have used something that resembled a crossbow or small ballista. You heard me right, a ballista may have been used by Tuhoe and Te Arawa iwi and perhaps others to fell trees. Granted, the 'arrow' didn't have a pointed tip, it was a chisel blade so it would have worked in a similar manner to the ram, except you would have rope tied to a bent piece of wood at each end with the chisel-bolt on the other side of the tree to pull back and release. I'll post a picture of this one on the website too cause it's even harder to describe and it is really an amazing piece of technology, if it existed. I say that cause it is disputed if this was a real thing used by Maori. We do have early explorers of New Zealand recording this device but the fact that Maori didn't develop any projectile weapons like a bow and arrow, let alone the much more complex crossbow lead some to doubt it's existence. Which I personally think makes sense, given I would assume if this device was used to fell trees someone would think "hey, this would make a great weapon to kill the hapu over

the hill”, especially in a society that was on a heavy martial footing and you would assume was always trying to get an edge over their neighbours.

Right, so now your tree is on the ground, it’s nice and dried out, the branches have been removed and you’re ready to start doing something with it. You can’t just go cracking into making a waka or your best depiction of grandad though, you had to go through three processes. Ranga was first, the scoring where the timber would be chipped across the grain at intervals to help with later adzing of the wood. Ranga means to lift as the timber was lifted up and had another piece wood placed underneath to hold the timber at an angle, making this stage just a bit easier to handle. Next was aupatu, shaping the timber into it’s rough form, much like chipping and sanding the adze blade into its rough preform, followed by tamaku which would make the wood nice and smooth. Once you had done those three steps, which would take some time and effort, you were now ready to hack away and make your best depiction of ya grandad, just make sure he doesn’t think it’s a taniwha instead...

So that was some of what you would be doing with a regular adze but as we have talked about before there were other toki that were much more highly decorated and renowned making them objects of desire, status and mana. These were called toki poutangata, ceremonial adzes and were typically held by ariki or rangatira and maybe certain tohunga too for use in various rituals. These toki were naturally considered tapu along with the tasks they performed such as putting the finishing touches on other tapu items, such as waka taua, war canoes, taking the first cut on a tree to be felled and it’s even possible that they were used to execute prisoners of high rank. Naturally with items of great importance and rarity, toki poutangata were handed down to the next generation upon death. Well, not quite. You see, the handle was buried with the previous owner and only the blade was passed down to the new one. I assume this was for a couple of different reasons such as the fact wood doesn’t last long compared to stone as well as it was much easier to carve a new handle from wood than it was to mine and shape stone and potentially for the new owner to really have the adze reflect his personality and whakapapa with a new carving on the handle. Although that is pure speculation, what I would say to back up that second point is that the blades of these adzes were typically made from the one type of rock.

Toki poutangata were usually made with pounamu, which we already know came from one place, Te wai Pounamu, the South Island, which we additionally know was sparsely populated, the majority of the Maori population being in the North Island and trade routes were shrinking due to increased warfare. As well as this, pounamu was hard to obtain due to the Alps, rivers, lakes and other natural formations in making the South Island difficult to traverse. Despite this, some coastal populations still made their entire living off mining, working and trading pounamu. In any case, what I’m getting at is that it was really hard to get a hold of pounamu greenstone and as such make blades for these adzes, as opposed to just getting Wiremu the local carver to make a new handle with a new design. The blades of these toki could actually be very old and have been passed down through many generations. Some have notches in the side which could be to indicate the past owners of the adze and thereby increasing the mana conferred on the owner. We aren’t sure if that is the case though, the notches could be to just help hold the bindings better as we sometimes see them in regular toki, rather than toki poutangata. As we have previously discussed though, some of these adzes would have come from Hawaiki to Aotearoa via the Great Fleet, even being used to calm the rough seas by ‘cutting’ the waves and breaking them up. Adding to their ceremonial nature is that the blades could be very large, potentially between 30-40cm, making them impractical to wield in the regular duties of a normal adze.

Like many tapu items and taonga in Maori culture, the handles were carved, usually with some sort of guardian or ancestor which would make the toki unique to the wielder as well as the hapu and

iwi. This also allowed for a lot of variation in style and motifs of the figure. For example, lizards were typically ensigns of the goddess of death and symbolised death, evil and all that good stuff. So to symbolise bravery or strength, the figure on the handle of a toki poutangata may be shown with a lizard coming out of their mouth, as if they were eating it. The end of the handle would also typically be carved with a koreke, a small carved head. I'll chuck some images up on the website as well as you can see what some of these may have looked like as they were really intricate and detailed.

The binding on a toki poutangata was typically the same as a standard adze but once the three essential parts had come together, the blade, the handle and the bindings to hold it all together, the pora would be added. This was the decorative piece that you also often see on taiaha. It was usually made of feathers, such as from kaka, and hair from the kuri, the Pacific dog that Maori brought with them, which would sometimes be plaited into the feathers as well. I've heard a couple of different reasons as to why this was done, beyond pure aesthetic reasons. In taiaha it is supposedly there to distract the enemy as you swing the weapon around and in both the taiaha and toki poutangata it is allegedly used to absorb the blood to stop it running down the handle and making the item wet and slippery. I say allegedly as I am very unsure as to the validity of these. If you are a trained warrior, you shouldn't really be distracted by some fur and feathers on a weapon, it's more likely you are concerned with the hurty end, and I can't imagine some tufts of fur and feathers are terribly effective at absorbing the amount of blood you are probably going to come into contact with if you are in a battle or executing prisoners. That is just my view though and I may be wrong, feel free to let me know! To add to all that, there was one other thing these ceremonial adzes had. A hole was often bored through the base of the handle and a cord put through to make a wrist hold, think like a Wiimote. This would help keep the adzes in the wielders hand as they used it, presumably to save them any embarrassment of accidentally throwing a priceless heirloom. We also see these hand cords in patu as well.

Now lets move away from adzes a bit and talk about some of the other tools Maori were, and still are, using for regular, everyday carving. The adze of course is a bit unwieldy if you want to put in those finer details so small chisels were used to really get into the nitty gritty of a piece after an adze had done the heavier work. Today we have all sorts of different types of chisels of varying shapes and sizes, most of which come from Europe and supplanted their Maori counterparts due to the superior materials and increased variation leading to a wider range of techniques. Before Europeans came to our shores though, there was really only one type of chisel with little variation. Most were just flat blades although there were some that had an angle on them, like an adzes and even some that were double ended like Darth Maul's lightsaber. Some chisels were made of bone from seals, kuri, and of course various birds, such as albatross which were particularly sought after for ta moko chisels. Kiore bones, and sometimes teeth for drill bits, moa and even human bones were sometimes used as well. Due to this little variation, some creative techniques were used to get a desired effect. For example, the lack of scoop chisels meant that to put a nice hole into a carving, the carver would dig the hole right through the wood and then adze off the back, which is a trick still used by carvers today. In saying that there was less variation and that European chisels were of superior quality is being slightly disingenuous though. The people wielding them were often highly skilled and in trained hands these tools could create works of art easily comparable to works made with modern tools, even if they were a bit more rough around the edges due to limitations. The blades would often sit in a little step on a wooden handle, bound up with flax cord to keep it together, again similar to an adze. A neat little thing is how carvers would carry chisels around. They would either put them behind their ears or hold them in a tatua pupara, belts made of fibre used to hold tools like chisels, sharpening stones and other small, handheld items.

Another traditional Maori tool in the box, or I guess *tatua pupara* was the cord drill or *tuwiri*, *porotiti* or *pirori*, which mean drill, to revolve/spin, and to twirl around respectively. These were used to create holes in stone, bone and shells as opposed to wood. Most of the holes we see in *whakairo rakau*, wood carving, are square, indicating the use of a chisel so it seems it wasn't a popular choice for the medium. If you have ever watched the Youtube channel Primitive Technology, you may be somewhat familiar with the cord drill but if you haven't seen it, then I'll put a link up under this episode on the website along with some other pictures of them and how they work as well. If you're one of those people that can't look things up because you're driving or you just can't be bothered (don't worry, I'm one of those too) then I'll do my best to describe it. They would be made up of a wooden shaft about 30-60cm long with the bottom cut to fit a small pointed stone that was lashed on. The type of stone and the shape of it would depend on what was going to be drilled, as well as what was on hand. Two stones could be tied to the shaft about half way up to balance the drill as well as add weight to give some momentum when spun. There were some variations on this such as using a heavy piece of wood or a circular, spoked flywheel, which looked really nifty! Once you had all that, a cord would then be twisted from the top around the shaft which could be pulled to twist the drill and make a hole. The spinning would also cause the cord to wind back up again, allowing them to be pulled and continue drilling. If you want to see this in action, I'd again direct you to Primitive Technology who has some great videos with him using similar devices.

So if a drill wasn't used on wood, what was it used for? As we have mentioned, *patu* and *toki poutangata* had holes in them for their hand cords but they were also used in the making of fish hooks and *hei tiki*. For fish hooks, a large piece of bone, after being sanded down would have a series of holes drilled into it in a circle. This would leave a piece in the centre that could be easily tapped out, leaving a large hole with some jagged edges which would be sanded down as well. One section of the bone would be filed out to leave the classic U-shaped hook that is associated with many Polynesian cultures. One end of this U would be notched to tie the line to with the other being filed further to be able to hook into a fish. We have talked a bit about *hei tiki* before, how they were perhaps symbols of fertility as they were often depicting women and were worn by women around the neck but their method of creation is interesting. Drills were used to make the eyes, which have a very distinctive round shape but they wouldn't use the pointed drill bit like most other mediums required. Instead the drill bit would be replaced with a hollow, cylindrical piece of wood or bone, which would then be used to drill into the *hei tiki* to form a round groove but it wouldn't go all the way through, only so far as to define the eyes of the piece. What was important about this process though was that *hei tiki* were, and are, typically made from *pounamu*. Traditionally, *hei tiki* were sometimes made from blades of *toki*, trying to recycle a stone that was hard to get and maybe had worn out its life as a working object. Again, I'll put some images up on the website of both this process with the fishing hooks and the *hei tiki* to give you a better idea.

Some other tools used were *waru*, scrapers, which were small stones with sharp or even serrated edges used to scrape meat, tendons and fat off bones as well as skin animals. These were often made of obsidian and were mostly in the South Island due to their much heavier reliance on meat as a food source compared to Maori in the North Island, who could also rely on *kumara* and other plants. Which is interesting given the South Island doesn't have the active volcanoes needed to make obsidian. There were of course the hammer stones we keep mentioning that were used to do all sorts of things from making adzes to mining other rocks. These could weigh between 70g to several kg depending on the job it was intended for but usually they were used to peck pieces off a rock to make it into the desired shape. They could also be mounted and lashed onto sticks to make for easier wielding if needed. In a similar vein were mallets used to hit chisels to get them to actually, well, chisel. Usually made of wood, they were a bit different to European round hammers designed

for chisels, because they were square. You still find modern carvers using square hammers over round ones when making whakairo rakau.

I think that's enough of tools for now, we should really crack into some more of what Maori were carving as opposed to how or what they were carving with. So, next time, we will cover the mythical origins of whakairo rakau as well as the major styles of carving in Aotearoa and the tokotoko.

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](mailto:historyaotearoa@gmail.com) or Twitter at History Aotearoa or Facebook at History Aotearoa New Zealand Podcast. We are also on Patreon if you would like to support us with cold hard cash. 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!