

He aratohu mā te pouako



# Ngā Kararehe o Aotearoa: He Mātauranga, he Matatika

Georgina Tuari Stewart<sup>1</sup>

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Ngā kaikōrero tokoono

Te mātauranga Māori mō ngā kararehe

Ngā huatau Māori mō ngā matatika kararehe  
me ngā pānga ki ngā Wh e Toru

Te kupu taka, ngā rauemi mō te akomanga  
me ngā kupu aratohu mā te kaiako

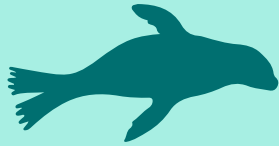
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# Ngā kaikōrero tokoono

**Ko Ahorangi Eloise Jillings**

He Rata Kararehe / He Pouako Whare Wānanga

**Ko Hilton Collier**

He Mātanga Hāpai Pakihi Ahuwhenua

**Ko Tākuta Kimiora Henare**

He Kairangahau Mate Pukupuku

**Ko Tākuta Leilani Walker**

Behavioural Ecologist

**Ko Rauhina Scott-Fyfe**

He Kaitiaki Pūranga, He Kairangahau Pakake

**Ko Te Winiwini Kingi**

He Tangata Whenua



Ngā Kararehe o Aotearoa: He Mātauranga, he Matatika

Ko Ahorangi Eloise Jillings

He Rata Kararehe / He Pouako  
Whare Wānanga



Ko Moehau tōku maunga  
Ko Tikapa te moana  
Ko Mātai Whetū tōku marae  
Ko Ngāti Te Aute tōku hapū  
He uri ahau nō Ngāti Maru ki Hauraki  
Ko Eloise Jillings tōku ingoa  
Tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

He Ahorangi a Eloise i te Whare Mātauranga me te Tautika mō ngā Rata Kararehe ki Te Kunenga ki Pūrehuroa, ki Te Papaioea. Ka ārahi ia i te ara o te VetMAP e whakapiki ai i te tautikatanga o te whai wāhitanga me te angitu o ngā ākonga Māori me ngā ākonga taketake nō Te Moana nui a Kiwa (Pasifika) i te mātai kararehe. Koia anake te kura rata kararehe i te motu, nā reira e whakaawe ana te hautū a Eloise i te anamata o te rāngai rata kararehe mō ngā Māori me te hunga Pasifika me mātua panoni, mēnā ka whakatauritea ki ngā āhuatanga ā mohoa noa nei.

Ahakoia i whakangungua ia, i tīmata mai hoki ia hei rata kararehe ki roto tonu i te rāngai, i uru atu ia ki ngā tohu tāura hei kaimātai māuiuitanga, arā, te āta tātari i ngā whakamātautau, te tautohu i ngā tahumaero hoki, i roto i ngā kararehe.

Nō nā tata nei, kua kotiti a Eloise i āna mahi ki mua tonu i ngā kararehe kia whakaakona ngā rata kararehe, e arotahi nei ki te tautikatanga mō ngā ākonga Māori i te ao o te mātauranga mō ngā rata kararehe. Ko Eloise te kanohi mō te kura i ngā kaupapa taritari ākonga. Koia hoki tētahi o ngā pūkaha kei muri i te VetMAP, he kaupapa hei tautoko i ngā ākonga Māori me ngā ākonga nō Te Moana nui a Kiwa i te kura rata kararehe. Ahakoia ko Eloise te toihau o VetMAP, i ēnei rā nei, ka mahi tētahi atu kaimahi ukiuki i ngā mahi o ia rā.

Pērā i te nuinga o ngā tāngata ka tonono ki te akoako i te kura rata kararehe, mai rā anō a Eloise e pīrangi ana ki te tū hei rata kararehe. I whānau mai ia i Aotearoa, ka mutu, ko ia te pōtiki i waenga i ngā tamariki e whitu, he Māori tōna māmā, nō Kānata tōna pāpā, waihoki, i neke atu te whānau ki Kānata i te wā e whitu ō Eloise tau, ahakoia i pakeke kē ōna hāmua, i wehe kē hoki i te kāinga. I mutu āna mahi i te kura, i tīmata hoki ia i te whare wānanga i Kānata, engari i tana rongo i pai noa tana kotahi atu ki te kura rata kararehe i Aotearoa, i hoki mai ai ia i te tau 1996. I whakaaetia tana uru atu ki te hōtaka rata kararehe i te kura e mahi tonu nei ia i ēnei rā nei hei kaimahi pūmātauranga matua – koia anake te Ahorangi Māori o te Mātauranga mō ngā Rata Kararehe i te motu, i te ao whānui hoki (te āhua nei).

Ko te reo Māori te reo tuatahi o tana kuia i te taha o tana māmā, ā, i noho ia i te pūtake o te puke kei reira tana marae, ko Mātai Whetū. I kaha te tāmia o tērā reanga kia kaua e kōrero i tō rātou reo ki ā rātou tamariki, nā reira kāore tō Eloise māmā i tipu mai i roto i te reo me ngā tikanga, ahakoia i pātata tana noho ki te marae. E motuhake ana te ao o ngā tāngata katoa, ka mutu, kāore e kaha ana te kitea o ngā tamariki Māori e wehe ana i Aotearoa i te wā e 7 noa te pakeke kia noho ki Kānata, ka hoki mai ai ka 18 tau ana te pakeke ki te haere ki te whare wānanga i konei. Engari, pērā i te huhua noa atu —ko te nuinga rānei—o ngā Māori o ēnei rā nei, kei runga a Eloise i tana ara o te whai i tōna anō tuakiritanga, i tōna tūrangawaewae i te whenua me te iwi o Pare Hauraki, o Te Tara-o-te-ika-a-Māui.

Professor Eloise Jillings

Veterinarian / University Educator



Ko Moehau tōku maunga  
Ko Tikapa te moana  
Ko Mātai Whetū tōku marae  
Ko Ngāti Te Aute tōku hapū  
He uri ahau nō Ngāti Maru ki Hauraki  
Ko Eloise Jillings tōku ingoa  
Tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

Eloise is Professor of Veterinary Education and Equity at Massey University, Palmerston North. She leads the VetMAP pathway for increasing equity of participation and success for Māori and Pasifika students in veterinary science. This is the only vet school in the country, so Eloise’s leadership is influencing the future of Māori and Pasifika in the veterinary profession, which needs to change drastically, compared with how things have been until now.

Although she trained and began working as a frontline vet, Eloise undertook further post-graduate training in clinical pathology, which is the specialist interpretation of tests, and diagnosis of disease, in animals.

More recently, Eloise’s work has shifted away from working directly with animals to the more human side of educating veterinarians, with a focus on equity for Māori students in veterinary education. Eloise is the face of the School at on-campus recruiting events. She is also the driving force behind VetMAP, an initiative to support Māori and Pacific students in the vet school. While Eloise is the head of VetMAP, nowadays a full-time professional staff member takes care of day-to-day operations.

Like most people who apply to study in vet school, Eloise has wanted to be a vet for as long as she can remember. Born in Aotearoa New Zealand as the youngest of seven children of a Māori mother and Canadian father, the family moved to Canada when Eloise was seven, although her oldest siblings had already grown up and moved out. She finished her schooling and started university in Canada, but on finding out she could go directly to vet school in New Zealand, she came back in 1996. She was selected into the veterinary programme in the school where she still works today as a senior academic – the only Māori Professor of Veterinary Education in the country and (presumably) the world.

Eloise’s maternal grandmother was a native speaker of te reo Māori and lived at the base of the hill on which her marae, Mātai Whetū, is located. Māori people of those generations received strong messages not to speak in their language to their children, so Eloise’s mother, although growing up living close to the marae, was not raised with te reo or tikanga. Each person’s life story is unique, and it is not very common for Māori children to leave Aotearoa at age 7 to go and live in Canada, then come back aged about 18 to attend university here. But like so many—if not most—Māori people today, Eloise is on her own personal identity journey, back to her roots in the whenua and iwi of Pare Hauraki, the Coromandel Peninsula.

Ko Hilton Collier

He Mātanga Hāpai Pakihi Ahuwhenua



Hawke’s Bay Regional Council.

Ko Hikurangi te maunga  
Ko Waiapu te awa  
Ko Ngāti Porou te iwi  
Ko Te Whānau a Rakairoa te hapū  
Ko Rāmari rāua ko Nehe Collier  
ōku mātua  
Ko Hilton ahau  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

I tipu mai a Hillton i tētahi pāmu miraka i ōna whenua tupuna i Te Tai Rāwhiti, i pāmūtia ai e ōna mātua tūpuna, i tukuna iho ai hoki ki tōna māmā, ā heke noa iho ki a ia. Ka pēnei tana whakaahua i te pāmu a te whānau o tōna tamarikitanga:

“ko tōna uho, he pāmu miraka, engari he hinonga matatini kē ia. He māra nui ā mātou, he hipi ā mātou, he kai ā mātou, he mīti kau, he heihei. Katoa mai aua mea i a mātou, he kikomanu hoki. Waihoki, i te whenua ngā mea katoa e ora ai te tangata. He pūnaha hauropi i whakawhirinaki atu ki te pāmu.”

Nōna e tamariki ana i tana āwhina i tana koroua i te pāmu, ka hoki ō Hilton mahara ki te 143 kau i mirakahia ai e rāua, me tō rāua mōhio ki tēnā kau, ki tēnā kau.

“He ingoa tō te katoa. He paparanga pāpori hoki tō rātou. I mōhio rātou ki tō rātou wāhi i te hēti. Mēnā kāore i tika te raupapa i tā tētahi kau kuhu mai, i mōhio koe he raru tō taua kau.”

I haere a Hilton ki Tūranga Tāne, ā, i tana puta i te kura, i mōhio ia ki tana pīrangī ki te tū hei kaupāmu, nā reira i kotahi atu ia ki Te Whare Wānaka o Aoraki (ko Lincoln College i taua wā), ki te whakatutuki i tana Tohu Paetahi o te Mātai Ahuwhenua i te tau 1984. I taua wā, i tīmata mai tana whakahaere i ngā āhuatanga katoa o te pāmu a tana whānau. Nāwai, nāwai, ka whakawhiti atu ia ki te ao o te mātanga hāpai i te pakihi ahuhwhenua Māori.

Hilton Collier

Agribusiness Consultant



Hawke’s Bay Regional Council.

Ko Hikurangi te maunga  
Ko Waiapu te awa  
Ko Ngāti Porou te iwi  
Ko Te Whānau a Rakairoa te hapū  
Ko Rāmari rāua ko Nehe Collier  
ōku mātua  
Ko Hilton ahau  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

Hilton grew up on a dairy farm on his ancestral lands in the East Coast, Te Tai Rāwhiti, farmed by his grandparents and passed down to his mother, and then to him. He describes the family farm of his childhood as being:

“fundamentally a dairy farm, but it was actually a mixed enterprise. We had big gardens, we had sheep, we had cows, beef, chicken. You name it, poultry, we had it. And we literally could live off the land. There was an ecosystem that relied on the farm.”

As a child helping his grandfather on the farm, Hilton recalls how they milked 143 cows and knew each one as an individual.

“They all had names. They all had their own pecking order. They all had their place in the shed. And when a cow came in in the wrong order, you knew there was something wrong with the cow.”

Hilton went to Gisborne Boys High School, and by the time he left school knew he wanted to be a farmer, so he went straight on to study at Lincoln University (then Lincoln College), completing his Bachelor of Agricultural Science degree in 1984. From there, he gradually took over full control of his family farm. Later, his work moved into Māori agribusiness consultancy.

Hilton thinks all animals have mana in their own right and deserve to be treated with respect. He explains the difference between good and bad livestock handling practices, both through his own experiences, and in terms of animal slaughter science. In the old days on the farm, animals killed ‘for the house’ would be gently walked into the killing house. They would be rested and watered, and then they’d be dispatched and dressed. All that contributed to the meat being tasty and tender, and to the full experience of having looked after the animal through to it fulfilling its purpose as food.

In contrast, when tired animals are loaded hurriedly onto a truck in hot conditions they will arrive at the works stressed, with elevated glycogen levels. The meat will not set properly and the resulting steak will not be tender, but instead will be chewy, dark-coloured and terrible. Whereas if that animal were respected, its meat could be presented in premium quality, and the farmer would be justified in expecting consumers to pay a premium, because they can guarantee that steak will be consistently tender. Even in the business of food production it is important to remember that ‘all living things have mana’ and, if treated as such, they end up providing a much better food experience. “In terms of whakapapa, if we accept that all living things are interrelated, then that idea leads back to treating an animal with its own mana, with respect, with some dignity.”



Ko Tākuta Kimiora Henare

He Kairangahau Mate Pukupuku



Ko Whakakoro te maunga moana  
Ko Rangiputa te maunga whenua  
Ko Whangapē te moana  
Ko Awaroa te awa  
Ko Ngāti Hauā te hapū  
Ko Te Kotahitanga te wharenuī  
Ko Te Aupouri, ko Te Rarawa ngā iwi  
Ko Manuka Henare tōku pāpā  
Ko Kimiora Henare tōku ingoa  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

He Paewai Rangahau a Kimiora i te Auckland Cancer Society Research Centre, e noho nei ki Te Papa Ako Matua i Waipapa Taumata Rau.

He kairangahau mate pukupuku a Kimiora e rangahau ana i te āhuetanga matatini o ngā pukupuku i runga i te hiahia kia whakamahia te awhikiri ki te pakanga i te mate pukupuku.

Kia rangahau ai i te āhua o tā te mate pukupuku huri haere i te pūnaha awhikiri me te tana tipu mai hei pukupuku nui taioreore, me mātua whakamahi i tētahi tauira kararehe e pērā ana tōna matatini mō te pukupuku. Nā konā e whakamahia nei ngā kiore hei tauira kararehe mō te rangahau me te whai rongoā mō te mate pukupuku i roto i ngā tāngata. Kia pērā ai, ka whakawhānautia mai, ka whakatipuria mai hoki ngā kiore i tētahi kāhui horomata. Ka whakamahia te rahinga iti katoa e taea tonutia ai ngā whakamātau hanga. Ka whakaurua ngā pūtau mate pukupuku ki ngā tūmomo kiore ōrite, ki tua noa atu i te mata o te kiri, ki runga i te hope, he wāhanga e iti katoa ai te whakararu i te kounga o te oranga o te kararehe, ka tupu mai ai te pukupuku. Ka tukua ana ngā rongoā whakamātau ki ngā kiore, ka mātaihia e ngā kairangahau kia kitea ai mēnā rānei ka whai hua ngā rongoā hei rongoā mō te pukupuku.

I uru atu ia ki te kura tuarua Māori me te kura tuarua auraki, ā, i tana tau 13, i mōhio pai a Kimiora ki te nui o tana rata ki te mātai koiora,

nā reira i uru atu ai ia ki Te Tohu Paetahi o te Pūtaiao, ā, ko te Mātai Koiora Rongoā tana kaupapa matua. I haere tonu i tana whai i Te Tohu Paerua o te Mātai Hauora i te Mātai Māuiuitanga, i te Tohu Kairangi hoki i te Mātai Koiora Rongoā. Nō tana whakatākututanga i te tau 2014, kua mahi a Kimiora hei kaimātai i te taiwhanga mātai koiora rongoā i ngā rangahau o te mate pukupuku i Tāmaki Makaurau, hāunga rā ngā tau e rua i mahi rā ia i tētahi taiwhanga pūtaiao e rite ana ki Kānata.

E huhua ana ngā kaupapa e tautokona ana e Kimiora hei whakahau i tā te Māori whai wāhi atu ki te pūtaiao, tae atu ki te MAPAS, arā, te Māori and Pacific Admission Scheme,<sup>1</sup> he hōtaka tautika kua roa e tū ana mā ngā ākonga Māori me ngā ākonga nō Te Moana nui a Kiwa kei Te Kura Rongoā o Tāmaki Makaurau. Ka whakahihikotia ia e tana pīrangī kia nui ake ngā hoamahi Māori i roto i taiwhanga rangahau koiora rongoā me ētahi atu tūranga pūtaiao, ahakoa tana mōhio ki te nuinga o ngā Māori ka whakatutuki i te whare wānanga kātahi ka puta ki te mahi i ētahi mahi ‘e mīharo kē atu ana.’

E hoki ana ō Kimiora mahara ki te korenga o tētahi paku aha i hāngai ki te mātauranga Māori i tana whakangungutanga i te ao pūtaiao. Ehara te mātauranga Māori i tētahi kaupapa i kōrerotia ai i te taha o tana kaiwhakahaere. E rikarika ana a Kimiora ki te tiaki i tētahi ākonga o te tohu tāura, o te tohu kairangi hoki kia rangahaua te mate pukupuku, e whai wāhi ai ia ki te wānanga i ngā āhuetanga o te mātauranga Māori, i ngā uara Māori, i ngā huatau Māori hoki. He pērā te kaiwhakahaere i tētahi kaitiaki ki tā rātou tauira, tae atu hoki ki te whakahau i te ākonga Māori kia haria atu ō rātou mātauranga ki te taiwhanga pūtaiao me te tautoko i te ākonga ki te tiaki i te mātauranga, ahakoa tōna momo. Ko te noho tahi a te Māori ki te kauhanga kotahi anake te wā e whai wāhi ai te kaimātai pūtaiao Māori kia māori te whakaurunga o te reo me ngā tikanga ki ngā wāhi mahi pūtaiao.

<sup>1</sup> <https://www.auckland.ac.nz/en/fmhs/study-with-us/maori-and-pacific-at-the-faculty/maori-and-pacific-admission-schemes.html>

Dr Kimiora Henare

Cancer Researcher



Ko Whakakoro te maunga moana  
Ko Rangiputa te maunga whenua  
Ko Whangapē te moana  
Ko Awaroa te awa  
Ko Ngāti Hauā te hapū  
Ko Te Kotahitanga te wharenuī  
Ko Te Aupouri, ko Te Rarawa ngā iwi  
Ko Manuka Henare tōku pāpā  
Ko Kimiora Henare tōku ingoa  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

Kimiora works as a Research Fellow in the Auckland Cancer Society Research Centre, located at the Grafton Campus of the University of Auckland Waipapa Taumata Rau.

Kimiora is a cancer researcher, who studies the complex biology of tumours in efforts to harness the immune system to fight cancer.

In order to study how cancer circumvents the immune system and grow measurable tumours, it is necessary to use an animal model with all the biological complexity of a tumour. For this reason, mice are used as animal models for researching the treatment of cancer in humans. To do this, the mice are bred and raised in a sterile colony. The minimum number of animals that are required for the planned experiments are used. Cancer cells from the same mouse species are injected just under the skin, above the hip, a position that will have the least possible impact on the quality of life of the animal, which causes a tumour to grow. When the mice are treated with experimental medicines, the researchers can see whether or not the medicines are effective in treating the tumour.

<sup>2</sup> <https://www.auckland.ac.nz/en/fmhs/study-with-us/maori-and-pacific-at-the-faculty/maori-and-pacific-admission-schemes.html>

Attending both Māori-medium and English-medium secondary schools, when he was in year 13 Kimiora realised he loved studying biology, so went on and enrolled in a Bachelor of Science, majoring in Biomedical Science. He then continued with a Master of Health Science in Pathology, followed by a PhD in Biomedical Science. Since becoming Dr Henare in 2014, Kimiora has worked as a biomedical laboratory scientist in cancer research in Auckland, apart from two years working in a similar research laboratory in Canada.

Kimiora supports a number of initiatives that encourage more Māori participation in science, including MAPAS, the Māori and Pacific Admission Scheme,<sup>2</sup> a well-established equity programme for Māori and Pacific students at the Auckland Medical School. He is motivated by wanting to help ensure that in the future there are more Māori colleagues working in biomedical research laboratories and other scientific roles, while accepting that many Māori move through the university system and out the other side to go on and do ‘much cooler things.’

Kimiora recalls there was nothing related to Māori knowledge in his own science training. Mātauranga Māori was not a topic that was spoken about with the supervisor. Kimiora looks forward to supervising Māori postgraduate or doctoral research students in cancer research, and the opportunity he would have to be able to open space for conversations about mātauranga Māori, Māori values and concepts. A supervisor is a kind of kaitiaki (guardian) to their student, and in a broad sense, this includes encouraging a Māori student to bring their mātauranga into the lab, and supporting the student to be able to look after that mātauranga in whatever way makes sense. Only when other Māori are working in the same corridor does a Māori scientist have the chance to introduce te reo and tikanga naturally into the science workplace.

Ko Tākuta Leilani Walker

Behavioural Ecologist



Ko Mākeo te maunga  
Ko Waiaua te awa  
Ko Ngāti Patumoana te hapū  
Ko Te Whakatōhea te iwi  
Ko Mataatua te waka  
Ko Waiaua te marae  
Ko Ruamoko te whare tipuna  
Ko Michael rāua ko Ratana ōku mātua  
Ko Leilani Walker tōku ingoa  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

He kaimahi pūmātauranga a Leilani i roto i te Mātai i te Taiao i Te Wānanga Aronui o Tāmaki Makau Rau (AUT). E whai wāhi ana ki tana rangahau i te whanonga hauropi te mahi ki te taha o ngā kararehe e ora tonu ana mā te whakamahi i a rātou i roto i ngā whakamātautau, mā te aroturuki rānei i ō rātou whanonga i ō rātou anō taiao māori. E arotahi ana āna mahi ki ngā kīrehe whai tuaiwi, pērā i ngā ngārara, i ngā pūngāwerewere, i te aha atu, i te aha atu.

Mai rā anō te pīrangi o Leilani ki te tū hei kaimātai koiora moana, ka mutu, hei tāna, ko tana pīrangi ki te whaiwhai i tana pāpā te take.<sup>1</sup> Nōna e tamariki ana, i hararei tōna whānau ki tātahi i ngā raumati ki te taha o ō rātou hoa, o te whānau Peters, ā, i te wā o te hao ika, ka titiro ia ki ngā hōpua i ngā toka, ka kerikeri hoki i te oneone ki te rapurapu i ngā pāpaka – nā tana noho ki tērā taiao i pai ai ia ki te mātai koiora, me te whakahihikotanga ōna e ā tana pāpā ‘kōrero mō ngā ara rerekē e mātai ai ngā kararehe i ngā tai, me aua momo āhuatanga.’

<sup>1</sup>Royal Society Te Apārangi. (2004). Michael Walker – science and the sea. [www.royalsociety.org.nz/assets/122-Alpha-Series-Science-and-the-Sea.pdf](http://www.royalsociety.org.nz/assets/122-Alpha-Series-Science-and-the-Sea.pdf)

Dr Leilani Walker

Behavioural Ecologist



Ko Mākeo te maunga  
Ko Waiaua te awa  
Ko Ngāti Patumoana te hapū  
Ko Te Whakatōhea te iwi  
Ko Mataatua te waka  
Ko Waiaua te marae  
Ko Ruamoko te whare tipuna  
Ko Michael rāua ko Ratana ōku mātua  
Ko Leilani Walker tōku ingoa  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā koutou katoa.

Leilani works as an academic in Environmental Science at Auckland University of Technology (AUT). Her background in behavioural ecology research involves working with live animals by using them in experiments, or making observations of their behaviour in their natural environments in the field. Her work is focused on terrestrial invertebrates such as insects, spiders etc.

Leilani always wanted to be a marine biologist, and credits this to wanting to follow in her father’s footsteps.<sup>2</sup> As a child, her family summer holidays were spent at the beach with their friends, the Peters family, when they would fish, look in rock pools, dig about in the sand to find mud crabs – being in that environment inclined her towards biology, with added motivation from having a father who would ‘talk about the way that different animals could read the tides, and things like that.’

<sup>2</sup>Royal Society Te Apārangi. (2004). Michael Walker – science and the sea. [www.royalsociety.org.nz/assets/122-Alpha-Series-Science-and-the-Sea.pdf](http://www.royalsociety.org.nz/assets/122-Alpha-Series-Science-and-the-Sea.pdf)



Ko Rauhina Scott-Fyfe

He Kaitiaki Pūranga, He Kairangahau Pakake



Ko Hikaroroa te mauka  
Ko Waikouaiti te awa  
Ko Āraiteuru te waka  
Ko Āraiteuru te tai  
Ko Kāi Tahu, ko Kāti Māmoe,  
ko Waitaha kā iwi  
I te taha o tōku hākororo, nō Ingarangi,  
nō Airani, nō Kōtirana ōku tīpuna  
I te taha o tōku hākuī, koia te taha Māori  
I tipu ake ahau ki Ōtepoti  
Ko Rauhina Scott-Fyfe ahau  
Mauri ora.

I te 2018-2019, i rangahau a Rauhina i ngā mātauranga Māori mō tētahi o ngā kekeno o Aotearoa, mō ngā pakake (*Phocarctos hookeri*). I te whakatutukihanga o tana BA i te ‘Māori Studies’ ki Ōtākou Whakaihu Waka, i tono atu rā a Ngāi Tahu ki a ia kia kōkiritia tēnei rangahau mā Te Papa Atawhai i raro i te Mahere Whakahaere Tūraru mō ngā pakake.

He whāngote moana nō Aotearoa te pakake, i kitea puta noa i te tai i ngā wā o mua, engari kua panaia atu nā runga i te whakangau kāore nei i te toitū; i te tīmatanga, nā te Māori tērā mahi, engari nā ngā kaiwhakangau Pākehā hoki i te whiore o te rautau 18 i muri ake. I ēnei rā nei, he momo tata korehāhā te pakake e tinga nei ka korehāhā, koia hoki tētahi o ngā kekeno e iti katoa ana te kitea puta noa i te ao, inā hoki 12,000 anake kei te toe i ngā motu o te pito whakateraki o Te Kōpakatanga ki te Tonga. Ko ētahi o te hunga whai pānga i te mahere whakahaere tūraru mo ngā pakake, ko te ahumahi o te hao i ngā moana hōhonu, ko Te Reo o te Taiao, ko ngā kaupāmu o te rohe, ko te kaunihera, ko DOC, ko Te Manatū Ahu Matua, ko Ngāi Tahu hoki hei mana whenua, hei hoa patui tiriti anō hoki.

I whānau mai a Rauhina i te tau i tae mai ai te pakake, a ‘Mum’, ki uta kia whānau mai ai tana punua; te pakake tuatahi i whānau mai ai i uta i Te Waipounamu mō kō atu i te 100 tau. Ko te tau 1993-1994 te wā o te whānautanga mai, ā, i tipu mai a Rauhina i runga i te mōhio ki te motuhake o aua whāngote nā te mea nō te iwi o taua rohe tana māmā, ā, he kaimātai pūtaiao, he āpiha moana hoki tana pāpā mā Te Papa Atawhai. I a ia e tipu haere ana, ko tētahi o āna tino mahi, ko te haere ki ngā taha moana o te rohe me te aroturuki i ngā pakake i ngā tai o Ōtākou. I tipu mai a Rauhina me tana mōhio ki tana marae i Puketeraki, i Karitane, e 40 manomita te tawhiti i te pito whakateraki o Ōtepoti. Nā te kaha o tana hononga ki ngā pakeke i ngā rangi o tōna ao i mārō ai te haere a Rauhina ki te mahi i ēnei rangahau.

Noho ai ngā pakake ki ngā taha moana oneone, e huna nei ngā uwaha whai punua i te taha o ā rātou punua i ngā tāhuna oneone kia kore ai e kitea e ngā taurawhi nui, i te nuinga o te wā (i ēnei rā) i waenga i ngā rākau paina. I tō Rauhina maumahara ki a Mum, he mate arotahi tōna he pakeke rawa nōna. I te wā i 16 ōna tau, i haere a Rauhina ki te taha o tana pāpā i tētahi haerenga rangahau ki Maungahuka i te pito whakateraki o Te Kōpakatanga ki te Tonga, i ora tonu ai te taupori o taua momo i tētahi rautau i muri ake i te whakakorehāhātanga ōna i Aotearoa. Nā ērā taupori tawhiti, kua hoki mai te pakake ki Muaūpoko kia puāwai mai anō i ō rātou whenua me ō rātou taiao o mua.

Nā runga i tana kōkiri i aua rangahau, i ako ai a Rauhina mō tā te Māori hāpai i ngā kararehe me te kawē i te mātauranga o ō tātou tūpuna, ka mutu, i tā tātou noho ki konei ināianei me te aroturuki i ngā mahi o nāianei, ka taea e tātou aua hononga te whakatau, aua tikanga hoki te tō mai ki ngā wāhi me ngā mahi e kite nei tātou i waenga i aua kararehe ināianei.

Rauhina Scott-Fyfe

Archivist, Sea Lion Researcher



Ko Hikaroroa te mauka  
Ko Waikouaiti te awa  
Ko Āraiteuru te waka  
Ko Āraiteuru te tai  
Ko Kāi Tahu, ko Kāti Māmoe,  
ko Waitaha kā iwi  
I te taha o tōku hākororo, nō Ingarangi,  
nō Airani, nō Kōtirana ōku tīpuna  
I te taha o tōku hākuī, koia te taha Māori  
I tipu ake ahau ki Ōtepoti  
Ko Rauhina Scott-Fyfe ahau  
Mauri ora.

In 2018-2019, Rauhina researched mātauranga Māori about the pakake, the New Zealand sea lion (*Phocarctos hookeri*). Having just finished their BA in Māori Studies at University of Otago, they were approached by Ngāi Tahu about doing this research, commissioned by Department of Conservation (DOC) under their New Zealand sea lion Threat Management Plan.

The pakake is an endemic marine mammal of Aotearoa, once found all around the coast, but driven off the mainland by unsustainable hunting, first by Māori, then European sealers in the late-18th century. Today, the pakake is endangered, a critical national species, one of the rarest sea lions in the world, with only about 12,000 remaining in the Subantarctic populations. Stakeholders in the sea lion threat management plan include the deep-sea fishing industry, Forest and Bird, local farm owners, local government, DOC, Ministry of Primary Industries, and Ngāi Tahu as mana whenua and Treaty partner.



Rauhina was born in the same year that the pakake named ‘Mum’ came ashore on a beach on the Otago coastline to have her pup; the first pakake to be born on mainland Te Waipounamu whenua in over 100 years. That breeding season was 1993-1994, and Rauhina grew up seeing and knowing these special sea mammals because their mother was from the iwi of that area and their father was a scientist and coastal marine ranger for the Department of Conservation. Growing up, a favourite activity was going out to the local beaches, observing pakake on the Otago coastline. Rauhina grew up knowing their marae at Puketeraki, Karitane, 40 kilometres north of Ōtepoti. Having strong connections to pakake all their life put Rauhina in a good position to do this rangahau (research).

Pakake inhabit sandy beaches, where breeding females hide from the big males, with their young, in the sandy dunes, often (now) amongst pine trees. By the time Rauhina remembers Mum, she had cataracts from old age. When they were 16, Rauhina accompanied their father on a research trip to the Auckland Islands in the Subantarctic, where populations of pakake had kept the species going for a century after they went extinct on the mainland of Aotearoa-New Zealand. From those distal populations, pakake have returned to the Otago peninsula to re-colonise their former breeding grounds and habitats.

From doing that research, Rauhina learned that when as Māori we advocate for animals, we are carrying the knowledge of our tīpuna with us, and by being here now, and observing what is happening now, we can make those connections and bring tikanga to the spaces and types of interactions we observe with the creatures now.

Ko Te Winiwini Kingi

He Tangata Whenua



*Waerea, waerea, tēnei ka mihi atu  
ki te kaupapa o te rā...*

Ko Whakairiora te maunga  
Ko Horahora rāua ko Ngunguru ngā awa  
Ko Te Waiariki te hapū  
Ko Kerepeti Te Peke te tupuna  
Ka moe a Kerepeti Te Peke i a Ripeka  
Amos (Kimete), ka puta ki waho ko Mere  
Ka moe a Mere i a Hone Wiremu  
Mahanga  
Ka puta ki waho ēnei wāhine,  
a Riri rāua ko Peti  
Ka moe a Riri i a Raniera Kopa, ka puta  
ki waho ko Kupai, ko tōku whaea  
Ka moe a Peti i a Hone Paraone Kingi,  
ka puta ki waho ko tōku matua, ko Te  
Winiwini  
Ka puta ki waho ko ahau, ko Te Winiwini  
Kingi  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā rā tātou katoa.

Ko Winiwini tētahi kaumātua e noho nei ki ngā  
whenua o ōna tūpuna i tukua iho. Nō Te Waiariki,  
nō Ngāti Kororā, nō Ngāti Takapari hoki ia,  
arā, nō ētahi o ngā hapū o Ngāpuhi e noho nei  
hei mana whenua mō ngā whenua kei te pito  
whakaterāwhiti o te tāone o Whangārei. E ai ki a  
Te Waiariki, nō ngā awa rātou, ka mutu, nā ngā  
ngahere aua awa i whāngai, e rere atu nei ki te tai  
o te rāwhiti: i Ngunguru ki te raki, ki Horahora, ki  
Pātaua, ki Taiharuru ki te tonga.



Tūhono ā kura ki te riu o Whangārei, [CC BY 3.0](#).

I tipu mai a Winiwini i ngā whenua o ōna tūpuna,  
ka mutu, i hoki atu ia ki te noho ki reira i te takiwā  
o te 30 tau ki muri, i te wā i wātea atu ai ia ki te  
hoki atu. E hoki ana ngā mahara o Winiwini ki  
ngā kōrero a tana kuia, a Riri, ki a ia mō tana  
maumahara ki ngā rākau taketake i ngā whenua  
o runga i tōna wā kāinga nōna e tamariki ana. I  
whānau mai a Riri i te takiwā o te tau 1900, nā  
konā e mōhiotia i turakina aua pūnaha hauropi i  
Te Tai Tokerau i te rautau 20.

E hoki ana ngā whakaako o Winiwini ki tā  
ngā kaumātua here i ngā pītau i runga i ngā  
kiekie, hei whakaruruhau i ngā hua i ngā kiore  
nō ngā hua e maonga haere ana, kia pai ai te  
hauhakenga i te wā e maonga katoa ana. Heoi,  
nā runga i te whakatakina o te kiore rāwaho me  
te kiore nō Nōwei ki reira, kāore aua here i whai  
hua; i ngaua noatia e aua kiore.

Nō tana hokinga mai ki te whenua, kua mahi  
a Winiwini ki te whakaruruhau i te ngahere  
taketake kei te toe me ngā pūnaha hauropi o ōna  
poraka whenua. I te tāraketanga o ngā tārawa  
e ngā Pākehā, i waiho mai ngā pakohu, e noho  
tonu nei, tōna noho tonu nei, ētahi wāhanga iti  
o ngā puihi kauri taketake i ēnei rā nei. E ora  
tonu ai ngā toenga o te puihi taketake, kua karo  
a Winiwini i te akiaki a ētahi kia tāraketia tana  
poraka me te waiho i ētahi kau ki reira, nā te mea  
ka whakakino ngā kau i te papa i te ngahere, ā,  
ko te kōhi ka tipu mai. Hei tupuna e haepapa ana,  
me whakatau i ngā whakataunga hei painga mō  
te whenua.

Winiwini Kingi

He Tangata Whenua



*Waerea, waerea, tēnei ka mihi atu  
ki te kaupapa o te rā...*

Ko Whakairiora te maunga  
Ko Horahora rāua ko Ngunguru ngā awa  
Ko Te Waiariki te hapū  
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ka puta ki waho ko tōku matua, ko Te  
Winiwini  
Ka puta ki waho ko ahau, ko Te Winiwini  
Kingi  
Nō reira, tēnā koutou, tēnā koutou,  
tēnā rā tātou katoa.

Winiwini is an elder who lives on his ancestral  
inherited lands (whenua tuku). He is a member  
of Te Waiariki Ngāti Kororā Ngāti Takapari,  
hapū o Ngāpuhi who claim mana whenua status  
over the coastal lands to the east of the city of  
Whangārei. Te Waiariki understand themselves  
as people of the rivers, and the ngahere or  
forests fed by those rivers, which flow east to the  
coast: from Ngunguru to the north, to Horahora,  
to Pātaua, to Taiharuru to the south.



Tūhono ā kura ki te riu o Whangārei, [CC BY 3.0](#).

Winiwini grew up on his tupuna whenua  
(ancestral land), and returned to live there about  
30 years ago, when he had the opportunity to do  
so. Winiwini recalls his grandmother Riri telling  
him about her memory of the original trees on  
the uplands of their home areas (wā kāinga) as a  
young girl. Riri would have been born in around  
1900, which dates the destruction of those  
original Northland ecologies in the 20th century.

Winiwini recalls his elders tying the fronds over  
the fruit of the kiekie, to protect it from the  
kiore as it ripened, so that they would be able  
to harvest it when it fully ripened. However,  
with the introduction of the ship rat and the  
Norwegian rat, those knots no longer worked;  
those rats just chewed through it.

Since returning to live on the whenua, Winiwini  
has been working to protect what is left of the  
original forest cover and natural ecological  
habitats on his inherited land blocks. When the  
pioneer settlers cleared the ridges, they left  
the gullies alone, where snippets of precious  
original kauri bush habitats and ecologies still  
remain intact today, to some extent. In order  
to help keep those remnants of the original  
bush healthy, Winiwini has resisted pressure to  
clear his block and put cows on it, since cows  
destroy the ground layers of the ngahere, which  
allows gorse to come away. Being a responsible  
ancestor means making decisions that favour  
the whenua.





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Manatū Ahu Matua

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He aratohu mā te pouako



# Te mātauranga Māori mō ngā kararehe

1. Te kuri
2. Te kiole
3. Ngā manu a Tāne-mahuta  
(te pīwakawaka, te tūī, te kererū,  
te ruru, te kōtare, te tītī, te toroa)
4. Ngā ika a Tangaroa  
(te makō, te tohorā)
5. Ngā ngārara – te aitanga a Punga
6. Te aitanga pepeke



Ngā Kararehe o Aotearoa: He Mātauranga, he Matatika

# He Whakatauki

Te manu e kai ana i te miro, nōna te ngahere  
Te manu e kai ana i te mātauranga, nōna te ao.

I mōhiohia ngā kararehe e ngā tūpuna Māori mā roto mai i ngā anga taketake whāiti o te mōhio i hāngai ki ngā whakapapa. Kei ngā tapanga e ono o raro iho nei te whakatakina o te Mātauranga Māori mō ētahi o aua kararehe:

- 1 Te kurī
- 2 Te kioire
- 3 Ngā manu a Tāne-mahuta  
(te pīwakawaka, te tūi, te kererū, te ruru, te kōtare, te tītī, te toroa)
- 4 Ngā ika a Tangaroa  
(te makō, te tohorā)
- 5 Ngā ngārara – te aitanga a Punga
- 6 Te aitanga pepeke.

I ētahi wā, ka takahi aua karangatanga Māori i ngā karangatanga o te pūtaiao, pērā i tā te tohorā noho i raro i ngā ika. Ko te kurī me te kioire te tuatahi, nā runga i tō rāua whakahirahira, nā te mea i āta haria mai aua whāngote i Te Moana-nui-a-Kiwa ki Aotearoa i te hekenga mai o ngā tūpuna Māori. E hāngai ana ngā karangatanga e whā e toe ana ki te whakapapa me ngā tūpuna o aua kararehe.



# He Whakatauki

Te manu e kai ana i te miro, nōna te ngahere  
Te manu e kai ana i te mātauranga, nōna te ao.

Animals were known to tūpuna Māori through specific indigenous frameworks of knowledge based on whakapapa. Introductions to Mātauranga Māori about some of those animals are presented below under six headings:

- 1 Te kurī
- 2 Te kioire
- 3 Ngā manu a Tāne-mahuta  
(te pīwakawaka, te tūi, te kererū, te ruru, te kōtare, te tītī, te toroa)
- 4 Ngā ika a Tangaroa  
(te makō, te tohorā)
- 5 Ngā ngārara – te aitanga a Punga
- 6 Te aitanga pepeke.

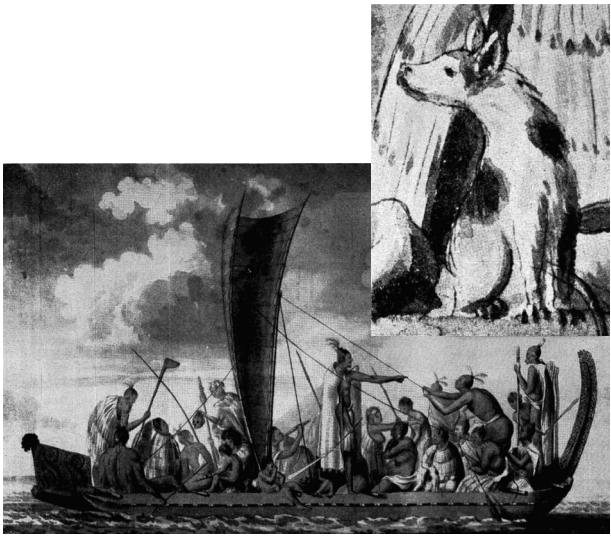
These Māori categories sometimes contravene those of science, such as grouping tohorā (whales) under ika. Kurī (dog) and kioire (rat) come first, given their importance as the two mammals purposely brought across the Pacific Ocean to Aotearoa by the voyaging ancestors of Māori. The other four categories are based on whakapapa and the ancestors of animals.



## 1 Te kurī

I noho ngā kurī ki ngā kāinga o te Māori hei mōkai, hei hoa haere rānei, engari he pūmua whakahirahira o roto ina kaingia; waihoki, tērā ētahi hitori Māori e kōrero ana mō ngā kāhui kurī e mohoa ana. E noho ana te kurī, me ngā kurī katoa nō Te Moana nui a Kiwa me te tingau (dingo), ki roto i te karangatanga o ngā mōkai whānui o te kurī, arā, te *Canis familiaris*. E ai ki ngā kōrero a ngā Pākehā tuatahi i tae mai ai ki Aotearoa mō ngā kurī, i ngawē te kurī, engari kāore i auau; e tohu ana pea te korenga o ngā kōrero i nui i te rite o tā te kurī mahi ki ngā mahi a ērā atu o ngā kurī mōkai. Ahakoa he kai hoki te kurī, i whakamahia tōna hiako, ōna huruhuru, ōna wheua hoki ki te waihanga, ki te whakarākei hoki i ētahi kākahu, i ētahi taonga whakarākei, i ētahi taputapu hoki. I whakamahia hoki ngā kurī e te Māori hei kurī whakangau e rapurapu ai i ngā manu huhua.

E ai ki ngā kōrero tuku iho, i tāpua ngā kurī i roto i ngā tikanga, i te ahurea, i te taha wairua hoki i te ao Māori. Mō te taha ki te whakapapa, ko te taokete o Māui, ko Irawaru, te tupuna o te kurī. I kīia ko ngā kurī he tupuna, he kaitiaki hoki ki ētahi hapū me ētahi whānau, ka mutu, e ora tonu ana aua tikanga i tēnei wā tonu nei. E kīia ana i aua pūrākau tā te kurī ārahi i ō rātou waka me ō rātou tāngata ki tētahi tauranga haumarua, me te huringa o ētahi tipua hei kurī. E kitea ana ngā whanonga o te kurī i ngā whakataukī mō ngā āhuatanga o te tangata kāore nei i te pai: te māngere – he whiore tahutahu, arā, te whiore e tahua ana (i te kaha o te takoto ki te taha o te ahi); te tautauā – he whore hume, arā, te whiore kei waenga i ngā waewae; te whakatuanui rānei – he kurī e pōtete ana, arā, ānō nei e herea ana te kurī ki te taura.



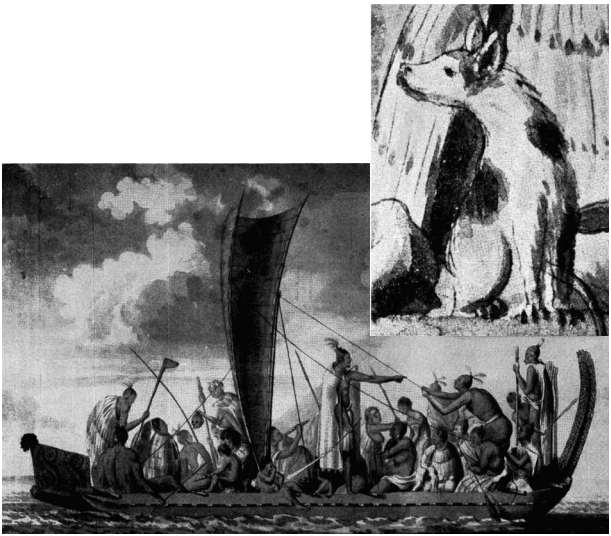
He kurī kei runga i te waka taua<sup>1</sup>

I muri i te taenga mai o te Pākehā, i kaha ai tā ngā kurī rāwaho moe haere me ngā kurī taketake, ka mutu, i te remu o te rautau 19 me te upoko o te rautau 20, kua kīia ko ngā kāhui kurī mohoa he pōreareatanga, i whakaponotia ai ko aua kurī rā, he hanumitanga i waenga o ngā kurī rāwaho me ngā kurī taketake, ā, kua pūhia ina kitea e ngā hēpara me ngā kirinoho. I kōhurutia aua kurī i te taunga haerenga o ngā kirinoho. Kua korehāhā ngā kurī taketake i te haurua tuarua o te rautau 19.

## 1 Kurī

Kurī lived with Māori households as pets or companion animals that also provided an important protein food source, and there are also Māori accounts of feral kurī populations. The kurī, along with all Pacific dogs and the dingo, is now included within the universal domestic dog species, *Canis familiaris*. Early European travellers to Aotearoa noted that kurī howled but did not bark; the lack of other comments on kurī behaviour probably means that they generally behaved like most other domestic dogs. In addition to being a food source, kurī hides, hair and bones were used to make and decorate clothing, jewellery, and tools. Māori also used kurī as hunting dogs for catching various birds.

Kurī were of traditional, cultural and spiritual significance within te ao Māori as recorded in narrative traditions. In terms of whakapapa, the ancestor of kurī was Irawaru, the brother-in-law of Māui. Kurī were regarded both as ancestors and as kaitiaki or spiritual guardians of particular hapū and kingroups, and these traditions are still passed on today. Traditional stories tell of kurī who guided their waka and people to safe landing, and of supernatural beings taking the form of kurī. Kurī behaviour features in various whakataukī about non-desirable personal qualities: idleness – he whiore tahutahu, a often-singed tail (from laying near the fire); cowardice – he whiore hume, tail between its legs; or being dominated – he kurī e pōtete ana, like a dog led around on a leash.



New Zealand War Canoe<sup>2</sup>

After the arrival of Europeans, introduced dogs rapidly interbred with kurī, and in the late 19th and early 20th centuries, feral dog packs, believed to be kurī-European cross-breeds, were seen as a great nuisance, and shot on sight by shepherds and settlers. These feral dogs were exterminated as settlement proceeded. Purebred kurī disappeared during the second half of the 19th century.

<sup>1</sup> Mai i te kohinga pikitia a te Whare Taonga o Piritene nā A. Buchan, nā S. Parkinson, nā J. F. Miller.

<sup>2</sup> From the British Museum's collection of drawings by A. Buchan, S. Parkinson and J. F. Miller



## 2 Te kiore

I āta haria mai ngā kiore ki Aotearoa e ngā tūpuna Māori mō ngā taioranga o roto, hei kai pūmua whakahirahira. I whakatipuria ngā taupori kiore i ngā papa tāpui, i rāhuitia hoki ngā kiore e ngā kirinoho Māori me ngā iwi. Engari ehara i te mea ko ngā kiore anake i pērātia, i maha hoki ngā manu i haria hei kai i roto i aua rāhui, e whakaatu nei i te pai o te noho tahi i te taiao ki te taha o te kiore, nā te mea i te nuinga o te wā, ka kai noa te kiore i te huarākau. I tāroretia ngā kiore mā te whakamahi i ngā taupopoki i takoto i tana ara hikoi, mā te whakamahi rānei i ngā rua torea. I parahunahunutia, i tihorea, i rokirokitia hoki ki ngā hinu i ngā hue, i tētahi tukanga (me tētahi rawa) e kīia nei ko te ‘huahua’. He taonga nui te huahua kiore, i whakamahia ai hei tauhokohoko hei hoko whenua. I whakamahia ngā hiako kiore kia waihanga mai i ētahi kahu kounga.

Ko te kiore (*Rattus exulans*) te momo kiore iti katoa i te puninga o te ‘Rattus’. E taketake mai ana tēnei momo i te pito whakaterāwhiti-mā-tonga o Āhia, kātahi ka horapa puta noa i Te Moana nui a Kiwa i te whakawhitinga o ngā tāngata i ngā moana i tētahi kohinga moutere ki tētahi. E ai ki te tirohanga Māori, ehara te kiore i te mea kino, pēnei i ngā whakaaro o te hunga nō Te Uru whakapono nei ko ngā kiore he ito nō te tangata, e kawe nei i ngā tahumaero me ngā mate urutā, e kīia nei hoki he riha, e tika ana kia orotā. He taonga whakahirahira te kiore, e ai ki te tirohanga Māori. E whakaatu ana te tirohanga Māori ki te kiore i te tauaro, i te nuinga o te wā, o te whakaaro Māori ki ngā whakaaro pūtaiao o nāianei.

I te wā koroniara i tīmata mai i te upoko o te 1800, i whakawaimehatia ai, i whakakapia ai rānei ngā kiore taketake i ngā wāhi e kaha kitea nei ngā momo kiore Pākehā (ko te *rattus rattus* me te *rattus norvegicus*), i tīmata mai ai i te taha o ngā wāhi e noho nei te tangata. I waenga i a Ngāi Tūhoe, e mau tonu ana ngā maharatanga mō te ngarohanga o te horotai, o te kiore, i nui nei te tāroretia i te Huiarau me Te Urewera, ā tae noa mai te kiore nō Nōwei. E whakapaetia ana i korehāhā te kiore i te tuawhenua i te takiwā o te tau 1922, engari e ora tonu ana ētahi o ngā taupori kiore i ētahi moutere mamao.



Te kiore. Nā Carl Clifford, [CC-BY-2.0](#).

I tētahi o ngā tātai whakapapa whāiti, he uri te kiore nō Hinamoki, tētahi o ngā tēina o Tāne-mahuta, te tupuna o te tangata me ngā mea koiora kei te whenua, e ai ki ngā whakapapa atua i te mātauranga Māori mō te ao tūroa. E ai ki ngā kōrero, i hoki atu ngā kiore ki tō rātou kaitiaki, ki a Ruanui, i ngā pūrākau nō Mamari waka. E kitea ana i te piringa i waenga i te kiore me te tangata te take e whakairohia nei ngā kiore i ngā wharenui me ngā ingoa o ngā tāngata, o ngā wāhi hoki. I whai wāhi hoki ngā kiore ki ngā tikanga Māori o ia rā, e whakaaturia nei i ngā waiata, i ngā haka, i ngā kupu whakarite, i ngā whakataukī hoki e whakatairite ana i te ao o te kiore ki tō te tangata.



## 2 Kiore

Kiore were purposefully transported to Aotearoa by Māori ancestors for nutritional reasons, as an important protein food source. Kiore populations were encouraged in reserves or rāhui kiore managed by Māori settlements and iwi. Not only kiore but also many manu or bird species were taken for food within those rāhui, showing they could live together in the same habitat as kiore were mainly frugivorous (fruit eating). Kiore were trapped using spring traps placed across their paths, or in pit traps. Kiore were roasted, skinned, and preserved in fat in gourds, in a process (and product) known as ‘huahua.’ Huahua kiore were valuable commodities, used as currency in land exchanges. Kiore pelts were used to make fine cloaks.

Kiore (*Rattus exulans*) is the smallest species in the *Rattus* genus. This species originated in Southeast Asia and spread throughout the Pacific as people undertook ocean voyages from island group to island group. In Māori thinking, kiore are not viewed negatively, as in Western ideas that see rats and mice as enemies of mankind, carriers of disease and plague, pests and vermin for extermination. The kiore is seen in Māori thinking as of great value. Māori views on kiore show how Māori thinking is often the opposite of modern scientific thinking.

In the colonial period starting from the early 1800s, kiore were rapidly assimilated or replaced whenever European rat species (*rattus rattus* and *rattus norvegicus*) took hold, starting from places near human habitation. Among the people of Ngāi Tūhoe, memories remain fresh of the loss of the delicacy of kiore, which were caught in abundance in the Huiarau ranges of the Urewera forest, up to the time of the introduction of the Norwegian rat. It is thought that kiore went extinct on the mainland by about 1922, but some kiore populations still survive on remote offshore islands.



Kiore. Carl Clifford, [CC-BY-2.0](#).

In one simplified whakapapa tradition, kiore are descendants of Hinamoki, a junior sibling/cousin of Tāne-mahuta, ancestor of mankind and life on land, in the cosmic whakapapa that structure Māori knowledge of the natural world. Kiore are recorded as running back to their human owner Ruanui, in traditions from the northern iwi of the Mamari waka. The closeness between humans and kiore explains why kiore featured in wharenui carvings and names of people and places. Kiore were also part of everyday Māori customs as shown by references in waiata and haka, and metaphors captured in whakataukī comparing aspects of kiore life with that of humans.



### 3 Ngā manu a Tāne-mahuta

He uri ngā manu, me ngā rākau, ngā tāngata hoki, nō Tāne, nā reira he whanaunga hoki rātou ki a rātou. Ko tētahi atu ingoa mō ngā manu, ko ‘te aitanga kapakapa a Tāne’ - arā, ko ngā tamariki a Tāne e kapakapa nei ō rātou parirau, ā, ko ngā rākau o te ngahere, ko te ‘hua a Tāne’ - ko te tikanga o te ‘hua’ ko ngā tamariki me ngā huarākau, ngā patatini hoki nō ngā rākau. Ahakoa he kupu whānui te ‘manu’ mō te ‘bird’, ka whakamahia hoki hei whakaahua i ētahi atu mea ka rere, pērā i te pekapeka me ngā manu aute. I ētahi wā, ka kīia ko ngā manu ngā kaituku karere nō te ao wairua, e hari nei i ngā whakatūpatotanga me te whakahau a ngā atua, a te hunga rānei kua mate e arohaina ana e te tangata.

He mātāpuna pūmua tāpua te manu; ko te kūkupa/kererū me te kākā ētahi o ngā kai tāpua katoa i mua i te taenga mai o te Pākehā, i tāroretia, i pūroutia hoki. I whakamātauria te āhua o ngā manu i mua i te puta ki te whakangau. I mau hoki ngā manu mā te whakamahi i tētahi mōkai - he manu ‘mōkai’, he tīmori rānei, i ngā kaupeka rānei e nui nei ngā hua nā te mea ka pērā rawa te mōmona o te manu, e kore e taea te rere atu, ka taumaha rawa rānei ina kaha te ua, nā reira ka mau ki te papa. I ngā tāhere, i ngā tāwhiti, i ngā tao, i ngā arawhata hoki kua hangā hei hopu manu e kitea ana ngā pūkenga o ngā Māori me tana hangarau.

Ahakoa hei kai te manu, he taonga puiaki ngā huruhuru o ngā manu, ā, i huhua tōna whakamahinga e ai ki ōna āhuatanga. Ko ētahi manu i hopukina hei hohore i ngā huruhuru, tē hopukina kētia ai hei kai, pērā i te kōkako, i te huia, i te kōtare, i te kōtuku anō hoki. I whakamahia ngā huruhuru: hei kākahu, hei tiatia, hei whakarākei hoki i ngā kākahu, i ngā rākau patu, i ngā waka, i ngā taputapu tākaro, i ngā ipu, me ētahi atu mea. I whakamahia hoki ngā huruhuru me ngā kiri o ngā manu hei tāpi i ngā taotūtanga, i te weranga rānei o te kiri, hei hei whakakakara rānei. I whakamahia hoki te hinu o ngā manu hei rongoā, i te tāmoko, hei rokiroki kai hoki i ngā hue. I nui te whakamahia o ngā wheua o ngā manu nui ake, tae atu ki ngā ngira, ki ngā pihuka, ki ngā kōauau, ki ngā whakakai hoki. E whai wāhi ana ki tō te Māori mōhio ki ngā manu te mōhio ki ngā kāinga me ngā taiao o ngā manu - katoa mai he mōhiotanga matahiapo i āta whakaakona, i āta tukua iho hoki i tētahi reanga ki tētahi, i ngā pia o te whānau me ngā wānanga.



Te korimako/kōmako. Nā Christopher Stephens, CC-BY-4.0.

E nui ana te kōrerotanga o ngā manu i ngā kīwaha me ngā kupu whakarite Māori, hei tauira, mēnā e rōreka ana te reo waiata o tētahi, ka kīia pea ia he korimako/kōmako, ka whakahāngaitia pea te tangata e kaha nekeneke ana ki te pīwakawaia/tīrairaka, manohi anō, ka tohu hoki pea te ruru e koukou i te ongeonge, i te tō te tangata mate kanehe ki tāna ipo kāore nei pea i tōna taha. Tērā ētahi kōrero mō ngā tipua manu me ngā tāngata e eke ana i ngā manu kaitā, pērā i te teina me te tuakana rerehua, i a Reitū rāua ko Reipae, i rere atu ai i tō rātou kāinga, i Waikato, i runga i te tipua kārearea kia mārena ai i tētahi o ngā tupuna whakahirahira nō Te Tai Tokerau.

E rite tonu ana te kitea o ētahi o ngā manu, pērā i ngā manu e rima e whai ake nei - te tūi, te kererū, te pīwakawaka, te ruru, te kōtare hoki, ka mutu, kua urutau hoki (tōna urutau nei) ki ngā taiao o te tāone kei reira ngā rākau me ngā tipu e taketake ana, me ngā mea rāwaho kei roto i ngā māra me ngā papa tāpui.



### 3 Ngā manu a Tāne-mahuta

Manu, along with trees and mankind, are descendants of Tāne, and therefore related to each other. Another group name for manu is ‘te aitanga kapakapa a Tāne’ - the ‘wing-flapping children of Tāne’ and the forest trees are also called the ‘hua a Tāne’ - ‘hua’ meaning both children and the fruits and berries of the trees. While ‘manu’ is a generic word for ‘bird’ it is also used for other flying things, like bats or kites. In some situations, manu were seen as messengers from spirit worlds, carrying warnings or reassurances either from atua sources or from deceased loved ones.

Manu were an important source of protein foods; the kūkupa/kererū and kākā were the two most important food birds to pre-European Māori, and both were snared and speared. The condition of the manu was always tested before deciding to proceed with a hunt. Manu were also caught using a mōkai - a ‘tame’ or decoy bird, or in fruiting seasons when they became too fat to fly away, or if it rained heavily and they became ‘grounded.’ Snares, traps, spears and ladders made for fowling demonstrate Māori craft skills and technologies.

In addition to food, bird feathers were valued items and used for diverse purposes depending on their qualities. Birds taken for feathers rather than food include kōkako, huia, kōtare and kōtuku. Feathers were used: to make cloaks, to wear in the hair, and to adorn clothing, weapons, waka, toys, containers and other objects. Bird feathers and skins were used in dressing wounds and burns, or for making fragrant sachets to wear as pendants. Bird oils were used medicinally and in tattooing, and to preserve foods in hue. The bones of larger birds were used to make many items, including needles, fishhooks, kōauau and earrings. Māori knowledge of birds extended to knowledge of bird habits and habitats - all of which was valued knowledge that was carefully taught and passed down from one generation to the next, in whānau/kingroup apprenticeships and wānanga.



Korimako/kōmako. Christopher Stephens, CC-BY-4.0.

Manu provide rich sources of Māori symbolism in sayings and metaphors, for example, a good singer or eloquent orator might be called a korimako/kōmako (bellbird), a restless person might be compared to a pīwakawaka/tīrairaka (fantail), while a hooting ruru (morepork) might be seen as expressing loneliness or lament for a lover’s absence. There are traditions of birds with supernatural powers, and stories of people riding giant birds, such as the beautiful sisters, Reitū and Reipae, who flew north from their home in the Waikato on the back of a magic kārearea (falcon), to marry and become important ancestors to the iwi of Te Tai Tokerau.

Some manu, including the first five below - tūi, kererū, pīwakawaka, ruru and kōtare, are still fairly commonly seen, as they have managed to adapt (at least to some extent) to urbanised habitats containing indigenous and introduced trees and plants in residential gardens and nature reserves.







Te tūi/kōkō. Nā Bernard Spragg, [CC-BY-1.0](#).

## Te tūi/kōkō

Ko te tūi, e kīia nei hoki ko te kōkō, tētahi o ngā manu tīoriori rongonui; ki te kī atu ki te tangata ‘me he korokoro tūi’, he mihi tēnei i te pai o tana waiata. He mīharo hoki te mōhio o ngā tūi ki te tāwhai, e kaha nei ki te tāwhai i ngā waiata a ētahi atu manu, i ngā oro huhua rānei ka rangona e rātou. I noho ngā pīpī kōkōuri hei mōkai mā te Māori, i kai ai i ngā patatini me te kūmara kua maoa, i whakaakona ai hoki ki te kōrero, ka mutu, tērā ētahi i mōhio ki te 40 kupu hemihemi. He puiaki ki ō rātou tāngata ngā tūi e mōhio ana ki te kōrero, i kaha ai te whakarongohia e ngā whānau, inā hoki i whakaponohia ētahi he matakite rātou. Tērā hoki ētahi pūrākau mō ētahi tūi atamai i mōhio ki te taki karakia me te taki whakapapa, ā, i tētahi o ngā pūrākau, i pakanga ētahi nā runga i te tāhaetia o tētahi tūi atamai. Ko tētahi kupukiri mateoha pea mō te pōtiki o te whānau, ko ‘he kōkō iti’ - arā, he tūi iti. I rere tonu ēnei tikanga Māori tae atu ki te rautau 20.

## Te kererū/kūkū/kūkupa

Pērā i te nuinga o ngā manu, he kupu ororite ēnei ingoa mō te manu taketake nei, e tāwhai nei i ā rātou kū māmā i te ohore, ahakoa i te nuinga o te wā, he ‘kararehe māhaki, e taunga ana ina whakatata atu te tangata ki a ia, e ngū ana hoki i te nuinga o te wā.’ Ko te kererū tētahi o ngā āhua o te tipua i mōhio rā ki te huri i tōna hanga, o Māui, kia pai ai tana whaiwhai atu i tana māmā, i a Taranga, ki Rarohenga ki te tūtaki atu ki tōna pāpā. Ko te ngahuru me te hōtoke te wā pai ki te whakangau i te kererū, i muri iho i tāna apuapu i ngā miro. I kaha te whakangau o ngā manu i te wā i mōmona ai rātou, kātahi ka rokirokitia hei huahua manu mō tētahi atu wā.



Te kererū/kūkū/kūkupa. Nā [Pseudopanax at English Wikipedia](#).



Tūi/kōkō. Bernard Spragg, [CC-BY-1.0](#).

## Tūi/kōkō

Tūi, also known as kōkō, are famous songbirds; to say of someone ‘me he korokoro tūi’ (a throat like a tūi) is to compliment their good singing. Tūi also have amazing powers of mimicry, readily imitating the songs of other birds or any other sounds they hear. Young male tūi were kept as mōkai or pet birds by Māori, fed on berries and roast kūmara, and taught to speak, some learning to recite 40 words or more. Talking tūi were highly valued by their owners, and listened to with keen interest by the kingroup since they were believed to have oracular powers. There are stories of gifted tūi that could recite incantations and whakapapa, and one tradition tells of a war caused by the theft of a learned tūi. A term of endearment for a pōtiki (youngest child of a family) might be ‘he kōkō iti’ – a little tūi. These Māori traditions persisted into the 20th century.

## Kererū/kūkū/kūkupa

As is common for birds, these names for the native pigeon are onomatopoeic, imitating their soft cooing of alarm, apart from which they are ‘placid creatures, easily approached, and usually silent.’ The kererū is one of the forms adopted by the shapeshifter Māui, so that he could follow his mother Taranga to the underworld and meet his father. The main kererū season was autumn-winter, after they had gorged on miro berries. Many birds were taken while they were fat, and preserved as huahua manu for future use.



Kererū/kūkū/kūkupa. [Pseudopanax at English Wikipedia](#).





Te pīwakawaka/tīrairaka.  
Nā Rosa Stewart, [CC-BY-SA-4.0](#).



Pīwakawaka/tīrairaka.  
Rosa Stewart, [CC-BY-SA-4.0](#).

Te pīwakawaka/tīrairaka

Whaiwhai ai tēnei pīwakawaka nanakia e iti ana i ngā tāngata me ngā manu i te ngahere, e kapokapo nei i ngā ngārara kua tumeke i tana nekehanga nōna ka rere. Kei te takiwā o te 20 ngā ingoa mōna, ā, e rite ana te takotoranga hei tāwhai i te toaitanga o āna mahi. Kitea ai hoki te pīwakawaka i ngā pūrākau mō Māui, inā hoki nāna i rahua ai tā Māui ngana ki te whakatutuki i te atua o te mate mā te kuhu i te tinana o tana tupuna, i te kaitiaki o te pō, i a Hine-nui-te-pō, nā tana kata i te wā hē. I whakaoho a Pīwakawaka i a Hine-nui-te-pō, i kati ai i ōna waewae, i hinga ai hoki a Māui, me te aha, i horapa te mate ki te ao. Ko tana whai wāhi pea ki tēnei pūrākau te take he tohu mate tā te pīwakawaka kuhu atu ki te whare o tētahi tangata.

Te ruru/koukou

Whakangau ai te ruru i ngā pō kua urutau nei ki te noho ki ngā whenua o ngā pāmu me ngā tāone. He pānga ō rātou ki te ao wairua, ā, i waenga i ngā whānau huhua, ko te ruru tō rātou kaitiaki, e kawe nei i ngā kōrero nō ngā atua e whai mana nei ki te tiaki, ki te whakatūpato, ki te ārahi hoki. Ko tētahi o ngā kaitiaki o Ngāti Wai ki Whangaruru, ki Te Tai Tokerau, ko Hineruru, e tohu ana āna tangi me ōna whanonga i tētahi karere pai, i tētahi karere kino rānei. Whakaritea ai ngā tūtei e tiaki nei i ngā urupā i te pō ki te ruru, e tangi nei i tana whakatūpatotanga. Ina hinga tētahi e arohaina ana e koe, ka whakarite hoki pea koe i a koe anō ki te ruru me te mōteatea o tana tangi.

Pīwakawaka/tīrairaka

This cheeky little fantail follows people and other birds through the bush, snapping up insects disturbed by the movement, taking nearly all of its prey on the wing. It has around 20 different names, most of a reduplicated structure to mimic its repeated actions. The pīwakawaka also features in the Māui narratives, as the manu who foiled Māui’s attempt to conquer death by climbing back up through the body of his ancestress, the guardian of the underworld, Hine-nui-te-pō, by twittering with laughter at the wrong moment. Pīwakawaka woke Hine-nui-te-pō, who brought her legs together, killing Māui, and death came into the world. Their part in this story may explain why it is a bad omen for a pīwakawaka to enter one’s house.

Ruru/koukou

Ruru are nocturnal predators that have also adapted to live in farmland and urban areas. They are often associated with spirits, and many families have a ruru as a kaitiaki or guardian, conveying messages from atua sources with the power to protect, warn, and advise. Ngāti Wai at Whangaruru in Te Tai Tokerau (Northland) have a kaitiaki known as Hineruru, whose calls and flight behaviour can be interpreted as either good or bad news. Watchmen standing guard over a pā at night were likened to ruru, hooting a warning. People who have lost love might also compare themselves to the mournful sounding ruru.



Te ruru/koukou. Nā JJ Harrison, [CC-BY-SA-3.0](#).



Ruru/koukou. JJ Harrison, [CC-BY-SA-3.0](#).



### Te kōtare

He manu pūkenga rau te kōtare e ora tonu nei i ngā taiao kua nōhia nuitia e te tangata, e noho nei i ngā ngahere taketake me ngā ngahere rāwaho, i ngā pāmu, i te taha o ngā roto me ngā kōawa, i ngā taikoraha hoki. I ngā tau o te 1879, i whakaritea e te Acclimatisation Society of Whanganui tētahi pūtea whakapati hei utu i te kōhurutanga o te kōtare, nā te mea i te kōikirikitia ngā tiu, i kaha whakaheke werawera ai te rōpū kia whakatakina te tiu kua ahu mai i Ūropi me Ahitereiria. Nā konā e noho nei te kōtare hei wāhanga mō tētahi kōrero whānui mō te hīkaka maikiroa o te Pākehā ki te tuku mai i ngā manu, i ngā kīrehe, i ngā tipu hoki, me te hītori whānui o tā te Māori porotēhi i aua mahi.

I whakarite te Māori i te kōtare ki te tūtei e mātai nei tana titiro, ā, ko tētahi o ngā pae o runga o te pā, ko te ‘kōtare’. I kāwhakina, i tunua hoki ngā pīrere kōtare i ngā hāngī, ā, i nui te pīrangitia o ngā huruhuru kikorangi wheriko hei whakarākei i ngā kākahu, hei poapoa hoki i te hao ika. Whakamahia ai te kīanga ‘he kōtare koe’ hei whakakapi i te tangata ka tae atu me te mātakitaki i te hunga e kai ana me kore noa e whai kai, he whakahāngaitanga i te korenga o te kōtare e neke i te wā o te noho ki te peka, e kimi nei ōna ‘kanohi hōmiromiro’ i ngā kai. I karanga ngā tamariki Māori, i tā rātou kite i tētahi kōhanga kōtare i tētahi ana: ‘Putaputa kōtare, putaputa kōtare’, ka mutu, ka waiata hoki i tētahi ruri ua mō te kōtare, nā runga i tana tohu i tētahi rangi paruhi e kainamu mai ana.



Te kōtare



### Te tītī, te ōi

Ko te tītī te ingoa e kaha whakamahia ana hei whakakapi i tētahi momo tītī anake, arā, ko te ‘sooty shearwater’, engari ko te tītī tētahi ingoa whānui mō ngā momo manu moana huhua - arā, ko ngā ‘shearwaters’, ko ngā ‘petrels’, ko ngā ‘prions’, ko ētahi atu hoki ka peka mai ki ngā tai o Aotearoa. I tapaina te tītī ko te ‘muttonbird’ e te Pākehā i te rite o te āhua o te kiko hinuhinu o roto ki te mātene. Ko te ōi hoki te ‘grey-faced petrel’ ka kitea i ngā taiao o Te Ika a Māui, e kapi nei hoki i te ingoa o te ‘muttonbird’. Kitea ai ētahi kāhui tītī nui e noho ana, e whakarite kōhanga ana, i ngā moutere i waho atu i te tuawhenua e tata ana ki Rakiura. He kai whakahirahira te tītī, i whakamahia ai hoki hei tauhokohoko ki ētahi atu iwi, tae atu hoki ki ō rātou huruhuru. Ka tino mōmona ana ngā pīpī, ka kāwhakina i ngā kōhanga. Ā muri ake, ka puta ana ngā pīrere i te tōnga o te rā ki te korikori i ō rātou parirau, i whakamahi ngā tāngata i ngā tūrama kia whēkite ai ngā pīrere. Ka huhuti i ngā huruhuru, ka tuakina, ka kōhuatia, ka rokirokitia hoki i ō rātou anō hinu, i ngā pōhā i ngā wā o mua, arā, he pēke kua hangaia ki te rimurimu, engari i ēnei rā, ka rite tonu te whakamahia o ngā pāketē kirihou e whai taupoki ana.

Ko tētahi tauparapara e rite tonu ana te whakamahia hei tīmata i tētahi mihi, ko ‘ka tangi te tītī... ka tangi hoki ahau’, e whakaatu nei i te tautohu a te Māori i tēnei momo kai a ngā tūpuna. Ko tētahi atu kupu whakarite, ko ‘he manawa tītī’ hei kōrero mō te tangata e manawaroa ana. He tikanga whakahirahira, he kaupapa whai moni whakahirahira hoki te kāwhaki tītī ki ngā Māori o Rakiura, ā, mō te hia tekau tau kua mea i roto i ngā mahi tōrangapū kia whai wāhi tonu atu ki taua rauemi, i te mahi tahi hoki ki ngā kaimātai pūtaiao e rangahau nei i te manu mō te toitūtanga te take. Tērā ētahi whānau ka kāwhaki tonu i ngā ōi i ngā moutere o Mokohinau (e tata ana ki Ruakākā) me Aldermen (e tata ana ki Whitianga).

### Kōtare

Kōtare are highly versatile manu and have survived drastic human environmental changes, living in native and exotic forests, farmlands, by lakes and streams, and on tidal mudflats. In the 1870s, the Acclimatisation Society of Whanganui introduced a bounty for killing kōtare because they were attacking the sparrows that the society had recently gone to great efforts to introduce from Europe and Australia. Thus the kōtare are part of a larger story about the disastrous Pākehā enthusiasm for importing birds, and all manner of other fauna and flora, and the history of Māori protest against these actions.

Māori compared a kōtare to a watchful sentry, and a high lookout platform in a pā was referred to as a ‘kōtare.’ Kōtare squabs (fledglings) were taken and cooked in hāngī, while the brilliant blue feathers were in demand for use to decorate clothing and for fishing lures. The saying ‘he kōtare koe’ is used of a person who turns up and watches others eat in hopes of getting some, a comparison with how a kōtare sits motionless on a branch, its ‘gimlet eyes’ searching out food. Māori children, on seeing a kōtare nest tunnel, would call: ‘Putaputa kōtare, putaputa kōtare’ (come out, kōtare, come out, kōtare) and also sang a rain ditty about the kōtare, seen as an omen of fine weather on the way.



Kōtare



### Tītī, Ōi

The name tītī is mostly used for the sooty shearwater, but is also a generic name for many species of seabirds - shearwaters, petrels, prions and others, that visit the shores of Aotearoa. Tītī were dubbed ‘muttonbird’ by Pākehā because the fatty meat resembled mutton. Ōi is the grey-faced petrel found in North Island habitats, also covered by the name ‘muttonbird.’ Large breeding colonies of tītī are found on the small offshore islands around Rakiura (Stewart Island). Tītī are an important food source, also used for trading with other iwi, and for their feathers and down. When the squabs become very fat, they are collected from the nests. Later, when fledgelings are emerging after sunset to exercise their wings, they are hunted using torches to dazzle them. The manu are plucked, cleaned, boned and boiled, then preserved in their own fat, traditionally in pōhā, large bags made of kelp but more commonly now in lidded plastic buckets.

One common tauparapara used to begin a mihi starts with the words ‘ka tangi te tītī... ka tangi hoki ahau’ showing basic identification of Māori people with this ancestral food source. Another saying is ‘he manawa tītī’ for a person with great resilience. The harvesting of tītī remains an important cultural and economic activity for Rakiura Māori, and there have been decades of work, both politically to retain access to the resource, and in partnership with scientists to study the manu and ensure its sustainability. Some whānau still harvest ōi on the Mokohinau (off Ruakākā) and Aldermen (off Whitianga) islands.





Te toroa

Te toroa

E ahu mai ana te ingoa o te ‘toroa’ i te tauihi māmā o te rere o tēnei manu, e kīia nei kua haria mai ki Aotearoa i te rangi tekau mā rua e Tāwhaki i muri i tana whawhai ki a Whiro, ā, he puia ki ō te toroa huruhuru mā ki te Māori, i āta puritia ai i ētahi pouaka rākau kua whakairohia, pērā i ngā waka huia. I whakamahia ngā huruhuru o te toroa hei waihanga pare i mau ai ngā rangatira, hei waihanga manu aute, hei whakarākei hoki i ngā kākahu, i ngā wāka, i te kanohi anō hoki mā te tuitui ki ngā werohanga i ngā pātaki o te ihu. I whakamahia ngā wheua o ngā toroa hei taputapu tāmoko, hei nguru, hei whakahei, hei whakakai hoki. I kāwhakina ngā pīrere toroa i ō rātou mātua hei mōkai i ngā iwi o tātahi, ā, he wā ōna i whati ētahi o ngā whenua o ngā parirau kia kore ai e rere atu, hei whakaratonga huruhuru hoki, tae atu hoki ki ōna hua, ki ōna kiko hoki.

He repe waitai, he pū waitai hoki kei ō rātou ngutu e noho nei hei pūnaha tuku atu i te mātaitai, e pai ai tā rātou inu i te waitai. Tohua ai ngā tukunga waitai ki tētahi taura raranga motuhake e whakamahia nei i ngā kahu, i ngā whāriki, i ngā tukutuku hoki, e kīia nei ko ngā ‘roimata toroa’. E huhua ana ngā pūrākau me ngā whakataukī e kōrero ana mō ngā haerenga o te toroa i te moana, mō tōna taketakenga mai, mō ōna huruhuru mā hoki e wheriko ana. Ko te ‘me he toroa e tau ana i runga i te au’, ko te ‘me he toroa ngunungunu’ hoki ētahi mihi e whakarite ana i te tangata ki te tau o te toroa.

He tohu ngā huruhuru toroa nō te maungārongo i ngā iwi o Taranaki. I whakatikangahia te mau i tētahi huruhuru toroa mā i ngā makawe i te rautau 19 i Taranaki e ngā poropiti, e ngā rangatira tōrangapū, e Te Whiti o Rongomai rāua ko Tohu Kakahi, hei tohu i tā rātou kaupapa i tū rā i Parihaka. I ārahi rāua i tētahi kaupapa o te ātete mārire i te tōkeke-kore o te panaia o rātou i ō rātou wā kāinga kia wātea ai ki ngā kirinoho Pākehā.



Toroa

Toroa

The name ‘toroa’ comes from the effortless gliding flight of this manu, which was said to have been brought to Aotearoa from the twelfth heaven by Tāwhaki following his battles with Whiro, and whose white feathers were among the adornments prized by Māori, kept in small carved wooden boxes, as with huia feathers. Toroa feathers were used to make headdresses worn by rangatira, in making kites, and to decorate cloaks, waka, and the face by being worn through the pierced nose septum. Toroa wing bones were used to make tattooing tools, nose flutes, necklaces and earrings. A young toroa would be taken from its parents and kept as a pet in a seaside village, sometimes breaking its pinions to prevent it flying away, and to ensure a ready supply of feathers, as well as for its eggs and flesh.

Toroa have salt glands and ducts connected to their bills that act as desalination systems, which makes them able to drink seawater. Their salt secretions are commemorated in a distinctive weaving pattern, used in cloaks, mats and wall panels, called ‘roimata toroa’ – albatross tears. Various stories and whakataukī refer to the seagoing travels of the toroa, its spiritual origins, and its brilliant white plumage. ‘Me he toroa e tau ana i runga i te au’ – like a toroa gliding on the updraft – and ‘me he toroa ngunungunu’ – like a toroa nestling its head under its wing – are both compliments comparing people to the physical grace of the toroa.

Toroa feathers are a symbol of peace for Taranaki iwi. To wear a single white toroa feather in the hair was adopted as a tikanga (custom) by 19th-century Taranaki prophets and political leaders, Te Whiti o Rongomai and Tohu Kakahi, as a sign of their movement centred on Parihaka. They led a campaign of peaceful resistance to being unfairly evicted from their homelands to make way for Pākehā settlers.



Te whakamaroke ika<sup>1</sup>

#### 4 Ngā ika a Tangaroa

E huhua ana ngā tikanga e hāngai ana ki te whakapapa o ngā ika, engari e mārama ana te kīia o rātou ko ‘ngā tamariki a Tangaroa’, nā te mea ko Tangaroa te atua o te moana me ngā kīrehe katoa o roto. I te whakaterenga o te waka i ārahi ai a Tamatekapua ki Aotearoa, i tūtaki atu ai ki tētahi kīrehe o te moana, ki a Te Parata, i tata apu rā i te waka me ōna kaumoana. I ora ai rātou, nā tētahi mangō, ā, hei mihi, i tapaina anō te waka me tō rātou iwi ko Te Arawa (he ingoa mangō).

I whakahirahira, e whakahirahira tonu ana hoki, te hao ika hei mātāpuna kai ki te Māori, ā, i huhua hoki ngā tikanga hao ika a ō tātou tūpuna - ko te wero, ko te hī, ko te tārore, o te hao hoki. Ko te hao ika te kaupapa ōhanga matua i Pēwhairangi i kaha kapi ai i te mahi a te tangata i ngā tau tōmua o te taunga mai o te Pākehā. I iti ngā kupenga a ngā Pākehā mēnā i whakaritea ki te rahi o ngā kaharoa kua hangaia i te muka. Ko te

hanga i tētahi kaharoa hou, pērā i ngā mahi katoa e nui ana, he mahi mā te tokomaha, i ū rā te tapu o ngā tāngata me te wāhi i hangā ai i te kaharoa. Kāore tētahi atu i āhei atu ki te wāhi mahi, hāunga rā te hunga kua tonoa ki te mahi i te mahi. Ahakoa te uaua, i āta whai tonu i te rāhui, ka mutu, i nui te whiunga ina takahia. Kāore i whakaaetia te kānga o ngā ahi, te takanga o ngā kai i te wāhi rāhui ā tutuki noa te kaharoa, kātahi ka hiki i te tapu.

E hāngai ana ngā huatau, pērā i te tapu me te noa, ki ngā taputapu me ngā wāhi o te hao ika. Mō te taha ki ngā mātauranga Māori mō ngā kararehe, i tāpua ake ngā mangō me ngā tohorā ki te Māori.



<sup>1</sup> Heaphy, Charles 1820-1881: Motu Rangitoto. He puia korehāhā. Nama 2 [ngā 1850?] Te Whare Pukapuka o Alexander Turnbull. C-025-002



Drying fish onshore<sup>2</sup>

#### 4 Ngā ika a Tangaroa

There are many traditions regarding the whakapapa of fish, but it makes sense to call them the ‘children of Tangaroa’ since Tangaroa is god of the sea and all that dwell within it. When the canoe captained by Tamatekapua was voyaging towards New Zealand, it met Te Parata, an ocean creature who almost swallowed the canoe and its crew. They were saved by a shark, in honour of which the crew renamed the canoe and their tribe Te Arawa (a shark name).

Fishing was and is an important food source for Māori and our ancestors caught fish by many methods - spearing, line fishing, trapping and netting. Net fishing was the main economic business in the thickly populated Bay of Islands at the time of early European arrivals. Māori seine nets made of muka (flax fibre) dwarfed the size of those of the British arrivals. Making a new fishing net, like all big jobs, was a communal activity, imbued with tapu for the people and

place of making. No-one was allowed at the scene of operations except those actually engaged in the task. Despite the inconvenience, such restrictions were rigorously enforced, with severe punishment for trespassing. No fire could be lit and no food could be prepared within the forbidden area until the net was finished, and the tapu was lifted.

Value concepts like tapu-noa are associated with objects and places for catching fish. In terms of Māori knowledge of the animal itself, sharks and whales were more significant to Māori.



<sup>2</sup> Heaphy, Charles 1820-1881 :Rangitoto Id. Extinct volcano. No 2 [1850s?] Alexander Turnbull Library. C-025-002



Te makō/mangō

E huhua ana ngā ingoa mō ngā tūmomo mangō huhua e kitea ana i ngā moana o Aotearoa, engari ko te mangō (i te pito o raro) me te makō (i te pito o runga) ētahi o ngā mea e rongonui katoa ana, ā, e whakamahia ana hei kupu whānui mō ngā mangō. Ka whakaritea ngā toa ki ngā mangō, i ngā kupu whawhai, pērā i te ‘Kia mate ururoa tātou, kei mate ā-tarakihi.’ E rite ana te makō ki te ‘tiger shark’, ki te ‘blue pointer’, ki te ‘dogfish’, ki te ‘gummy shark’ rānei.

I taea e ngā taniwha o te moana te huri hei mangō, pērā i te taniwha o Te Tai Tokerau, i a Ruamano. Mēnā i tūpoki tētahi waka, ka karangahia a Ruamano e ngā kaumoana kia whakaorangia ai rātou. I aua wā, he kaitiaki hoki ngā taniwha – arā, ko ngā kararehe ngā kaimahi a ngā atua.

Ngā Mana (Kaitiaki) o Ngāti Wai

I waenga i te iwi o Ngāti Wai ki Whangaruru, kei te pito whakaterāwhiti-mā-raki o Whangārei i Te Tai Tokerau, ka kīia ngā kararehe e tiaki nei ko ngā ‘mana’ e ōrite nei ki ngā ‘kaitiaki’ (Tūhoe) e whakamahia whānuitia ana. E kōrero ana te mana mō tētahi *karangatanga* atua, ā, e hāngai pū ana ki ngā mahi tipua. Ko ngā kaitiaki ngā atua kua uru atu ki tētahi tūmomo kararehe, ā, e kīia nei ēnei kararehe, he ‘mana’ hei tonu i te whakapono ko ngā kaitiaki te mātāpuna o tā te tangata whai mana. Nō te kaihao e hao ika ana te mana nā te mea he kaupapa haurokuroku te hao ika. Ka puta te ihu o te tangata mana nui, ā, ka hinga te tangata noa. He mana hoki tō te tangata mēnā ka peka atu te mana o tētahi iwi ki a rātou kia tukua ai tērā kaha.

E ono ngā kaitiaki kararehe e mōhiotia ana e ngā tāngata o Whangaruru, e rua ngā mangō, he whai tētahi, he kawau tētahi, he ruru (Hineruru) tētahi, he kurī tētahi. Ka whakatata atu aua mana ki ētahi tāngata mēnā ka whakatauria kia pērā, ā, ka hāngai tō rātou āhua ki tētahi take whāiti, ki tētahi take whakahirahira hoki ki te tangata e torona ana e rātou

Te tohorā

E ai ki ngā tikanga Māori, he ika te tohorā, ā, ko rātou ngā tamariki nui katoa a Tangaroa. Ko te tohorā (tohoraha rānei) tētahi kupu whānui mō te ‘whale’, engari e whāiti ana hoki ki te ‘southern right whale’, arā he tohorā ka hekeheke i ngā tai katoa o Aotearoa. Ko tētahi atu kupu mō ngā tohorā ko ‘te whānau puha’. He wā hoki ōna ko te tohorā tētahi o ngā āhua o ngā taniwha o te moana.

E ai ki te tirohanga Māori, he takoha tētahi tohorā kua pae ki tātahi nā ngā atua me tētahi mātāpuna kai karioi. I mua i te pā atu ki te tohorā kua pae ki tātahi, me taki karakia e noa ai ia. Ki ētahi tāngata, e ai ki te whakaaro Māori, he tipua, he mōkai hoki te tohorā, ka mutu, hei kaiārahi i ngā waka, hei kaiwhakaora hoki rātou i te hunga i aituā ai i te moana, i ngā waka hoki.

He nui ngā kōrero i ngā waka moana i heke mai ai mō te arahina, mō te āwhinatia hoki o rātou e ngā tohorā. He huhua hoki ngā pūrākau Māori mō tā te tangata eke i ngā tohorā, pērā i te tupuna pou whakarae o Ngāti Porou, i a Paikea. Whakarite ai ngā whakataukī i ngā rangatira ki ngā tohorā. Ko ‘te kāhui parāoa’ - hei tohu i tētahi ohu rangatira. Ko ‘he paenga pakake’ e tohu ana i ngā rangatira kua hinga i te pakanga.



Te tohorā

Makō/mangō

There are many Māori names for the various types of sharks found in the waters of Aotearoa, but mangō (in the north) and makō (in the south) are among the most well-known and used as generic terms for sharks. Warriors are compared to sharks, in battle cries such as ‘Kia mate uruora tātou, kei mate ā-tarakihi’ (let us die like white sharks, not tarakihi). The makō is equated to the tiger shark, blue pointer, dogfish or gummy shark.

Ocean taniwha could take the form of sharks, such as Ruamano, a taniwha of iwi in the far north. If a waka capsized, the crew would call upon Ruamano to save them. In such cases, taniwha are also acting as guardian animals – an atua acting through an animal.

Ngā Mana (Kaitiaki) o Ngāti Wai

Among Ngāti Wai people at Whangaruru, northeast of Whangārei in Te Tai Tokerau, guardian animals are called ‘mana’ equivalent to the more widely-known usage (Tūhoe) of ‘kaitiaki.’ Mana refers to a class of divine beings and is always associated with supernatural power. Guardian animals are deities who have entered a specific member of an animal species, and calling these animals ‘mana’ expresses the belief that the guardians are the source from which people derive the power of mana. The fisherman who catches fish has mana because success in fishing is essentially uncertain. A person with great mana will succeed whereby human reckoning they are likely to fail. People also have mana when they have the mana of the tribe visit them and give them the power.

Of the six guardian animals known to the people of Whangaruru there were two sharks, a stingray, a shag, a morepork (Hineruru) and a dog. These mana come very close to certain people of their own volition, and their appearance always has a specific and important meaning to those they visit.

Tohorā

Māori traditions include whales in the category of ika, whales being the largest of the children of Tangaroa. Tohorā (or tohoraha) is equated with a generic term for whales, but also specifically used for the southern right whale, a migratory whale that ranges through all the coastal waters of Aotearoa. Another generic Māori name for whales is ‘te whānau puha’ - the family of animals that expel air. An ocean taniwha sometimes takes the form of a whale.

In Māori thinking, a stranded whale is a gift from the gods and a bountiful ‘cut and come again’ buffet. Before touching a stranded whale, karakia needs to be recited to free it from tapu. Whales are regarded in Māori thought as *both* supernormal *and* subservient, at least to some people, and were relied on as guardians of vessels and rescuers of people in marine mishaps and shipwreck.

Several of the oceangoing waka of migration include stories of being guided and aided by whales. Māori traditions include multiple stories of people riding whales, including Paikea, a prominent Ngāti Porou ancestor. Whakataukī about whales compare them with rangatira. ‘Te kāhui parāoa’ – a gathering of sperm whales – indicates a group of chiefs. ‘He paenga pakake’ (beached whales) refers to fallen chiefs on a battlefield.



Tohorā



## 5 Ngā ngārara – te aitanga a Punga

I ēnei rā, ka whakamahia te kupu ‘ngārara’ hei kōrero mō ngā ‘reptiles’, engari ko tōna tikanga taketake, ko ngā ‘insects’, e whakaū nei i te rerekē o tā te Māori whakarōpū i ngā karere i tā te pūtaiao pērā. Mō te taha ki te whakapapa, he tamariki ngā ngārara nā te tama a Tangaroa, nā Punga, e kīia nei āna tamariki he anuanu, he mōrikarika, koia i tapaina ai ko ‘te aitanga a Punga.’ Kua tapaina te tuatara mō tō tuarā taratara; ko ngā mokomoko ngā ‘lizards’. Ko te ngārara, hei karangatanga Māori, tētahi ingoa hoki mō tētahi momo taniwha, he momo tipua, ā, ko tōna āhua, ko te mokomoko kaitā, ko te tuatara rānei. E kōrero ana ngā pūrākau mō te tutūnga o te puehu i waenga i te aitanga a Punga mō te noho ki te whenua, ki te moana rānei, e whakatauirā nei i te horopaki e rite tonu nei te kitea, i te tohe i waenga i ngā kōwhiringa e rua e kitea ana i ngā pūrākau o te ao tūroa mō te whakapapa.



Te tuatara. Nā Bernard Spragg, [CC-BY-1.0](#).

He tohu kino te kitea o tētahi mokomoko i roto i te whare o te tangata; ko te mokomoko me te tuatara te tohu o te maruaaitu (ko ngā kaikawe karere nō te ao wairua). I ētahi atu horopaki, i whakanohongia ngā ngārara ki ētahi wāhi tāpua kia noho ai hei kaitiaki. Ko ēnei tikanga ngārara mō tauwhirotanga o ngā atua ka tau hoki ki runga i ngā rua kōiwi, hei mauri rānei, arā, ko ngā toka maruwehi, ko ngā tohu rānei e whakamahia ana hei tiaki, hei whakaū hoki i te oranga ki roto i ngā wāhi kei reira ngā koiora, pērā i ngā māra me ngā ngahere.



Te mokomoko. Nā Bernard Spragg, [CC-BY-1.0](#).



## 5 Ngā ngārara – te aitanga a Punga

Ngārara is used today to mean ‘reptiles’ but its traditional meanings also include insects, demonstrating again how the Māori categories for animals diverge from those of science. In whakapapa terms, ngārara are the progeny of Punga, son of Tangaroa, whose descendants were said to be ugly and repulsive, hence the name ‘te aitanga a Punga.’ The tuatara is named for its spiny back; lizards (skinks and geckos) are known as mokomoko. Ngārara as a Māori category is also the name of a type of taniwha, a supernatural class of being, which takes the form of a giant mokomoko or tuatara. Traditions tell of cosmic arguments between the descendants of Punga about living on land or in the sea, making another example of the common theme in Māori traditions of battles being fought over binary choices found in the nature narratives of whakapapa.



Tuatara. Bernard Spragg, [CC-BY-1.0](#).

To see a mokomoko inside one’s house is considered an ill omen; both mokomoko and tuatara were traditionally regarded as bringers of bad luck (spiritual messengers). In other circumstances, ngārara were placed at special sites to live as kaitiaki or guardians. These ngārara traditions invoke atua protection over places such as burial caves, or mauri, which are venerated stones or other totem objects, used to guard and ensure the health of particular inhabited places such as gardens or forests.



Mokomoko. Bernard Spragg, [CC-BY-1.0](#).





## 6 Te aitanga pepeke

E kapi ana i tēnei ingoa ko te ‘insect world’, ā, e hāngai ana ki te whakapapa me te ariā o te ‘aitanga’, arā, ko ngā kīrehe e ora ana e heke iho ana i tētahi atua o nehe i takea mai ai i te ao tūroa. I tēnei karangatanga Māori, e hāngai ana te ‘pepeke’ ki ngā waewae e piko ana me ngā pūkenga pepeke. E kitea ana te aitanga pepeke i ngā pūrākau mō te pakanga i waenga i ngā atua e noho nei hei teina, hei tuakana hoki ki a rāua anō, i a Tāne-mahuta rāua ko Whiro, i whakamahi ai i te aitanga pepeke hei ope tauā kia kōkiritia, kia werohia hoki ngā tāngata me ngā kararehe. I ētahi atu pekanga o aua pūrākau, nā te atua o ngā tāngata, nā Tūmatauenga, te atua o ngā namunamu, a Namuiria, i kōhuru, ā, hei utu, ka kōkiri ana iwi o te Waeroa (mosquitoes) me te Namu (sandflies) i ngā tāngata.

Ko te aitanga pepeke hoki e kōkiri ana i te pūrākau o te kaiwhakairo waka, o Rātā, kāore nei i tono whakaae i te ngahere i mua i tana tuatua i tētahi rākau nui. I riri ngā ngārara me ngā manu, ā, i muri i ā Rātā mahi mō taua rā, i rewa anō i a rātou te rākau, i karanga hoki i ngā peka me ngā wāhanga kua whati kia kōtuitui rātou ki a rātou anō. I rua ngā tuakanga o te rākau e Rātā, ā, i rua hoki ngā hikinga o te rākau e te aitanga pepeke.

Nāwai rā, nāwai rā, tē wehe kē ai i te ngahere i te paunga o te rā, i huna a Rātā, i mātakitaki hoki ia i tā ngā ngārara me ngā manu hiki anō i te rākau. I ngā wānanga i whai ake rā, i warea a Rātā e te whakamā me te whakapāha, me te aha, nā te mea he tohu hūmārie tērā, i āwhina rātou i a ia kia hangaia mai he waka. Ko te kōrero mō Rātā me tana waka tētahi pūrākau taketake mō ngā tikanga me ngā ara tika o ngā whanonga me te whakaute i te ao tūroa.



Te wētā

## 6 Te aitanga pepeke

This group name equates to ‘the insect world’ and calls to whakapapa in the concept of ‘aitanga’ meaning living creatures descending from the primordial atua who are the supernatural origins of the natural world. In this Māori category, ‘pepeke’ refers both to bent legs and jumping ability. Te aitanga pepeke feature in cosmogenic narratives of conflict between primordial brothers, Tānemahuta and Whiro, who used te aitanga pepeke to form his armies of attack, stinging people and animals. In other versions of these nature narratives, Tūmatauenga, the ancestor of humans, killed Namuiria, the primordial sandfly, and in return his tribes of Waeroa (mosquitoes) and Namu (sandflies) attack humans.

Te aitanga pepeke also drive the narrative of Rātā, the canoe maker, who failed to ask permission of the forest before felling a large tree. The insects and birds were angry, and after Rātā had retired for the day, they raised the tree up again, calling on all the branches and broken pieces to bind together. Twice Rātā felled the tree, and twice the aitanga pepeke raised it up again.

Eventually, instead of leaving the forest at the end of the day, Rātā hid, and observed the insects and birds raising the tree once again. Dialogue ensued that made Rātā overcome with shame and remorse, a sign of humility for which the aitanga pepeke and manu offered to build him a waka, a canoe. The story of Rātā and his waka is an Indigenous parable about tikanga, right ways of behaving, and respect for nature.



Wētā

Kōrero Whakakapi

He tīpakonga noa ngā wāhanga o runga nō te whānuitanga o ngā mātauranga i kohikohia ai e ngā tūpuna mō ngā kararehe o Aotearoa mā roto mai i tā rātou anō āta aroturuki, arā, koia tētahi o ngā tohu motuhake o te pūtaiao. E tapatahi ana ngā whakaaro o te nuinga ki ngā ritenga me ngā tūhononga i waenga i te mātauranga Māori me te pūtaiao. E kitea ana i ngā kōrero o runga ētahi o ngā āhuatanga whāiti o ngā rerekētanga i waenga i ngā mātauranga Māori mō ngā kararehe me ō te pūtaiao.

E whai wāhi ana ki te mātauranga Māori mō te ao tūroa ngā pūrākau e whakaū nei i te anga whānui o te ao wairua Māori me tōna hāngai ki te takiruatanga i ngā pae huhua, i te ao wairua ki te ao kikokiko. Nā konā e kaha nei te kitea o ngā pakanga o te taiao i ngā pūrākau – i waenga i ngā peka rerekē o ngā manu, o ngā ika, o ngā mokomoko, o ngā ngārara, o te aha atu, o te aha atu – e hāpai nei i te whakamāramatanga o te ao tūroa o Aotearoa i kitea rā e ngā tūpuna Māori.

Te hī ika<sup>1</sup>



1 Webber, John, 1751-1793. Tohu: B-098-015. Te Whare Pukapuka o Alexander Turnbull, rekoata/22664325.

Conclusion

The above sections provide merely a taster of the vast knowledge collected by tūpuna about the animals of Aotearoa by detailed empirical observation, which is one of science’s trademarks. There is general agreement that there are similarities and overlaps between mātauranga Māori and science. The above account has highlighted some interesting ways in which Māori knowledge about animals differs from science.

Māori knowledge of the natural world includes traditional narratives that reinforce the overall structure of the traditional Māori cosmos as based on dualities (binaries, dipoles) operating at many levels, from the cosmic to the psychological. Thus many traditional stories tell of primal ecological battles – between different factions of the birds, fish, reptiles, insects, etc – which help explain the natural world of Aotearoa encountered by tūpuna Māori.

Fishing Tōtaranui Queen Charlotte Sounds<sup>2</sup>



2 Webber, John, 1751-1793. Ref: B-098-015. Alexander Turnbull Library, records/22664325

Māori knowledge of animals is underpinned by whakapapa, the organising principle of reality in te ao Māori, on which stand the two basic concepts of tapu and mana. Making a new fishing net was declaring a group’s intention to harness the power of nature and ngā atua, hence it was an activity governed by the law of tapu, which dictates how people behave in relation to that activity. A successful hunter or fisher had mana, since they showed their ability to turn that power to their own ends. Mana is related to a person’s ability to keep the cosmic forces of ngā atua in balance (utu).

In some ways whakapapa is like an ethical Indigenous version of the concept of evolution. Dogs, rats and humans are considered to be closely related, not only in terms of phylogeny, but also whakapapa. Tūpuna fully utilised the animals of Aotearoa to survive and thrive, while respecting their relationships with animals through whakapapa.





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Manatū Ahu Matua

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He aratohu mā te pouako



# Ngā huatau Māori mō ngā matatika kararehe me ngā pānga ki ngā Wh e Toru



Ngā Kararehe o Aotearoa: He Mātauranga, he Matatika

## He Whakataukī

Te manu e kai ana i te miro, nōna te ngahere  
Te manu e kai ana i te mātauranga, nōna te ao.

Kua roa tā te tangata wānanga i tō rātou hononga ki ētahi atu momo koiora, inarā, ko ngā kararehe. I roto i ngā rautau, kua whakapae haere ngā iwi o Te Uru ki tō rātou noho wehe i ngā kararehe. I ngā tirohanga o ēnei wā, kāore he mōhiotanga, he hinengaro hoki o ngā kararehe. Nā konā i whakaaetia ai te whakamahinga (te tūkinotanga hoki) o ngā karahere hei kai, hei whakamātauhanga, hei whakangahautanga hoki. E ai ki aua tirohanga, kāore ō ngā kararehe kare ā-roto.

I te takahanga o te wā, i te whanaketanga hoki o te pūtaiao me ngā hangarau, i kitea i ngā rangahau he koiora matatini kē ngā kararehe, ka mutu, pēnei i a tātou nei, ka rongo rātou i te rekareka, i te mamae, i te matakū, i te auhi hoki. Ehara i te mea ko ngā whāngote waewae-rua anake, e pātata nei ōna ira ki tō te tangata, e whai kare ā-roto ana i ngā tirohanga o nāianei. Ko ētahi o ngā kararehe whai tuaiwi, pēnei i ngā kau i ngā pāmu miraka, ka rohi nei i te wehenga atu o ngā punua kau kātahi tonu nei ka whānau mai. E huri ana ngā whakaaro mō te korenga o ō rātou mōhiotanga, e kitea ana he hinengaro tō ngā kararehe whai tuaiwi. E kitea ana i ngā rangahau nō nā tata nei, ka tākaro ngā pīrorohū, arā, he āhuatanga motuhake tērā i whakaponotia rā ka whai pānga ki te whanaketanga pai o te hinengaro me ngā pūkenga nukunuku o roto o ngā koiora. E kitea ana hoki ngā rerekētanga e hāngai ana ki te pakeke me te ira i tā te pīrorohū tākaro, pērā i ngā kararehe whai tuaiwi.

Nā runga i te piki haere o te māharahara ki tā te tangata tiaki i ngā kararehe, inarā, te tiaki i ngā kararehe i ngā whenua e kaha nei te ahumahi, i hua ai te pekanga o te matatika kararehe, e tūhono nei i te pūtaiao me te tautake. E rua ngā ara matua o ngā ariā e hāngai ana ki ngā matatika kararehe, arā, ko te ara o te whakakotahi me te ara o te tūhonohono, e rehurehu nei ngā roherohenga i waenganui i ngā mea e rua.



Whakamaharatanga ki ngā kararehe taiwhanga pūtaia.  
Nā T, [CC-BY-SA-2.0](#)

## He Whakataukī

Te manu e kai ana i te miro, nōna te ngahere  
Te manu e kai ana i te mātauranga, nōna te ao.

People have always grappled with their relationships with other species, particularly animals. Over the course of many centuries, people in Western cultures have come to view themselves as separate from animals. Through a modern lens, animals came to be viewed as lacking in intelligence or consciousness. These ideas justified animals to be used (and abused) as resources for food, experiments and entertainment. Animals were not being seen as sentient, emotional beings.

As time proceeded and science and technology advanced, research was showing that, in fact, animals are complex creatures, and that, just like us, they experience pleasure and pain, fear and distress. It is not only primates, with their close genetic similarities to humans, who are now seen as sentient. Large vertebrates such as cows on dairy farms are known to mourn the separation from their newly-born calves. Overturning earlier notions of lack of intelligence, invertebrates have been shown to have consciousness. Recent research has shown that bumblebees play, a biological phenomenon believed to contribute to the healthy development of both cognitive and motor skill abilities in living entities. Age and sex differences are found in bumblebee play, just as in vertebrates.

Rising concern over how humans treat animals, especially within modern industrialised nations, led to the emerging field of animal ethics, which straddles science and philosophy. There are two main approaches to a theory of animal ethics, a unifying approach and a relational approach, with fuzzy boundaries between the two.



Memorial to the lab animals. T, [CC-BY-SA-2.0](#)



Ngā ara o te Whakakotahi me te Tūhonohono (ētahi momo rānei) mō ngā ariā o te matatika kararehe

Whakaūria ai e ngā ara o te whakakotahi ngā mea e rite ana, te auroatanga hoki i waenga i ngā tāngata me ngā kararehe; manohi anō, whakaūria ai e ngā ara o te tūhonohono ngā rerekētanga, ngā mea rānei kāore i te rite i waenga i ngā tāngata me ngā kararehe. Kua puta i te ara o te whakakotahi te rītaha ki ētahi tūmomo kararehe, te ‘rītaha kararehe’ rānei. Ahakoa ka pōhēhē pea te tangata e hāngai ana te ara o te tūhonohono ki ngā whakaaro Māori, ka kite i ngā tikanga o Te Uru i ngā taupā i te ara o te tūhonohono, tē hāngai kē ai ki ngā hononga i waenga i ngā tāngata me ngā kararehe. E piere nuku ana te whakahāngai i te whakapono o te ōrite o ngā mōtika o ngā kararehe ki ō ngā tāngata o roto o te ‘whakakotahitanga’ ki ngā mahi, engari ko te tūraru o roto i te ara o te ‘tūhonohono’, ko te takahi i te tirohanga a te kararehe, ko te iti hoki o ngā kupu ārahi mō ngā mahi, me te aha, kāore te pākinikinitanga i te arohia.

Ina tirohia kautia, kāore tētahi o aua ara i te pai. Tērā pea, ka whakaata ngā whakapono o tēnā tangata, o tēnā tangata i ētahi āhuatanga o ngā ara e rua, e paku rerekē nei pea i runga i te āhua o tōna anō ao. Nā runga i tēnei ariā o te matatika kararehe, ki te wāhanga e whai ake nei whakatakina ai ngā mātāpono o ngā Wh e Toru (te Whakakapi, te Whakaheke, te Whakamaheni) e noho nei hei ture whānui mō ngā matatika kararehe i roto i ngā rangahau, i ngā whakamātautau, i ngā mahi whakaako anō hoki.



Nā Gavin Schaefer, [CC-BY-SA-3.0-migrated](#).

Unifying and Relational approaches (or versions) of animal ethics theory

Unifying approaches emphasise the similarities or continuity between humans and animals, while relational approaches emphasise the differences or otherness of animals from humans. Unifying approaches give rise to the idea of species bias or ‘speciesism.’ Although it sounds like the relational approach would align with Māori ideas, in the Western tradition the relational approach draws boundaries, rather than connections, between humans and animals. The ‘unifying’ belief that animals have equal rights with humans is almost impossible to put into practice, but the ‘relational’ approach risks disregarding the animal’s perspective, offering little guidance for practice, and hence overlooking suffering.

Taken on its own, neither approach seems entirely satisfactory. Quite possibly, each person’s own belief system reflects elements of both traditions, in a particular balance according to their life circumstances. With this overview of animal ethics theory in mind, the next section introduces the Three Rs principles (Replacement, Reduction, Refinement) that are the standard formula for animal ethics used in research, testing and teaching.



Gavin Schaefer, [CC-BY-SA-3.0-migrated](#).

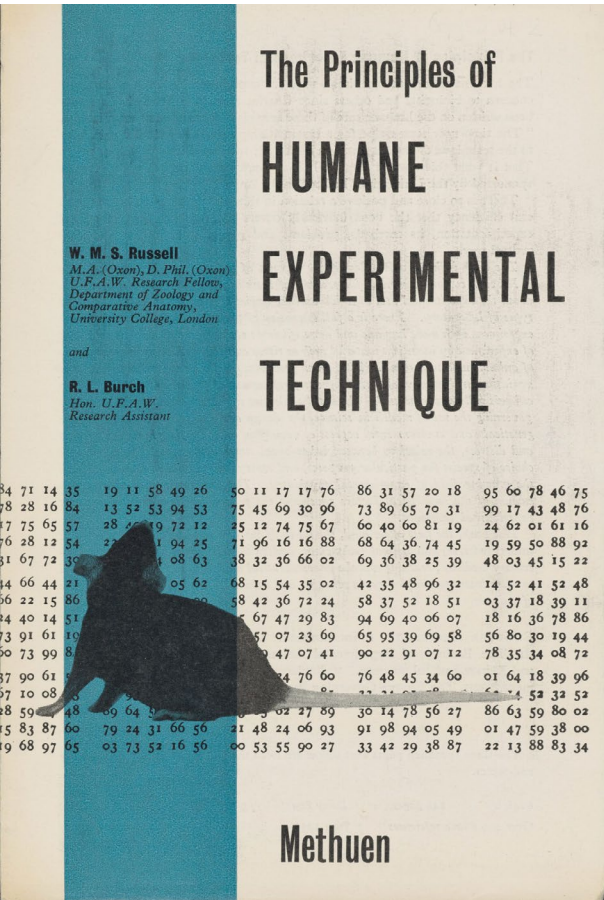


Ngā Wh e Toru i roto i ngā mahi

I tipu haere ngā māharaharatanga mō te whakamahinga o ngā kararehe i ngā whakamātautau i te haurua tuatahi o te rautau 20. I te tau 1954, i tonoa ai a William Russell me tana kaiāwhina, me Rex Burch, e te UK Universities Federation for Animal Welfare kia rangahaua te whakatakinga o ētahi tikanga e ngākau atawhai ake ana, e puta ai te tuhinga matua o te pekanga e kīia nei ko The Principles of Humane Experimental Technique. E whakamārama ana tēnei pukapuka i ngā māharaharatanga ā-matatika mō te oranga o ngā kararehe i ngā whakamātautau pūtaiao me te whakataki i ētahi mātāpono mō te rangahau, mō te whakamātautau, mō te whakaako hoki e kīia nei ko ngā Wh e Toru, kua tapaina nei hoki ko “te whakahekenga o te tūkinotanga”. E tohea ana te whakaurunga atu o ngā tikanga ngākau māhaki e puta ai ngā raraunga whai hua nā te mea kāore e kaha ana te ahotea o ngā kararehe.

Ko ngā Wh e Toru ētahi mātāpono e toru, ētahi rautaki e toru rānei hei whakamahinga i roto i te rangahau, i te whakamātau, i ngā mahi whakaako hoki e pā ana ki ngā kararehe: Te Whakakapi, te Whakaheke, te Whakamaheni. Ko te mātāpono o te Whakakapi, ko te karo i te whakamahinga o ngā kararehe katoa he kare ā-roto o rātou, me te whakakapi i ērā ki ngā matū kāore nei i te rongō i ngā kare ā-roto. Ko te Whakaheke te whakaheke ki tōna mōkitotanga i te nui o ngā kararehe e whakamahia ana e puta tonu ai ngā rangahau e hiahiatia ana. Ko te Whakamaheni te whakaheke i ngā wā e whai nei, i te kino rānei o taua whai, i ngā tukanga e tūkino ana i ngā kararehe i ngā wā me whai tonu.

I whakatakina ngā Wh e Toru i tua atu o te 60 tau ki muri, ā mohoa noa nei, kua whanake haere te ao pūtaiao me te ao hangarau hei whakapakari i ō ngā kairangahau me ngā kaimātai pūtaiao pūkenga ki te whakamahi i aua rautaki hei painga mō ngā kararehe. I ēnei rā, i te nuinga o te wā, ko te Whakakapinga te whakamahinga o ngā tauira me ngā taputapu kei ngā taumata tiketike o te hangarau, tē whakamahi kē ai i ngā kararehe, hei tauira, ko te whakangungutanga o te mātai kararehe.

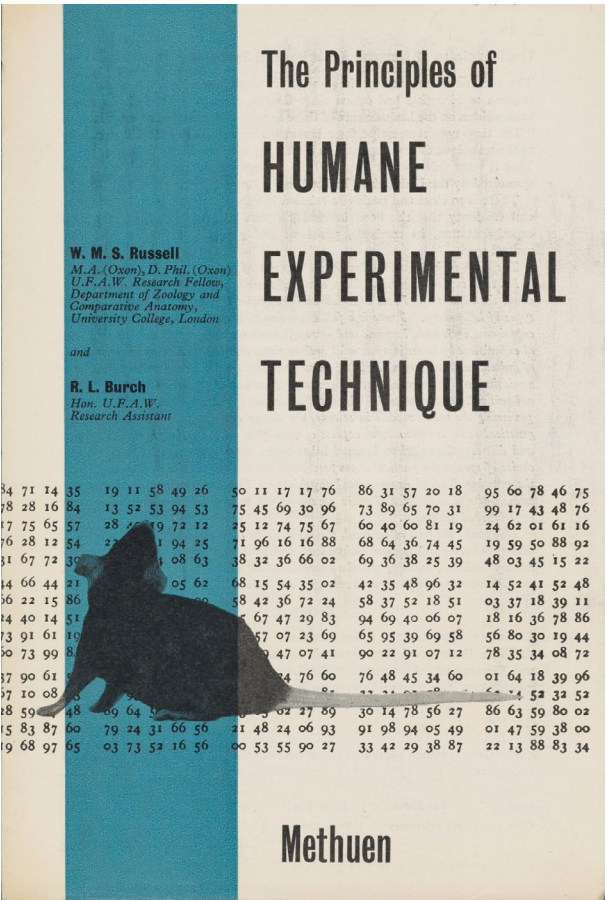


The Three Rs in practice

Concerns about how animals were being used in experimentation began to grow in the first half of the 20th century. In 1954, the UK Universities Federation for Animal Welfare commissioned William Russell, assisted by Rex Burch, to research how more humane methods could be introduced into scientific research, leading to the central text in the field, The Principles of Humane Experimental Technique. This book explains ethical concerns for the welfare of animals in scientific experimentation and introduces the set of principles for research, testing and teaching known as the Three Rs, dubbed the “removal of inhumanity”. They argue that adopting humane methods leads to good data since animals are likely to be less stressed.

The Three Rs are three principles or strategies for the use of animals in research, testing and teaching practice: Replacement, Reduction and Refinement. The principle of Replacement means avoiding the use of sentient animals entirely, replacing them with insentient material. Reduction means reducing the number of animals being used to the minimum needed to obtain the required information. Refinement means decreasing the incidence or severity of the inhumane procedures being applied to animals when they still need to be used.

The Three Rs were introduced more than 60 years ago, and since then, advances in science and technology have continued to enhance the ability of researchers and scientists to use these strategies for the benefit of animals. Replacement now often means using high-tech models and tools instead of animals, for example in veterinary surgery education. Refinement has become associated with advanced in vivo technologies, handling techniques that cause the least amount of distress, and re-homing animals once experiments have concluded.





# Ngā whakaaro matua i ngā matatika Māori

I te pae o te mahara, ka kite i te putanga o te rerekētanga o te Māori i ngā huatau Māori matua; he huatau taketake nō nehe ērā, e kitea ana puta i ngā ahurea huhua e hāngai ana nō Te Moana nui a Kiwa, kāore nei he kupu reo Pākehā e hāngai ana. Nā konā i pāhao ai i te ‘tapu’ (ko tōna tikanga taketake, ko ‘te noho ki te takiwā o ngā atua’) kia hāngai ai ki te tikanga reo Pākehā ā-ao o te ‘taboo’ (i taketake mai i te kupu Tonga, i te tabu), ā, ko te ‘mana’ (ko tōna tikanga taketake ko ‘te mōhio ki te whakataurite i tō hononga ki ngā atua’) kua whai wāhi katoa atu ki te reo Pākehā o Aotearoa.

Ko tētahi o ngā tauira matua o te whakaaro Māori ko te whakapapa. Kei runga i te whakapapa ko ngā huatau mātāmua, ko te tapu me te mana. Kei te pae tuatoru, ko te takitoru o ngā uara Māori, ko te pono, ko te tika, ko te aroha hoki. Ka whakatakina ēnei huatau ki raro iho nei.



Auahi Kore marae. Nā Phillip Capper [CC-BY-2.0](#).



Tauira (‘He Takarangi’ te ingoa o te tauira whakairo nei) i tāngia ai e Anaha Te Rahui i Rotorua, i te tau 1909. He mea pūpuri nā Te Papa (ME024168/8)

# Key ideas of Māori ethics

Key Māori concepts manifest Māori difference at the intellectual plane; they are ancient indigenous concepts, some shared across many related cultures of the South Pacific, with no English equivalents. Hence ‘tapu’ (originally meaning ‘in the presence of ngā atua’) has been appropriated intact into international English as ‘taboo’ (from the Tongan cognate, tabu), while ‘mana’ (originally meaning ‘the ability to maintain balance with ngā atua’) has been included whole in New Zealand English.

A simple model of Māori thought is based on whakapapa. Standing on whakapapa are the central ontological concepts of tapu and mana. The third layer consists of the triadic Māori ethical values, pono, tika, aroha. These concepts are introduced below.



Auahi Kore marae. Phillip Capper [CC-BY-2.0](#).



Tauira (He Takarangi carving pattern), 1909, Rotorua, by Anaha Te Rahui. Te Papa (ME024168/8)

## Te whakapapa

E mātāmua ana te whakapapa, hei tūāpapa mō ērā atu o ngā huatau Māori. Ko te huatau o te whakapapa tērā i kaha kōrerotia ai e ngā kaikōrero Māori hei tūāpapa mō te whakaute i ngā kararehe hei wāhanga mō tō rātou anō māramatanga ki te tirohanga Māori. Hei tauira, i whakamārama a Leilani Walker i te whakatipuria ōna kia mārama ki te mana ka ahu mai i te whakapapa ki ngā kararehe katoa, nā reira e tika ana kia manaakitia, arā, ko tētahi o ngā ahunga matatika o te mātauranga Māori mō ngā kararehe kāore nei i te kitea i te ariā o te kuneroatanga. He huatau whānui, he huatau whakaputaputa hoki te whakapapa, he pokapū hoki e kitea nei te rerekētanga i waenga i ngā pūtaiao o Te Uru me ngā whakaaro Māori, ngā whakaaro taketake hoki. E nui ake ana te tikanga o te whakapapa i tēnā o ngā whakatipuranga anake, ahakoa e whakahāngai pērātia ana i te nuinga o te wā, mō te taha ki te whakarōpūtanga o ngā ingoa o ngā tūpuna, o ngā tātai whāiti, o ngā hītori hoki o ngā whānau. Hei huatau, ko te whakapapa tētahi ara e whakariterite ai i ngā pārongo matatini whānui, ānō he mahere huatau, he pūnaha whakarōpū, he kohinga whakaaro hoki.



Ko Tākuta Leilani Walker

Ko te whakapapa i roto i tēnei āhuetanga hōhonu o te ‘whakariterite pārongo’, ka hāngai ki ngā pūrākau mō te ao tūroa, e noho ai hei kohinga whakaaro taketake e whakamārama nei i te ao me tōna takenga mai. Nā runga i tēnei, ka pērā te whakapapa, mō ngā pūnaha o te mātauranga Māori, i te ariā me te tautake o te pūtaiao mō ngā mātauranga a Te Uru. Ko te whakapapa, hei pūnaha mātauaranga, e whakamārama ana i te takenga o te ao, e whakanahanaha ana i ngā mātauranga nō te tirohanga Māori mō te ao tūroa, e ārahi ana hoki i ngā mahi matatika i te ao Māori. Ko te huatau o te whakapapa te tūāpapa e mārama ai ki te hononga i waenga i ngā tāngata me ngā kararehe, e noho nei hei pūtake mō tā te tangata manaaki i ngā kararehe e noho tahi nei ki ō tātou kāinga, ki tō tātou ao hoki.

Ko te whakapapa te tūāpapa mō ērā atu huatau. Ka noho ki runga i a ia ngā huatau mātāmua o te tapu me te mana; ko te pono, ko te tika, ko te aroha hoki te takitoru matatika o ngā huatau e ārahi nei i ngā whanonga e tika ana kia whāia i te taha o ngā tāngata, o ngā koiora, o ngā mea hoki kāore nei i te ora i te ao tūroa.

## Whakapapa

Whakapapa comes first, as the base or ground on which the other Māori concepts are built. The concept of whakapapa was mentioned repeatedly by the Māori consultants as underpinning a sense of respect for animals that was part of their personal understanding of a Māori worldview. For example, Leilani Walker explained how she had been brought up to understand that whakapapa affords mana to all animals, thus making them deserving of being treated with respect, an ethical dimension in Māori knowledge of animals that is absent from evolutionary theory. Whakapapa is an expansive, generative concept, and an important locus of difference between Western/scientific and Māori/Indigenous thinking. The concept of whakapapa goes beyond genealogy, with which it is normally associated, in the sense of collections of ancestor names, specific lineages and family histories. As a concept, whakapapa is a way of organising complex arrays of information, likened to a mind map, a folk taxonomy, and a cognitive gestalt.



Dr Leilani Walker, Behavioural Ecologist

Whakapapa in this more conceptual sense of ‘organising information’ relates to the nature narratives, which collectively act as an indigenous paradigm to explain the world and how it came to be. Whakapapa in this way fills a similar role for Māori knowledge systems as does the theory and philosophy of science in Western knowledge. Whakapapa as a knowledge system explains how the world came to be, structures empirical knowledge about the natural world, and guides ethical action in the Māori world. The concept of whakapapa provides a basis for understanding human-animal relationships, which acts as a rationale for humans to respect the animals with whom we share our homelands and world.

The other concepts build on from whakapapa. Tapu and mana are basic ontological concepts that operate on whakapapa; and pono, tika and aroha are triadic ethical concepts to guide right behaviour towards other people and all living and non-living elements of the natural world.



Te tapu me te mana

He hononga tata i waenga i te tapu me te mana e noho ana hei tūāpapa i te ao Māori, inā hoki mēnā kāore i reira, kāore he paku aha i tō tātou ao. E hāngai ana te tapu me te mana ki ngā atua, nā te mea i ahu mai te tapu me te mana i ngā atua. I te ao Māori, he mana tō ngā kararehe katoa, nā reira me manaaki e tātou. Hei huatau taketake nō nehe, kāore te tikanga tōtōpū e kapi i ngā kupu Pākehā, ka mutu, ina whakamahia ētahi kupu Pākehā, ētahi kīanga Pākehā rānei i tētahi raupapatanga, kāore tonu e tōtōpū te whakamāramatanga i te horopaki e tika ana. Kua roa te tapu e whakahāngaitia ana ki te ‘sacred’, ki te ‘holy’ rānei, me te mana ki te ‘prestige’, ki te ‘dignity’ rānei.

Ko te tapu tētahi āhuatanga tainekeneke o ngā pae o runga o te ao wairua, e hāngai nei ki ngā āhuatanga o te ao me te pō, pērā i tana hāngai ki te wāhanga o waenga i te haukāinga me ngā manuhiri i ngā mahi ōkawa o te pōwhiri. Ko tētahi atu tauira o te tapu, ko te wā e whakatūpatotia ai ngā tāngata kia kaua e pātata atu ki tētahi wāhi mēnā, hei tauira, kei te whakatūria ētahi whakairo, tae atu ki te whakanoatanga (te tauaro o te tapu) mā roto mai i ngā karakia me ngā tikanga o te whakanoa. I ētahi wā, ka tapu tētahi kararehe, pērā i te mokomoko, nā te mea he tohu, he kauwaka rānei nō ngā atua. Ko te tapu me te mana ētahi huatau matua i te tautake Māori, engari kāore e pērā ana i ngā huatau pūtaiao, nā te mea he nui ngā āhuatanga matatika o roto, ka tahi; ka rua, kāore e whāiti pū ana, kāore hoki e pūmau ana ngā tikanga, ahakoa ka pērā ngā kupu pūtaiao.

Ka kōrerotia te tapu i ngā kōrero mō te matenga o ngā kararehe e whakawhitinga nei i te āputa i waenga i te ora me te mate, pērā i te matenga whakaahurutanga o ngā kararehe i ngā taiwhanga pūtaiao, pērā i ngā rangahau a Kimiora Hēnare mō te mate pukupuku, pērā rānei i ngā matenga tōmuatanga o ngā kararehe i kitea rā i ngā tauporitanga māori, hei tauira, te kaha o te matenga o ngā punua pakake (kekeno) i ō rātou kāhui whakatupu kei ngā motu o te pito whakateraki o Te Kōpakatanga ki te Tonga, i whakamāramatia ai e ngā kaiaroturuki o Ngāi Tahu ki a Rauhina Scott-Fyfe i ā rātou mahi rangahau i ngā pakake.

I rite tonu hoki te kōrerotia o te mana e ō mātou kaikōrero, tae atu ki te whakaaro kua tohua i runga mō te mana o tēnā kararehe, o tēnā kararehe, nā reira me manaaki, tae atu hoki ki ngā kararehe e whakamahia ana hei kai. Hei tauira, e hoki ana ngā mahara o Hilton Collier ki tana tipu mai i te pāmu a tana whānau i ngā whenua i te pokapū o Ngāti Porou, i te wā i āta hīkoi atu ai ngā kararehe ‘mō te whare’ (he kōrero mō te kōwhiringa o tētahi kīrehe ka whakakī i te pākatio hei kai mā te whānau o te pāmu mō tētahi kaupeka o te tau) ki te whare parekura. Ka whakatā rātou, ka whāinutia hoki rātou, ka kōhurutia, ka tuakina ai. Nā aua mahi katoa i mōkarakara ai, i tāngohengohe ai hoki ngā kiko, tae atu ki te manaakitanga o te kararehe nō tana whānautanga mai ā whakatutuki ai i tōna pūtakenga hei kai.

Manohi anō, ka whakamārama a Hilton i te whakahorotanga o ngā kararehe e ruha ana ki runga o te taraka i ngā rangi wera, ka tae atu ki te whare parekura i runga i te ahotea, e nui ana hoki te kūhukahuka. Kāore ngā kiko e tau tika, me te aha, kāore te mīti kau e tāngohengohe, engari kē ia, ka kākatikati, ka pōuriuri, ka kino. Heoi, ina manaakitia te kararehe, ka eke ki ngā taumata tiketike o te kounga, ā, ka tika tā te kaupāmu whakapiki i ngā utu ki ngā kiritaki, nā te mea ka mōhio ki te tāngohengohe katoa o te mīti kau. I roto i te ahumahi o te whakaputa kai, e whakahirahira ana te maumahara ‘he mana tō ngā mea katoa e ora ana’, ā, ina pērā te manaakitia, ka pai ake rātou hei kai.



Tapu, mana

Tapu and mana are closely related foundational concepts in te ao Māori without which nothing else would exist. Both tapu and mana are related to spiritual power, since ngā atua are the source of both tapu and mana. In te ao Māori, all animals have mana by virtue of being loved descendants of ngā atua, and must therefore be treated with respect. As ancient indigenous concepts, the full meaning of these concepts cannot be understood by equating them with English words, since even using several English words or phrases in combination does not give a complete meaning-in-context. Tapu has long been equated to sacred or holy, and the meaning of mana is generally reduced to prestige or dignity.

Tapu is a dynamic state of heightened spiritual charge, which applies to life-and-death situations, as it does to the space between hosts and guests in the formalities of a pōwhiri (welcome ceremony). Another example of tapu is when people are warned to stay clear of a place if, for example, whakairo (carvings) are being erected, until they have been made noa (opposite of tapu - unrestricted) through karakia and whakanoa ceremony. In some situations, an animal such as a mokomoko (gecko/skink) is considered tapu because it is a representative or intermediary of ngā atua. Tapu and mana are key concepts in Māori philosophy, but do not work like scientific concepts, first because they are ethically loaded, and secondly because they do not admit of precise, stable definitions in the terms required by science.

The interviewees mentioned tapu in relation to the death of animals as crossing the divide between ora (life) and mate (death), such as the planned euthanasia of laboratory animals, as in Kimiora Henare’s cancer research involving mice, or the premature deaths of animals seen in natural populations, for example, high death rates of sea lion pups in their breeding colonies on Subantarctic Islands, which Ngāi Tahu observers described to Rauhina Scott-Fyfe during their sea lion research.

Mana was also frequently mentioned by our informants, including the above-noted idea that every animal has its own mana, and thus deserves to be treated with respect, including animals being used for food. For example, Hilton Collier recalls growing up on his family’s farm, on whenua in the heart of Ngāti Porou, when animals ‘for the house’ (an expression referring to the selection of a beast to fill the freezer and provide a season of meals for the farm family) would be gently walked into the killing house. They would be rested and watered, then dispatched and dressed. Everything contributed to the meat being tasty and tender, and the experience of having looked after the animal from birth through to fulfilling its purpose as food.

In contrast, Hilton explains, when tired animals are loaded hurriedly onto a truck in hot conditions, they arrive at the works stressed, with elevated glycogen levels. The meat will not set properly and the resulting steak will not be tender, but chewy, dark-coloured and terrible. Whereas if that animal were respected, its meat could be presented in premium quality, and the farmer would be justified in expecting consumers to pay a premium, because they can guarantee that steak will be consistently tender. Even in the business of food production it is important to remember that ‘all living things have mana’ and, if treated as such, they end up providing a much better food experience.



Te pono, te tika, me te aroha

Ko te pono, ko te tika, ko te aroha hoki ētahi o ngā uara matua, o ngā huatau matatika rānei o te ao Māori, e ārahi nei i ngā mahi me te hautūtanga i runga i te tika. E hāngai ana te pono ki te ao motuhenga, e hāngai ana te tika ki te tapatahi o tō urupare ki taua motuhengatanga, ā, e hāngai ana te aroha ki tō mākohi i taua urupare ki taua motuhengatanga. Ahakoa ka noho takitahi aua kupu i ōna wā, ina noho tahi, ka kapi i a rātou te āhuatanga o “te mahi i te mahi e tika ana i runga i te pono me te aroha.” Katoa mai ō mātou kaikōrero i whakaatu i tō rātou aroha ki ngā kararehe i kōrerotia mai ai e rātou. Ka whai wāhi ki te aroha te aro atu, te ū ki te rangahau, ngā whakataunga ōhanga anō hoki. Hei tauira,

i whakapau kaha a Te Winiwini Kingi ki te tiaki i ngā toenga puihi i ngā pākau o ōna whenua, nā runga i tana whakanau i te whai moni mā te tuku i ngā kau ki te kai i runga i aua whenua, nā te mea i mōhio ia ka whakakinotia te hauropi māori o te ngahere i toe mai. Nā runga i te hāngai ki ngā huatau o te torowhārahi me te tūhonohono, e iti iho ana te tūponotanga ka whakamātāmua ngā matatika Māori i te tangata, e kitea ai ko ngā tāngata anake ka whai mōtika, kaua ko ngā kararehe. Ina whakaarohia te katoa, ka puta i te pono, i te tika me te aroha te whakaute me te mōhio ki te haepapa o te motuhenga i te ao tūroa, e noho nei ngā kararehe me ngā tāngata.



Te pūtakitaki/pūtangitangi. Nā Geoff McKay, CC-BY-2.0.

Pono, tika, aroha

Pono, tika and aroha are central values or ethical concepts of te ao Māori, which provide guidance for right action and leadership. Pono is concerned with knowledge of reality, tika is concerned with right response to reality, and aroha is concerned with a loving response to reality. Although each word can stand alone, when considered together they encompass a sense of “doing the right thing with integrity and love.” All our informants showed aroha for the animals they told us about. Aroha can include interest, devotion to study, and economic decisions. For example, Te Winiwini Kingi made efforts to conserve the remnants of original bush in the gullies on his land, refusing

to earn money by grazing cows, knowing how this would damage what was left of the natural forest ecology. Based on holistic and relational concepts, Māori ethics are less likely to fall prey to anthropocentrism, whereby only humans have rights, which are not extended to non-human animals. Taken together, pono, tika and aroha entail respect and a sense of responsibility for truth and the natural world, of which both animals and humans are part.



Pūtakitaki/pūtangitangi. Geoff McKay, CC-BY-2.0.



## Te hāngaitanga o ngā whakaaro Māori ki ngā matatika kararehe

Ko te mōhio o te tangata ki a ia anō me tana hāngai tika atu ki ngā mea katoa e ora ana, kāore hoki e ora ana, i te ao tūroa, tētahi take whai take mō te manaaki i te ao tūroa, tētahi wāhanga hoki o te tohe kia whakautea te ao tūroa, tae atu ki ngā kararehe.

E torowhārahi ana te mātauranga Māori i runga i te korenga ōna e whakawehe i ngā ‘meka’ i ngā ‘uara’ e ārahi nei i tā tātou mahi i runga i te tika me te ngākau aroha ki te ao tūroa, tae atu ki te manaaki me te whakaute i ngā kararehe. I te māramatanga ki tēnei ara o ngā uara, ko te whakaute i ngā kararehe te tūāpapa o te whāinga me ngā pānga o roto i ngā rautaki o ngā Wh e Toru e whakaheke nei i te tūkinotanga o ngā kararehe ka whakamahia i ngā rangahau, i ngā whakamātautau, i ngā mahi whakaako hoki. Mā te anga huatau Māori e ārahi ai i tā tātou whai whakaaro ki ngā matatika kararehe kia kore ai e whai i ngā hapa o ngā whakaaro nō Te Uru mō ngā kararehe, kia whakatau ai hoki i tētahi take arorau kia whakautea ngā kararehe, e puta nei ngā Wh e Toru, e tautoko nei hoki i ngā Wh e Toru.

I te ao Māori, he whanaunga ngā kararehe ki ngā tāngata mā roto mai i te whakapapa. He uri ngā kararehe me ngā tāngata nō ngā atua, nā konā he mana, he tapu hoki tō rātou. Ka pai tā ngā atua noho i te ao tūroa me te kōrero ki ngā tāngata mā te whakamahi i ngā kararehe hei kaituku karere, hei kaitakawaenga hoki. Nā runga i ēnei māramatanga matua, me mātua whakaute ngā tāngata i ngā kararehe, hei whanaunga, hei kīrehe tāpua e ai ki ngā matatika i roto i tō rātou anō mana. Nā reira, me pā ki ngā kararehe i runga i te tika, i te pono, i te aroha hoki e mahi tahi nei kia puta ai tētahi anga māmā, tētahi anga tōtōpū hoki e tika ai ngā mahi, e whakautea ai te tapu me te mana o te whakapapa, e kīia nei hoki ko ‘te mahi i te mahi e tika ana i runga i te pono me te aroha.’ Nā konei, ko ngā huatau tautake Māori te tūāpapa mō te whakaute i te pono me te ao tūroa e noho nei ngā kararehe me ngā tāngata. Ka whakaū ngā hononga whakapapa i te whakaute i ngā kararehe i ngā tautakenga Māori, e tautoko nei i ngā huatau o ngā Wh e Toru.



Te toutouwai

## Relating Māori ideas to animal ethics

To understand oneself as literally related to all the living and non-living elements of the natural world makes a coherent reason for taking care of nature and is part of an ethos of respect for nature including animals.

Māori knowledge is holistic in the sense that it does not attempt to separate ‘facts’ from ‘values’ and thereby enables us to act with integrity and compassion towards the natural world, including treating animals with dignity and respect. Understood in this principled way, respect for animals underpins the intent and effect of the Three Rs strategies to alleviate harm to animals used in research, testing and teaching. A Māori conceptual framework offers an approach to thinking about animal ethics that avoids the pitfalls of modern Western thinking about animals, and provides a logical reason to respect animals, which leads to and supports the Three Rs.

In the Māori world, animals are related to humans through whakapapa. Animals as well as humans are descendants of ngā atua, and as such are considered to have their own mana and tapu. Ngā atua are able to operate in the natural world and communicate with humans using animals as their messengers and intermediaries. These basic understandings mean that animals command respect from humans, both as kin, and as ethically-significant beings in their own right. Therefore, animals must be treated with tika, pono and aroha, which work together and form a simple but robust framework for right action and respect for the tapu and mana of whakapapa, also expressed as ‘doing the right thing with integrity and love.’ In this way, Māori philosophical concepts underpin respect for truth and the natural world, of which both animals and humans are part. Whakapapa relationships embed respect for animals in Māori philosophy, which thereby provides conceptual support for the Three Rs.



Toutouwai



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# Glossary, classroom resources and teacher guidenotes



## Ngā Kararehe o Aotearoa: He Mātauranga, he Matatika

## Te kupu taka Glossary

<b>ariā</b>	theory
<b>ātete mārire</b>	peaceful resistance
<b>auroatanga</b>	continuity
<b>hiako</b>	hide, skin of an animal
<b>huatau</b>	concept
<b>kaharoa</b>	seine net
<b>kirinoho</b>	settler
<b>kohinga whakaaro</b>	cognitive gestalt
<b>kūhukahuka</b>	glycogen
<b>kuneroa</b>	evolution
<b>mate urutā</b>	plague
<b>mate whakaahuru</b>	euthanasia
<b>ngahere rāwaho</b>	exotic forest
<b>ngahere taketake</b>	native forest
<b>parahunuhunu</b>	roast
<b>patatini</b>	berry
<b>pīrorohū</b>	bumblebee
<b>pūmua</b>	protein
<b>rokiroki</b>	preserve
<b>rua torea</b>	pit trap for kiore
<b>tahumaero</b>	disease
<b>taikoraha</b>	mudflat
<b>tāpua</b>	significant
<b>taupopoki</b>	snare trap for kiore
<b>tautake</b>	philosophy
<b>Te Uru</b>	Western
<b>tīhore</b>	to skin
<b>tīmori</b>	decoy
<b>tingau</b>	dingo
<b>tiu</b>	sparrow
<b>whai tuaiwi</b>	vertebrate
<b>whakamaheni</b>	refine
<b>whakaputaputa</b>	generative
<b>whāngote</b>	mammal
<b>whāngote waewae-rua</b>	primate





Ngā rauemi mō te akomanga me ngā kupu aratohu mā te kaiako

1. Te Taumahi Rangahau

Whakahāngaitia tēnei taumahi whānui e ai ki te horopaki o tō rohe, ki ngā kararehe hoki e ngākaunuitia ana, me te ara pai katoa o te whakapuakanga ki a koe.

**TE KAUPAPA:**  
“Kōrerotia mai ētahi pārongo mō ngā kararehe, mō tētahi rōpū kararehe\* rānei nō Aotearoa”

**TE ARA:**  
Ka taea te whakarite tēnei taumahi mā ētahi ara rerekē:

- 1. **He pānui whakaahua:** He whakaaro nō maimai, engari ka rawe tonu te whakarite pānui whakaahua hei taumahi rangahau, mēnā he kāri, he rawa hoki o ia rā ā te kaiako - he pene whītau, he pepa tā, he kāpia, he aha atu. E hāngai ana te pānui whakaahua ka iri ki te pātū ki te pūtoi ako ataata, he hua hoki nō tā te tangata whakapau kaha.
- 2. **He taumahi tuhinga:** Ka tāpaetia hei kōnae pdf – ka kaha rawa pea tō whai kōnae Kūkara me tiki ake.
- 3. **He whakapuakanga A/V:** Ka whakarite te ākonga i tētahi whakapuakanga (he ataneke, he mea rānei e rite ana) hei ārahi i āna kōrero. Ka pai noa iho kia whakahaerehia ki tētahi hui ā-tinana, ki tētahi huiata, kia rekoatahia rānei i mua.
- 4. **He whakapuakanga ā-rōpū:** Kia mahi tahi pea ngā rōpū kei reira te 2-4 ākonga hei whakatutuki i te mea 3 o runga ake. Tērā pea me whai wāhi atu ētahi huānga o te whakaaro, o te reo, o ngā mea auaha hoki.

2. Te Tuhi Pūrongo

- **Tuhia he pūrongo** mō tētahi kaupapa, mō tētahi tūāhuatanga rānei (o mua, o nāiane rānei) e whai wāhi nei ngā kararehe o Aotearoa.

**KO ĒTAHI KAUPAPA HEI TAUIRA:**  
Te kite anō i te Takahē  
Ko Maungatautari  
Ngā rāpeti hei riha i ngā pāmu  
Ngā pūrātoke o Waitomo  
Te Tutūnga o te Puehu mō te Tāke Kuri i Hokianga  
Te Kuri whakamutunga  
E tika ana rānei te hau o te rongong mō te Kea?  
Kei te tika tonu rānei ēnei whakamahinga o ngā kararehe?  
Ngā Taiopenga Rodeo, Te Reihi, Ngā Whare Kararehe, Ngā Whakaaturanga Kararehe, Te Whakangau, Te Hao Ika, Hei Mōkai

3. Ngā Pangakupu

Ko te anga o te pangakupu tētahi ara whakahihiko e whakaū ana, e aromatawai ana rānei i ngā kupu me ngā whakaaro. Ka whai hua hoki hei mahi kāinga, hei akoranga rānei mā te kairiwhi.

\*I roto i ngā mahi, ka tika i te nuinga o te wā te whakaingoa i te tūmomo kararehe (arā, te kārearea), i te karangatanga rānei o ngā kararehe (arā, ko ngā manu hekeheke, ko ngā manu kāore nei e rere, ko ngā manu whakangau).

Classroom resources and teacher guidenotes

1. Research Assignment

Adjust this generic assignment according to the local context and animals of interest, as well as the preferred mode of presentation.

**TOPIC:**  
“Tell me about an animal or group of animals\* from Aotearoa”

**MODE:**  
The assignment can be set up in a few different ways:

- 1. **Poster:** A poster research assignment is an oldie but a goodie, if the teacher can supply the cardboard and perhaps consumables - markers, printing, glue, etc. A poster that can be put up on the classroom wall addresses the drive towards visual pedagogy and is a material product of one’s efforts.
- 2. **Written assignment:** Handed in as a pdf file – prone to getting a lot of Google downloads.
- 3. **A/V Presentation:** The student prepares a presentation (PowerPoint or similar) and speaks to it. Can be in person, live online or pre-recorded.
- 4. **Group presentation:** Small groups of 2-4 students could work together to complete 3 above. Could include performance, language and creative elements.

\*In practice, it will almost always be appropriate to name the animal species (e.g. kārearea) or group of animals (e.g. migratory birds, flightless birds, birds of prey).

2. Report Writing

- **Write a report** on a topic or event (past or present) involving animals in Aotearoa.

**EXAMPLE TOPICS:**  
Rediscovering the Takahē  
Maungatautari Sanctuary  
Rabbits as farm pest animals  
The glow worms of Waitomo  
The Hokianga Dog Tax Rebellion  
The last Kuri  
Does the Kea deserve its reputation?  
Are these uses of animals still acceptable?  
Rodeos, Racing, Zoos, Animal Shows, Hunting, Fishing, Pets

3. Crossword Puzzles

The puzzle format makes an engaging way of reinforcing or assessing grasp of vocabulary and ideas. Also useful for homework or relief lessons.

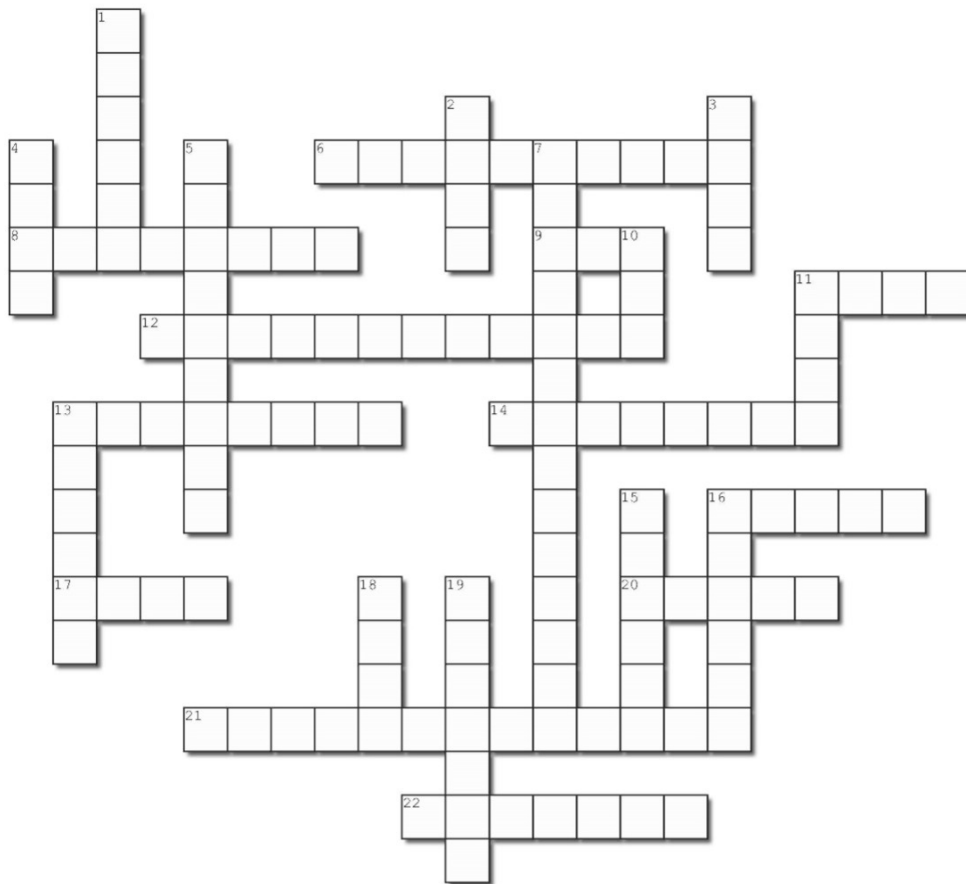
## Ngā Kararehe o Aotearoa Animals of Aotearoa crossword

Whakaotia te pangakupu kei raro iho nei	Complete the crossword puzzle below
Tō Ingoa	Name
Te Pae	Across
Te Pou	Down

Name: \_\_\_\_\_

### Animals of Aotearoa

Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

#### Across

6. Fantail
8. The primordial forces
9. Someone who is a good singer may be compared to this bird
11. A famous flightless bird that is a symbol of NZ
12. Generous care for others especially visitors and the vulnerable
13. A generic word for 4-legged animals
14. Guardian animal, messenger from ngā atua
16. The smallest member of the rattus family
17. This little bird of prey hoots in the dusk
20. This sea bird gets its name from how it glides over the sea
21. Spider
22. A generic group name for reptiles

#### Down

1. Whale
2. Shark
3. A generic word for flying things including birds
4. Status, ability to keep balance
5. Webs of relationality
7. A generic group name for insects and invertebrates
10. A generic word for finfish that includes dolphins and whales
11. The larger quadruped brought to Aotearoa by Māori ancestors
13. A Māori name for the indigenous pigeon
15. This bird gives its name to a high sentry post
16. Another generic word for 4-legged animals
18. Fishing canoe
19. Fishing net





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