

WHAKAHOKIA TE MAURI O OPOROA

LAKE OPOROA RESTORATION



He Kupu Whakaaraara

Ka tiaho mai ngā whetū
Hei tohu o te kauae runga
Ka whitiwhiti mai i te rā
Hei ara ki te kauae raro
Ki te whai ao ki te ao mārama
Ko Papa e tūhonotia
E te pito i te Hono i Wairua
Ko Rangi e tūhonotia
E te kāwai a Tākawe o Kahukura
Whiti whano haramai te toki haumi e hui e tāiki e!





^{*} He Kupu Whakaaraara is akin to a "call to arms" or "words to alert/awaken".

1. Foreword

This foreword is provided by kaumatua Neville Lomax who is a highly respected kaumatua in the Mōkai Pātea rohe with a deep relationship and understanding of Lake Oporoa, and its cultural significance and history.

Manaaki whenua, manaaki tāngata, haere whakamua - Care for the land, care for the people, go forward

The oral traditions relating to the journey made by our ancestor Matangi and his two children Horouta and Hine-te-Iwaiwa from the south Wairarapa Coast, over the Tararua Range, across the Manawatū, up the Rangitīkei awa, and into the Mōkai Pātea rohe, are reasonably well known by some Ngāti Hauiti people. However, until recently, when it became evident that urgent restoration was needed at Lake Oporoa, where Matangi settled after following a large flock of tūī (whirikōkō) from the Manawatū, many people including locals were unaware of the lake's existence, nor of the oral stories about the history of the lake that have been handed down for over twenty generations.

Having been raised from a young age hearing these stories and visiting Lake Oporoa on many occasions to gather tuna for whānau consumption, prior to the lake becoming badly polluted, it is my great pleasure to recommend this Restoration Plan as a blueprint for the implementation of the work needed to restore both the mana and the mauri of Lake Oporoa to its rightful place.

Neville Lomax

June 2023



2. Introduction

Lake Oporoa is a lowland lake in the Rangitīkei, located about 10 kilometres southwest of Taihape. It's connected by an outlet stream and wetlands to the Rangitīkei Awa nearby. The lake is 7.1 hectares in area and 3 metres deep, and today is surrounded by farmland and a mixture of native and exotic vegetation.

Up until very recently, not many people in the local community knew of the lake's existence and few have visited it. But for Ngāti Hauiti, Lake Oporoa is a taonga with a rich history. Reconnecting whānau with the lake and its cultural history is a priority.

Over the years, the water quality in the lake has declined markedly and this has had consequences for its mauri. Te Mana o te Wai remains a key concern for iwi.

Ngāti Hauiti, landowners, other iwi, local councils and researchers are working collaboratively to better understand the lake's changing health, its history and cultural significance. Both science and mātauranga Māori contribute to our collective holistic understanding. Together, we're focussed on restoring the health and wellbeing of Lake Oporoa.

Whakahokia te mauri o Oporoa is a restoration plan that sets out a vision and objectives to restore the health of Oporoa.



3. Background

Lake Oporoa is a significant lake with a rich cultural history for Ngāti Hauiti that relates to Matangi, a tūpuna and early Māori explorer who traversed and named places in the Rangitīkei around 800 years ago. Following the flightpath of a huge flock of tūī, Matangi came upon Lake Oporoa where he settled with his whānau.¹

Lake Oporoa was an important mahinga kai (food gathering place) and large numbers of tuna (eel) resided in the lake and were harvested regularly. Kaumatua Neville Lomax recalls times during his childhood in the late 1940s and '50s when the annual spring rains would trigger a mass migration of tuna from the lake to the Rangitīkei Awa where they would then migrate out to sea.

Sadly, the tuna population is no longer as healthy and plentiful as it once was even a generation ago. This may be due to a combination of nutrient enrichment and changing lake levels causing a decline in water quality and therefore habitat for tuna and other species. ² Iwi members have identified that tuna are still present and caught in the lake, but their numbers and condition are greatly reduced.

The once plentiful $t\bar{u}\bar{\imath}$ - and other native birds - have also declined as the native forest has been replaced by pastoral farming throughout the catchment. Farmed sheep and cattle and other introduced species such as fallow deer and Canadian geese now frequent the lake and its surrounds.

Rain that falls into the lake or flows in from the surrounding hillside is the only water source for Lake Oporoa. But due to land instability on the northern side of the lake, measures have been taken to divert water from there to reduce the risk of erosion. A farm track on the northwest side of the lake also appears to be diverting water away from the lake. There is also evidence of an outlet drain being excavated adjacent to the outflow stream, and it appears that this was installed to lower the lake level. All of this means that the water level in the lake is lower than it was historically, which may be one of the causes of the current algal blooms in the lake. Anecdotal accounts suggest that the outflow stream and connecting wetlands that previously linked the lake with the Rangitīkei Awa only flow infrequently during periods of high rainfall.

In years gone by, the lake was used regularly by iwi and the community for recreational activities, such as swimming and picnicking. As the lake's health has declined so too have visits by iwi and other members of the community. Sadly, many in the community – including iwi members – are now unaware of the lake's existence let alone its significant cultural history.

The main access corridor to the lake is via an adjoining private farm property for which permission to cross the land is required. Access is not guaranteed and may

be declined due to seasonal farming activities such as spring lambing. This uncertainty further deters people from accessing the lake and has resulted in disruption to intergenerational relationships with Lake Oporoa. For Ngāti Hauiti, this is a major concern and so reconnecting people with the history and cultural significance of the lake is a key priority. Raising the profile of the lake is critical to gaining more widespread support and commitment to restoring the lake.



 $^{^1}$ See Appendix 1, and the 15-minute min-documentary, 'Whakahokia te mauri o Oporoa,' at https://www.lakestoriesnz.org/lake-oporoa

²See: Short, J. et al. 2022. Using palaeolimnology to guide rehabilitation of a culturally significant lake in New Zealand, Aquatic Conservation, 32(6), accessed at https://doi.org/10.1002/aqc.3808.

4. Restoring Lake Oporoa

Restoring Lake Oporoa is a long-term goal for Ngāti Hauiti, and in 2015 the iwi initiated a targeted restoration programme. As part of the Ngā Puna Rau o Rangitīkei collective (NPRoR),³ funding was obtained from the Ministry for the Environment to:

- undertake research and monitoring on Lake Oporoa, which culminated in a report on lake restoration options, ⁴
- undertake pest control around the lake, and fence off and plant a significant proportion of the riparian margins, and
- develop a Strategy and Action Plan to guide iwi environmental work across the Rangitīkei catchment.⁵

In 2019, further research was initiated on Lake Oporoa as part of the Lakes380 project (Our Lakes' Health: past, present, future).⁶ This involved Lakes380 researchers and Ngāti Hauiti and NPRoR iwi members collaborating to:

- collect and analyse water and lake sediment samples to determine the current and historic health of Lake Oporoa, ⁷ and
- research, collate and promote the mātauranga Māori and cultural history of the lake.

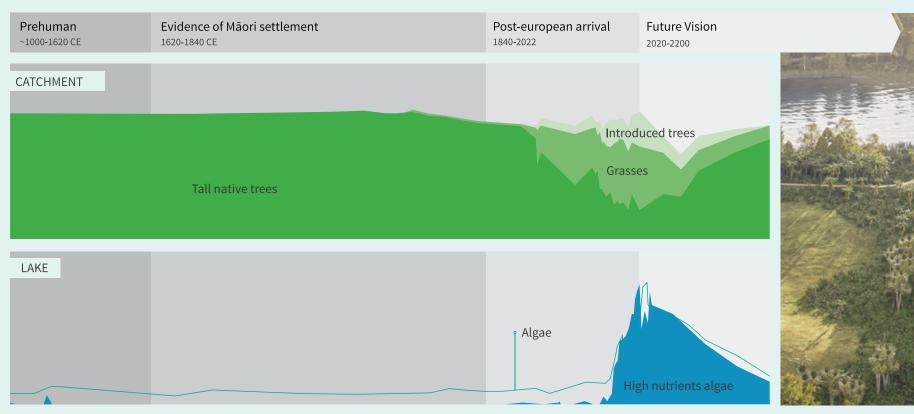
Lake Oporoa was a focal lake for the national project known as Our Lakes' Health: past, present, future (or Lakes380 - www.lakes380.com). Year by year sediment is laid down at the bottom of a lake. Analysis of the sediment provides information that can be used to understand how the health of the lake and surrounding land has changed over time.



The Lakes 380 team took sediment cores from Lake Oporoa to explore historical shifts in lake health over the last 1000 years.

The results from the sediment core indicate that following Māori settlement (approx. 1620 CE) in the region around Lake Oporoa there was gradual vegetation change. There were also shifts in some of the microorganisms that live in the lake indicating small amounts of nutrient enrichment occurred.

Post European settlement (approx. 1840 CE) in the region native vegetation was rapidly replaced by farmland and the results from the sediment core indicate increases in nutrients and algae, and changing lake levels, particularly since the 1960s. 9



³ NPRoR is a collective of five iwi and two councils working together on environmental initiatives in the Rangitīkei catchment. NPRoR includes representatives from Ngā Wairiki Ngāti Apa, Ngāti Hauiti, Ngāti Tamakōpiri, Ngāti Whitikaupeka, Ngāi Te Ohuake, Rangitīkei District Council and Horizons Regional Council. See https://www.cawthron.org.nz/new-zealand-river-awards-news/rangitikei-river-story/

Concentration (%)

⁴See Kelly, D. & Waters, S. 2018. Lake Oporoa – options for lake restoration. Cawthron Institute report prepared for Ngā Puna Rau o Rangitīkei and Horizons Regional Council.

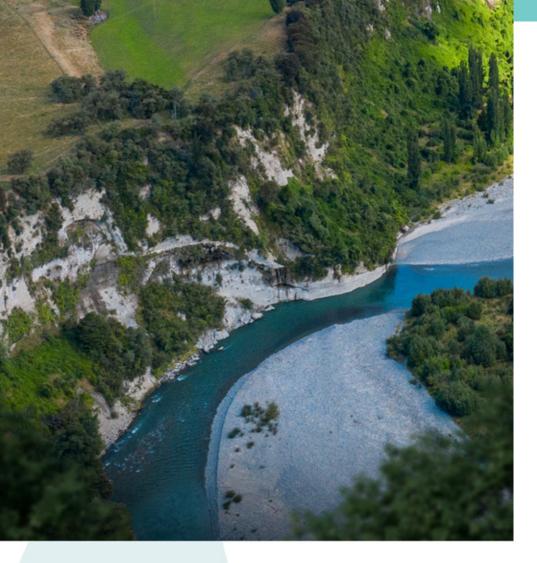
⁵ Ki Uta, Ki Tai – Ngā Puna Rau o Rangitīkei is the Strategy and Action Plan developed by Ngā Puna Rau o Rangitīkei and was released in July 2019. Lake Oporoa is identified as a significant waterway and cultural site in the Strategy and Action Plan. See https://www.horizons.govt.nz/HRC/media/Media/lwi%20and%20Hapu/Nga-Puna-Action-Plan-2019.pdf

⁶ See https://lakes380.com

⁷See Short, J. et al. 2022.

⁸ See https://lakes380.com/lakes/oporoa/ and https://doi.org/10.1002/aqc.3808 and lakestoriesnz.org/lake-oporoa

⁹ See: Short, J. et al. 2022.



Despite the work initiated thus far, there's also a realisation that much more is required and that efforts need to be sustained. Ngāti Hauiti and NPRoR are continuing to implement further environmental and cultural projects for Lake Oporoa and other waterbodies throughout the Rangitīkei.

In March 2022, NPRoR was funded by the Ministry for the Environment to:

- establish a Kaitiaki Team to provide the iwi of NPRoR with the capacity and capability to participate more effectively in the resource management system for the Rangitīkei Awa and the wider environment;
- implement a flagship project—Rangitīkei 253—that will capture different voices and perspectives along the 253 kilometres of the Rangitīkei Awa (e.g., historical information, stories, waiata/songs, artwork, photographs, interviews, videos, pūrākau, etc.); and
- undertake a research and knowledge collation project focussed on mātauranga Māori held within the Rangitīkei and demonstrate how it can be effectively and respectfully integrated into the policies and plans that effect the Awa and its catchment.

All these initiatives show the dedication of Ngāti Hauiti and NPRoR in working to strengthen relationships with key stakeholders to galvanise support and momentum for restoring Lake Oporoa and other freshwater taonga throughout the Rangitīkei catchment.

5. Vision and Objectives for Lake Oporoa

Prompted by the interest and goodwill generated through a focus on Lake Oporoa, and some success in funding for environmental improvement, there is eagerness amongst the iwi and community to commit to restoring Lake Oporoa. However, lake restoration is no easy task. It takes time, resources, and sustained input from numerous stakeholders. It also takes vision.

In this restoration plan, the vision to restore Lake Oporoa acknowledges two fundamental qualities – mauri and mana – that must be addressed in tandem:

Restoring the mauri and mana of Lake Oporoa for future generations ¹⁰

Restoring the mauri of the lake requires sustained long-term action to address the various environmental issues (e.g., poor water quality and clarity, algal blooms, etc.) that are affecting the health and well-being of the lake. Restoring the mana of the lake requires strengthening connections between the iwi, the broader community, and the lake. These connections are crucial to getting buy-in for the sustained commitment required for restoration. ¹²

Restoring the mauri and mana of the lake is intertwined. Actions that restore mauri may also contribute to restoring mana, and vice versa. ¹³

The following objectives have been developed to focus the restoration efforts. The objectives seek to weave the various streams of scientific information and mātauranga Māori that have been collated over recent years. This collective wisdom provides an opportunity to take a more holistic approach and imagine a new future for the lake:

¹⁰ In this context, mauri relates to the life principle, life force of Lake Oporoa, and mana refers to the prestige, authority, control, power, influence, status of Lake Oporoa.

¹¹ See Short, J. et al., 2022 and Kelly & Waters, 2018.

¹² See https://www.lakestoriesnz.org/lake-oporoa

¹³ See 'Te Mana o Te Wai: Rangitīkei' (6-minute video) featuring Neville Lomax and Robert Martin, at https://www.lakestoriesnz.org/rangitikei



Te whakaora i te hauora me te oranga o te Roto o Oporoa me ana rohe hopu/taiao - kaitiakitanga Restoring the health and wellbeing of Lake Oporoa and its surrounding catchment/environment

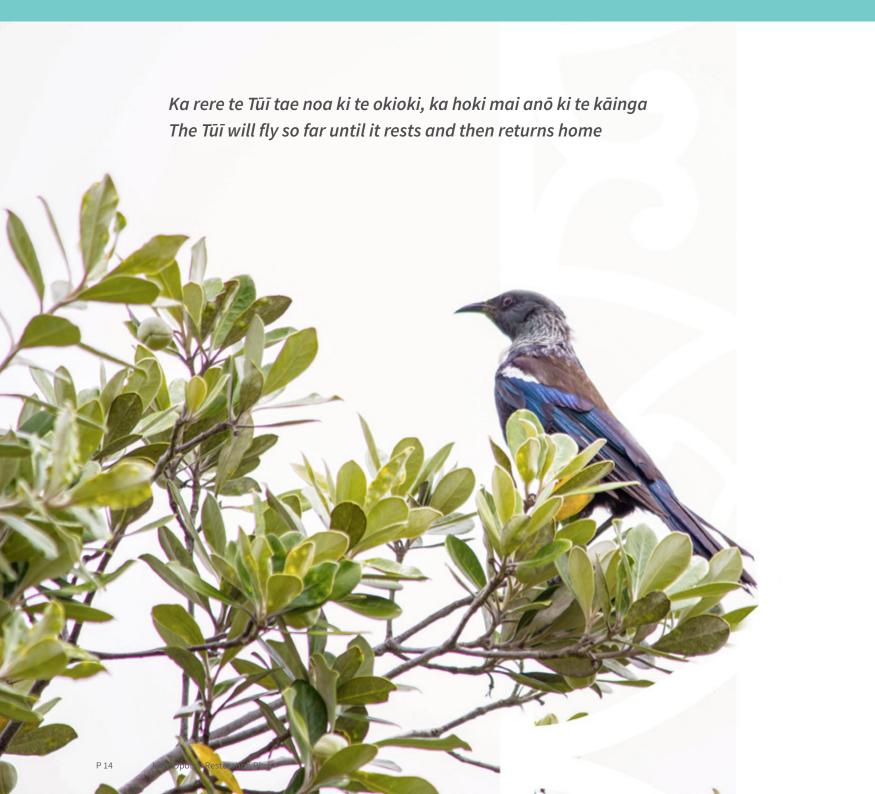
Te hono me te whakaako i te Hāpori mō ngā hītori me ngā tikanga o te Roto o Oporoa - whakapapa me te whakawhanaungatanga

Reconnecting and educating the community on the history and cultural significance of Lake Oporoa

Te tiaki te roto o Oporoa mō ngā whakatupuranga a muri ake nei – taonga tuku iho Safeguarding Lake Oporoa for future generations







6. The Action Plan for Lake Oporoa

The table on the next page outlines the key actions for restoring Lake Oporoa. These actions are grouped according to the objective they most closely correspond with. However, it must be acknowledged that some actions will complement the achievement of the other objectives (e.g., riparian planting can provide environmental benefits, and at the same time planting days associated with this work can be used to reconnect and educate).

These actions are based on the various streams of scientific information and mātauranga Māori that have been collated on Lake Oporoa in recent years. The actions below also complement and align with the broader goals and objectives contained in the NPRoR Strategy and Action Plan. ^{14,15}

Sustained and long-term action is necessary to restore Lake Oporoa, and therefore ongoing monitoring is required to measure the progress of restoring the lake.

Ka rere te Tūī tae noa ki te okioki, ka hoki mai anō ki te kāinga The Tūī will fly so far until it rests and then returns home.

This whakataukī relates to the importance of growing and maintaining plants in the vicinity where they have been nurtured. This ensures that the mauri of the plant is not spoiled, meaning that plant seedlings should not be sown further away than the distance a tūī can fly.

¹⁴ See https://www.horizons.govt.nz/HRC/media/Media/Iwi%20and%20Hapu/Nga-Puna-Action-Plan-2019.pdf

¹⁵ Some suggested actions for restoring the lake have been discounted as they are considered cultural inappropriate and/or overly intrusive (e.g., sediment capping, dredging of the lake, installing destratification pumps).

Vision: Restoring the mauri & mana of Lake Oporoa for future generations	
Objectives	Actions
Restoring the health and wellbeing of Lake Oporoa and its surrounding catchment/environment	 Enhancement of the lake and its catchment via: ongoing riparian planting and protection such as fencing around the lake, the outflow stream, and downstream wetlands.¹⁶ establishing aquatic plants around the shallow margins of the lake to reduce organic inputs and reduce nutrient inflows. ¹⁷ Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Reduction of the nutrient inflows into the lake via: ongoing riparian planting and protection/fencing. investigation of methods/options for reducing nutrient inflows within the lake catchment (e.g., improved land/farm management practices within the catchment). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Increasing water inflows into and through Lake Oporoa, through: investigation into the drainage patterns around the lake and its catchment, and rectifying areas where water is being diverted away from the lake (e.g., the farm track on the north-western side of the lake). investigation into options for increasing the water flows and volume/depth within the lake (e.g., reinstating the height of the natural outflow area for the lake). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Restoration of habitat within and around the lake for identified taonga species (e.g., kōwhai, ponga, tuna & tūī), through actions such as:
Reconnecting and educating iwi members and the community on the history and cultural significance of Lake Oporoa.	 Regular wānanga, hui and events to enable iwi and community members to connect to their whakapapa and kōrero tuku iho about Lake Oporoa (e.g., public planting days, wānanga to share information on the history of Lake Oporoa). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, researchers

¹⁶ The riparian planting and enhancement work will be guided by the Lakes380 research which analysed pollen records to identify which vegetation species are natural to the Lake Oporoa catchment (e.g., species prior to human arrival, since the arrival of Māori and then European settlers).

¹⁷ See Kelly & Waters, 2018.

Vision: Restoring the mauri & mana of Lake Oporoa for future generations Objectives Actions Reconnecting and Investigating options for providing simpler and more regular access opportunities to the lake. Potential options include: Providing regular and planned opportunities for accessing the lake (e.g., annual wānanga/group visits to the lake). educating iwi members and the community on • Investigating alternative access options (e.g., alternative access routes). the history and cultural developing an MoU with the landowners around access to the lake. significance of Lake development of a walking track/boardwalk/canopy walkway around the lake complemented with viewing platforms, seating & picnic Oporoa. areas, information signage, and a waharoa (entranceway). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Walking Access Commission Investigating options for reconnecting and educating people about Lake Oporoa. This could include: consolidating all the information on Lake Oporoa in an accessible forum/platform (e.g., developing a platform/directory of online information). developing regular communication material on the work to restore the lake (e.g., quarterly Ngāti Hauiti newsletter, NPRoR/Ngāti Hauiti investigate options for developing Lake Oporoa related teaching materials in tandem with local schools (e.g., history and science materials relating to Matangi and Lake Oporoa). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Local Schools, Lakes380 researchers Undertaking ongoing monitoring of the lake, and exploring options for involving landowners and local iwi/community members in this monitoring work. This includes building the capability of people to get involved in this work. This could include: identifying options for involving landowners and local iwi/community members in "flax-roots" monitoring initiatives. building the capability of the local Oporoa community to undertake this work. investigating options for Lake Oporoa to become part of any regional/national monitoring programme(s). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Building and strengthening relationships between key stakeholders to unify and align efforts to restore Lake Oporoa. This includes strengthening the existing relationships that have supported the restoration efforts thus far (i.e., neighbouring landowners, Taihape Area School, Horizons Regional Council, Rangitikei District Council, and various central government agencies). Potential contributing organisations: all contributing organisations

Vision: Restoring the mauri & mana of Lake Oporoa for future generations	
Objectives	Actions
Safeguarding Lake Oporoa for future generations.	 Undertaking ongoing monitoring of the lake to capture long term data on the health and wellbeing of the lake (this aligns with the actions in the section above). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Investigating options for reconnecting and educating people about Lake Oporoa, to ensure future generations maintain their awareness and understanding of the cultural/historical importance of Lake Oporoa (this aligns with the actions in the section above). Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Local Schools, Lakes380 researchers Undertake regular plant/pest control work to ensure the riparian planting and habitat restoration work is protected. Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR, Horizons Regional Council Undertaking a review of this restoration plan on a regular basis to ensure it is kept updated and relevant to issues that emerge over time. Potential contributing organisations: Landowners, Ngāti Hauiti, NPRoR

7. Summary

Lake Oporoa is a taonga with a rich history. It holds special significance to Ngāti Hauiti and the local community. However, its water quality has declined markedly in recent decades, and this has impacted upon its mauri.

To address this, stakeholders are working together to better understand the lake's changing health, and its history and cultural significance. With the help of this knowledge, this restoration plan sets out a vision and objectives for restoring the health and mauri of Lake Oporoa.

The work to restore Lake Oporoa has only just begun, and implementing the actions in this plan is a priority. The restoration work relies on current and – more importantly – future generations to care for and invest in the lake.

Ultimately, the key to restoring Lake Oporoa is reconnecting people with the lake and inspiring a better future for the lake. By fostering these connections, we will inspire our current and future generations to commit to restoring the mauri & mana of Lake Oporoa.

Me hoki whakamuri, kia haere whakamua: Look to the past, to move forward.



Appendix 1: Te Haerenga Mai a Matangi - The Coming of Matangi Written by Neville Lomax - April, 2022¹⁹

Some four generations (approx. 100 years) before the arrival of the seven main canoes of the migration of our ancestors from Hawaiki (1350 AD), a man journeyed from the Wairarapa side of the Tararua Ranges. This man's name was Matangi. He had heard tales about the large flocks of Tūī birds (Whirikōkō) that had been seen on the western side of the ranges.

Matangi climbed to the top of the ranges to see if he could see these birds for himself.

At a point, that he named **Tirohanga**, on top of the ranges, Matangi gazed towards the northwest and saw a large flock of birds flying over the trees below. Following the birds, he saw them alight on the forest trees at a place that he named **Tahuna-a-rua**. This place is now better known as Palmerston North.

As the birds, continued their flight, Matangi saw them fly high up above the clouds, to again settle in the high forest trees at a place named **Pūrākau**, below **Whakaari** (Mt. Stewart). Matangi named this place **Te Aorangi** (near present day Feilding).

Further on, at a place called **Taumata-pātiti**, the birds rested, sunning themselves in the nearby forest. However, they did not stay there long before flying on. As this forest was undergoing regeneration Matangi named it; **Te Rākauhou**.

The birds flew on and settled for the night at a place that Matangi named **Te Whakamoe-Takapū.** It was here that Matangi slept on his stomach with his face pressed against the ground.

At a place further on that he named, and that is still known as **Tokorangi**, Matangi used his staff as an aid to leap across a stream.

As the birds flew on Matangi came to a stream where he recited a karakia. He named this place **Waitapu** in recognition of his karakia at that place. (**Waitapu Stream** marks the southernmost boundary of the lands of Ngāti Hauiti).

Matangi continued to follow the birds to a place now known as **Pūtōrino** where he heard the screeching of the birds over one of the hills. He named this place **Parororangi**, and it was on that hill that Matangi played his pūkāea (horn).

At a place, now known as **Te Papa o Hauiti** (where Hauiti later died), Matangi saw the birds on the opposite side of the Rangitīkei River. He named this place **Tirohanga-tuarua.**

Further on near the peak of the mountain range at a place named Taupe, Matangi stood and stamped his foot. He named this place **Tapuwae.**

Moving further on up the Rangitīkei River, the flock of birds flew high up into the clouds above the high cliffs. Matangi named this place **Ōtamakapua**.

Further up the river, Matangi again blew on his horn. He named this place **Pūtātara.**

¹⁹ Ngāti Hauiti Oral Traditions as told to Neville Lomax by his Great Grandfather: Wirihana (Wilson) Winiata Te Whaaro.

At a place, further up beside the river, near present day Mangaweka, Matangi plunged his tokotoko into the ground. The place became known as **Te Pounga-o-te-Tokotoko-o-Matangi.**

Continuing to follow the flock of birds, Matangi climbed a mountain range that he named **Whakaara-waru**. It was at this point that the birds again crossed over the Rangitīkei River, flying in the direction of a lake surrounded by bush.

When Matangi and his party reached the lake, he was tired and did not wish to travel any further. To his delight he found that the flock of birds had also travelled as far as they wished and had settled in the forest to feed.

Naming the surrounding area **Rangitauria**, Matangi and his party built a kāinga beside the lake that he named **Oporoa** and settled down to live on the birds supplied by the forest and the tuna supplied by the lake. (This lake is situated approximately five kilometres to the east of Utiku).

Matangi stayed at **Oporoa** for several seasons. However, it was during this period of his occupation of the area that another story of importance to his descendants of Ngāti Hauiti was enacted. Our oral history also tells us about how two of his children, named **Hine—te Iwaiwa** and **Horouta**, came to remain at Oporoa. It is suffice to say that these two children disobeyed an instruction from their father to fetch water, and as a result he angrily turned them into taniwha. They remain in the lake forever searching for some taonga that Matangi is said to have placed in the lake. As a result of these actions, which resulted in **Hine-te-Iwaiwa** and **Horouta** being forever trapped in Lake Oporoa, the lake has remained a special place in the history of the people of Ngāti Hauiti.

After staying for several seasons in the area, Matangi left his two children at Oporoa and, together with some of his party, proceeded to return to the Wairarapa along the western side of the Rangitīkei River.

It was while the party was travelling southward between present-day Ohingaiti and Rata that Matangi's pet dog named **Rangatira** went missing. An exhaustive search failed to locate the animal anywhere. In memory of his lost pet, Matangi named the area **Rangatira**.

All these place names left by Matangi remain in general use to this day and, therefore provides support for the land rights of Ngāti Hauiti, as descendants of this eponymous ancestor, within the middle and southern Rangitīkei District.

Descendants of Matangi later intermarried with the Ngāti Whatumāmoe ancestors of Hauiti and settled in the south-eastern Mōkai Pātea rohe.

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