

Taku Wao

A Maungaharuru-Tangitū perspective on wide-scale pest control and biodiversity restoration

Haratua (May) 2017

Report by Hayley Lawrence and Maungaharuru-Tangitū Trust
Prepared for Manaaki Whenua Landcare Research and Hawke's Bay Regional Council
Funded by the Ministry of Business, Innovation and Employment Envirolink Fund

Maungaharuru-Tangitū Trust 1st Floor, 15 Hardinge Road, Ahuriri, Napier 4110
PO Box 3376, Hawkes Bay Mail Centre, Napier 4142
0800 TANGOIO / 06 835 3300 • info@tangoio.maori.nz • www.tangoio.maori.nz



Note:

The majority of the work for this report was carried out prior to the end of June 2016. Due to strict Maungaharuru-Tangitū Trust tikanga (protocols), the report needed to be thoroughly checked and approved by numerous experts from our Hapū before release. Hence the delayed release date.

© Maungaharuru-Tangitū Trust 2017

No part of this work covered by copyright may be reproduced or copied in any form or by any means (graphic, electronic, digital or mechanical, including photocopying, recording, taping, information retrieval systems, or otherwise), in whole or in part, without the written permission of Maungaharuru-Tangitū Trust.

This report is not to be distributed or published without the written permission of Maungaharuru-Tangitū Trust.

Contents

1	Introduction	1
2	Kōrero tuku iho (oral tradition) relating to terrestrial biodiversity	2
3	Taonga species lists	3
4	Poutiri Ao ō Tāne	10
5	Cultural and economic opportunities consistent with kaitiakitanga	13
6	Recommendations	16
7	Ngā Mihi - Acknowledgements	17
8	References	17



Ka tuwhera a Maungaharuru, ka kati a Tangitū, Ka tuwhera a Tangitū, ka kati a Maungaharuru. When the season of Maungaharuru opens, the season of Tangitū closes, When the season of Tangitū opens, the season of Maungaharuru closes.

1 Introduction

Takiwā

The whakatauākī (tribal proverb) above describes the takiwā (traditional area) of our Hapū (tribes) – from Maungaharuru (the mountain) in the west, to Tangitū (the sea) in the east.
It extends from Keteketerau (the former outlet of Te Whanganui-ā-Orotu) in the south, to the Waitaha River in the north. Our Hapū include Ngāti Kurumōkihi (formerly known as Ngāi Tatara), Ngāti Marangatūhetaua (also known as Ngāti Tū), Ngāti Whakaari, Ngāi Tauira, Ngāi Te Ruruku ki Tangoio, and Ngāi Tahu. Our marae is located at Tangoio.

Mahinga Kai

The whakatauākī also describes the mahinga kai (places for gathering food) of our Hapū. The ngahere (forest) on Maungaharuru was the source of food for our Hapū in the winter. Tangitū was, and remains, the source of food in the summer. While our Hapū collected food on a seasonal basis, our tīpuna (ancestors) were blessed in that they did not need to leave our takiwā in search of food. Hence another Hapū whakatauākī "ko tō rātau pā kai ngā rekereke", "their fortified villages were in their heels". 1

In the past, the ngahere was bountiful. From the domain of Tāne-nui-a-rangi, our Hapū sourced our kai (food). (For more information on Tāne-nui-a-rangi see page 3.) Our tīpuna gathered aruhe (fern root), pikopiko (young fern shoots), the heart and roots of the tī kōuka (cabbage tree), raurau (leaves), berries and huhu (edible grubs) and caught manu (birds). Rongoā (medicinal resources), bark, fern fronds and timber for building materials and carving, flowers for pigments and perfume, leaves and seeds for oils, paru (special mud) for dyes and other resources were also gathered.^{1, 2, 3, 4}

Mauri

All natural resources have a mauri (life force). This mauri binds the spiritual world with the physical world and it is this mauri that connects the Hapū with all natural resources. Mauri is therefore the basis of the spiritual relationship of the Hapū with all natural resources. ¹

Economy

The ngahere was also integral to the economy of our Hapū – kai and resources gathered from the ngahere were often traded with our neighbours. An example of the importance of the exchange of preserved kererū and tūī by Waiatara (rangatira (chief) of Kokopuru pā, Opouahi) for dried mango and kahawai with a chief of a neighbouring tribe is related in the book *Tutira* by Guthrie-Smith. 5

Manaakitanga

The whakatauākī also implies that the manuhiri (visitors) of our Hapū will be served kai from Maungaharuru and Tangitū. The ability to offer the range and quality of kai our Hapū had from our takiwā enhanced our mana.¹

Kaitiakitanga

In addition, the gathering of kai and resources has the reciprocal obligation of our Hapū to act as kaitiaki (guardians). Our Hapū had tohu (signs) and tikanga (customs) which dictated the appropriate time and practices for gathering food and resources from the ngahere. Mātauranga (knowledge) associated with the collection of resources was central to the lives of our Hapū and remains a significant part of the cultural identity of our Hapū today. Mātauranga and associated tikanga, karakia (prayers) and kawa (rules) are all essential for maintaining customary traditions - the ritual and tapu (sacredness) associated with gathering and utilising resources.¹

2 Korero tuku iho (oral tradition) relating to terrestrial biodiversity

Maungaharuru and the mauri of birdlife

Kōrero tuku iho (oral tradition) recounts the migration of the waka Tākitimu southwards, and a tohunga (high priest) of the waka, Tūpai, who cast the staff Papauma high into the air. Papauma took flight and landed on the maunga (mountain) at the summit of Tītī-a-Okura, at a place called Tauwhare Papauma. Papauma embodied the mauri of birdlife. The maunga rumbled and roared on receiving this most sacred of taonga (treasures), and the maunga was proliferated with birdlife. Hence the name, Maungaharuru (the mountain that rumbled and roared). It is also said that the mountain roared every morning and evening as the many birds took flight and returned again to the maunga.¹

Te Mauri-o-te-māra-o-Tauira

Maungaharuru, and in particular its ridges towards the southern end of the range, are known as "Te Mauri-o-te-māra-o-Tauira" — "the garden over which the life force of Tauira still remains". Tauira is the souce tipuna (ancestor) for one of our Hapū, Ngāi Tauira. The maunga was a source of sustenance for Tauira and his descendants over many generations.¹

Tītī-a-Okura

Tītī-a-Okura is the pass where tītī (muttonbirds) flew over Maungaharuru. Te Mapu and his son Te Okura caught tītī there using a net attached between two poles held high by them in front of a fire. Hence the name, Tītī-a-Okura – the muttonbirds of Okura.¹

Clouds of birdlife

The abundance of birdlife in our takiwā influenced the arrival of the Wairoa chief, Te Ruruku (from whom one of our Hapū "Ngāi Te Ruruku" is named). The Ngāti Tū tipuna Marangatūhetaua sought the help of Te Ruruku to defend the fishing grounds at Tūtira and Tangoio, which were being plundered by another hapū. On their journey to Tangoio they slept the night at Arapawanui. The next morning they climbed to the summit of Te Karaka, a high hill overlooking the awa (river). There they were afforded a panoramic view of the surrounding area. Te Ruruku watched in awe as dense clouds of birdlife rose above the forests to black out the horizon of the sea and the rays of the rising sun. Impressed, Te Ruruku asked who had rangatiratanga (authority) over the region. Marangatūhetaua replied that his occupation began from Arapawanui to Maungaharuru, then to Te Waka from there

to Hukanui and on to Puketitiri. On hearing this information Te Ruruku's interest in the expedition increased and discussions began about what help he could provide to Marangat $\bar{\mathbf{u}}$ hetaua. $\mathbf{1}$

Te Rewa-a-Hinetu

In the northern edge of Lake Tūtira, lies the log Te Rewa-a-Hinetu. As its name Rewa (float) implies, it is endowed with the power of moving from spot to spot. Its approach to Tautenga, a rock, was a particularly bad omen, and would signal a death in the Hapū. Te Rewa-a-Hinetu is a branch of a rākau (tree) named Mukakai, which has travelled from the South Island up the coast to Ōtaki; another branch rests in Lake Wairarapa, another at Tikokino, and another at Te Putere. The presence of any portion of this eminent tree is said to be indicative of abundance. With its disappearance the food supply of the Hapū is said to dwindle and diminish.¹

Rūrū

Motu-o-Rūrū is a Ngāti Tū pā near Te Pōhue. It literally translates as "Island of the Owls". Rūrū are kaitiaki of Ngāti Tū.⁶

Pākura

Pākuratahi is the name of a valley and stream in our takiwā. According to our tīpuna, the name Pākuratahi derives from "pākura" which is another name for the pūkeko (purple swamp hen).¹

Tāne-nui-a-rangi

The Hapū regard all natural resources as being gifts from ngā atua kaitiaki (spiritual guardians), including the ngahere. Tāne-nui-a-rangi is the spiritual guardian of the ngahere and all that lives within the ngahere. Tāne-nui-a-rangi is the son of Papa-tū-ā-nuku (Earth Mother) and Rangi-nui (Sky Father), from whom all living things descend, including our Hapū. Descendants of Tāne-nui-a-rangi include the manu and rākau within the ngahere. Therefore, both the descendants of Tāne-nui-a-rangi and the descendants of our Hapū are connected by whakapapa (genealogy). Tāne-nui-a-rangi was central to the lives of our tīpuna and remains significant to our Hapū whānau (families) living today. ¹

Oral tradition provides that Tāne-nui-a-rangi and his ngahere provided a kahu (cloak) for Papa-tū-ā-nuku (his mother). Accordingly, prior to the clearing of native forests, pastoralism, and the introduction of pest and predator species, Maungaharuru was home to a wide range of animals and plants which were, and remain, of great significance to the Hapū. Today, the abundance of these animals and plants is significantly reduced, and some are even locally extinct.

3 Taonga species lists

The tables below list some of the species that are taonga to our Hapū, and their various uses from the past to present day. It is important to understand that not just the species listed but "all of Tāne's tamariki and mokopuna all have a significant part in our lives, especially with our whakapapa and our kōrero, kōrero pūrākau (legends), and kaitiakitanga."⁷

Table 1: Taonga plant species

Important: Readers are advised that some of the plants listed are poisonous. Harvesting and preparation of any plants for rongoā purposes should not be undertaken without the direct guidance and/or supervision of an experienced rongoā practitioner.

Māori & English Names	Botanical Name	Use	Location/s	Ref.
fern	Various species	rongoā; kai (pikopiko fern shoots, aruhe fern roots); shelter; waterproofing; decoration	Arapawanui, White Pine Bush, Tangoio Falls, Waipātiki	1, 2, 3, 4, 8, 9
hangehange (nz privet)	Geniostoma ligustrifolium	rongoā	Waipātiki	1, 4, 10
horoeka (lancewood)	Psuedopanax crassifolius	tie-off like a string	Bellbird Bush	1, 4
horopito	Pseudowintera axillaris	rongoā	Opouahi, Boundary Stream	9, 10
houhere (lacebark)	Houheria populnea	rongoā	Tangoio Falls	1, 4
kahikatea (white pine)	Dacrycarpus dacrydioides	rongoā	Boundary Stream, Arapawanui, Tangoio Falls, White Pine Bush	1, 4
kāmahi	Weinmannia racemosa	rongoā	remnant & regenerating areas of native forest on Maungaharuru, Opouahi, Bellbird Bush, Boundary Stream	1, 4
kānuka (white tea tree)	Kunzea ericoides	rongoā	remnant & regenerating areas of native forest on Maungaharuru, Esk Kiwi Sanctuary Area, Waikōau, Bellbird Bush, Boundary Stream, Waipātiki	1, 4
kāpuka / pāpāuma	Griselinia littoralis	rongoā	Boundary Stream	1
karaka	Corynocarpus laevigatus	rongoā; kai	previously grew in Tangoio but no longer	1, 2, 4, 10
kāramuramu (karamū)	Coprosma robusta	rongoā	Tangoio Falls, Opouahi	2, 4, 10
karamū (shining karamū)	Coprosma lucida	rongoā	Tangoio Falls, Opouahi	4, 10
kawakawa (pepper tree)	Macropiper excelsum	rongoā; kai; tohu	Waipātiki, Tangoio Falls, White Pine Bush	1, 2, 4, 10
kiekie	Freycinetia banksia	kai; drink; weaving	White Pine Bush, Tangoio Falls	1, 4, 8, 9
			1 46 - 1 4	

Māori & English Names	Botanical Name	Use	Location/s	Ref.
kopakopa (broadleaf plantain)	Plantago major	rongoā	Tangoio Falls, White Pine Bush	1, 2, 10
kopakopa (narrow leaf plantain)	Plantago lanceolata	rongoā	Tangoio Falls, White Pine Bush	1, 2, 10
kōrau	Hypolepis rufobarbata Leptopteris hymenophylloides	rongoā; kai	White Pine Bush	1, 2, 10
koromiko (hebe)	Veronica stricta	rongoā	Tangoio Falls, White Pine Bush	1, 2
kōwhai	Sophora microphylla	rongoā; tohu	Boundary Stream, Waipātiki, Tangoio Falls, White Pine Bush	1, 2, 10
kūmara	Ipomoea batatas	rongoā; kai	cultivations	4
lichens	Various species	dye	Opouahi, Boundary Stream	4, 9
māhoe (whiteywood)	Melicytus ramiflorus	rongoā	Esk Kiwi Sanctuary Area, Bellbird Bush, Tangoio Falls, White Pine Bush	1, 4, 10
maire (black maire)	Nestegis cunninghamii	carving	Bellbird Bush, Boundary Stream	1, 3
maire (white maire)	Nestegis lanceolate	carving	Boundary Stream	1, 3
mākākā (nz broom)	Carmichaelia australis	rongoā	Tangoio	4
makomako (wineberry)	Aristotelia serrata	rongoā; kai	Tangoio Falls	1, 2
mamaku (black tree fern)	Cyathea medullaris	rongoā; kai; building materials	Esk Kiwi Sanctuary Area, Boundary Stream, Opouahi, Waipātiki, Tangoio Falls, White Pine Bush	1, 4, 9
mānuka (red tea tree)	Leptospermum scoparium	rongoā; tea; honey; dying piupiu; whare tuna (eel shelters); tuna (eel) preparation and smoking; taewa (potato) storage	remnant & regenerating areas of native forest on Maungaharuru, Waikōau, Opouahi, Bellbird Bush, Arapawanui, Tangoio/White Pine Bush, Tangoio Falls	1, 2, 4, 5, 9
māpau (red matipo)	Myrsine australis	rongoā	Opouahi	1, 10
māpau (brown matipo)	Myrsine covii Cockayne	rongoā	Opouahi	1, 10
mataī (black pine)	Prumnopitys taxifolia	habitat for wild bees' nests; building materials	Boundary Stream, Arapawanui, White Pine Bush	1, 2, 3
māwe (cleavers)	Galium aparine	rongoā	Opouahi	1, 10

Māori & English Names	Botanical Name	Use	Location/s	Ref.
miro (brown pine)	Prumnopitys ferruginea	kai; tohu; image carved on Waharoa (entranceway) of Tangoio Marae	Previously in White Pine Bush	1, 2, 4
mosses	Various species	bedding for babies; nappies	Opouahi, Boundary Stream	4, 9
ngaio	Myoporum laetum	rongoā; kai	possibly at Waipātiki	1, 4
ngutu-kākā (kaka beak)	Clianthus maximus		remnant & regenerating areas of native forest on Maungaharuru, Boundary Stream, Opouahi	1, 4
nīkau	Rhopalostylis sapida	thatching and flooring; decoration	Waipātiki, Tangoio Falls, White Pine Bush	1, 4, 9
ongaonga (native stinging nettle)	Urtica ferox	rongoā	Tangoio Falls, White Pine Bush	1, 10
orihou / whauwhaupaku (five-finger)	Pseudopanax arboreus	rongoā	White Pine Bush	4
pā harakeke (flax bushes)	Phormium tenax	rongoā; weaving materials; kahu (clothing); tukutuku (lattice-work); trading; insect control; whare tuna; threading pipi; ropes & lashings; whipping tops game; paper	Opouahi, Waipātiki, Tūtira, Tangoio Falls, White Pine Bush	1, 2, 5, 9, 10
paewhenua / runa (Māori dock)	Rumex flexuosus	rongoā	Tangoio Falls, White Pine Bush	1, 2, 4, 10
paewhenua / runa (broadleaf dock)	Rumex obtusifolius	rongoā	Tangoio Falls; White Pine Bush	1, 2, 4, 10
parapara (bird-catcher tree)	Pisonia brunoniana	rongoā	Opouahi, Te Pōhue	1, 10
patatē (seven finger)	Schefflera digitata	rongoā	Te Pōhue, Opouahi	10
pīngao	Ficinia spiralis	tukutuku	no longer grows in takiwā	10
piripiri (bidibidi)	Acaena novae-zelandiae	rongoā	Tangoio Falls, White Pine Bush	1, 10
ponga (silver tree fern)	Cyathea dealbata	rongoā; fencing; building materials	Boundary Stream	1, 4, 9
poroporo	Solanum aviculare	rongoā; kai	Tangoio Falls, White Pine Bush	1, 2, 4, 10

Māori & English Names	Botanical Name	Use	Location/s	Ref.
puawānanga	Clematis paniculata	name of Whare Tipuna (ancestral house); features in carving on Whare Tipuna; metaphor; tohu	Boundary Stream, Tangoio Falls, White Pine Bush	4
pūhā (sow thistle)	Sonchus oleraceus	rongoā; kai	various locations	4
raupō	Typha orientalis	kai; lining and covering kumara pits; sides of whare puni (sleeping house); building materials; sealing holes in waka; fishing materials; poi; water purification	Tūtira, Opouahi	2, 5, 9, 10
rewarewa (NZ honeysuckle)	Knightia excelsa	rongoā; kai	remnant & regenerating areas of native forest on Maungaharuru, Esk Kiwi Sanctuary Area, Opouahi, Bellbird Bush, Boundary Stream, Waipātiki, Arapawanui, Tangoio Falls, White Pine Bush	1, 10
rimu (red pine)	Dacrydium cupressinum	rongoā; building materials	Boundary Stream	1, 3, 4
taewa (Māori potato)	Solanum tuberosum	rongoā; kai	cultivations	4
tarata (lemonwood)	Pittosporum eugeniodes	rongoā	Tangoio Falls, White Pine Bush, Waipātiki, Opouahi	4
tātarāmoa (bramble / bush lawyer)	Rubus cissoids	rongoā; kai	Te Pōhue, no longer grows in the Tangoio valley	1, 10
tawa	Beilschmiedia tawa	kai	remnant & regenerating areas of native forest on Maungaharuru, Waikōau, Opouahi, Boundary Stream, Waipātiki, Arapawanui, White Pine Bush	1, 2, 4

Māori & English Names	Botanical Name	Use	Location/s	Ref.
tī kōuka (Cabbage Tree)	Cordyline australis	rongoā; kai;	Tangoio Falls	2, 3, 4,
		building materials		8, 9
tītoki	Alectryon excelsus	rongoā; kai	remnant &	1, 4, 8
			regenerating areas of	
			native forest on	
			Maungaharuru,	
			Waikōau, Boundary	
			Stream, Waipātiki,	
			Arapawanui, Tangoio	
			Falls, White Pine Bush	
toetoe	Cortaderia spp.	building materials;	existing location is	4, 9
		mats; kites; frames	uncertain	
		for tukutuku panels		
tōtara	Podocarpus totara	rongoā; kai; carving	Boundary Stream,	1, 2, 3,
			Waipātiki, Arapawahui	4, 5, 8
tōtara (halls tōtara,	Podocarpus laetus	rongoā; kai; carving	Boundary Stream,	1, 2, 3,
mountain tōtara)			Waipātiki, Arapawahui	4, 5, 8
tutu	Coriaria arborea	rongoā; drink	Pākuratahi, only small	1, 2, 9,
			patches at Tangoio	10
			Falls and White Pine	
			Bush	
wātakirihi (watercress)	Nasturtium officinale	kai	Various streams and wetlands	11

Note: the following locations are Scenic Reserves: White Pine Bush, Tangoio Falls, Waipātiki, Bellbird Bush, Boundary Stream, and Opouahi.

Table 2: Taonga animal species

Name	Use	National Threat Status	References
mon. (hinda)	hinu (fat) used as rongoā; kai;		1, 2, 3, 4, 5, 8,
manu (birds)	feathers for weaving; bones for musical instruments		11, 12, 13
huia		Extinct	1, 14
kāhu (hawk)		Not Threatened	8, 14
kākā (native parrot)	kai; feathers for weaving; metaphor	Nationally Vulnerable	1, 5, 7, 8, 11, 14
kākāriki		Nationally Endangered / Relict	11, 14
kārearea (falcon)	referred to in mihi (greetings) and whaikorero (formal speeches)	Nationally Vulnerable	1, 5, 14
kererū (native pigeon)	kai; feathers for weaving; image carved on Waharoa (entranceway) at Tangoio Marae	Not Threatened	1, 2, 5, 7, 14
kiwi	kai; feathers for weaving	Nationally Vulnerable	1, 2, 3, 5, 11, 14
kōau (shag)	place names: Waikōau & Tauranga Kōau		1, 5
koekoeā (long-tailed cuckoo)		Naturally Uncommon	1, 5, 14
kōkako		Recovering	12, 14
korimako (bellbird)		Not Threatened	1, 5, 14
kōrure (mottled petrel, muttonbird)	kai	Relict	3, 7, 8, 11, 14
kōtare (kingfisher)		Not Threatened	1, 5, 7, 14
mātātā (fernbird)		At Risk	1, 5, 14
miromiro (tomtit)		Not Threatened	1, 14
pākura (pūkeko or purple swamp hen)	kai; place name Pākuratahi	Not Threatened	1, 2, 14
pārera (grey duck)	kai	Threatened	1, 2, 5, 11, 14
pāteke (brown teal)	kai	Recovering	1, 2, 5, 11, 14
pihipihi (silvereye)		Not Threatened	1, 14
riroriro (grey warbler)		Not Threatened	1, 14
rūrū (morepork)	kaitiaki; place name, Motu-o-Rūrū	Not Threatened	1, 3, 5, 14
tītī (Cook's petrel, muttonbird)	kai; place name, Tītī-a-Okura	Relict	1, 3, 7, 8, 11, 13, 14
tītīpounamu (rifleman)		At Risk	13, 14
tīwaiwaka (fantail)	messengers; tohu for harvesting rongoā; always present at Marae during gatherings	Not Threatened	1, 4, 5, 10, 14
tūī (parson bird)	kai; feathers for weaving	Not Threatened	1, 2, 5, 7, 14
weka (woodhen)	kai; feathers for weaving	Nationally Vulnerable	1, 3, 5, 14
whio (bue duck)	kai	Nationally Vulnerable	1, 2, 5, 11, 14

Name	Use	National Threat Status	References
ngāngara (insects)	tohu; whakatūpato (warnings)		8
huhu	kai		2, 3, 8
noke (worm)	bait for tuna		8
pokorua (small flying insect)	depicted on kōwhaiwhai (painted panels); tohu of welcome for manuhiri at the Marae		3
snail	rongoā		4
Powelliphanta 'Maungaharuru' snail	unique to Maungaharuru	Nationally Endangered	11, 15
wild bees	honey - kai		2
mokomoko (reptiles)			8, 11
pekapeka (bat)		Nationally Vulnerable	8, 11, 16

4 Poutiri Ao ō Tāne



Our Hapū kaumātua (elder) Bevan Taylor named the Poutiri Ao ō Tāne project and designed the project logo. Poutiri Ao ō Tāne is about embracing the sacred knowledge of Tāne-nui-arangi. Bevan explains:

"It was during the time of Rangi-nui and Papa-tū-ā-nuku, when their children were living in the world of darkness, that Tāne-nui-a-rangi (Tāne) and his brothers decided to separate their parents to let light into the world of darkness. This they did. Tāne having control of that task, along with some of his brothers who became props whilst holding Rangi-nui up in the sky, allowed light into the world of darkness. Tāne and his brothers became the pillars of the environment, hence the name "Poutiri Ao ō Tāne" (the sacred pillars of Tāne).

Tāne had the authority of all life within the forest including the trees and surrounding area. He delegated some of his authority to some of his brothers. One of those brothers being Parauri who had responsibility for the land and seabirds including the kiwi." ³

'Parauri' was the name Bevan gave the 100th kiwi to be raised by the Save Our Kiwi Hawke's Bay project. Parauri was raised at the Pan Pac Kiwi Creche at Opouahi Scenic Reserve and released into the Kaweka ranges.¹⁷

Tāne-nui-a-rangi and his forest with its creatures provide a kahu (cloak) for Papa-tū-ā-nuku (his mother, earth mother). Poutiri Ao ō Tāne is about restoring the kahu of Papa-tū-ā-nuku together as a community. The logo represents Tāne's authority within the environment. The spiral in the middle is the beginning of the environment Tāne provided. As it spirals out it is the ever-changing environment, including the period of time when mankind caused

destruction and today when we are trying to right the wrongs to return the environment to its natural state. 18

Our Hapū are tāngata whenua of the area included in the Poutiri Ao ō Tāne project - Maungaharuru to Tūtira. We have been part of the conservation effort from before the project began. Numerous bird translocations have enhanced the mauri of the area. The cultural importance of birdlife to Maungaharuru is described in the kōrero above. Our kaumātua enjoy recollecting the translocation of kōkako from our Tūhoe relations in Te Urewera to Boundary Stream in 2001. In 2012 we welcomed kākā and kākāriki. Seabird translocations began in 2013 with tītī and kōrure. These transfers are particularly significant to our Hapū, given our oral traditions of seabirds on Maungaharuru (described above).

Most recently (in 2015), pāteke were reintroduced to Opouahi. We are pleased that some pāteke remained at Lake Opouahi and have bred, it is "heart-warming". However, most translocated pāteke left the lake and were predated on or disappeared. We need to understand why and to remedy the issues as kaitiaki of this precious taonga, provided to us by Ngāti Wai of Northland. Some of the issues we should consider include the health of Lake Opouahi and the predator control in the surrounding area. ¹²

Ngāngara (insects)

There is a nationally endangered native snail that is only found on our sacred maunga at Tarapōnui-a-Kawhea, currently called "Powelliphanta Maungaharuru". ¹⁹ Our Hapū would "love to know more about these snails, they must be incredible creatures". ¹¹ The discovery of the *Powelliphanta* Maungaharuru has "highlighted Maungaharuru and our area to people who might not be familiar with it because of this unusual snail". ¹¹

Pest control

Predation on native birds, reptiles, insects etc. by introduced predators is "the biggest issue that we are dealing with. If we can't sort that out then all our efforts to relocate birds is pointless." ¹¹ Our kaumātua urges "we need to be supportive [of pest control]" ³ and we recognise "it's a very complex issue to deal with." ¹¹

Opouahi Station covers 2,550 ha and is included in the Poutiri Ao ō Tāne wide-scale predator control programme. This programme aims to "promote recovery of native fauna in a pastoral landscape with fragments of native bush". Our Hapū regained ownership of the land at Opouahi Station as part of our Treaty of Waitangi settlement. Landcorp Farming Limited currently leases the station. The station is adjacent to DOC reserves: Boundary Stream Scenic Reserve, Bellbird Bush Scenic Reserve, Opouahi Scenic Reserve and Waikōau Conservation Area. Birches Conservation Covenant is within the station. We would like to measure the health of the station, its forest and waterways, using a cultural health index. An inventory of the biodiversity surviving on the station, especially in the Birches Conservation Covenant, would also aid our Hapū environmental planning and gain understanding into potential positive benefits of the pest control.

Pest control and the effects on rongoā

Introduced pests affect rongoā by eating the plants and by defecating and spraying to mark territories. The main pests affecting rongoā are possums, rats, goats and cats. Tangoio Falls Scenic Reserve is an important rongoā harvesting area but the pest control there needs improvement. Another problem is that people drop off unwanted pets at the Reserve, including cats, chickens, and ducks.^{4, 10}

Our Hapū rongoā practitioners understand that it is necessary to use bait stations at Tangoio Falls Scenic Reserve for pest control, but need to know more information. There is concern about the toxins leaching into the ground, water, and back into the rongoā. More information regarding the baiting schedule and how long the toxins remain in the environment would be helpful - rongoā can then be harvested before bait stations are erected.^{4, 10}

Most weeds are a problem in rongoā harvesting areas, however, some rongoā are considered to be weeds by others. It could help if weed-spraying practices were improved to minimise the impact on rongoā in important harvesting areas.^{4, 10}

Other issues for rongoā

Pollution is a major issue for rongoā, including water pollution, vehicle exhaust, road run-off, farming practices, weed spraying, dead animals, animal waste, and people dumping rubbish. People using walkways can leave emotional / spiritual pollution, be disrespectful to rongoā and the environment and take it for granted.^{4, 10}

Harvesting by people who don't know how to harvest sustainably can cause damage to plants. Another problem is that others from outside our Hapū have nowhere in their own regions to harvest, and so harvest from our area, thereby depleting our scarce rongoā resources. ¹⁰

Pest control and habitat restoration

Our kaumātua stated that "conserving the area is one thing, but it's about growing the area." A combination of extended predator control and habitat restoration could increase the range of our taonga species. Glen et al.²⁰ state "controlling species in the landscape between conservation reserves can restore functional connectivity, with benefits for a range of native species and ecological processes." We would like to explore the feasibility and potential benefits of 'bush corridors' from Maungaharuru to Tangitū, linking mountain to sea, i.e. from Boundary Stream, Opouahi, Tūtira to the coast at Moeangiangi, Arapawanui, Waipātiki and Tangoio.

Pan-regional pest control

In the future, as the scale of predator control increases, we would like to see more of our takiwā connected and protected from predators. It opens up the opportunity of bush corridors so that "birds can enjoy a greater range in safety". ¹¹ Tania Hopmans ¹¹ (Trustee) explains that pan-regional pest control is "a great initiative if it can be successful. I think the notion of pest control across agricultural landscapes is a really interesting one and seems to make sense. That if birds can happily inhabit agricultural landscapes then they're not limited to ngahere, then it brings birds closer to the urban environment and our children, where we live and play today, and hopefully it means they've got a greater range to survive." If predator control becomes pan-regional it could help to reconnect our taonga with those of our neighbours and relations, benefitting us all.

Tūtira

Various natural resources at Tūtira were celebrated by our Hapū. Where Tūtira was a place of abundance, it is now resource poor. Some rongoā were only found in or around Lake Tūtira, for example, particular harakeke (flax). The harvesting of rongoā from Tūtira is now non-existent because the rongoā that was there is nearly depleted and the lakes and their awa are polluted. Our Hapū are now undertaking a project called Tūtira mai ngā iwi with partners including the Hawke's Bay Regional Council. Funding was sourced from the Ministry

for the Environment's Te Mana o Te Wai fund. The project involves short-term actions (including habitat restoration, pest plant removal, fencing of waterways etc.) and longer-term planning, to improve the mauri and water quality of Tūtira lake and its associated waterways.

5 Cultural and economic opportunities consistent with kaitiakitanga

Cultural revitalisation

If the whenua and its associated biodiversity is restored "it would be an opportunity... to reconnect back to our tīpuna and the way that they used to live. [It] would just be a paradise, whenua taurikura." ¹³ Our rangatahi (youth) leader further explains "the mauri of the maunga would be so powerful that I think it would call back all of the people, not only the birds but the people... If we restore this maunga we are going to restore the people as well." ¹³ As he thinks of the future, he comments that we would "be able to put life into our whakatauākī which will enable us to put life inside of our uri whakaheke, our generations to come." ¹³

Retention of mātauranga Māori and cultural practices

Decisions about how to look after taonga species and places within the takiwā are based on mātauranga. Mātauranga associated with the collection of resources was central to the lives of our tīpuna and remains a significant part of the cultural identity of our Hapū today. Restoration of biodiversity would allow us to revive our tikanga and cultural practices (rongoā, mahinga kai, māra kai (cultivated gardens), whakairo (carving), raranga (weaving)) that are connected to resources of the ngahere, and put our whakatauākī into practice. That is, the seasonal harvest from Maungaharuru.

Resources for carving and weaving

Many of our taonga are made from natural resources that are currently difficult to obtain. Tōtara is the main tree species used for carving but sources are limited. Creating plantations of tōtara for carving is something for our Hapū to consider. If tree species such as tōtara and black maire were more abundant it would create more opportunities for carving.³

Feathers are important for creating kahu huruhuru (feathered cloaks) and those made from the feathers of native birds are more highly prized. Today the most prized is the kahu kiwi (made from kiwi feathers). In recent years, one of our Hapū whānau learned to weave a kahu kiwi. The whānau explained there were many benefits in the process, it "brought us knowledge... of taonga Māori and mahi whatu" (weaving). It was also important for whanaungatanga (family connection). The whānau describe the kahu kiwi as "a priceless taonga" they are proud of having. The whānau are now weaving a kahu kererū (made from kererū feathers). Kahu are used at tangihanga, worn at important hui, graduations etc. Kahu were laid on the tables on which our Deed of Settlement was signed. If feathers from native birds such as kiwi, kererū, tūī, and kākā are more available in the future it would be of great cultural benefit to our Hapū, for the re-establishment of cultural practices and the revitalisation of the mātauranga associated with those practices.

Kai: spiritual and physical sustenance

"To be able to serve that traditional kai, traditional rongoā, traditional resources and share them amongst our Māori people would be just absolutely empowering to us as tāngata whenua. Without these resources who are we?" ¹³

With the translocation of tītī and kōrure chicks to Maungaharuru we look towards the future where our descendants could enjoy them again as a food resource. To be able to eat tītī and kōrure "would be really good, we'd be able to... experience the past." "[I] love the idea that hopefully my mokopuna and their mokopuna will see that maunga full of tītī once more... and all the practices and all the tikanga around what our whānau would've done when they collected tītī would be reborn again... I think muttonbirding would be a great goal but only when that population is thriving, abundant and sustainable." ¹¹

Hapū kaumātua Matiu Eru⁸ explains "He oranga ngakau...Pēnā ka taea e rātau te hokihoki ki ngā ra o mua. Kia tūtuki ai i a rātau o tātau wawata." (It would be of great comfort; if the generations to come can return to what it was like in the old days, our dreams will come true).

Physical and spiritual health

Our Hapū is fortunate to have expert rongoā practitioners to care for our physical and spiritual health. Our practitioners need suitable plants to work with. "Rongoā rākau [(medicinal plants) are] part of our rongoā world. Without that we ... are incomplete". However, "rongoā is more than just the plants ... rongoā begins and ends with wairua" (spirituality). 10

Restored biodiversity would support our rongoā practitioners. It is important that healthy, abundant and diverse rongoā can be sourced from areas in close proximity to our Marae, such as the Tangoio Falls, Waipātiki and White Pine Bush Reserves. It is important to note that rongoā harvesting areas are rotated so as not to deplete the resource. Therefore, multiple harvesting areas are required. The skills and expertise of our rongoā practitioners are in high demand and their time is very precious. If time spent searching for scarce rongoā rākau can be reduced by restoration, it would be of great benefit to our practitioners and their patients.^{4,10}

Education

Te Kōhanga Reo o Punanga Te Wao is based at our Marae. The mokopuna enjoy seeing manu flying around the Kōhanga Reo, and can identify them, especially the kererū, tūī, tīwaiwaka and kōtare. The mokopuna are taught to mihi to the manu and respect them as tuakana (as manu were created before people). The Kōhanga Reo has haerenga (trips) to White Pine Bush 2 - 3 times a year during which they collect resources such as rau (leaves), rākau kirikiri (bark), and wood for education and artworks. Their kaiako (teacher) explains "the ngahere is our akomanga" (classroom). They enjoy the trips to the bush "it's a therapy" and opportunity to teach the mokopuna about Tāne and Papa-tū-ā-nuku and the importance of looking after her - so that they can then teach their parents. Improvements to the biodiversity would improve the educational experience of our mokopuna.

It is important for our rangatahi (youth) and adults to also be able to experience Te Taiao (the natural world) to evoke kaitiakitanga. Our kaumātua Matiu Eru⁸ advises "we gotta take our mokos, our people, around to see these things... once they see them, they'll appreciate it ... so they'll think about their kids, their mokos, they'll want to see that kind of thing in their time." Tania Hopmans¹¹ explains "the more we know our maunga and what goes on on it the better we are to be kaitiaki. ... You can't protect something if don't love it, you can't love it, if don't know it."

Wānanga (Māori educational forums) are "a good way to educate the rangatahi on this kaupapa (topic)". ¹³ There are currently wānanga held throughout the year at Tangoio Marae for the Te Ara Kairangi programme for rangatahi. Hōri Reti¹³, the leader of Te Ara Kairangi suggests "the restoration project should be able to work hand in hand with wānanga we have at Tangoio."

Education - Rongoā

A couple of decades ago, Hapū tamariki (children) were brought up with rongoā. Even at preschool age they were able to go to White Pine Bush and show their Kōhanga Reo kaiako which plants were rongoā and what they were used for! These tamariki could heal themselves using rongoā. Rongoā supplies were kept at Kōhanga Reo for them. As they grew and progressed to kura (school) and college, the rongoā supplies remained with them. This is no longer the case for most of our tamariki due to loss of the Whare Oranga (health clinic), and loss of local plant biodiversity.^{4, 10}

To educate more of our tamariki, rangatahi, and adults about rongoā is an aspiration. For educational purposes it is particularly important to have good plant biodiversity that is easily accessible, i.e. at Tangoio Falls Reserve. "It's hard to teach someone about a plant when they can't touch it, see it, feel it, get to know it ... without the experience ... it's nothing but words." A dedicated Whare Oranga is also required, as a clinic and an educational facility. 4,10

Economic Opportunities

Our Hapū are considering ecotourism as a potential economic opportunity, especially as the restoration of biodiversity improves but "when the time is right". ¹¹ We could "take people to [see] and hear Maungaharuru in its natural state. Just to be able to do that would be a huge benefit to our Hapū". ¹³ The creation of bush corridors (mentioned above) with associated walkways could also benefit ecotourism.

An eco-retreat is another possibility; a place where rongoā healing such as eye baths, mudpacks, massages etc. are offered. It could "create opportunities for our people ... that could be sustainable". ¹⁰ "The dream of any practitioner" is to be able to earn a living practicing rongoā - not commercialising products but being paid for services. ¹⁰ The retreat could support a clinic. "If we had our plants and we had the people ... and the building ... we could service people from far and wide, ... Tangoio would be a thriving place. ^{4, 10}

In the future, when biodiversity is restored, harvesting could provide economic opportunities. Hōri Reti¹³ suggests "to be able to harvest natural kai, the kai that our tīpuna once were able to harvest, every season up there, the birds, the plants, be able to use those in many ways to create employment opportunities for our Hapū would be huge. I think the opportunities are there."

Employment Opportunities

Job opportunities for our Hapū on Maungaharuru "would be perfect because nothing better than working in your own takiwā, with your own taonga, and being able to look after your whānau, have a good wage and love what you do and its all tied up with who you are and where you're from. That would be perfect."

Employment opportunities can have cultural benefits in addition to economic benefits. One of our rangatahi, Bruce Morrell, has worked in weed control in Tangoio Soil Conservation Reserve, including on Te Pā-o-Toi, a pā of great significance to our Hapū. Bruce²¹ explains:

"It's great to be able to be on the land that our ancestors once lived and fought for, being able to go up to the pā site and cut a new track for our elders to have access was the best part. I'm truly glad I have the opportunity to view and help keep the environment in its best condition and also learn about the culture more."

6 Recommendations

Improve the health of waterways to improve the health of terrestrial biodiversity

The health of our waterways is directly related to the health of the plants and animals in the surrounding area. To improve the habitat for terrestrial biodiversity it is therefore important to consider the mauri of the waterways. A holistic view of restoration should be taken.¹²

Conduct an Environmental Audit

We need an audit of our environment from our perspective, through our lens, to find out more about the abundance of species that are important to us. Not just species that we use but species that we enjoy, that are part of our whakapapa. We need to understand what state are they in, if they are not thriving then why not and what can we as Hapū and other organisations do about it. Subsequent monitoring is then important.¹¹

Increase understanding of predator controls and the subsequent benefits

Our Hapū would like to understand more about cultural health, species abundance and diversity in areas of intense predator control (such as Boundary Stream Mainland Island), and in areas subject to wide-scale predator control. Of particular interest is Opouahi Station, including Birches Conservation Covenant, which our Hapū regained in our Treaty Settlement. 11, 12

Explore Bush Corridors

We would like to understand the feasibility and potential benefits of bush corridors expanding habitat and linking Maungaharuru to Tangitū. How the corridors could be designed to benefit native animals, plants, walking tracks, and whether they could follow traditional trails of our tīpuna such as the trails detailed in the book *Tutira*. 5, 11, 12

Improve communication about pest control activities

Communication between pest control agencies, Maungaharuru-Tangitū Trust and rongoā practitioners could improve rongoā harvesting. If we could be informed when and where bait stations are to be erected and when weed-spraying will take place, rongoā could be harvested prior. 4, 10

Minimise impacts of weed spraying on rongoā

Discussions regarding weed spraying techniques and protocols and the effects on rongo \bar{a} could lead to changes to minimise the impact on rongo \bar{a} in specific harvesting areas.^{4, 10}

Improve communication about track maintenance

Communication between agencies maintaining tracks in Reserves, Maungaharuru-Tangitū Trust and rongoā practitioners could aid rongoā harvesting. When native plants are to be cleared for tracks etc. we could be informed so that harvesting can take place before the plants are destroyed. Maintenance of tracks is particularly important in frequently harvested areas i.e. Tangoio Falls Reserve including the track to Te Ana Falls, Waipātiki and White Pine Bush Reserve. 4, 10

Restore Reserves close to urban centres

Restoration and maintenance of Tangoio Falls, Waipātiki and White Pine Bush Reserves are particularly important for the continued harvesting of rongoā, due to the location and ease of access to these reserves. $^{4, \, 10}$ Improved access also increases the opportunity for cultural practices and education. $^{4, \, 10, \, 11}$

Explore education and employment opportunities

Education and employment opportunities relating to kaitiakitanga are important for our Hapū. ^{3, 4, 8, 10, 11, 13, 21, 22}

Complete the Environmental Management Plan

Our Hapū are currently working on our Environmental Management Plan. This plan will formalise our kaitiaki roles and responsibilities, so that our position on a range of issues including biodiversity can be taken into account by relevant agencies and stakeholders.

7 Ngā mihi - Acknowledgements

He mihi maioha tēnei ki ngā kaitiaki o Maungaharuru ki Tangitū. We give special thanks to the kaitiaki who provided their mātauranga, māramatanga (insight), whakaaro (thoughts) and wawata (dreams and aspirations) towards this report: kaumātua Bevan Taylor, Matiu Eru, and Fred Reti; Tania Hopmans, Aroha Taurima, Hōri Reti, Joe Tawhai, Bruce Morrell, and our rongoā experts Sabre (Thursday) Puna, Natasha Puna, Sally-Belle Taunoa, and Jessica McGregor. Jessica was also the research assistant for the project. Thanks to Justin Puna for naming our research project "Taku Wao".

This report was funded by the Ministry of Business, Innovation and Employment Envirolink Fund. We acknowledge Campbell Leckie, Hawke's Bay Regional Council and Garth Harmsworth, Manaaki Whenua Landcare Research for the opportunity to research this kaupapa.

8 References

¹ The Maungaharuru-Tangitū Hapū and The Trustees of the Maungaharuru-Tangitū Trust and the Crown, *Deed of Settlement of Historical Claims*, *25 May 2013*, pp. 29-32, 50-52, 56-58.

² Taylor, B. "Esk Forest Claim: WAI 299 Mohaka - Waikare Confiscated Lands Customary Usage Report", research report, 1993. pp. 1-115.

³ Oral Interview with kaumātua Bevan Taylor, 14 June 2016.

⁴ Oral interviews with Jessica McGregor, 20-21 June 2016.

⁵ Guthrie-Smith, H., *Tutira: The Story of a New Zealand Sheep Station.* 3 ed. Edinburgh & London William Blackwoord & Sons Ltd, 1953. pp. 100-102.

⁶ Parsons, P., *In the Shadow of Te Waka - The History of the Te Pohue District*. Te Pohue History Committee, 1997. pp. 225-226.

⁷ Oral interview with Aroha Taurima, 20 June 2016.

⁸ Oral interview with kaumātua Matiu Eru, 9 June 2016.

⁹ Brooker, S., Cambie, R., Cooper, R. *Economic Native Plants of New Zealand*. Economic Botany, 43(1), 1989, pp. 79-106.

¹⁰ Hui with Rongoā practitioners Sabre (Thursday) Puna, Natasha Puna, Sally-Belle Taunoa, and Jessica McGregor, 11 June 2016.

¹¹ Oral interview with Tania Hopmans, 23 June 2016.

 $^{^{12}}$ Haerenga (journey) and interviews with kaumātua, matakite (seer), and kaitiaki, 15 June 2016.

¹³ Oral interview with Hōri Reti, 20 June 2016.

¹⁴ Robertson, H., Dowding, J., Elliott, G., et. al. *Conservation status of New Zealand birds, 2012*. New Zealand Threat Classification Series 4, Department of Conservation, Wellington, New Zealand, 2013.

¹⁵ Hitchmough, R., Bull, L., Cromarty, P. (compilers). *New Zealand Threat Classification System lists, 2005*. Department of Conservation, Wellington, New Zealand, 2007.

¹⁶ O'Donnell, C., Christie, J., Lloyd, B., et. al. *Conservation status of New Zealand bats, 2012*. New Zealand Threat Classification Series 6, Department of Conservation, Wellington, New Zealand, 2013.

¹⁷ ECOED Press Release, 2011. http://www.ecoed.org.nz/news/Official-Opening-of-Pan-Pac-Kiwi-Creche.

¹⁸ Video of Bevan Taylor: *Bevan Taylor introduces Poutiri Ao ō Tāne*, Poutiri Ao ō Tāne, 2012. https://www.youtube.com/watch?v=vMRxypiF1ww

¹⁹ Walker, K. *Recovery plans for Powelliphanta land snails 2003-2013.* Threatened Species Recovery Plan no. 49, Department of Conservation, Wellington, New Zealand, 2003.

²⁰ Glen, A., Perry, M., Yockney, I. et al. *Wide-scale predator control for biodiversity conservation: a case study from Hawke's Bay, New Zealand*. in prep.

²¹ Email interview with Bruce Morrell, 19 June 2016.

²² Oral interview with Joe Tawhai, 22 June 2016.