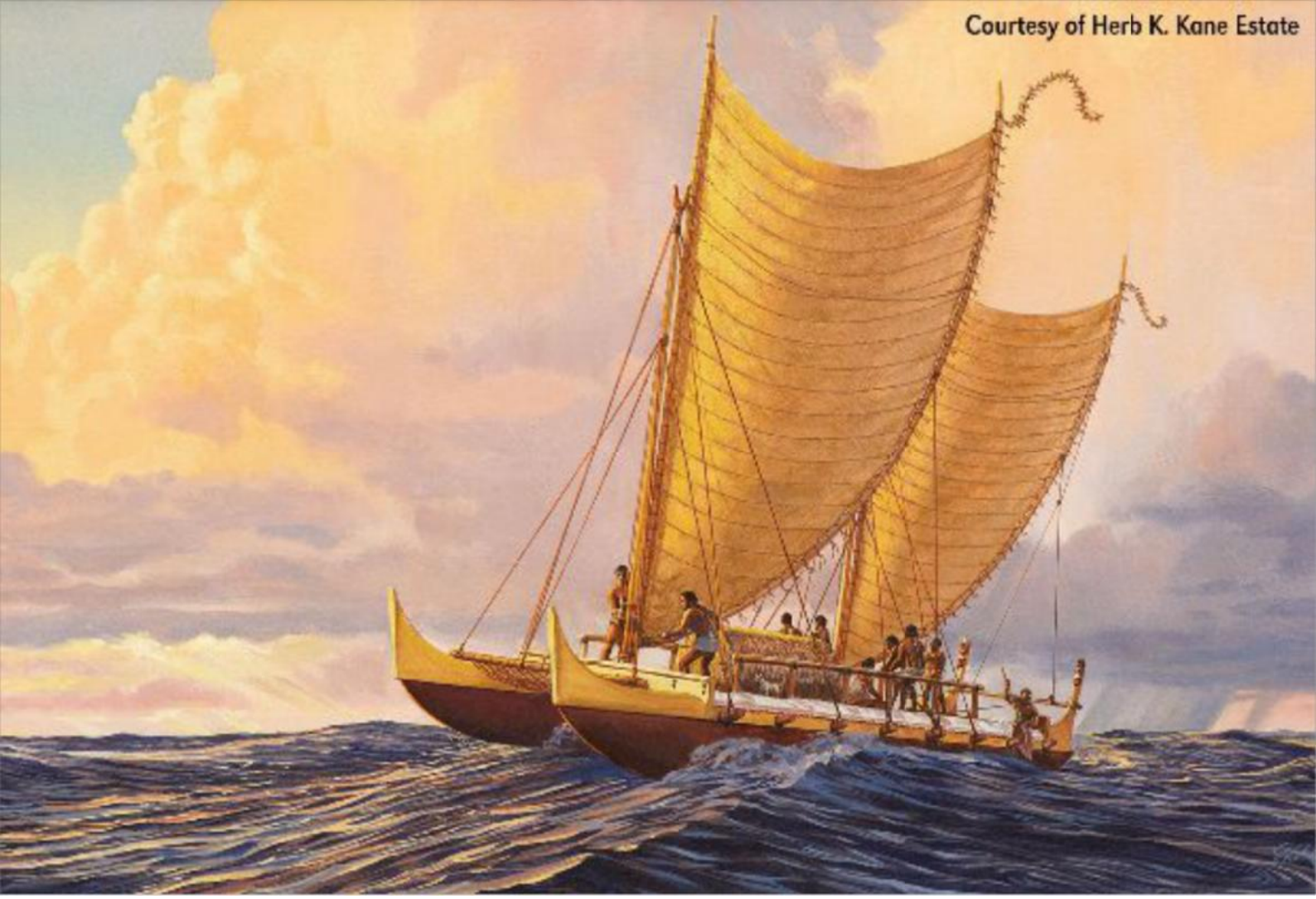


NGA MOTEATEA
O NGA WAKA HEKENGA

Traditional chants of the voyaging vessels.

Page

1 **Toia Toia Mai Ra** – starting the big project
3 **Toi Tu Te Hoe** – a helmsman's chant
7 **Kura Tiwaka Taua** – paddling chant
10 **Tua Tua Koi Rangi Nui** – surviving a southerly gale
14 **WhakatakaTe Hau** – a karakia & its 3-part structure
16 **Taku Toku** – the origin of pounamu blades
17 **Attaching a Waka Prow** – boat-building technology
21 **Toia Tainui Tapotu** – variations of the launching chant
26 **Ko Uhia Mai** – the Black Ferns haka
28 **Launching Rituals** – omens and offerings
29 **The Searoads of the Ancestors –** by Elsdon Best
33 **The Sea Roads –** by Dr Rawiri Taonui

NEW ZEALAND PĀTERE*WAKA

Toia Toia Mai Rā

Ancient

This song re-enacts the felling and hauling of logs to build huge voyaging waka, but it is not a work song. It is used metaphorically by speakers on marae to create enthusiastic support for a major communal undertaking. It is derived from **Toia Tainui Tapoto, page 21**, a log-hauling chant brought from Tahiti, and several lines from it are quoted in the Black Ferns' haka, **Ko Uhia Mai, page 26**.

Tōia!	Haul!
Tōia mai rā a Tainui, Te Arawa, Mātaatua,	Haul Tainui, Te Arawa, Mataatua,
ngā waka o te motu!	the waka of the island!
Ma wai e tō?	Who will haul it?
Māku e tō; ma Whakapau[1] e tō!	Haul for me; haul it for One-who-gives-all!
Tēnei hoki rā te rangonga ake nei,	Especially after hearing of this,
He tārewa i nuku,	a tree towering up from the earth,
he tārewa i rangi.	towering up in the sky.
Tūnui[2] ē, nau mai, nau mai,	Tall One, come forward, come forward,
Nau mai; ka kau téua	Come forward; the two of us will enter
i te awa i Pikopiko-i-whiti[3]	the channel of Pikopiko-i-whiti
Kia mātakitakitia tāua e te tini,	To be gazed upon by the hosts of people,
e te mano.	by the multitudes!

1, **Whakapau** - an example of Chinese whispers here. In the oldest version it is whakaranga (gather a crowd together), then whakarongo (listen), whakatau (decide) and next Te Whakatau.
2. Tū-nui is the great tree that is to be felled, split and adzed to make the keel of one hull of a voyaging waka. Earlier versions have tinia (blocked), punia (stuck), punui (punga roller???).
3. Pikopiko-i-whiti (-o-whitīki) was "*a place on the coast, where the sea was always smooth*." This can only describe a coral lagoon, and this was an old name for part of the eastern peninsula of Tahiti.

Nāku koe i tiki atu	It was I who went to fetch you
i te Wao-nui-a-Tāne	from Tane's great forest.
Mihimihi e Tāne,	Greetings, oh Tane,
Kohakoha e Tāne[4]	You are to be reduced in size, oh Tane.
Turuturu haere ana mai te wai	The water is dripping
o te hika o Marama[5]	from Marama's private parts.

4.Kohakoha e Tane - the trunk of the tree is being addressed here. Fires and chipping of the charcoal are going to reduce it in size. But all the earlier versions of this chant used Koakoa e Tane, Be happy Tane!

5. Marama - When Tainui arrived on the east coast at Tamaki, an attempt was made to portage it to the west coast. The men hauled on the ropes, but the vessel could not be moved. Finally the tohunga, Rakataura, discovered that this was because Marama, a wife of the captain, had broken tapu by having an affair with a crew member. Necessary rituals were performed and the vessel glided forward when the crew pulled on the ropes again. This line refers to evidence of Marama's guilt.

E patua ana mai e te kōmurimuri
Nā runga ana mai o Waihī
Ko te iringa mai tēnā o ngā waka nei.
Arara, huhura te rā,
wewero te rā,
Ngā tāngata i whakariri
ka mamau ki te taurai[6]
Kia tūmatatorohia atu e ahau
- taku timatatoro.

Ihu o waka turuki, turuki,
Paneke, paneke!
Haramai te toki,
Haumi ē, hui ē, taiki ē!

Blown around by the gentle breeze
that comes from over Waihi
Now resting on rollers are these waka.
Behold, the sun rises,
the sun shoots out its beams,
The aroused people
grasp the rope[6]
so it can be thrust forward by me
- my thrusting!

The bow of the waka moves, moves.
Forward! Forward!
Bring the adze,
Gather, unite, bind together!

6. Grasp the rope - the message in this *old chant is repeated when a speaker on the marae proposes a major project.*

> *"For thousands of years, our people have completed herculean tasks by proper planning, good preparation, cooperative effort and emotional commitment. We can do that again now."*

7. Haramai te toki - An adze with a sharp stone blade was used for shaping the waka's hull. "Bring the adze!" - that is, "Give us the tools and let's get stuck in all together now!" The toki has become a symbol of strength, determination, and courage in challenging times.

8. Haumi ē, hui ē, taiki ē! Everyone joins in reciting these ancient words of unity.

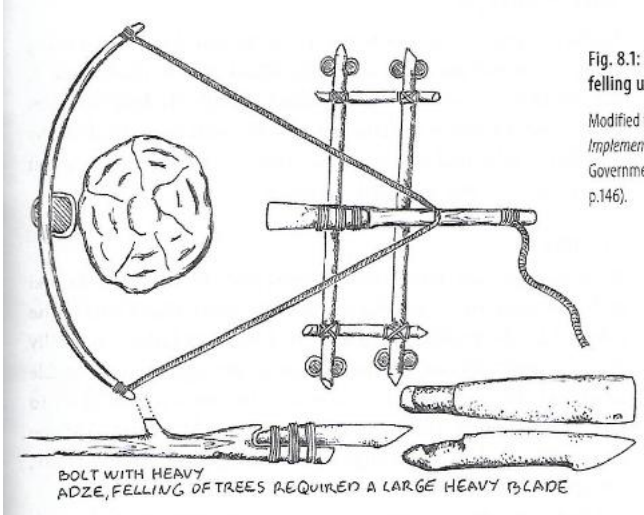


Fig. 8.1: The Māori method of tree felling using a ballista apparatus.

Modified from Elsdon Best, *The Stone Implements of the Maori* (A.R. Shearer/ Government Printer, Wellington, 1974; p.146).

NEW ZEALAND
MOTE*ATEA

Toi Tu Te Hoe!

"Ko Aotea Te Waka"

Ancient

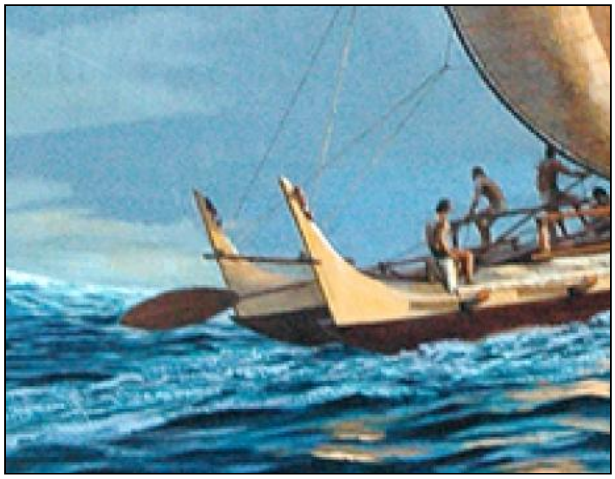
This is one of the legend-poem poi chants of Taranaki women, a traditional paddling song handed down for six centuries, the chant of the commander of the *Aotea* voyaging waka to his crew on the voyage from Ra'iatea Island in the Eastern Pacific up to Aotearoa.

Ko *Aotea* te waka, Ko Turi tangata ki runga, Ko *Te Rōku-o-whiti* te hoe. Piri papa te hoe! Awhi papa te hoe!	*White Cloud* is our voyaging craft, Turi is the person in command *The Log-for-changing-direction* is the steering oar. Keep this oar close to the hull, Hug the hull with this oar!
Toi tū[1] te hoe! Toi rere te hoe! Toi mahuta te hoe! Toi hapakapa[2] te hoe! Kai runga te rangi.	Quickly set in place is the steering oar![1] Quickly gliding along is the steering oar! Quickly rising is the steering oar! Quickly moving back and forth is the oar[2] As it steers us up to the sky's edge.

1. **Toi Tū.** This could also be Toitū te hoe! = The oar is undisturbed!

2. Hapakapa is not in any dictionary. However, among several other meanings: toi = move quickly, hapa = crooked, and kapa = a line.

A steering oar moves back and forth, leaving a crooked line in the water so the boat goes in a straight path. Tautahi's version uses kakakapa = flutter.



Ko te hoe na wai? Ko te hoe na Te Kahu-nunui Ko te hoe na wai? Te hoe na Te Kahu-roroa Ko te hoe na wai? Ko te hoe nō Rangi-nui-e-tu-nui[3]	Whose steering oar is it? It's the oar from *The Great Hawk* Whose steering oar is it? It's the oar from *The Long-enduring Hawk* Whose steering oar is it ? It's the oar of *Great-sky-so-vast*[3]
Tena te waka, Ka tau ki Tipua-o-te-Rangi, Ki Tawhito-o-te-Rangi, Nga turanga whetu o *Rehua*. Hapai ake au I te kakau o taku hoe, I Te Roku-o-whiti.	Now our voyaging craft is heading towards the scariness of the unknown towards the primeval unknown. Our bearings are set on the star *Antares.* I raise on high The handle of my steering oar, *The Log-for-turning.*

Whiti pātatō,[4]	Rattling[4] as we turn,
Rere pātatō,	Clattering as we flow forward,
Māmā pātatō.	Tap-tapping lightly.
Te riakanga, te hapainga,	The straining, the lifting up,
Te komotanga, te kumenga,	The inserting, the pulling out,
Te riponga, te awenga	The swirling, the white plume
A te puehutanga	from the spray
O te wai o taku hoe nei.	of water of my steering oar here!
Kei te rangi, hikitia!	Here's to the unknown. May it be lifted up!
Kei te rangi, hapainga,	Here's to the unknown. May it be raised aloft!
Kei te aweawe nui nō Tū!	Here's to the great expanse belonging to Tu!
Tena te ara ka totohe nui,	This is the sea-path that was much-argued about
Ko te ara o tenei ariki,	but it's the path of this commander,
Ko te ara o tenei matua iwi,	it's the pathway for this crew,
Ko te ara o *Rangi-nui e tu nei,*	the path of the great unknown all about us.

3. I think Kahu-nunui, Kahu-roroa and Ranginui-e-tu-nui are descriptive names for the Aotea.

4. **Patatō** is not in modern dictionaries, but Tregear, Williams and the Polynesian Lexicon gives its meaning in Samoan, Tongan, Futunan, Hawaiian and NZ Maori as a repeated dripping, tapping, chopping, knocking, rattling noise.

Nguha te kakau o taku hoe nei,	Fighting fiercely is this handle of my steering oar
Ko Kautu-ki-te-Rangi.	named *Wading-into-the-unknown.*
Ki te rangi, hikitia;	Towards the unknown, may it be lifted.
Ki te rangi, hapainga;	Into the unknown, may it be raised.
Ki te rangi tu torona atu,	Towards the unknown that is to be reconnoitered.
Ki te rangi tu torona, mai.	Into the unknown that in being explored here.
Ki te rangi tu te ihi,	Towards the unknown, so scarily exciting.
Ki te rangi tu te kōkō,	Into the unknown, so windblown.
Tu te mana, tu te tapu,	So full of prestige, so set apart.
E tapu tena te ara,	It is the sacred pathway
Ka totohe te ara	the argued-about pathway
O Tane-matohe-nuku,	of Tane who split land and sky wide open,

Te ara o Tane-matohe-rangi, Ko te ara o Te *Kahu-nunui,*[3]	the pathway of Tane who split the heavens, the pathway of the *Great Hawk,*[3]
Ko te ara o te *Kahu-roroa*,	the pathway of the *Long-distance Hawk*the pathway
Ko te ara o tenei ariki,	of this chief,
Ko te ara o tenei tauira,	the pathway of this navigator.
Tawhi kia *Rehua,*	The star *Antares* guides us
Ki uta mai, te ao mārama!	to the shores of the world of light!
E Rongo-ma-Tane!	O Rongo and Tane!
Whakairihia!	We raise our offerings!

James Cowan at Parihaka

From James Cowan, *"The Maori: Yesterday and Today"* (1930)

He wrote
"In Taranaki I have watched and listened to poi acts of a quality differing greatly from the action-songs of other tribes. When I stayed at Parihaka one night, the venerable Te Whiti invited me to accompany him to his meeting-hall and see his poi parties rehearse their songs and dances for the coming March assemblage of the faithful. The women and girls, numbering about thirty, wore a profusion of white feathers - the raukura, Te Whiti's badge - in their dark glossy hair.

"They gave one poi after another, and the earnestness and fire with which they chanted their songs made it seem more like a sacred religious ceremony than anything else. And that indeed was what it was; the poi chants were legendary, historical, and ritualistic; they recited the coming of the Taranaki people's ancestors from Hawaiki in the traditional canoes, they described the grievances of the Maori under pakeha rule, the tragedy of the war, the confiscation of the land, and they embodied some of the figurative utterances and cryptic "sayings" in which Te Whiti delighted ...

"This is one of the legend-poems chanted by the Taranaki poi women; it is a paddling song traditionally handed down for six centuries, the chant of the chief of Aotea canoe to his crew on the voyage from Ra'iatea Island to New Zealand:—

Cowan's Translation

Ko *Aotea* te waka,	**Aotea** is the Canoe,
Ko Turi tangata ki runga,	And Turi is the Chief.
Ko *Te Rōku-o-whiti* te hoe.	The Roku-o-whiti is the Paddle.
	Behold my paddle!
Piri papa te hoe!	**It is** laid by the canoe-side,
Awhi papa te hoe!	Held close to the canoe-side.

Toi tu te hoe!
Toi rere te hoe!
Toi mahuta te hoe!
Toi hapakapa te hoe!
Kai runga te rangi.

Ko te hoe na wai?
Ko te hoe na Te Kahununui;
Ko te hoe na wai?
Te hoe na Te Kahuroroa.
Ko te hoe na wai?
Ko te hoe nō Rangi-nui-e-tu-nui.
Tena te waka,
Ka tau ki Tipua-o-te-Rangi,
Ki Tawhito-o-te-Rangi,
Nga turanga whetu o *Rehua*.
Hapai ake au
I te kakau o taku hoe,
I Te Roku-o-whiti.
Whiti patatō,
Rere patatō,
Māmā patatō.
Te riakanga, te hapainga,
Te komotanga, te kumenga,
Te riponga, te awenga
A te puehutanga
O te wai o taku hoe nei.
Kei te rangi, hikitia!
Kei te rangi, hapainga,
Kei te aweawe nui nō Tū!
Tena te ara
ka totohe nui,
Ko te ara o tenei ariki,
Ko te ara o tenei matua iwi,
Ko te ara o *Rangi-nui-e-tu-nei,*

Nguha te kakau o taku hoe nei,
Ko Kautu-ki-te-Rangi.
Ki te rangi, hikitia;
Ki te rangi, hapainga;
Ki te rangi tu torona atu,
Ki te rangi tu torona, mai.
Ki te rangi tu te ihi,
Ki te rangi tu te kōkō,
Tu te mana, tu te tapu,

E tapu tena te ara,
Ka totohe te ara
O Tane-matohe-nuku,
Te ara o Tane-matohe-rangi,
Ko te ara o Te *Kahu-nunui,*
Ko te ara o te *Kahu-roroa,*
Ko te ara o tenei ariki,
Ko te ara o tenei tauira,
Tawhi kia *Rehua,*
Ki uta mai, te ao mārama!
E Rongo-ma-Tane!
Whakairihia

Now 'tis raised on high—the paddle!
Poised for the plunge—the paddle!
We spring forward!
Now, it leaps and flashes—the paddle
It quivers like a bird's wing
This paddle of mine!
This paddle—whence came it?
It came from the Kahu-nunui,
*
From the Kahu-roroa,
*
It came from the Great-Sky-above-us.
Now the course of the canoe rests
On the Sacred Place of Heaven,
The dwelling of the Ancient Ones
Beneath the star-god Rehua's eye.
See! I raise on high
The handle of my paddle,
Te Roku-o-whiti.
I raise it
—how it flies
and flashes!
Ha! **the** outward lift and the dashing,
The quick thrust in and the backward sweep
The swishing, the swirling eddies,
The boiling white wake
And the spray that flies from my paddle!
Lift up
The paddle to the sky above,
To the great expanse of Tu,
There before us lies our ocean-path
of strife and tumult,
The pathway of this chief,
The danger-roadway of this crew;
'Tis the road of the Great-Sky-above-us,

Here is my paddle,
Kautu-ki-te-rangi;
To the heavens raise it;
To the heavens lift it;
To the sky far drawn out,
To the horizon that lies before us,
*
To the heavens,
sacred and mighty.

Before us lies our ocean-way,
The path of the sacred canoe, the child
Of Tane, who severed Earth
from Sky.
The path of the Kahu-nunui,
the Kahu-roroa,
The pathway of this chief,
this priest.
In Rehua is our trust,
Through him we'll reach the Land of Light.
O Rongo and Tane!
We raise our offerings!

NEW ZEALAND
HAKA TA*PARAHI

Kura Tīwaka Tāua

Ancient

This East Coast chant uses an ancient paddling song of the Takitimu voyagers. This tukiwaka, or takitaki-hoe-waka, is a good example of a rhythmic waka chant, with its regular beat and frequent repetition. It is used nowadays as a haka taparahi to promote or pay tribute to cooperative effort.

1943 Kuri Tiwaka Taua MP3 was recorded at the posthumus Investiture of Lt Moana-Nui-a-Kiwa Ngarimu VC, at Ruatoria in 1943, with the performers abbreviating some words, but with great audience interaction.
And in 1977 kura tiwaka.mp3, the Mangatū Haka Club used all the words.

Whakaara	Warming up
Ma konei ake au!	Let me get going this way!
Titaha ake ai, hai?	Always going sideways, eh?
Me kore e tutaki?	Maybe I'll meet you then?
He **pūpū karikawa,***	A big fat sea snail
he **pūpū harererorero, hi?**	a sea snail poking out his tongue, eh?
Ka tikoki!	It's losing it's balance!
Ka tahuri!	It's going to capsize!
Ka tikoki!	It's tipping over!
Ka tahuri!	It's capsized! -
Ka tahuri ra Nui Tireni,	New Zealand has capsized!
I au, au au!	Yeah! Yeah! Yeah!

* **Pūpū karikawa** is the Toitoi or Cook's Turban Shell, living on rocks just below the water line. In 1970, I spent a day with Fijian villagers gathering these, then boiling them in a big old kettle on the beach and eating them. Delicious! They sold the shells for the manufacture of shirt buttons.

Taparahi	Ceremonial haka
Papā te whatitiri,	The thunder crashes,
hikohiko te uira,	the lightning flashes,
I kanapu ki te rangi;	it illuminates the heavens,
i whetuki i raro ra.	and hammers downward.
Rū ana te whenua, e!	The land is forever shaking, wow!
E, i aha tērā e?	What is that, eh?
Ko te werohanga A Porourangi[1]	Porourangi has pierced
i te Ika a Maui e takoto nei!	the Fish of Maui lying beneath us!
A ha ha!	A ha ha!
Kia anga tiraha ra tō puku	So it is your belly,
ki runga ra!	upturned and laid bare !
A ha ha!	A ha ha!
Kia eke mai o iwi ki runga	So that your people may mount
ki To tuatua werowero ai e ha!	And spear you! A ha ha!
I aue, taukuri, e!	Ee! Alas, oh dear, yes!
Tena rā, e tama[2] tu ake ki runga ra	Now then, my son, take your stand to direct
Ki te hautu i ohou waka, i a Horouta,	and to urge on your canoes, Horouta,
Takitimu, e takoto nei!	Takitimu, drawn up here!
A ha ha!	A ha ha!

Ara! he tia, he tia, he tia,	A deep stroke, deep stroke, deep stroke!
Ara! he ranga, he ranga, he ranga,	A quick stroke, quick stroke, quick stroke!
Whakarere iho te kakau o te hoe	Strike the handle of the paddle downwards,
Kō a manini tua, i manini aro	Dig smoothly back, then smoothly forward.
I tangi te kura; i tangi wiwini.	The autumn godwit cried; it cried fearfully.
I tangi te kura; i tangi wawana[3]	The migrating godwit cried; it cried fiercely.

1. Porourangi was the founder of the Ngati Porou people, and the Fish of Maui is the North Island. Porourangi was one of the first to cultivate the soil of the North Island.

2. Tena ra, e tama... At the posthumus investiture of Lt. Ngari Ngarimu VC in 1943, this was modified to *Tena ra, Moananui...*

3. Whakarere....wawana. These last four lines are from the karakia Taikekehu chanted after the *Tainui* left Rarotonga, and they are also used in the oriori Pō! Pō! with some modifications. The chants compares the voyagers on the Tainui to red-breasted godwits fearfully contemplating their 10,000 km non-stop flight cross the Pacific.

4. Kura 1. The Takitimu people's Tahitian ancestors sailed hundreds of kilometres to the Cook Islands to catch *Kura,* red breasted lorikeets whose feathers were treasured by them as red onamentation on the finely woven loincloths of their kings. Because red feathers were rare, these *maro kura* were small and lightweight treasures. Big heavy treasures that weighed down (tao) a sailing vessel were called *tao-nga*.

Kura 2. Chestnut-red breast feathers appear on mature godwits, or Kuaka, in autumn when they are about to depart on their high-speed and fearfully long-distance breeding flight to Siberia, and these reddish birds are also called Kura. When there was no wind, the Society Islanders paddled large canoes long distances between islands across the open ocean, at high speed, just like the red-breasted Kura flying overhead.

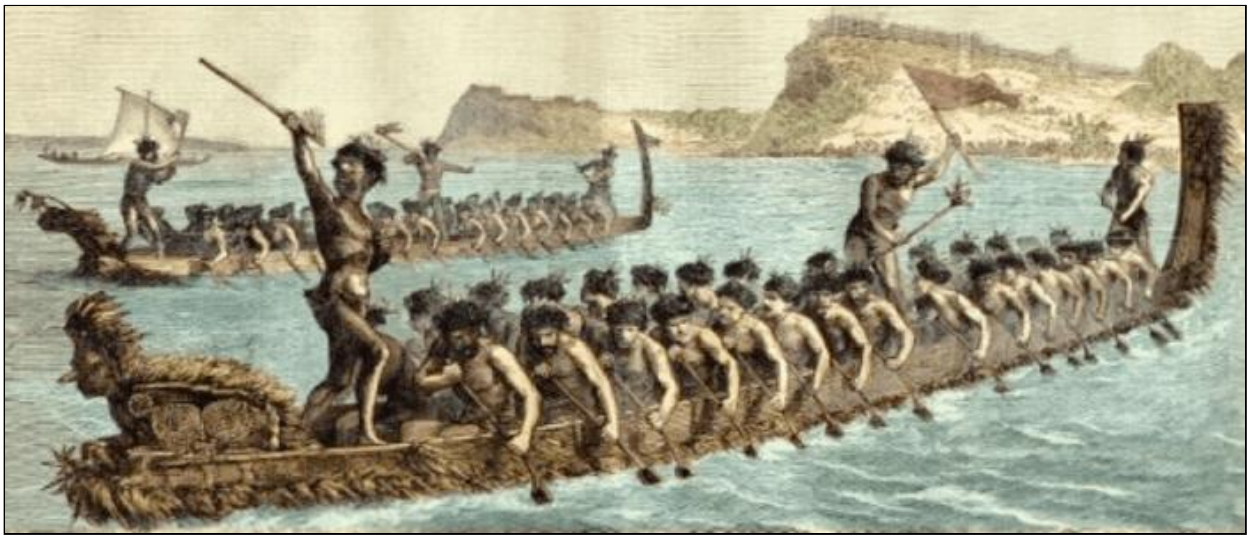
Kura 3. After Polynesians brought this chant to New Zealand, where greenstone for making fine chisels enabled the creation of elaborate carving, carved waka became treasures, but they were taonga, not kura.

Nowadays the meaning of *kura* in this haka is transferred to metaphorical 'paddling,' or the treasured spirit of cooperative effort that gets people places.

5. Wawana, wawā is a loud rumbling, which could refer to the sound of hundreds of migrating birds taking to the sky simultaneously.

Tērā, te haeata takiri ana mai	There, dawn is breaking
I runga o mata tērā	on top of the headland back there.
Anā whai uru, whai uru, whai uru	Keep on chasing the western horizon.
Anā whāia tō whāia tō, whāia tō!	Keep being chased, oh sunset!
I ararā tini, i ararā tini!	So many, so many!
I ara ri!	That's the last one!

6. Mata tērā When Polynesian navigators departed from an island, they took a back-bearing to the top (runga) of the headland (mata) back there (tērā) where they embarked, so this phrase probably started as a sailing instruction "i runga o mata tērā" for a waka voyage with a pre-dawn departure. A Takitimu ancestor is said to have migrated from "Matatera" to Rarotonga (JPS). But a search of the world atlas finds no such place except a headland in New Zealand, 10 km inland from Turakina! In some performances of this haka, the word Matatera is replaced by Hikurangi.



E kō; tēnā, tēnā!	Dig; that's it!
E kō; tēnā, tēnā!	**Dig; that's it!**
E whara wai ia kō wā!	**Strike water every digging beat**
whara wai ia kō wā!	**Strike water every digging beat**
Hei kotī, hei kotī, hei kotī!	**Make it flow, flow, flow along!**
Ko re-rere! Tō rere!	Flowing! More like flying!

Earlier written versions give these words and translations of E whara wai ia kō wā
E hara ko te wai o taku hoe. *That was not the water from my paddle.* (1930)
Ehara ko te wai o to waho. *It's not like foam from your mouth.* (1943)

And they give these words and translations of Ko re-rere! Tō rere! Te rere i te waka!
E ka rere te rere i te waka! *How the canoe flies! (1930)*
Ka rere! I ka rere! Te rere i te waka *So my canoe rushes along, swiftly, so smoothly. (1943)*

Te rere i te waka,	**The waka is in flight**
E kutangitangi, e kutangitangi;	**We're really howling along, really zinging!**
E kura tī waka tāua,	**Our wakas resemble** speeding **godwits**
E kura tī waka tāua!	**Our wakas are like** ocean-crossing **godwits**
E kura wawawa wai,	**Godwits scattering** across the **water**
E kura wawawa wai-i-i!	**Godwits scattering** across the **water**

Tuku	Winding down
E Kō kōmako! Kō kōmako!*	The bellbird sings! The bellbird sings
Ko te hau tapu e rite	**The sacred wind blows gently**
ki te kai na Matariki.	**Like the food at New Year.**
Tapareireia koi tapa!	**Saturated indeed is the valley!**
Tapa konunua koiana tukua!	**From the deep cleft the rod is withdrawn.**
I aue hi!	**Yes!**

* **E kō kōmako** - these last six lines are from the end of Rūaumoko, an ancient haka that uses sexual metaphor to express the quiet bliss experienced after exerting oneselves totally.

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Tūā Tūā Koi Rangi Nui

c.1400

This recalls how the *Takitimu*, after sailing from Rangiatea to the North Island, was next used to explore South Westland. When it ran into a cold front (strong nor-westerlies, a cold southerly and then calm sunny weather) near Franz Josef glacier and Mt Cook, the *Takitimu's* four "taniwha," enabled the vessel to cut through the waves and survive the storm. The high bow-posts and stern-posts had been carved out by adzes and attached to the hull in a complex, very strong, manner, as shown in this colourised 1905 photo of an old Fijian-style Drua.

1st. Acknowledging the great forces that connect us to the spiritual powers and to the deeds of our ancestors.

Tūā, tūā[1]	I am chanting for protection, protection...
koi rangi nui,[2]	...against the vast spaces
Koi rangi roa,	against the long travel times
Koi rangi pouri,	against the gloomy places
Koi rangi potango,	and against the intensely dark regions.
Koukou[3] te whetu i runga nei,	The stars are sprinkled above us here.
Moana[4] ropu kei tai,	Up-and-down go the crew on the seas
Kei tai e riri ana,	on the always-angry seas
Tu mai ana horoi	that constantly rise up and wash us;
Kei tai e patu ana i te hau,	on the seas, constantly hit by the wind,
Tu mai ana horoi	constantly rising up and washing us.
Punganangana,[5]	
Punganangana,	
Puaka[6] haua	It is very blustery
te tawhito o te rangi,	persistently relentless.
	Struck down (hidden) is the star Rigel
	that ancient guide in the sky.
He Uru ra ko te hau,	
He Tonga ra ko te hau,	From the west is the wind
Ka hara mai[7]	from the south is the wind
ka tinei,	pushing rudely in;
Ka tinei kia mate.	extinguishing our body warmth
	extinguishing it near to death.

1. Tua is a location word, on the far side. **Tuuaa**, with long vowels, is a ritual chant for protection.

2. With capitals, these describe Rangi, the Sky-Father *"Ka huru ki te tua i to rangi, Tuatua Ranginui, Rangiroa, Rangi-potongotango, Rangiwhetu ma."*

3. **Koukou** is an owl's hoot in North Island NZ Maori, but in older dialects it means to sprinkle water. I think the meaning here is "Only a sprinkling of starlight is above us." The approaching storm clouds were starting to hide the stars.

4. **Moana** can be used as the verb "uneven."
5. **Pu-ngana-ngana** Pu = bunched up, twice as much. Ngana = persistent
6. **Puaka** is not a pig (poaka), but the South Island variant of Puanga, the useful navigational star Rigel.

7. **Hara mai** = violating. It is not Haramai or Haere mai. Nor is it mara mai; that is a typo in Pe Te Hurinui's copy of this karakia.

HERB KANE

2nd. Loosening the harmful bonds and strengthening the helpful ones.

Toki nui te toki,
Toki roa te toki,
Toki tawahi e te toki![8]

But huge is the adze
Very long is the adze
from high-tech Hawaiki is the adze that crafted this well-founded, weather-tight waka!

8a. **Toki** - A legendary giant adze with a long-lasting blade is a metaphor for the boat's advanced construction. The adze referred to here is *Awhiorangi*. This speckled red 45 cm long adze was brought from Rangiatea to Aotearoa in the *Takitimu* by its captain Tamatea, who is said to have "used the adze to cut a path" through a storm encountered on the voyage from the Eastern Pacific.

That story, retold in this karakia, is a vivid way of telling us that the massive bow-posts and stern-posts of the *Takitimu* were adzed so skillfully that they could cut through storm wavesThe posts had long zigzag joints to make certain that the sewn bindings did not break with the stress.

Bowpost Technology, page 15

After arrriving at Whakatane, the Takitimu was later used by Tamatea's brother Tahu to explore South Westland, and this is the basis of a Ngai Tahu claim that he "discovered greenstone. However ***Taku Toki*****,** a West Coast Ngati Wairangi waiata, explains how Ngai Tahu actually learnt of it.

Taku Toki, page 16

Awhiorangi was later taken to South Taranaki after Tamatea's brother married Turi's daughter. It was stored in a tree at Waitotara for seven generations, and found again in 1887, after the tree died, rotted and fell to the ground.

8b. **Tāwāhi**. tā = belonging to, wāhi = a place apart.
Tāwāhi is the far side of a stretch of water, usually a river, but in this case it is a metaphorical reference to Hawaiki.

a whanatu au	I keep going ahead
ka hahau i te takapu[9]	chopping at the calf muscle (bulging waves)[9]
O te rangi e riri mai ana,	of the always-angry weather,
E nguha mai ana,	and I keep fighting fiercely.
Ka hinga	Finally it is defeated.
Ka mate	It is dead.
Hau mate	The wind has died away!

3rd. Naming what is required for oneness with the forces and ancestors.

Whakataka[10] to hau ki te uru,	The wind circles to the west
Whakataka to hau ki te tonga,	Then turns to the south
Kia tu mahinahina[11] i uta,	Until, in a haze, the land rises up
Kia tu marokeroke[12] i tai,	and it stays somewhat drier at sea
Kia ao ake te ra,	So that the sun rise on a world
He tio,[13]	of ice
He keo	snowy peaks[14]
He hauhunga.[15]	and frost.[16]

9. **Takapu**. This can be taken metaphorically, or as describing the waves. Cutting the tendon below an enemy's calf muscle left him unable to walk on that leg, and thus harmless. To make the storm harmless, the captain would have reduced the sail area, kept bow-on to the waves, and maneuvered towards where he had calculated calmer waters were.

10. Whakataka - to change direction. When Pei Jones translated this line in the 1940s, he seems to have read it as Whakakati, to cease, and many others have copied his translation.

11. **Ma-hina-hina** is from hina = grey, and mahina = dim light. Land that is seen hazily on the horizon is where they can find shelter and start a big warming fire.

12. **Maroke-roke** = becoming dryer, from maro = hard, and maroke = dry (clay).

13. **Tio.** Ice was white, and sharp when you walked on it, just like walking on beds of rock oysters, or tio. So the newly-arrived Polynesians named ice after them.

14. Ice, snowy peaks is a description of the Fox
and Franz Josef Glaciers, and Mt Cook, etc.

15. **Hauhunga.** Frost only forms when there is dead calm and no rain.

16. **This translation** is according to Williams' "Dictionary of the Maori Language."

Whakataka te Hau

Ngai Tahu c.1500

'Whakataka' is a modification of the final stanza of ***Tūā Tūā Koi Rangi Nui***, the karakia on ***page 10*** that tells how the waka *Takitimu* survived a storm when exploring the coast of South Westland because it was well-built and well-managed. This karakia reminds us that the great natural forces can harm us, but if we work hard preparing for them, and then respond in harmony with them and in harmony with our ancestors' response, we are rewarded with warmth and calm, both literally and spiritually. **Whakataka_te_Hau.mp3**

Whakataka tō hau ki te uru, Whakataka tō hau ki te tonga.	The wind swings to the west, settles then turns to the south, settles down.
Kia makinakina ki uta, Kia mataratara ki tai.	Making it prickly cold inland Making it piercingly cold at sea.
E hi ake ana te ata kura he tio, he hu Haumi e! Hui e! Taiki e!	The glowing morning will rise on ice, on snow, on frost. Join! Gather! Intertwine!

In 2005, Takirau Hohua (Tainui) turned this into a waiata that is now often sung in schools at the beginning of the day's work. **whakataka.mp3**

Three sections of a karakia

The first section of a karakia usually acknowledges the great forces that are at work connecting us to the atua, the ancestral spiritual powers.

The second section expresses a loosening of these forces' harmful bonds, and a strengthening of their helpful ones.

After the howling Southerly storm blows through, a frigid, but windless night will follow.

The third section is the naming of what is required for oneness with the atua.

An awe-inspiring dawn transforming the icy snowscape.

Whakataka can mean both 'to prepare for' and 'make a change in direction.'
The longer Ngai Tahu karakia that these lines were taken from uses
"Whakataka tō hau ki te tonga" = The wind turns and settles to the south.

Kina, a spiny sea egg.
Ma - kina - kina = like lots of sea-eggs.
The spines of a kina release a toxin when stood on.

Tara, a sharp point. Ma - tara - tara = like many sharp-pointed blades.

Hauhunga (frost) has been shortened to Hau hu (quiet wind) in some recent performances.

Taiki (noun) is a wicker basket woven from vines. **Taiki e** (verb) we become strongly intertwined like a wicker basket. The final line is equivalent to the Amen at the end of a Christian prayer.

Lost in translation

Some people appear not to have understood the karakia's triple structure when they tried to put this karakia into English.

They noticed that it was a "prayer" of sailors threatened by a storm, and they then distorted the Maori words to make all three sections requests for what is wanted.

> *"May the winds **from** the west and south **cease** (?).*
> *Let **light breezes** (?) blow over the land and sea.*
> *Let the red-tipped dawn come with a sharpened **air** (?),*
> *a **touch (?)** of frost, a **promise of a glorious day**.(?)*

There are cut-and-paste copies of this very loose 1855 translation on dozens of websites, including NZ university websites.

Ancient karakia seem to have been rational mental exercises to reassure those about to undertake a potentially hazardous event.

> "*There was this really big swell out on Waitemata Harbour,*
> *but Koro had a big launch and was wearing a lifejacket,* (just like us)
> *and he got back safely with lots of fish."* (so we should all be OK too).

Then unfounded belief set in.

> *"If I recite that story of Koro's Waitemata Harbour fishing trip*
> *in perfect detail, we will be safe*
> *and bring back lots of fish."* (even in this old runabout)

In recent times, Pakeha influences have distorted some 'karakia' into irrational requests.

> *"Dear Lord, it is really rough out on Waitemata Harbour,*
> *and we only have this rust-eaten flatty and no lifejackets, eh!*
> *Please help us get back safely with lots of fish, just like our Koro did."*

ChatGTP

Taku Toki

Traditional (Ngati Wairangi) c. 17th century

Raureka took Ngati Wairangi's greenstone axe technology to the Ngai Tahu.

Whaka-atu[1] ra e taku toki	I stretch forth my axe
Ki te kauru[2].	To the head of the tree(?)
Koia pā-nuku-nuku, e ra e hine,	How it moves up and down, all day, oh ladies,
I a pakurangi, e tama,	Resounding through the air, oh lads!
Nā te hiahia, nā te koroka, e tama,	Because of my desire for the mantle, oh lads!
I a Tane, e tama,	- of Tane, oh lads!
Tane i ruka[3], Tane i raro.	Tane, high above me,then Tane down at my feet.
Ka rere te maramara;	See the woodchips flying from my axe.
Ka huaki ki waho;	opening up the forest to the outside light.
Ka tipu[4] mai i uta,	That which was once growing up in the interior,
Ka takoto mai i waho,	is now lying outside
E hura ki te ata,	laid bare to the morning light
ko te ata o Tane[5]	to the light of Tane's day.

1. **Whakaatu** is pronounced *whaka-atu*, with doubled short "a" sounds. It is not *whakātu,* with one long "a" sound.
2. **Kauru** is either the "head" of any tree, or a cabbage tree's sugar-filled root. The first meaning is meant here, as the song tells of opening up a forest.
3. "**Ruka**" is the southern dialect variant of "runga" - "up high"...
4. ...and "**tipu**" is is the eastern variant of "tupu" - "growing up."
5. **Tane** is the forest deity, and the trees are Tane personified. But Tane is also the lord of day, the sun: it is the light and the warmth of the sun that cause the growth of Tane's forest trees.

The discovery of pounamu

The greenstone was discovered by Ngati Wairangi people who came from Poverty Bay to Blind Bay in Nelson. Finding the Waitaha Tribe already there, they moved over to West Whanganui, and eventually occupied the whole of the West Coast. To work the greenstone, they had to learn a whole new technique. It could not be roughly shaped by chipping, and had to be sawn with sandstone knives.

Raureka was a Ngati Wairangi woman who had lived at Arahura until she quarreled with her people and left the West Coast. She was the first person to cross the Southern Alps. Accompanied by a slave, she wandered up into the mountains at the head of Lake Kanieri, she discovered the pass now known as Browning's Pass.

After climbing the cliff at the end of the valley, she crossed the divide and traveled down the Rakaia Valley into the plains of what is now Canterbury, where she was given food by a party of Ngai Tahu men. They were building a canoe and she noticed the bluntness of their tools, so she showed them a sharp pounamu adze she had with her. She then recited this song which was chanted when these axes were used in timber-felling.

Over time the Ngai Tahu went to war with Ngati Wairangi and wrested control of the resource from them. The West Coast section of Ngai Tahu (Poutini Ngi Tahu) supplied their eastern relations, and Kaiapoi became a focus of pounamu trading, so in the 1830s, Te Rauparaha invaded Kaiapoi to get the high-status pounamu.

NEW ZEALAND
MAORI * HAUMI

Attaching a Waka Prow

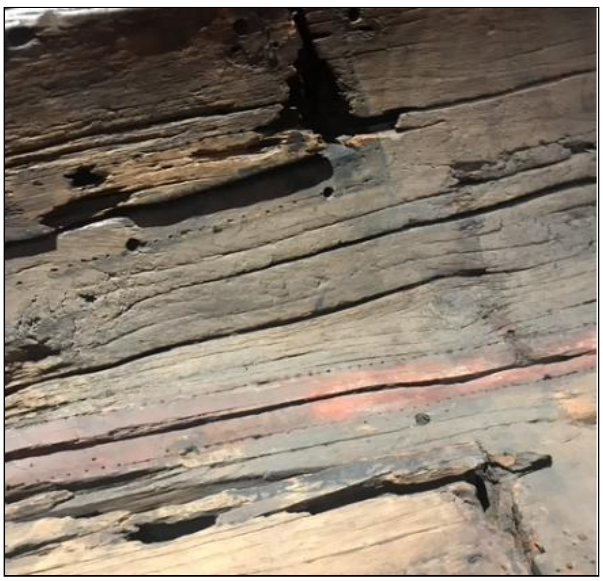
A technical triumph

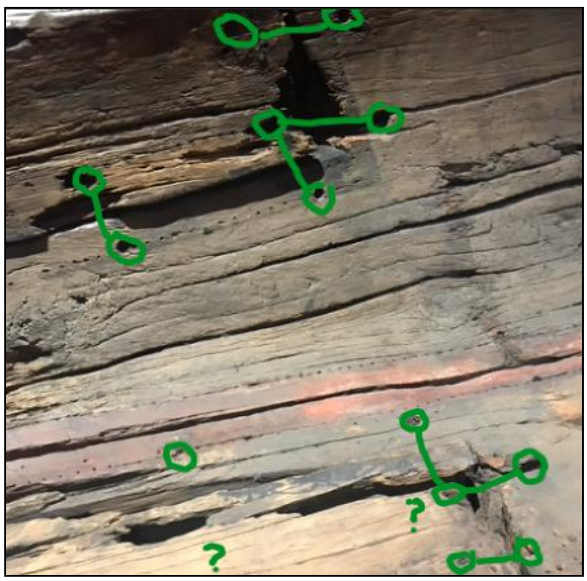
The South Island mōteatea **Tūā Tūā Koi Rangi Nui, page 10**, tells how the Takitimu migratory waka conquered the storm waves of a cold front (a nor-westerly gale turning to a southerly) off the coast of South Westland. Each of its bow and stern posts acted as a high, long adze that chopped through storm waves. *"Toki nui te toki, toki roa te toki."* All the other voyaging waka that sailed up to Aotearoa would have had similar 'toki'.

Q 1. How could the upper end of a high bow withstand the mechanical forces of the waves without the latex gum and fibre stitching at its lower end breaking?

I visited the Whanganui District Museum and discovered how the attached bows of an old river canoe had been carved from another tree and attached to the carved hull with loops of muka fibre. This complex mortice and tenon prow design is called a haumi kokomo. Haumi = an extension, Kokomo = thrust in.

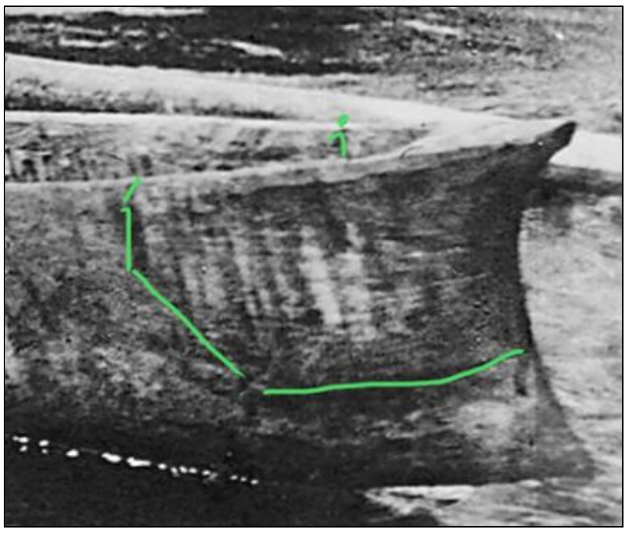
The sides of the carved hull was cut further back than its keel, creating a interlocking join of 8 different flat surfaces, thus tripling the length of the wood to be joined and making the join much stronger when the bow was subjected to an upwards thrust at the bottom of rapids.





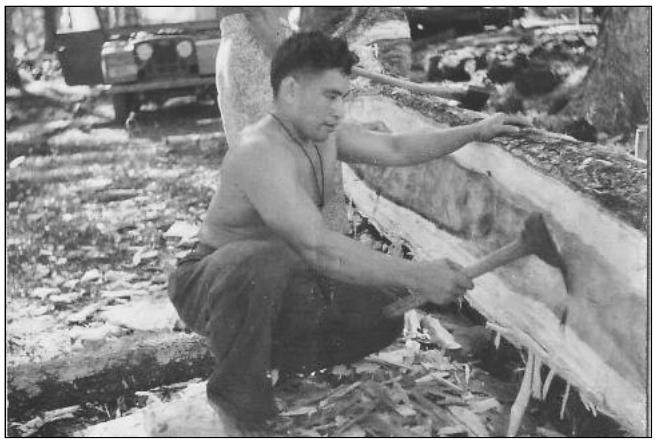
These show some of the holes drilled for the muka bindings, and where a tin strip had later been nailed to make a crack in the hull waterproof.

In this 1910-12 photo of a small Samoan paopao, built at Safune, Savai'i, the join between the hull and the prow can be seen clearly. Notice that no fibre bindings are used to hold the bow to the hull. The two parts are stuck together with latex from a breadfruit tree. Also notice the sophisticated wave-piercing bow, presumably used to minimize wave splash.



The next photo-sequence shows the construction of a Samoan paopao at Mulifanua, Upolo. A paopao is a small outrigger canoe mostly used for reef-fishing. The photos were taken by Don Trask when he was a member of the flight crew for the NZ Aerial Mapping Ltd aerial photographic survey of Samoa in 1954.

The Mulifanua copra drier with the tree that was used beside it. The breadfruit or ulu tree was often used to carve canoes, but for this canoe, a fast-growing introduced tamaligi tree (Moluccan albizia) was used. Right: the branch of the tree that was felted for the paopao.

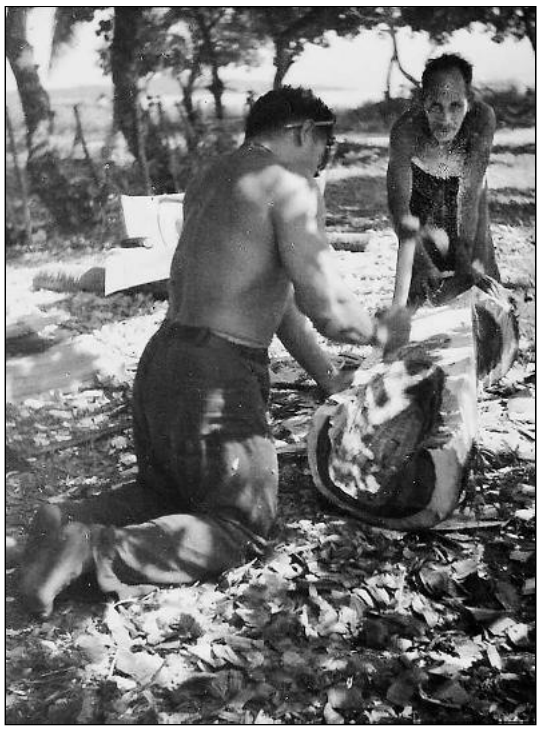


Adzing the interior.

A steel-bladed adze.

David Tippett says he once saw a canoe craftsman from Vanuatu adzing a hull in Grey Lynn, Auckland.After after the craftsman had shaped the outer form and was hollowing the inside out, he wanted the hull thickness to be about 20mm thick. As he got towards the 20mm thickness, he was listening for the right tone of each blow of the adze which would indicate how close he was to achieving the desired thickness.

Falili, the lead carver (tufuga fau va'a) using that adze to carve the paddle (foe) of the paopao.



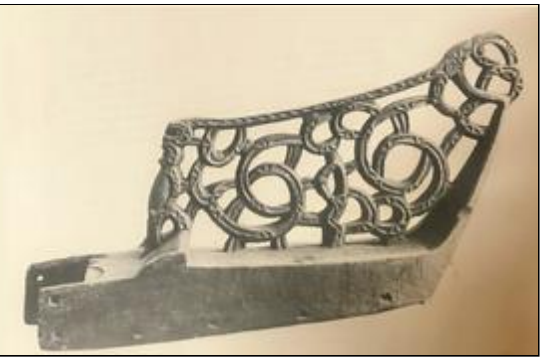
Working on the prow or stern insert.

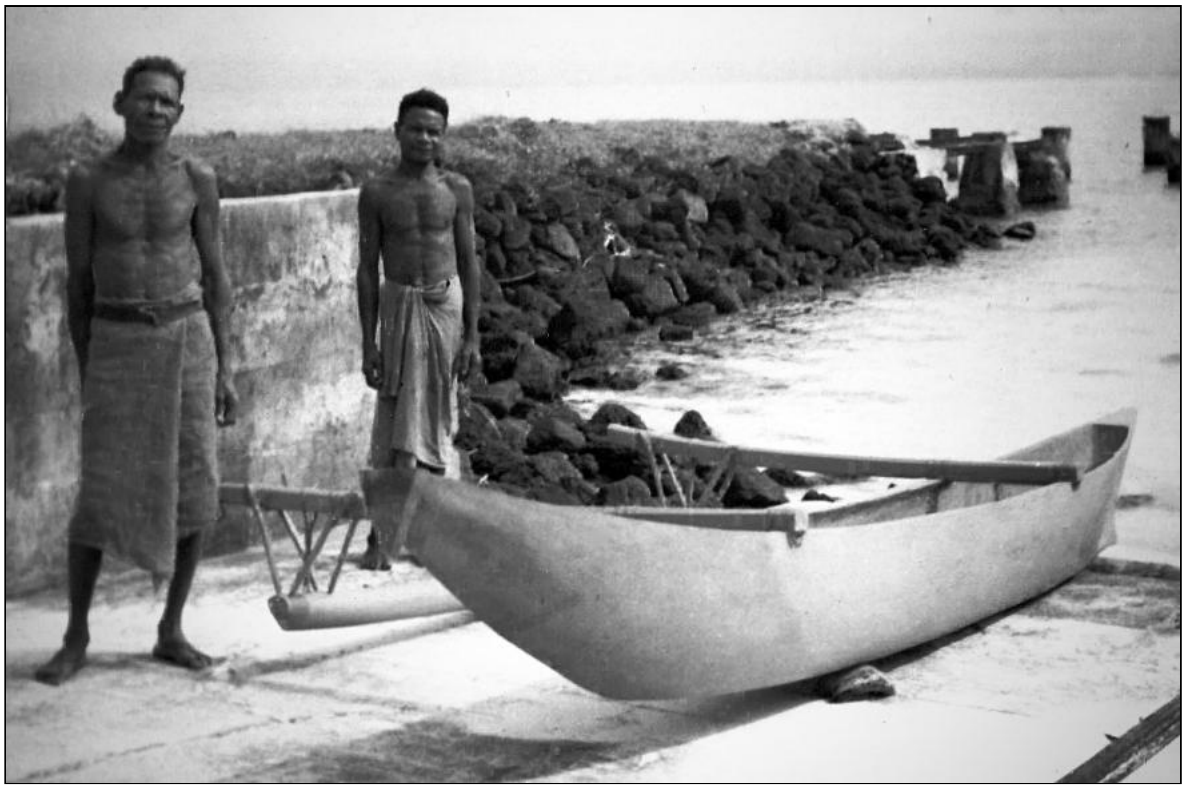
An adze lies on the keel in front of the asymmetric notching of the va'a prow to take the carved bow insert. There are similar asymmetric notching on the Whanganui River waka in the Whanganui Diatrict Museum and also on this prow of a waka from the Mokau coast, so perhaps it is a design feature passed down from old times.

Q 2. How did the Polynesian master-carpenters manage to cut those two complex shapes so that they fitted together so closely?

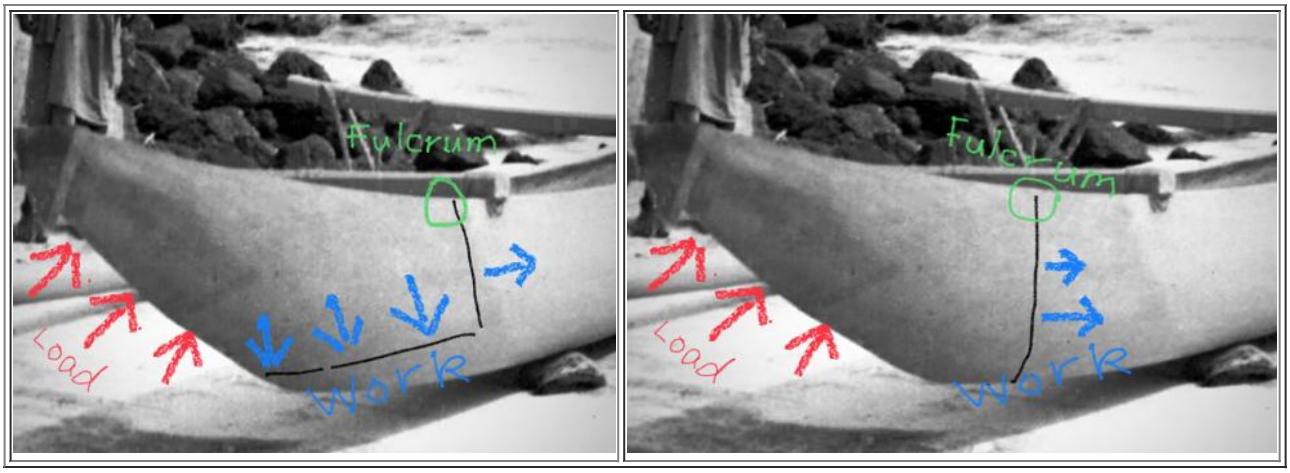
This stone-carved prow was found north of the Mokau river, New Zealand. Notice the different length of the arms that opposed the upwards force of waves hitting the triangular wave-diverter.

(from *Whakairo*, by D Simmons, 1985)





The finished paopao with its outrigger, paddle and long bow insert (darker wood). The raw stern and bow inserts were added before finishing off. The perfect and almost invisible fit of the prow and stern when the completed paopao was in the grand tradition of Polynesian boat-building where joins as seen from the outside of canoes were hard to detect. Before the pieces were joined, the latex gum from the fruit of the breadfruit-tree was used to cement them close and prevent leakage. The bow extension was stuck in place with a latex gum exuded from a breadfruit tree, and then the hull sanded smooth with a pumice-like type of coral.



"Toki nui, toki roa!" **Toki nui, toki poto?**

A high wave-slicer, a long wave-slicer. The force of a wave on the high bow is LESS than the adhesive force of the long line of latex on the haumi kokomo joint holding the timbers together.

Right: if Falili had saved time by attaching the bow with just a simple join, (a haumi tūporo) the force of a wave on the high bow would have been GREATER than the adhesive force of the short line of latex holding the two timbers together. Easier to construct, but not safe on a rough day.

On ocean-going waka, plant latex extracted from the sap of a breadfruit or candlenut tree was heated and mixed with natural fibres such as coconut husk or hibiscus bark to create a strong, waterproof adhesive.

Q 3. What gum did Maori use to seal any joints in waka like the ones at the Whanganui District Museum, and did they use to make the fibre stitching waterproof?

This chant was the one used to develop the **Toia! Toia Mai Ra, on Page 1**.
It was first used when the *Tainui* voyaging waka was portaged across the Tamaki isthmus to the Manakau harbour, slightly modified from the chant used at the Kawa ritual before the launching of the Tainui in Tahiti.

The *Hiaroa* chant used for the *Tainui* in Tahiti was a very old one used at the launching of many other significant waka in East Polynesia. The kupu here were reconstructed from earlier copies of the Toia Tainui chant that had typo errors and regional ideosyncrasies. You can compare them from Page 27 onwards.

Toia_Tainui_Tapotu.mp3

Toia Tainui tapotu ki te moana!	Drag Tainui right down to the sea!
Mā wai e tō?	Who will haul her?
Ma te whakaranga ake!	Those who've been gathered here,
Te rangona atu nei,[1]	having become aware of it, since it is
he tara[2] wainuku,	the peak topic of the earth,
he tara wairangi.	the peak topic of the heavens.
Tinia, monoa, nau mai!	It is caulked, it is plugged, so let's go!
Nau mai e Tane.	Come, oh Tane's voyaging catamaran.
Ka kau tāua i te awa wai	We shall float on the waterway
Pikopiko-i-whiti[3]	called Enclosed-by-a-meandering-belt
kia mātakitakina tāua	so that we can be admired
a te tini e te mano,	by the countless multitudes.
Nāku koe i tiki atu	I brought you forth
i Te Wao Nui a Tane	from the Vast Forest of Tane
He tane miroi[4] he tane koakoa,	An embracing, delightful husband
He tane rangahau.	an adventurous husband.
E turuturu haere mai ana	Moisture drips
e te wai o te hika o Mārama.[5]	from the womanhood of Marama.[5]
E patua ana mai	Always blowing here
e te kōmuri hau	is the gentle breeze
nā runga o Waihihi[6]	that comes from over Waihi[6]
te īringa mai o hera o Tainui	when the sail of Tainui is outspread.
Ūra te rā	The sun rises,
wewero te rā.	the sun shoots out its beams.
Ngā tāngata i whakariri[7]	The aroused people
mamau ki te taura	grasp the rope
kia tū matatorutia atu	so it can be thrust forward.
- Taku tū matotoro[8]	- Crowd around! Keep thrusting!
Ihu o waka!	The bow of the canoe!
Turuki, turuki!	Shift it, shift it!
Paneke, paneke!	Keep it moving, keep it moving!

1. ***Te rangona*** - Or is this *Te rango nā*, referring to the log skid?

2. **Tara** - the peak topic of conversation, or gossip, talk.

3. **Pikopiko-i-whiti**(ki) was "*a place on the coast, where the sea was always smooth*." This can only describe the space within a coral reef, such as Pi'opi'o-hiti at Tahiti, an old name for part of the eastern peninsula of Tahiti.
The name means 'the enclosed ins-and-outs,' referring to the coastline. Large crowds gathered on the hills above this long lagoon to watch canoe races.

4. **Miroi** - it seems to be Tahitian for our Maori "roi" - spin, enclose.
Mingoi, also used here, is equivalent to our "whakamingo" - curl.

5. **Marama.** When the *Tainui* arrived on the east coast at Tamaki, an attempt was made to portage it to the west coast via Manakau Harbour. The men hauled on the ropes, but the vessel could not be moved. Finally the tohunga Rakataura discovered that this was because Marama, a wife of the captain, had broken tapu by having an affair with a crew member.

In the original Tahitian chant, moisture dripped from a wise old woman, Maruanuku or Māhurangi. However the name *Rongorongo is sometimes used, referring to* an even older chant points to a crime in Rangiatea.
Toia e Rongorongo "Aotea," ka tere ki te moana,
Rongorongo launched "Aotea," so she floated on the sea.
Rongorongo is an ancestress from Ra'iātea Island. She was the wife of Turi, the chief of the Aotea canoe which was given to her as a present by her father Toto. After Rongorongo overheard Uenuku chanting incantations for the murder of Turi, he and his people fled to New Zealand in the *Aotea* and arrived at the mouth of the Patea River.
Ko te hara ki Awarua i whiti mai ai i Hawaiki.
Because of the sin at Awarua they crossed over from Hawaiki
For centuries Island communities throughout the East Pacific used to voyage to Rangi-atea and gather at the great altar there for ceremonies that kept them unified. But one year a revered Rarotongan tohunga was murdered by others, and so there was no more voyaging between the island groups until the Hawaiian waka *Te Aurere* arrived in 1976. (Finney, Sin at Awarua) http://archive.hokulea.com/awarua.html

6. **Waihihi and Waihaha** were hills to the south-east in Tahiti, where the prevailing wind is a cooling south-easterly. But after a reference to Marama, at Tamaki in Auckland, was added to the chant, the name was changed to Waihi, to the east of Tamaki. The usual prevailing wind at Auckland is westerly, but when the Tainui arrived in midsummer, a nor-easterly would have been blowing.

7. **Whaka-riri** is usually translated arousing anger, but here it probably refers to arousing maximum communal effort, the way a haka does before a rugby match.

8. T**a**ku = *edge, around*, not T**ā**ku = *my*. And I can't find Matatoru and Matotoro in dictionaries, but they seem to be derived from Mātoru = a crowd, to give a meaning of crowding, shoving all together.

On the following pages you can find the *Hia-roa* (How long it is!) chant used in East Polynesia before an ancient tree was felled and a voyaging waka launched, a Tainui version collected by several tohunga in the 1840s for Sir George Grey, then other variations collected in later decades after epidemics of introduced diseases had decimated whare wānanga.

Te Whetu 1893 Te Ao Hou 1953	Dr Maui Pomare (1906)	Te Hurinui Jones 1995	*The Maoris of NZ*, page 67	Uehoka Tai Rakena Tō Tātau Waka CD,	Hauraki Treaty document 2020	1893 - 2020
Toia Tainui! Tapotu ki te moana, Ma wai e to? Ma te whakarongo ake. He tara wainuku, He tara wairangi, Puni e! Manoa! (monoa?) (Chocked up! Admire it!) Naumai! Naumai e Tane! Ka tau taua i te wai, Kia matakitakina taua E te tini o te tangata. Naku koe i tiki atu ki te Wao-nui-a-Tane, Mingoi! E Tane! Koakoa! E Tane! Rangahau! E Tane! Katahi ka whakaaturia! Turuturu haere ana te wai, o te hika o Maruanuku, E patua ana mai e te komuri hau Na runga ana mai o ihi-ihi. Panekeneke-koia i tona waka, Ka to ki whea? Ka to ki Maungatorohi e! Katahi ka oho te iwi: 'Torohi e! torohi e! torohi e!' Spurt, Spurt,Spurt out	Toia Tainui, tapatu ki te moana, Ma wai e to? Ma te whakarangana ake Ki te taha o te rangi He tara wai nuku, he tara wai rangi Punia teina, (chocked) Naumai, naumai, e Tane koakoa E Tane rangahau, E Tane takoto atu ana, Te ngaro ki tatahi. Maturuturu haere mai ana te wai o te hika o Marama-kikohure, E patua ana mai E te komuri hau Na runga ana mai o Waihihi, o Waihaha; Kei reira te iringa o Tainui. Manea ura te ra, Werowero te ra, Nga tangata i whakariri Ka mamau ki te taura kia tū matatorohi atu Taku tū matatoro, Hei hoa turuki, turuki, Paneke paneke ihu o waka Turuki, turuki! Paneke paneke!	Tōia, Tainui Tapotu ki te moana. Ma wai e tō? Māku e tō, ma Whakatau e tō Whakarongo ake au Ki te taha o te rangi, He tarawai nuku he tarawai rangi; Pūhia te ahi, e. Nau mai, e Tāne! Ka kau tāua i te awa I Pikopiko-i-whiti, kia mātakitakina koe. E te tini o te mano. Naku koe i tiki atu I te Wao-nui-a-Tane. Mīroi, e Tane, Koakoa e Tane. Turuturu haere ana te wai o te hika o Maru-a-nuku: E patua ana mai E te kōmuri hau; Na runga ana mai O Wai-hihi, o Waihaha; Te iringa tēnā o Tainui Ura te rā, wewero te rā; Nga tāngata i whakaririka, Mamau ki te taura; Kia tū mātātorohia atu Taku tū mātātoro: Ihu o waka! Turuki, turuki! Paneke, paneke!	Toia Tainui, Tapotu ki te moana. Ma wai e to? Maku e to, ma Whakatau. Te rongona atu nei, He tara-wainuku, he tara-wairangi Punui e! (punga logs?) Naumai! e Tane! Ka kau taua i te awa I Pikopiko-i-Whiti, Kia matakitaki a taua Te tini e te mano. Naku koe i tiki atu I te Wao-nui-a-Tane. Kimikimi e Tane, Koakoa e Tane. E turuturu haere ana mai te wai o te hika o Marama. E patu ana mai E te komurimuri hau Na runga mai o Waihi, Te iringa mai te ra o Tainui. Ura te ra, Wewero te ra, Nga tangata i whakiririka Mamau ki te taura. Kia tu matatorotia atu Taku tu-matatoro. Ihu o waka! Turuki, turuki! Paneke, paneke!	Toia Tainui tapotu ki te moana! Ma wai e to? Ma te hokarongo aaaak! Hokarongo ake he tara wainuku: he tara wairangi tinia tono, nau maiiii! Nau mai e Tane ka kau taua, wai tiwai kia matakitakina koe. E te tini o te mano. Naku koe tiki atu te wao nui o Tane, he tane rangahau, he tane miroi. Turuturu haere ana te hiku ra te wai o Marama. No ru ana mai te komutu hau. due to the famed obstacle constantly shaking Ihu o waka i perori e The bow of the canoe swerved eh Hui ē! Taiki ē!	Toia Tainui Tapotu ki te moana mā wai e tō? mā te whakatau e tō te rangona atu nei he tarawainuku he tarawairangi Pūnui e, nau mai, nau mai e Tane Ka kau tāua i te awa wai Pikopiko i Whiti kia mātakitaki tāua te tini e te mano, Nāku koe i tiki atu i Te Wao nui a Tane kimikimi e Tane, koakoa e Tane e turuturu haere mai ana e te wai o te hika o Mārama. E patu ana mai e te kōmuri hau nā runga o Waihīhī, o Waihāhā te iringa mai o hera o Tainui Ūra te rā wewero te rā ngā tāngata i whakaririki mamau ki te taura kia tū matatorutia atu taku tū matotoro not tāku Ihu ō waka! Aha? turuki, turuki, Paneke, paneke ihu ō waka, e!	Drag Tainui down to the sea. Who will haul her? Te Whakatau will haul it, having become aware it, The talk of the earth, of the heavens. Chocked up for launching Come, o Tane's canoe We shall float you on the waterway of Pikopiko i Whiti That we may be admired by the countless multitudes. I brought you forth from the Vast Forest of Tane Seek for Tane, rejoice for Tane Moisture is indeed dripping from the vagina of Marama Always blowing here is the gentle breeze that comes from over Waihihi, and Waihaha spreading out the sail of Tainui Behold, the sun rises, the sun shoots out its beams. The people, aroused, grasp the rope so it can be thrust forward[6] Crowd around, shoving it! The bow of the canoe! What? It shifts, it shifts! Keep it moving, keep it moving the bow of the canoe!

Te Hurinui Jones 1995	Grey *Ko Nga Moteatea* page 90	White Ancient History Vol 5, Upoko 1
Hiaroa! Hiaroa! Tapotu ana te ngaru ki tātahi. Ma wai e tō? Ma te whakarongo ake e whakarongo nei ki te taha o te rangi He tarawai nuku, he tarawai rangi. Puhia te ahi e-e, Nau mai, e Tāne, Ka kau tāua i te wai, Kia mātakitakina tāua E te tini, e te mano. Mīroi, e Tāne, Koakoa, e Tāne. Ka turururu haere te wai O te hika o Māhu-rangi. Patua ana mai E te kōmuri hau Na runga ana mai O Wai-hīhī, o Wai-hāhā! Turuki, turuki! Paneke, paneke!	Toia Tainui tapotu ki te moana! Ma wai e to? Ma te whakarangona atu! He tarawa i Nuku: he tarawa i Rangi. Tinia, monoa. Nau mai, nau mai e Tane! Ka kau taua, I te awa tuatahi, I te awa tuarua kia matakitakina koe e te tini o te tangata. Naku koe i tiki atu Ki te wao nui a Tane Mingoi e Tane Rangahau e Tane, Koakoa e Tane Turururu haere ana mai e te wai o te waha o Marama. E takina ana mai e te komuri hau na runga o Waihīhī, Turukiruki, Panekeneke Ihu o waika Turukiruki, Panekeneke Turukiruki, Panekeneke Oioi te toki whanapou	Toia Tainui tapotu ki te moana! Ma wai e to? Ma te whakaranga ake! He tara wai nuku, he tara wai rangi. Tinia, Momoa. Naumai, mau mai ra e Tane! Ka kau taua, kia matakitakina koe e te tini o te tangata. Naku koe i tiki atu ki te wao nui a Tane He tane miroi, he tane koakoa, He tane rangahau. E patua mai ana E te komuri hau na runga o Waihi. Panekeneke ihu o te waka Turuki, turuki Paneke, paneke

Rewi Maniapoto Te Waka a te Iwi 1.2 Page 7	(from White with corrections) Grace, Tuwhaetoa page 34	1853 - 1955
Toia Tainui tapotu ki te moana! Ma wai e to? Ma te whakarongo ake. He tara wainuku: he tarawairangi. Tinia, manoa. Naumai, naumai ra e Tane! Ka kau taua, kia matakitakina koe e te tini o te tangata. Naku koe i tiki atu i te wao nui a Tane He tane miroi, he tane koakoa, He tane Rangahau. E patua ana mai E te komuri hau na runga o Waihihi. Panekeneke ihu o te waka turuki, turuki! paneke, paneke!	Toia Te Arawa tapotu ki te moana! Ma wai e to? Ma te whakaranga ake! He tara wainuku, he tara wairangi. Tinia, Monoa. Naumai, naumai ra e Tane! Ka kau taua, kia matakitakina koe e te tini o te tangata. Naku koe i tiki atu ki te wao nui a Tane He tane miroi, he tane koakoa, He tane rangahau. E patua mai ana E te komuri hau na runga o Waihi. Panekeneke ihu o te waka Turuki, turuki! Paneke, paneke!	Drag Tainui down to the sea! Who will drag her? All who've been gathered here. The talk of the earth, of the heavens It is caulked, plugged Come, oh come, Tane's canoe! We will float you That you may be admired by the multitude of people I came and got you in Tane's great forest an embracing, delightful husband an adventurous husband blown about by the gentle breeze that comes from over Waihihi. Keep the bow of the canoe moving! Shift it! move it!' Keep it going, keep it going!

Ko Uhia Mai

Te Whetū Tipiwai 1990?

This haka contains quotes from ancient hakas and chants that highlight the Black Ferns' earth-shaking female energy and cosmic origins, their mastery of defence and penetrating attack, their unity of purpose and their ultimate aim of creating unity and friendships with the other team and their supporters.

Kaea:	*Leader:*
Ko nga Mamaku[1] o Aotearoa	Black Ferns of NZ
Kia mau	Be ready
Katoa:	*Team:*
Hi	**We rise up**
Torona titaha	Hands on hips
A uhia mai	Spread the word.
Ko wai nga hine?	**Who are these women?**
Ko wai nga hine?	**Who are these women?**
Ko nga Mamaku e ngunguru![2]	**The Black Ferns are rumbling!**
Hī au! au! Aue ha!	**Rising up, this is us! Yes indeed!**

1. Mamaku - The mamaku (Cyathea medullaris) is New Zealand's tallest tree fern. Its young fronds are black rather than the brown colour of other ferns.

2. Ngunguru - This is a reference to the ancient haka *Rūaumoko*, which highlights the awesome creative power of primal humanity, mysteriously beyond human control, like the divine creative force of the earthquakes that create new landforms. This line implies that this team will unleash the same primal energy in their game.

Ko Hine-ahu-one[3],	From the first woman,
Ko Hine-ti-tama	from the first woman's daughter,
Ko Hine-nui-te-pō	from the goddess of death,
Ki te whaiao, **ki te ao marama e**	to the world of light **and understanding**
Hi a haha!	**We rise indeed!**
Mauri ki te rangi	**Our life force is from the heavens**
Me te whenua	**and the land**
Nga kapua whakapipi[4] Ma nga	**from the sheltering clouds**
maunga titia e	**and the sky-piercing mountains**
Hi a haha!	**We rise indeed!**

3. Hine-ahu-one
She was molded from clay by Tane, the first man. Their daughter, the dawn-maiden, eventually became the sundown-woman who receives the spirits of humans when they die.

4. Kapua whakapipi refers to an old Tuwharetoa proverb, reminding the opposing team the Black Ferns are strong on cover defence as well as piercing attacks.

Whakamarotia atu, ano ka whakahoki mai ana ki te kapua whakapipi.
Stretch out, but return again to the sheltering cloud.

It was quoted by Tamamutu, a chief at Motutere (on the shore of Lake Taupo) about 1720 AD. Two Tuwharetoa chiefs had been killed at Waitahanui by raiders from Whanganui. Tamamutu embarked with a war-party on a large canoe and paddled swiftly towards Waitahanui. While discussing the plan of campaign against the Whanganui taua, Tamamutu quoted this proverb, urging the warriors to be cautious and guard their rear. Journal Polyn. Soc.

He tia, he tia	We vigorously, vigorously paddle
Te Moana nui-a-Kiwa	the Pacific Ocean

Mai nga topito	from the ends of New Zealand
Ki nga moutere	to the islands
O te ao whanui e.	**of the whole wide world.**
Hi a haha!	**We rise indeed!**
Tūmai ra koe	**You are standing tall** with
Te mana wahine[5]	**the prestige of women** who are
Te whare tangata[6]	**the house of humankind.**
Nga Mamaku o Aotearoa	**The Black Ferns of New Zealand.**
He tia! He tia![7]	**A strong stroke! A strong stroke!**
He ranga! He ranga!	**A long stroke! A long stroke!**

5. Tumai ra koe te mana wahine
- you stand tall with the prestige of women.
This is addressed to the other team. Mana can only be bestowed on others, not on yourselves.

6. He tia!....He ranga*!*
these two lines call to mind the ancient paddling chant **Kura Tīwaka Taua, page 7,** reminding us that the team are descended from the crews of many ancestral voyaging waka, and are going to cooperate, just as those crews did, this time to move the ball strongly in the forwards and for long distances in the backs.

Tena ra, e tama, tu ake ki runga ra	*Now then, my child, take your stand*
Ki te hautu i ohou waka, i a Horouta,	*To urge on your vessels Horouta,*
Takitimu, e takoto nei!	*Takitimu, drawn up here!*
He tia! He tia! He tia!	*A strong stroke! A strong stroke!*
He ranga! He ranga! He ranga!	*A long stroke! A long stroke!*

7. Whare Tangata -this recalls a much-used whakataukī or proverb.
Ko te wahine te whare tangata,
A woman is the house of humanity,
ā he mea whakanui rātou i tōna mana whakawhānau oranga.
and everyone venerates her for creating life.

Turuki! turuki!	Move it! Move it!
Paneke! Paneke!	**Forward! Forward !**
Turuki! turuki!	Move it! Move it!
Paneke! Paneke![8]	**Forward! Forward !**
Haramai te toki ![9]	**Bring the adze !**
Haumi ē! Hui ē!	**Gather! Discuss!**
Taiki ē!	**Bind together!**
Hi!	**Right!**

8. Turuki!... Paneke*!*... This is the ritual finish from **Toia Toia Mai Rā, page 1**, a chant that creates enthusiam for a difficult and complex project by using the metaphor of olden days waka-building, when dozens had to work together to fell a giant tree, haul it down out of the forest, then hollow and shape it with adzes.

9. Haramai te toki*!*
This is also from the ritual finish of Toia Toia Mai Rā.
It is the equivalent of "Give us the tools and we'll finish the job." A small adze is often brandished by a Maori leader to symbolize his people's keenness to get a big project underway and completed.

10. Haumi ē! Hui ē! Taiki ē!
Rightfully, this should be shouted by both teams, as well as the spectators. The purpose of team sports is to bring individuals and small groups together and bind them as one with shared values, and thus engender peace, prosperity and harmony in their everyday lives.

Kawa & Launch of a Waka

Elsdon Best 1925

The kawa was the ritual removal of tapu placed on an important waka during its construction. The tapu, among other things, kept women away so workers would not be distracted and the vessel would be seaworthy. If the kawa was correctly performed the canoe was deemed lucky and safe; any error was taken as an ill omen, predicting mishap.

On the day before the kawanga the tohunga (priest) went into the forest to find a small karangu shrub (Coprosma), about three feet high. He made it tapu by laying hands on its leaves and repeating invocations to endow it with power to foreshadow the canoe's fate:

"Tohungia te tohu o te mate Tohungia te tohu o te ora."

The next morning he returned, grasped the stem and repeated the same words. He then pulled the shrub up by the roots.

If the roots came away entire, it was a good omen and he declared "Turuki ki tahito o te rangi." If the roots snapped, he cried "E taukuri E! He atua, he taitahae," a sign of a bad omen for the canoe. In such a case other tohunga were consulted to kaupare (avert) the evil through invocations or charms. The divination derived its efficacy from the shrub having been made tapu; using an ordinary shrub for this act was, in Maori belief, ineffectual. This ceremony lifted the tapu placed on the vessel during construction so it could be approached and handled by noa (non-tapu) persons.

Launching

The launching of a first-class canoe was an important communal event, a social gathering marked by ritual observances and a ceremonial feast. People from many social units and tribal divisions assembled; matters of tribal welfare were discussed, and there was feasting, dancing, singing, and games.

A tohunga chanted ritual placing the vessel under the care of the gods. Occasionally a human sacrifice was reportedly made, though this was not universal. Williams's Maori Dictionary records it as a "Taitai" —to remove tapu from a new canoe— and koangaumu waka has a similar sense. The ritual aim was to secure the gods' protection and general good luck for the canoe, and invokes sea taniwha (monsters) in times of crisis.

A welcome chant sometimes used addressed the canoe as Tane, linking it to the forest (Tane) whence the timber came, and invoked the Pikopiko-i-whiti, using a variation of the chant **Toia Tainui, page 1.**

After launch and trial paddling, a great feast followed, with preserved foods and crops prepared over time. Other clans were invited. In some accounts a human being—often a slave or an enemy—was slain and the heart offered to the tribal gods at the tuahu to induce their presence and protection. The custom is said to have been introduced from Hawaiki, though it did not occur universally, and certainly not on the east coast.

Offerings could also be less drastic: for a new canoe's first fishing trip one fish of the first haul was set aside for the gods; on a war expedition the first slain enemy might be offered.

Taitai waka (or koangaumu waka) also referred to special ceremonial food for the completion feast—marere—items set aside sacral-wise, which could include human flesh, dog, rats, or birds. Missionaries later used the term patunga tapu for such offerings.

The Sea-roads of the Ancestors

How the Māori Peopled the Pacific

Elsdon Best 1925

The Great Paradox of the Pacific

Far across the dark waters of the Great Southern Ocean, within two thousand miles of the coast of South America, lies the lone Polynesian outpost of Easter Island. Away to the north-west, beyond many a far meridian, lies Nukuoro, south of the Carolines. A vast distance of something like seven thousand miles separates the two isles—yet the inhabitants of both speak the Māori tongue. In the southern extremity of New Zealand, about 48° south latitude, and at Kauai in the Hawaiian Group, about 22° north latitude, early voyagers found peoples speaking dialects of that same tongue. Eastward to the Marquesas and westward to the Ellice Group, the Māori held sway. Over a great oceanic area of four thousand by five thousand miles in extent—an area larger than Europe—flecked with hundreds of isles, the Māori alone was master.

How did this happen? How came one people, ignorant of metals, possessing only stone tools and fibre lashings, to occupy so vast a realm? How came the Hawaiian to speak of his old-time voyages to Tahiti and relate the deeds of ancestors of the New Zealand Māori? How came the Samoan to describe his exploration of the Paumotus, and the Tongarevan to trace his descent from immigrants from New Zealand? Why do Moriori and Hawaiian claim the same gods?

The answer is that all these widely separated peoples are descendants of common ancestors—of the Polynesian Vikings, the Māori voyagers who broke through the hanging sky in times long past, who fretted the heaving breast of Hine-moana with the wake of their swift canoes, and who marked off the sea roads for all time.

The Vessels That Crossed the World

Two forms of vessel enabled these voyages: the double canoe and the single canoe with outrigger. Both types were employed by voyagers to New Zealand, the latter being probably the most favoured.

The double canoe needed no outrigger—the second hull took its place. Early European voyagers found them throughout Polynesia. In 1774, at Tahiti, the naturalist Forster recorded 159 large double canoes, from 50 to 90 feet in length, ranged in order off shore. These were war-canoes, with large platforms and fighting-stages. In addition, there were seventy smaller double canoes, each with a roof or cabin at the stern. The smallest district of Tahiti at that time possessed forty of the larger vessels. These were not toys. They were the battleships of a seaborne people.

The double canoe, however, had a weakness. The two hulls were connected by cross-spars, with one to two and a half feet of space between them. Should those lashings give way in rough weather, disaster followed. As the Māori tradition of the voyage of Nuku records, when Nuku pursued his enemy Manaia to New Zealand, he came in three vessels: one single canoe and two double canoes. After the sea fight, when Nuku prepared to return to Polynesia, he dismantled his two double canoes and sailed them back as single vessels with outriggers. He did this to make the return passage faster and lighter. That is the voice of practical seamen, not legend-spinners.

The outrigger canoe was the other great design. A single dugout hull, shallow and swift, was stabilised by a float, *korewa,* of very light timber, connected to the hull by curved spars, *hokai*. This vessel could sail remarkably close to the wind. Morrell, a Pacific voyager of the early nineteenth century, stated that the outrigger canoes of the Carolines sailed eight miles an hour within four points (45°) off the wind,

and that in running large he reckoned they would sail twelve miles an hour (20 kph) when the wind is 120° or more). Dampier, who tested these craft himself, gave even more astonishing estimates. At seven miles an hour, a voyage from Tahiti to New Zealand would take eleven days; from Rarotonga, nine days.

The Anatomy of a Voyaging Canoe

Let us take one canoe as our example —*Takitumu*, which arrived in New Zealand from Tahiti about five hundred years ago, a century before Columbus felt his way across the Western Ocean. The traditions preserved by the East Coast and South Island tribes give us extraordinary detail.

The hull was dug from a single tree, then lengthened by adding *haumi*—carved pieces lashed to each end. Four side-boards, or strakes, were lashed to each side of the shallow dugout trough, carvel fashion—edge to edge, not overlapping. The lashings passed through holes bored near the edges of the planks and enclosed wooden battens that covered the joints. (The Tongans and Samoans, however, borrowed a Fijian method where lashings passed through cants hewn on the inside edges, so no cords appeared on the outside—a more elegant, hydrodynamic finish.)

The outrigger float was attached, as were the masts, stanchions, cross-pieces, and battens for the awning. For *Takitumu* was not an open boat. Stanchions *tokotu* were lashed upright along the sides; curved rods, *whiti-tu* arched across the vessel; battens (*kaho*) were lashed horizontally; and then the *huripoki*—a cover or awning of mats made from bark cloth (*tuwhara*)—was stretched over this framework, hauled taut, and lashed down along the sides. In a storm, additional splashboards (*taupa karekare wai*) were secured along the sides. The voyager did not ride naked to the sea. He built himself a moving shelter.

Every part of *Takitumu* had a name. Each of the twenty-six thwarts had its own name. The outrigger timbers, anchors, cables, steer-oars, masts, sails, ropes, bailers—all had proper names. This was not superstition. This was a memory system. By naming every piece, the navigator could call out orders with absolute precision, and the crew—who knew every name—could respond instantly. In the chaos of a storm, that meant survival.

How They Sailed: Navigation Without Instruments

The Māori voyager had no compass, no sextant, no chronometer. He had something better: generations of accumulated knowledge, passed down in chants and oral traditions, and a deep intimacy with the behaviour of the sea and sky.

He navigated by the stars. Different stars marked the routes to different islands. The rising and setting points of particular stars formed a sidereal compass—a celestial path laid across the dome of night. He also watched the sun by day, the moon and its phases, and the planets when visible. He knew that when certain stars stood at a certain height above the horizon, he was on the correct latitude.

He read the swells. Ocean swells, generated by persistent winds thousands of miles away, roll across the Pacific in predictable patterns. An experienced amotawa (sea expert) could feel the direction of the main swell under his canoe, even on a calm day. When that swell intersected with a secondary swell reflected from a distant island, he could sense the change. Some navigators could lie down in the hull and, by feeling the motion of the canoe, determine which swells were dominant and from what direction they came.

He watched the clouds. A fixed patch of white cloud on the horizon often meant an island —the result of moist trade winds rising over warm land and condensing. A greenish reflection on the underside of clouds meant shallow lagoon water. Frigate birds, which roost on land at night but fly far out to sea by day, were living compasses: they flew outward in the morning and returned in the evening.

Their direction of flight at dawn pointed toward land. He watched the sea itself. Floating debris—leaves, branches, pumice from volcanic eruptions—drifted from specific islands. A change in the colour or temperature of the water, the appearance of certain fish species that feed near reefs, the presence of land birds far from shore—all were signs. This was not guesswork. It was science, encoded in oral tradition and tested over centuries.

Drift Voyages: The Accidental Discovery

Not all voyages were planned. Many of the most important discoveries came from drift—canoes caught in storms and carried far beyond sight of land. The first peopling of New Zealand, according to tradition, came from a drift voyage. A people called the Maruiwi arrived in three canoes— *Kahu-tara, Tai-koria,* and *Okoki*—driven from their homeland by a westerly wind. They reached the Taranaki coast and settled. When the voyager Toi arrived centuries later, he found them already occupying much of the North Island.

The most famous drift story concerns Toi himself. His grandson Whatonga had been caught in a storm during a canoe race and blown out to sea. Toi, an old chief, set off in search of him, sailing westward. He visited Samoa, then the islands as far south as Rarotonga, still without success. Then he made a bold decision: he would sail across the Southern Ocean to the great land discovered by Kupe in past times—Aotearoa, New Zealand. His final words to the folk of Rarotonga are recorded: "*I go to seek my child in strange lands, in the moist land discovered by Kupe, and I will greet the land-head at Aotearoa or be engulfed in the stomach of Hine-moana."*

Toi missed New Zealand on his first attempt and discovered the Chatham Islands instead. He eventually reached New Zealand and settled at Whakatane. Meanwhile, Whatonga had returned home, found Toi gone, fitted out the famous vessel *Kura-hau-po*, and sailed in search of his grandfather. He followed Toi's route down to Rarotonga, heard of his voyage to Aotearoa, and crossed the Southern Ocean after him. The two were reunited at Whakatane, and there they settled—two generations of Vikings, never again to see the palm-clad isles of the sunny north.

European records confirm that drift voyages were common. In 1696, two canoes containing thirty persons of both sexes drifted nine hundred miles to the Philippines. In 1721, two canoes reached Guam in the Ladrones after a twenty-day drift. In 1817, Kotzebue found on one of the Radack Chain a native of the Carolines, one of a party that had made a fifteen-hundred-mile drift due east. In 1832, the missionary William Williams found at Manua in Samoa a native of Tubuai in the Austral Group—three months adrift, most of his crew dead. In 1844, a drift voyage from Chain Island, east of Tahiti, carried three natives and one white man all the way west to Manua; only the white man survived.

Cook himself, on his third voyage, found at Atiu some castaways from Tahiti who had been driven there while trying to reach Raiatea. Of this incident he remarked, *"It will serve to explain, better than a thousand conjectures … how the islands of the South Seas may have been first peopled."*

Planned Voyages: Deliberate Colonisation

But drift alone does not explain the pattern. Polynesians also made planned, two-way voyages over immense distances. They had known starting-places for each route and stopping-places at intermediate islands. Voyagers from Tahiti to New Zealand first made the run to Rarotonga, left there in December, the month "*Akaaka-nui*," for the run south-west, and called at Sunday Island, *Rangi-tahua* if needed.

The return voyage was made in June. An old native of the Nga Rauru Tribe stated that Whangarei and Whangateau were starting-places for canoes leaving New Zealand for Rarotonga.

A voyage made by Uenga of Samoa about the twelfth century extended to Tonga, Tongareva, Rimatara, the Austral Group, Tahiti, and the Paumotus—a jaunt of over three thousand five hundred miles. Tangihia, a voyager of the thirteenth century, made an even longer one.Starting from Samoa, he visited Niue, Keppel Island, the Marquesas, Tahiti, Rapa, the Austral and Cook Groups, Rimatara, and other isles. Whiro took a party of settlers to Rarotonga, then sailed to the Marquesas, Tahiti, Rapa, and beyond.

In 1616, Le Maire and Schouten encountered a double canoe under sail west of the Paumotu Group, out of sight of land, with twenty-five men, women, and children on board. The historian of that voyage remarked on the enterprise of natives who, *"without compass, or any of the aids from science which enable the navigators of other countries to guide themselves with safety, ventured beyond the sight of land."*

The Tongans were particularly daring. They made frequent voyages to Fiji—a three-day sail from Tongatapu—and also reached the New Hebrides and New Caledonia. In 1793, an expedition searching for La Pérouse saw a canoe off the coast of New Caledonia containing eight Polynesians—seven men and one woman—who spoke the Tongan dialect. They had come from Uvea in the Loyalty Group, a day's sail distant.

What They Carried

These were not mere exploration vessels. They were colonising ships. They carried not only stocks of food and water—dried fish, preserved shellfish, coconuts, water in gourds and bamboo vessels—but also live animals and plants. Hogs and fowls were transported across the Pacific. So were yams, taro, sweet potatoes, the gourd, breadfruit, bananas, and coconuts. The orange was advancing eastward when Europeans arrived. The sweet potato, of South American origin, reached Polynesia centuries before Columbus—a fact that suggests contact between Polynesians and the Americas.

The animals that reached New Zealand were the dog and the rat. The food plants were the sweet potato, taro, gourd, and possibly the yam. The *aute* tree (paper mulberry), used for bark cloth, was also introduced. Every living thing that came to these islands came in the hull of a canoe.

The Art of the Landing

After weeks at sea, the voyager's greatest danger was not the open ocean but the surf. The reef-lined coasts of Polynesia and New Zealand presented a lethal barrier. A single mistake in the breaking waves meant the canoe swamped, the cargo lost, and the crew drowned.

The *amotawa*, the sea expert, took command. He knew that in the *tai maranga*—the leaping surge—eleven curling dangerous combers (*ngaru wharau*) were followed by one smooth, rounded, crestless billow (*mutu moana*). That was the only wave on which a canoe could ride safely to land. He waited for that wave.

As it reached the canoe and lifted her, he gave the sharp order: *"Kia aronui te hoe!"* Every paddle was held stationary in the water, blade broadside to the sea run. This held the canoe on the swell of the wave. The prow needed to project slightly in front of the wave-crest. If the canoe began to slip back, the command *"Kia korewa te hoe!"* turned all paddles edgewise, and the canoe forged ahead again.

As the wave grounded and began to dissolve, the cry came: *"Kumea te hoe!*" The long bow oars were taken in. Every paddle was plied with fierce energy. The canoe shot up the beach. As one man, all hands dropped their paddles, leaped out, and ran her up beyond the reach of the next wave. The Māori voyager had made his landing, upholding the saying of yore: "*He ihu waka, he ihu whenua*" —the prow of the canoe touches the nose of the land.

The Last Voyages

The Māori did not stop voyaging when they reached New Zealand. As late as the time of Toi—thirty generations ago, about 750 years before the present—Polynesians had not yet permanently settled these islands. The great migrations continued. Later, voyages became rarer, but they did not cease entirely. Ten generations ago, the last known voyage from New Zealand to Polynesia took place.

In 1835, when Ngati-Awa seized the barque Rodney at Port Nicholson to raid and settle the Chatham Islands, they wrote the final chapter in the long history of the Māori buccaneers. And it is on record that these daring Vikings had arranged with an American whaler to transport them to Samoa—a scheme foiled only by the arrival and plunder of another ship, the Jean Bart.

What It Means

The Māori voyager left the so-called adventurous peoples of other cultures to their sailing journeys close to the shoreline. He passed through the dark-skinned folk of Melanesia, despising them not for their colour but for their lack of daring. He roamed far and wide over the vast Pacific Ocean and carried his speech from Nukuoro to the Chathams, from Easter Island to Madagascar. He feared not the dangers of the deep, known or unknown. He harnessed his gods to the task of assisting him. He traced out the *ara moana*—the sea roads—over two great oceans for western folk to treasure and western keels to furrow.

He did all this without metals, without compasses, without maps, without writing. He did it with a dugout log, a stone adze, fibre lashings, and the knowledge encoded in his genes and his chants. When we say that he was a navigator, we mean something more than that he found his way from one island to another. We mean that he looked at the stars and saw roads. He felt the swells and heard the voice of distant land. He watched the birds and understood their language.

He stepped softly on the flanks of new islands and placated the demons thereof. He conducted solemn ritual to introduce his gods. He forgot not those who had protected, guided, and succoured him. For he was ever in sympathy with his surroundings, and ever he vivified them. He endowed them with strange powers. He loved to personify the elements, the forces of nature, and inanimate objects—to feel that he was in unison with them, that all possessed life in common, that all were the offspring of the first all-embracing parents: the Sky Father and the Earth Mother.

Impelled by Tawhiri-matea (god of winds) and borne by Tane (god of forests) across the broad, heaving breast of Hine-moana; guided by Hine-korako (the moon) and urged forward by Huru-moana (the ocean current); succoured in time of stress by Te Ihorangi (the rain) and Tangaroa (god of the sea)—the voyager eluded iron-ribbed Rakahore (the rocky coast) and was received by Hine-tuakirikiri (the fair landing beach). Rolling down the rugged flanks of Hine-tu-maunga (the mountain) came Para-whenua-mea (the food of the land) to restore his waning energies, while Hine-pukohu-rangi (the mist) cast her white mantle over him.

Even so does the Māori voyager return to the Primal Parent—the Parent who brought man forth to the World of Life and who takes him again to her sheltering breast when, weary and wayworn, he returns from his journey. The Parent to whom all voyagers and all men return at last: the first Mother Parent, Papa-tuanuku, Papa-matua-te-kore—the Parent and the Parentless. The old, old Earth Mother. 

Thousands of years ago, the ancestors of Māori journeyed out of South-East Asia and into the Pacific. They sailed in waka, and were some of the world's greatest boat builders, navigators and mariners.

Ancestral seafarers

These ancestors were among the greatest ever of boat builders, navigators and mariners. Over the course of several thousand years, long before they came to New Zealand, Māori ancestors swept eastwards out of South-East Asia into Micronesia, Melanesia, Polynesia, and westwards across the Indian Ocean.

Early sea craft

The earliest crossings were probably made on rafts and dugout canoes. Travel was limited to neighbouring islands that were within clear sight of one another. Rafts could carry several people and heavy loads, but were slow. Dugout canoes were faster, but could carry only a few people. Both were unsuited to longer crossings – high seas washed people off rafts, and dugouts were prone to capsizing.

Outrigger canoes

Over time, an outrigger was added to dugouts to increase stability. Decks gave stability between the hull and the outrigger. Sails were also added for greater speed, and steering paddles controlled direction.

The Micronesian baurua and proa were the most sophisticated outrigger canoes. They were always sailed with the outrigger facing the oncoming wind, so that it did not drag and slow the vessel. Hulls had a distinctive asymmetric shape. The outside of the hull was flat, which stopped the wind pushing the canoe sideways; the inside was rounded to keep the water flowing between the hull and the outrigger. Carefully counter-balanced decks maintained overall stability.

The stability and speed of these canoes allowed navigators to sail across long stretches of open sea between relatively distant islands. European explorers, including James Cook and Charles Wilkes, observed craft like these moving much faster than their own ships: some were estimated to be travelling at up to 40 kph.

Double-hulled canoes

Polynesians developed the double-hulled canoe (sometimes called a twin-hulled canoe or catamaran) to sail in the rougher waters of the open Pacific. Some of these canoes were very large – one Fijian ndrua was 36 metres long (Cook's Endeavour was 33 metres). European explorers and missionaries reported ndrua carrying up to 250 people.

Ndrua had two hulls, one slightly longer than the other. The longer main hull could carry heavy loads; the shorter hull allowed manoeuvrability, functioning in much the same way as an outrigger. The Tongan adaptation of ndrua was called kalia, and the Samoan equivalent was ʻalia. These vessels were best suited to ferrying large numbers of people between nearby islands.

Double-hulled canoes used over long distances were generally shorter (about 20 metres). Such vessels were capable of travelling between 150 and 250 km a day. Tahitians used the pahi and tipairua: on one occasion Cook saw six of these canoes, each 23 metres in length. The Rarotongan double-hull was called vaka-katea.

Hawaiian double-hulls were waʻa-kaulua, usually about 20 metres long; one, probably used for inter-island sailing, measured 33 metres and reputedly carried over 100 people.

Hulls, sails and steering paddles

Canoes could have two main hull shapes: the fast V-shape, and the more manoeuvrable U-shape. All double-hulled canoes sat high in the water to minimise drag, and were therefore capable of great speeds. The record-breaking catamaran yachts of Sir Peter Blake (Steinlager 1) and Grant Dalton (Club Med) were based on Polynesian designs.

Several types of sail were used on traditional craft. Forming a V-shape, sails caught more wind on masts which, made from natural materials, were much shorter than those of modern yachts.

Steering paddles were long, some over 6 metres. Length served two purposes: steering the canoe, and preventing the vessel being pushed sideways by the wind and sea swell. When plunged deep into the water, paddles had much the same function as the keel on a modern yacht.

Preparing to sail

The most manageable long-distance canoes were about 20 metres long, with a crew of between five and 15. Food carried on board might include bananas, taro, kūmara (sweet potato), chickens, pigs, fish, breadfruit, yams and gourds. Coconuts served as both food and drink. Water was stored in gourds, and voyagers also caught rainwater in the sails. West Polynesian traditions speak of thirsty voyagers draining the blood of large fish into coconut shells. This may have been especially tasty.

Voyage routes were preserved in memory, often in song and story. They were mapped using notable landscape features such as mountains, outcrops of rock and prominent trees, lined up with known star paths. The term for this method of navigation is back-sighting. Navigators would set sail at dusk, lining up their canoe with prominent landmarks behind them, and follow the relevant star path as the sun set.

Navigation at sea

The principles of traditional Polynesian navigation were simple, but its practice was refined over generations of experience. The greatest skill of the old navigators was their ability to read the night sky. The rising and setting points of the brightest and most distinctive stars and planets were gauged with the help of sophisticated star compasses, and then memorised. Compasses were also used to chart the winds.

Navigators steered their canoes toward a star on the horizon. When that star rose too high in the sky or set beneath the horizon, another would be chosen, and so on through the night. Seven to 12 stars were sufficient for one night's navigation, and the moon and bright planets such as Kōpō (Venus) and Pareārau (Jupiter) were also useful. At daybreak, navigators noted the position of the canoe in relation to the rising sun. As the sun got higher in the sky, they looked to where it would set in the evening.

When skies were too overcast for navigators to use the sun, the moon, planets or stars, their course could be gauged according to ocean swells. In the Pacific, prevailing north- and south-easterly trade winds pushed up swells that remained constant for long periods.

Navigators kept their canoes at the same angle to these swells. Sudden changes in canoe motion indicated that it had changed course. To avoid veering off course, a rope was trailed behind the canoe – if a wave suddenly jarred the vessel, the rope remained true to the original line of travel. Some navigators also lined up their canoe with wind direction, using pennants tied to the mast and rigging as guides.

Locating land

a. Birds

The pathways of migratory birds helped in the discovery of new lands. There were certainly people who were familiar with patterns of bird migration. For example, the direction of the West Polynesian pigeon's annual migration was followed by navigators between Tonga and Samoa. Ancestors of the Māori may have speculated that there was land in the south-west Pacific, as the long-tailed cuckoo and shining cuckoo fly south from the islands of Polynesia and Melanesia respectively every spring and return in autumn.

An island was signalled by the birds that fly out from it to sea at sunrise to fish, then return to their nests at sunset. Frigate birds fly up to 100 km from land, gannets and petrels 70 km, and terns up to 50 km.

b. Whales

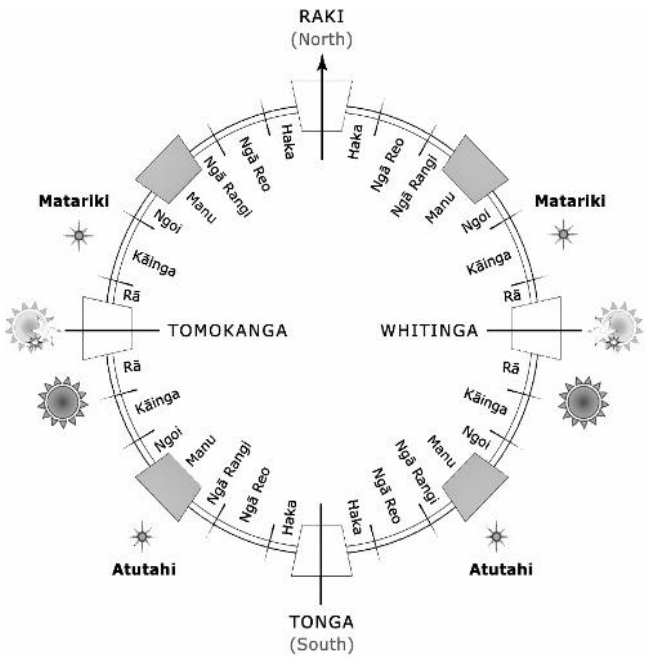
At the beginning of each winter the humpback and other whale species travel in multiple family groups, or pods, as they migrate north from Antarctica to the Pacific. Some pass along the west coast of New Zealand into the waters of Vanuatu and New Caledonia. Some travel along both sides of the country toward Tonga and Samoa, while others pass the east coast to Rarotonga and Tahiti. In November and December, the whales return south to Antarctica.

Māori ancestors may have believed that by following whales they would be led to land, as whales typically calve in the calmer waters off atolls, islands or larger land masses. Because they are slow, whales would have been easy to follow. Their rate of travel, three to five knots, is well within the cruising speed of a double-hulled canoe. According to Māori oral traditions, whales guided canoes to New Zealand, and the ancestor Paikea is even said to have arrived "on" one.

The season when whales migrate south coincides with the appearance of the stars and planets most useful for navigating to New Zealand – the setting sun, Kōpū (Venus), Te Waka o Tamarereti (Scorpio) and Māhutonga (the Southern Cross).

c. Stars

Zenith stars that at their highest point shine directly over known islands were useful for locating land. They were used by Tongan, Tahitian and Tikopian navigators. Arcturus is the zenith star for Hawaii, and Sirius for both Ra'iatea in Tahiti and Vanua Levu in Fiji. Navigators positioned their canoes immediately beneath their target star, knowing that this would place them within 80 km of the destination island.



Measuring the height of meridian stars (stars on the same longitude) above the horizon using fingers and hands was a useful method for finding land. Polynesian sailors may have been guided by meridian stars such as the Southern Cross.

For instance, viewed from Hawaii the bottom of the upright Southern Cross is four fingers above the horizon; sailing south it increases to one full hand span at the equator, and two hand spans approaching the latitude of Tahiti.

d. Clouds

The shape, movement and colour of clouds were important indicators of land. Convection clouds build up during the day over large islands, becoming higher, thicker, darker and slower moving than clouds over the sea.

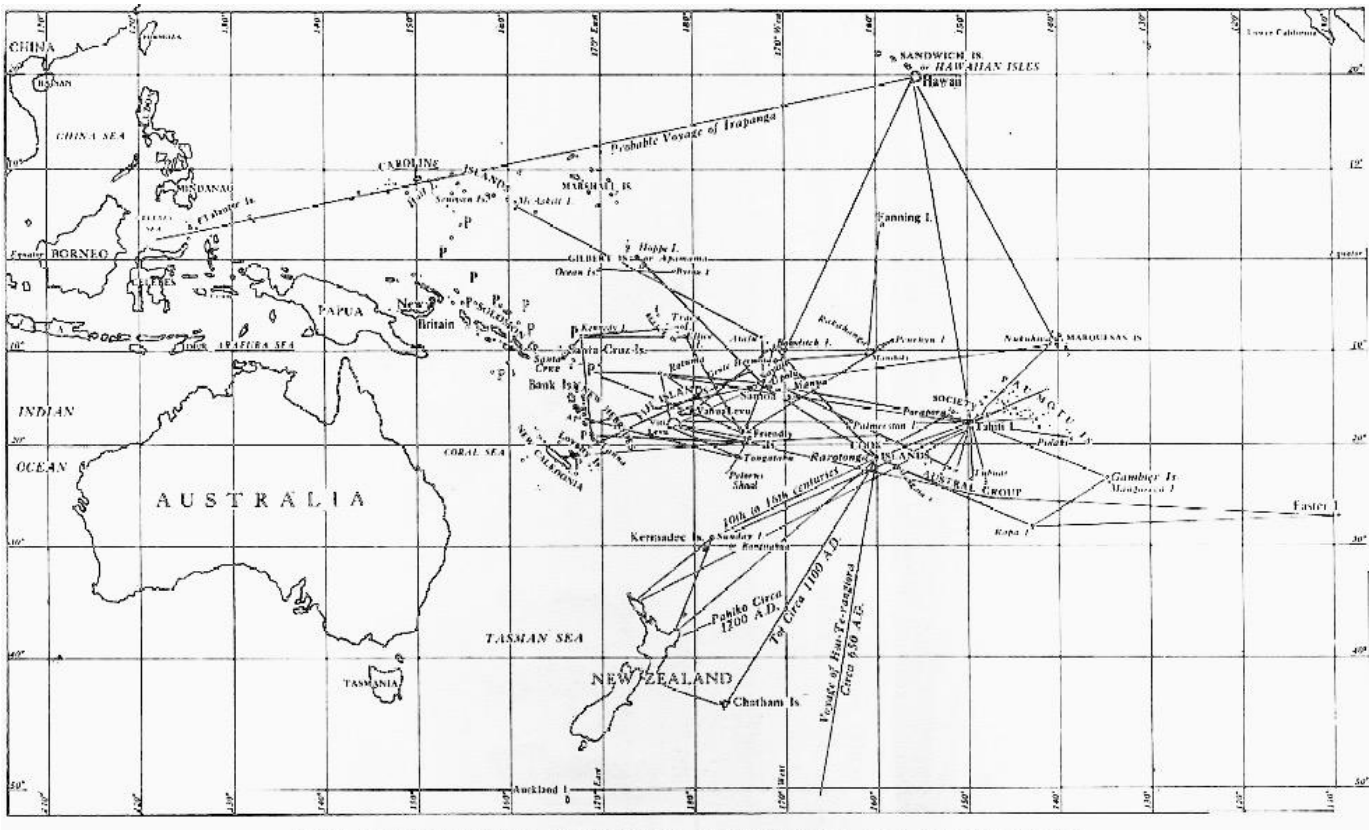
Cloud over high islands such as Tahiti and Hawaii can be seen over 150 km away. The small, characteristically eyebrow-shaped clouds that form over small atolls can be seen up to 50 kilometres away. A reef is indicated by pinkish cloud, while the cloud base over forested islands is dark or green. When a cloud is unusually bright, sunlight is being reflected off atoll lagoons onto the cloud base.

e. Land swell

Experienced navigators used distinctive land-swell patterns, which form when sea swells strike land, to determine the location of land long before it was visible. Land-swell patterns have two distinctive forms. In one, waves take shape when the prevailing swell strikes an island and bounces back on itself. Bounce-back waves can be detected 50 km away from small islands, and up to 300 km away from land masses the size of New Zealand. In the other land-swell form, patterns are created when a swell divides and curls around an island. Navigators can detect the confused wave pattern or shadow of turbulence at some distance.

f. The sea

The sea itself provided useful markers for navigation. Changes in colour, the presence of certain fish species, ocean currents, the 'scent of land' and the appearance of whirlpools were all important signs. Debris such as driftwood and leaves suggested nearby land, and floating rubbish signalled that human settlement was close.



MAP SHOWING SOME RECORDED VOYAGES OF THE POLYNESIANS

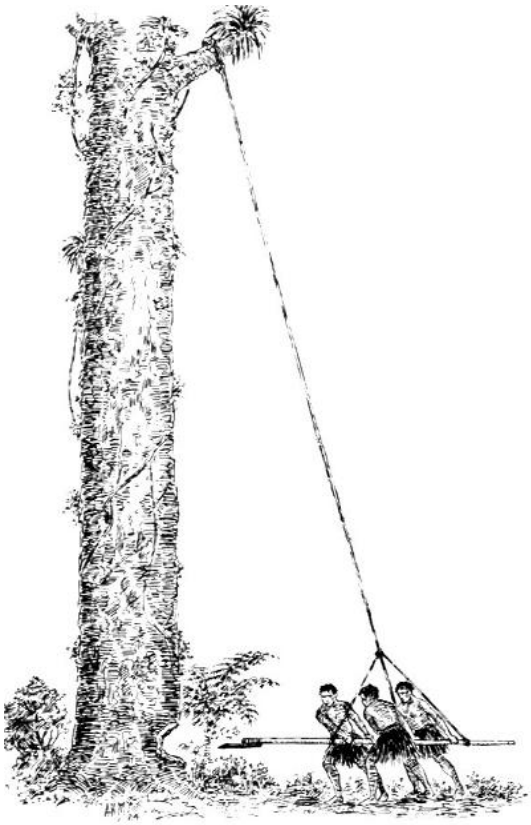


Fig. 17. An East Coast Tree-felling Device.

Just after I finished putting all the above pages together, I discovered 300 pages of pure gold; **THE MAORI CANOE, by Elsdon Best (1925)**. A reprint copy of it can be bought for $120. Or you may be able to get it interloaned. An archived copy is on the internet. I have copied the contents pages for you. If you want pages from it printed for you, ask a librarian or whanau member to go here. (**tinyurl.com/wakamaking**)

INTRODUCTORY REMARKS
The Polynesian canoe. Canoes of New Zealand. Obsolete types. Scarcity of information. Nomenclature. Canoe-structure changed by local conditions. Possible origin of local peculiarities. Principal forms not peculiar to New Zealand. Symbolical terms for canoes. The canoe of Tama-rereti. Ownership of canoes.

Page 8. CLASSIFICATION AND DESCRIPTION OF MAORI CANOES
Three main types of canoes.
(1.) The double canoe. (2) The single canoe with outrigger. (3.) The single canoe with no outrigger.
Subdivision of class (3): (a) The waka taua or war-canoe; (b) the waka tele, or ordinary canoe; (c) the waka tiwai, or river- canoe.
The double canoe seen by early voyagers. Tasman's remarks. Banks's remarks. Two forms of double canoe. Shortland's remarks. Missionary notes. Vessels of immigrants from Polynesia. Origin and distribution of double canoes. Late use of double canoe. The outrigger canoe. Seen by early voyagers. Origin and distribution of outrigger. Outrigger employed in India prior to Christian era. Disuse of outrigger in New Zealand preceded that of double canoe. The double outrigger. Maori tradition of canoes. Distribution of canoes. Use of same abandoned in several regions. The single canoe lacking outrigger. Native names for canoes. Mohi Turei's remarks. Description of war-canoes by early voyagers.

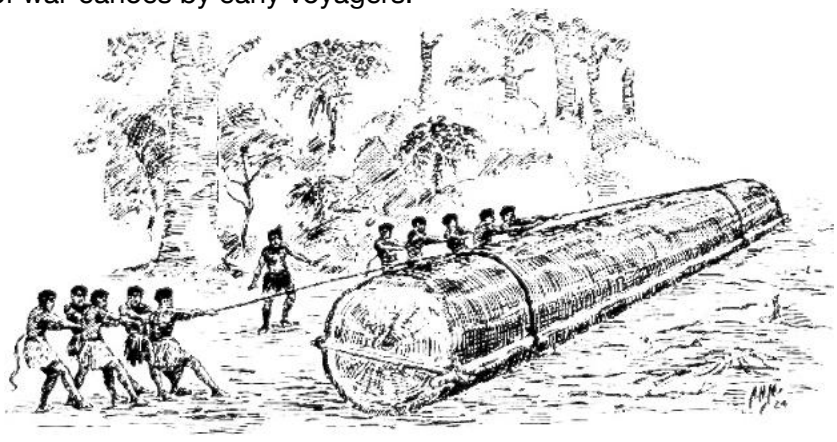


Fig. 23.—The Takamiiti Log-turning Device.

Page 36. THE CONSTRUCTION OF THE WAKA TAUA, FROM TREE-STUMP TO LAUNCHING
Evolution of built-up vessels. Tree-felling. Timbers used. Suitable trees reserved. Special trees named. Superstitions and ritual pertaining to tree-felling. Curious device for tree-felling. Fire employed in tree-felling. The dubbing process. Log-rolling apparatus. Tap of work and workers. Hauling canoe from forest. Hauling-songs. The waka hauni. Fitting up canoe. Joining hull sections. The top-strakes. Different modes of lashing top-strakes in Polynesia. Thwarts. Splitting-wedges. The tawihu, or carved prow. The taurapa, or carved stern-piece. Floor-grating. Canoe-painting. Launching of canoe. Ritual and human sacrifice. Large canoes.

Page 120. FISHING AND RIVER CANOES; CANOES OF CHATHAM ISLANDS; CEREMONIAL OBSERVATIONS PERTAINING TO CANOES
The waka tele, or fishing-canoe. Marked by plain figurehead and lack of adornment. Descriptions of ordinary canoes. The wakd tiwai, or river-canoe. The Henley canoe, an abnormal form. Mending and patching canoes. Canoe fleets. Arrival of European vessels. Rafts and floats. Canoes of Chatham Islands.Ceremonial matters pertaining to canoes.The mauri. Canoes under tapu.

Page 158. METHODS OF PROPULSION; ANCHORS

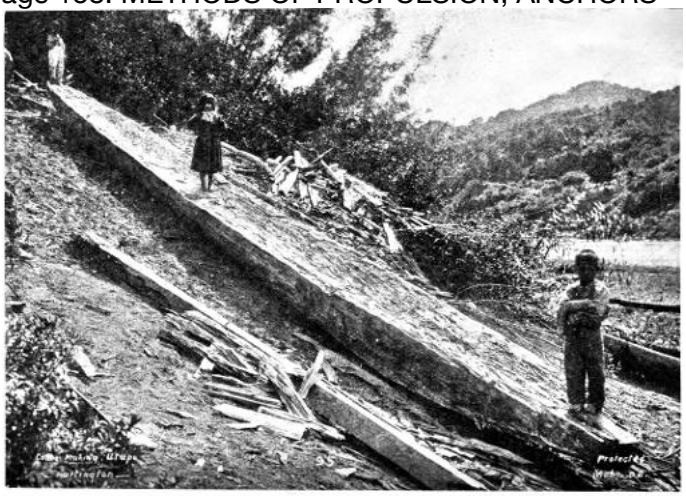


Fig. 25.—A Canoe in the Making.
Steel-tool work. [Partington, photo.

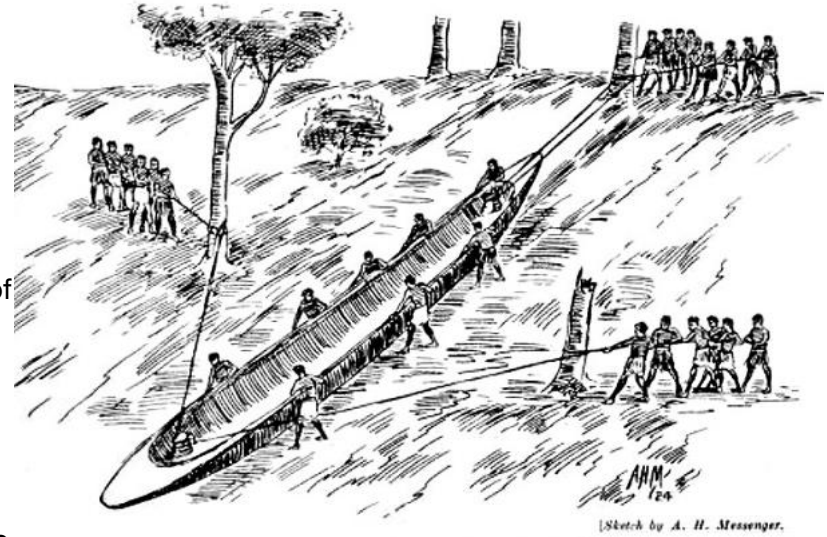
Paddles and their use. Materials used. Steering-paddles. Steering. Fuglemen and songs. Painted paddles. Carved paddles. Modes of paddling. Women as paddlers. Certain canoes beached stern foremost. Bailers and bailing. Sails and sailing. Materials and form. Process of manufacture. Manipulation of sails. Modes of sailing. The lateen sail, or ra kaupapara. The upright sail, or ra kautu. Maori canoe-sail in British Museum. Speed of canoes. Rates of sailing and paddling. Poling or punting. Anchors and their uses. Materials and forms of anchors. Method of raising sea-anchors. Anchors named.

Page 200. CANOES OF THE PACIFIC AREA

Prototypes of Maori vessels. Distribution of different forms. Australian canoes. Double outrigger. Possible evolution of ordinary Maori canoe from outrigger and type with balance-platforms. Superiority of Polynesians as navigators. Polynesian canoes. Canoes of CookGroup. The pahi. Double canoes. Canoes of Mangaia. Curious steering-device. Canoes of Niue. Canoes of Manihiki. Canoes of Austral Isles. Canoes of Tongareva. Canoes of Ellice Group. Canoes of Easter Island. Canoes of Society Group.Canoes of Paumotu Group. Canoes of Marquesas Group. Canoes of Hawaiian Isles. Canoes of Tonga Group.Canoes of Samoan Isles. Melanesian canoes. Canoes of Fiji. Canoes of New Hebrides. Canoes of Santa Cruz Group. Canoes of New Caledonia. Canoes of Solomon Isles. Canoes of New Ireland. Canoes of Admiralty Isles. Micronesian canoes. Canoes of Caroline Group. Canoes of Ladrones. Outriggers of Ceylon and India. Deep-sea vessels mentioned in Maori tradition. Management of same. The double outrigger. Compass-points and wind-names.

Page 272. THE PEOPLING OF NEW ZEALAND

Polynesian voyagers. Oral traditions. Discovery of New Zealand by Polynesians. Voyage of Kupe and Ngahue. A lone land. First settling of New Zealand. Coming of the Mouriuri, a people of unknown origin. Second peopling of New Zealand. Coming of the Maori.The voyage of Toi. The coming of Kura-hau-po. Voyage of Manaia and Nuku from eastern Polvnesia to New Zealand. Coming of the fleet. Vessels of the immigrants. Arawa canoe. The Matatua. Aotea. Takitumu. Horouta. List of immigrant canoes. Voyages made from New Zealand to Polynesia.



[Sketch by A. H. Messenger.

Fig. 30.—Method of lowering a Canoe down a Steep Hill.

Page 292. NAMES OF PARTS OF MAORI CANOES

(There are about 300 names here)

Dear readers,
I do hope all this encourages some of you make an adze (the steel blade out of a carpenter's wood-plane shown on Page 18 works) and a drill, and practice the skills your tupuna used. Or learn and use the chants that made your tupuna to become one with Tane's trees, so that you become one with them too.
And I hope you have enjoyed your voyage through these pages as much as I have enjoyed making them.
And my best wishes for you in finding peaceful shores as you continue on your voyage through life.
Kia kaha
John Archer

THE END