



Whakaotirangi

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Tainui and Te Arawa traditions speak of Whakaotirangi. She was, one of New Zealand's first scientists, carefully attending to Kumara brought to Aotearoa and adapting methods to help them grow in Aotearoa.

Tainui tradition holds that Whakaotirangi arrived in the Waikato at Kawhia to establish gardens after travelling to Aotearoa. She experimented with her plants and moved over the hill to Aotea. There she built a garden she called Hawaiki Nui. Her husband Hoturoa performed Karakia and Whakaotirangi tended to the kumara and māra.

The following two whakatauki celebrate Whakaotirangi:

Te Kete Rokiroki a Whakaotirangi (The secure basket of Whakaotirangi) in Te Arawa

Tainui speak of Te Kete Rukuruku a Whakaotirangi (The small basket of Whakaotirangi) in Tainui

**Te Kete
Rukuruku
a Whakaotirangi**



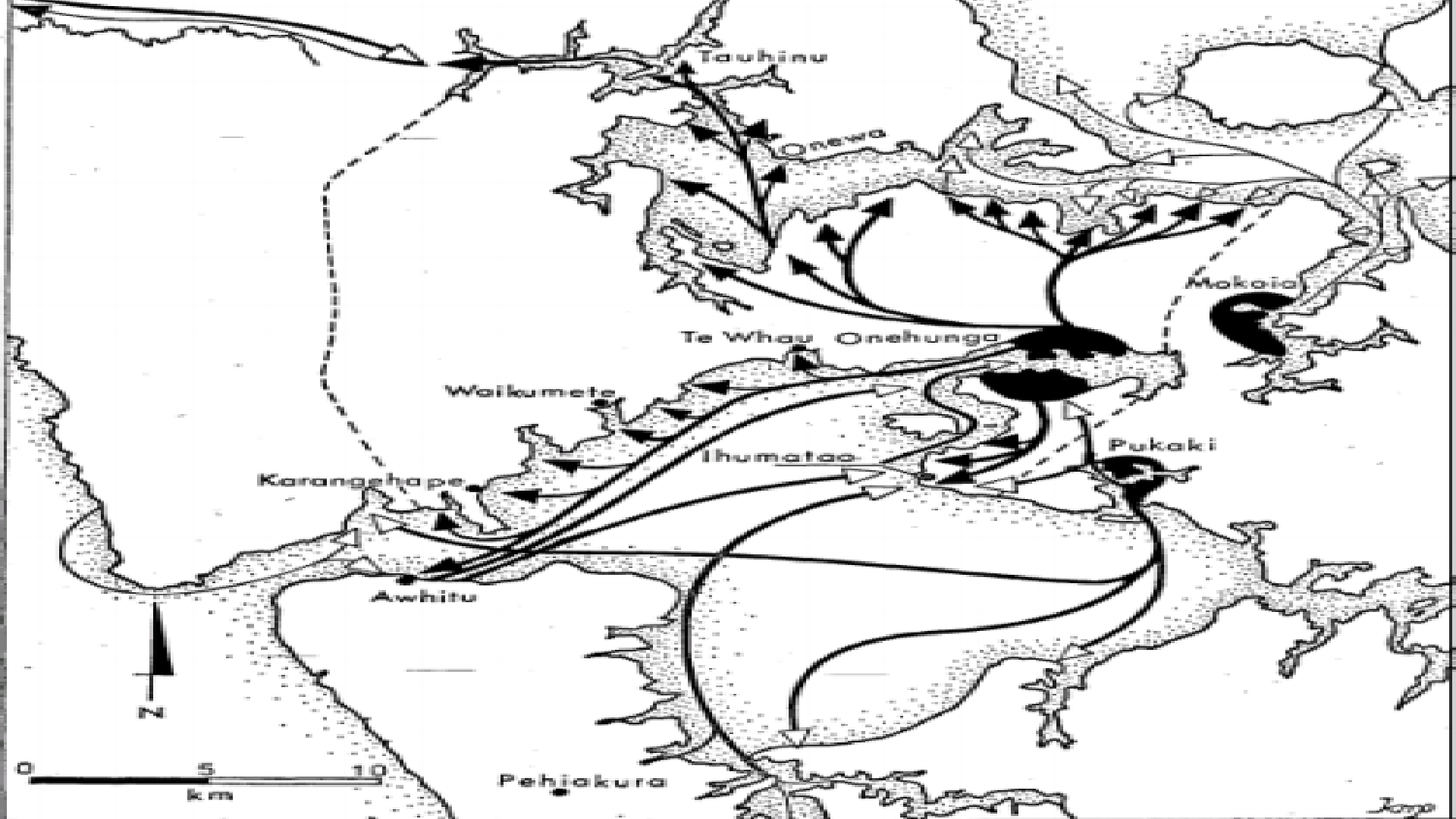
Aims of the project - Te Kete Rukuruku a Whakaotirangi

There are several aims to the project:

- To provide opportunities for matatahi and rangatahi to learn about Kumara cultivation including tikanga, waiata and korero.
- To help students explore matauranga and science around soil types used in Kumara cultivation and test these
- To strengthen knowledge/matauranga around kumara cultivation in our area.
- To use this knowledge to restore mauri, connect with our community and to feed in to Matariki celebration
- To teach students how to tāpapa kumara
- To build connections with māra and marae
- To establish a māra kai on campus

Kumara Māra in Tāmaki Makaurau





Puketāpapa



Kumara cultivation in Tāmaki and in our area

Kumara cultivation has been in our area since Māori first arrived.

There were cultivations on each of the maunga with storage pits at Puketāpapa, Te Tātua a Riukiuta, Koheraunui - Monte Celia and by the Unitec marae. These are noted in Tainui, Wai-o-hua, Kawerau a Maki and Ngāti Whatua tradition.

At Maunga Kiekie, Tahuri tended to rich fertile kumara gardens. The kumara and food gardens were famous throughout the region as Ngā Mara a Tahuri (the gardens of Tahuri). The gardens were expertly cultivated with the guidance of Te Tahuri, the wife of Te Ikamaupoho and mother of Kiwi Tāmaki. The proverb “Kohi Awheto i te Mara o Te Tahuri” or “collect caterpillars in the garden of Te Tahuri” is a reference to how popular the gardens were, even with the caterpillars who fed on the abundant kumara leaves.

At Te Tātua a Riukiuta - Three Kings, a Wharekura or learning school for agriculture was established by Te Kete-ana-Taua in some traditions.

Te Tātua a Riukiuta



Kumara Storage pits



Kumara cultivation in Koheraunui

Pōtatau Te Wherowhero and his brother Kati Takiwaru occupied Koheraunui until 1840, when they settled at coastal Māngere. Pōtatau Te Wherowhero and Tāmati Ngāpora sold the land with the consent of Ngāti Whātua Ōrākei chief Apihai Te Kawau.



Investigating the soil:



Testing what is the best soil:

We will trial which is the best soil for growing kumara on campus in terms of production.

Independent Variable: We will test different soil types

Dependent Variable: We will measure how productive the soils are

Controlled Variable: We will use the same type of kumara and numbers and keep conditions the same.

Testing what is the best soil:

We will test four different soil media and measure how effective they were at harvest before Matariki. We will prepare these in the following ways.

Box 1 Garden mix only

Box 2: Garden mix and stone

Box 3 Garden mix and volcanic scoria

Box 4 Garden mix and river sand

We will have a karakia recited before we plant in the puke.



Pīpīwharauroa
Shining Cuckoo

Call of Pīpīwharauroa

Call of Riroriro







Pīpīwharauoa and Kumara

“Ka tangi te Pīpīwharauoa, ko ngā karere a Mahuru”

The arrival of the pīpīwharauoa signals the beginning of planting of kumara. There are many tikanga associated with this and some say that the pīpīwharauoa migration patterns might have given hints to navigators.

In the South Island - Te Waipounamu it is sometimes known as the bird of Maui and is recorded in song.





Manu Tiria

Manu Werohia
Ki te poho o te Rāka

Ka tau

Ka tau rērere
Ka tau mai i te ruhi
E tau e koia

Koia, Koia

Ko Tara-rauriki
Kī mai a Māui
Ehara i te whitu,
Me te waru e
E tau, e koia....
Koia!

Manu Tiria

*Bird of the planting time
Bird of the ground-breaking time
Upon the chest of Maui's father*

*Landing after a long flight
Landing here exhausted
It will land at our Kumara digging time*

*Dig! Dig! The first Kumara shoots
From Maui are already filling out,
But don't plant them in November or in December
Settle down and Dig!*

Dig!