

National
SCIENCE
Challenges

NEW ZEALAND'S
BIOLOGICAL
HERITAGE

Ngā Kōiora
Tuku Iho

NGĀ RĀKAU TAKETAKE

Saving Our Iconic Trees

from Kauri Dieback & Myrtle Rust

2022

Ngā Mahi
Whakahirahira



“Te Wero Pūtaiao
 ā-Motu mō ngā Koiora
 Tuku Iho o Aotearoa,
 e whai ana ki te
 whakamarumaruru me te
 whakahaere i te kanorau





koiora o Aotearoa, te
whakapiki i tō tātou
haumarū koiora, me
te whakanikoniko i tō
tātou manahautanga ki
ngā kaiao whakakino”



New Zealand's
Biological Heritage
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Ō MĀTOU MĀTĀPONO

Mahi whaipanga

Ngākaunui / Uekaha / Ngakau
Whakapuke

Whanaungatanga

Manaakitanga

Mana Motuhake / Tino Rangatiratanga

Whakapapa

Kaitiakitanga

Mātauranga

Tohungatanga / Ngā tiketiketanga o
te pai

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Nā ngā Kaiwhakahaere

Nau mai, haere mai ki te Pūrongo Whakahirahira nō Ngā Koiora Tuku Iho - Te Wero Pūtaiao ā-Motu mō te Koiora Tuku Iho o Aotearoa.



Daniel Patrick



Shaun Ogilvie

Mai i te putanga o te pūrongo whakamutunga, i ngā tau e toru kua hori, ko ngā tau mutu kē mai o te hūkerikeri i ngā kōrero tuku iho o te ao - mō te tini tāngata ko te hua ko te takahuringa o te ao mahi, ko te takahuringa anō o tō rātou ake ao. Kua mīharo katoa mātou i te manahautanga o ō mātou kairangahau, o ngā hāpori hoki i roto i tēnei wā, manawareka ana hoki mātou ki te tuari i ētahi āhuatanga whakahirahira mai i ā rātou mahi.

Heoi anō, tuatahi ake ko te mihi. Tēnā koutou, koutou katoa e rongō ana i te wairua awe o tētahi ao ki tua e momoho ana, e ora rawa atu ana tō tātou koiora tuku iho. Nā koutou anō i taea ai e mātou te mahi ngātahi puta noa i Aotearoa, e ikapahi ana i ngā kāhui e tika ana hei whakaputa i te pūtaiao tino kairangi me te papānga whaihua.

Nā runga anō i ngā mahi i mahia ai e koutou i te tau 2019 i taea ai e mātou te waihanga ngā tīma rangahau hou e whitu i raro i te kapa o Ngā Rākau Taketake – Saving Our Iconic Trees. Ehara i te mea kua tautoko noa iho rātou i te whakapikinga o te mātauranga mō te wāhi hauora ngahere o ngā kauri me te myrtle anake, engari e para huarahi hou kē ana hoki rātou kia tūturu, kia whai hua hoki te whai hononga ki te mana whenua.

Ka mutu hoki te nui o te nekehanga whakamua i roto i ō rātou ake kaupapa mahi nā ō mātou kaupapa rangahau e whitu o Ngā Koiora Tuku Iho. E hui ana rātou, e kōrero ana hoki rātou i ngā kōrero uaua i ā rātou e mahi tahi ana ki te taha o ngā momo hoa pātui katoa. Nā runga i tēnei kei te whakaputa rātou i ngā hua pūtaiao kairangi, ka mutu, e whai hua ngā mahi ki ngā wāhi e hiahiaitia nuitia ana te awhina.

Kei te hiahia mihi atu mātou ki tō mātou Rōpū Mana Rangatira Governance me te International Science Advisory Panel mō tā rātou tirohanga whānui ā-rautaki, ārahitanga hoki. Nā tō tautoko, tohutohu mai hoki kua āhei mātou ki te whakakīki i te whāruarua i waiho mai ai e Andrea Byrom me Melanie Mark-Shadbolt mā māua ngā kaihautū ngātahi.

Mō ngā tau e rua e tū nei ka mahi tahi mātou ki ō mātou kairangahau 250 neke atu ki te whakamana, tiaki, me te whakahou i te kanorau koiora, me te pūnaha haumarua koiora i Aotearoa. Ka whai tonu mātou ki te whakarauora i ngā hononga kia ōrite te mana o tētahi ki tētahi i runga i te ngākau whakautu hei hāpai ake i Te Ao Māori: kia tū ai hei tauira o te whakapono tūturu ki Te Tiriti o Waitangi me ōna huanga nui whakaharahara mō te tangata me te taiao tahi.

Ka whāia kia eke panuku ā mātou whāinga, kia mātātoa te wairua o ō mātou āhuatanga mahi, kia hangore hoki mātou kia taea ai te huri ki huarahi kē (ki te kore e tino tika te Mahere A). Ka noho ko te whakawhitinga ki te whakatinanatanga hei arotahinga ā ngā tau e tū mai nei, e mātua whakarite ai ka tae atu ngā hua o tā mātou rangahau ki ngā ringa āwhina, nā rātou mātou i āwhina ite tuatahi ki te hoahoa ngātahi i te rangahau.

Ko te tūmanako ka harikoa ō koutou ngākau i te kitenga ahakoa poto nei o ngā mahi o ā mātou kāhui.

Noho ora mai,

Ngā Kaihautū Ngātahi ko Daniel Patrick rāua ko Shaun Ogilvie

KAIHAUTŪ NGĀTAHI

Ngā Mahi Tahī

Ko Te Wero Pūtaiao ā-Motu mō ngā Koiora Tuku Iho tētahi o ngā Wero tekau mā tahi i waihangaia e Hīkina Whakatutuki i te tau 2014.

Ko tā matou mahi he karapinepine, he whakarite, he honohono i ngā momo hoa pātui me ngā haumi o nāianeī ki te whakaterē ake i te ahunga whakamua. E mahi ana mātou ki te taha o ngā Rōpū Wero tekau mā waru, hei konei ko ngā whare wānanga, me ngā Pūtahi Rangahau Karauna katoa i Aotearoa.

He mea nui hoki ki a mātou te honohono ā-hoa pātui ki te mana whenua, ki ngā iwi, ngā rōpū Māori, te kāwanatanga me ngā whakahaere ehara i te kāwanatanga, ngā kaunihera ā-rohe, ngā pakihī, me ngā kanohi tūmataiti.

Mārama pea te kitea, i runga i te mea he 15 ngā kaupapa rangahau matua puta noa i ngā take kanorau koiora, haumarū koiora hoki i Aotearoa, kua inakitia ētahi e ētahi. Koirā hoki te take kua whakatū wānanga auau mātou kia hui ai ngā kāhui Ngā Koiora Tuku Iho me Ngā Rākau Taketake ki te āwhina tētahi i tētahi. Mā konei e taea ai te whakapiki te mahinga tahitanga, te whakawhānuitanga o ngā taura tangata, me te whakakorenga o te tāruatanga o te whakapaunga werawera.

Mā te whānuitanga atu o ngā hoa pātui e taea ai te turaki ngā whare tūtahi o te pūnaha pūtaiao o neherā me te waihanga i ngā kāhui pai rawa ake, kia pai ake ngā hua ka puta ki te motu katoa.



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Te Mahi Tahī ā-Pātui ki te Iwi Māori

Ko ngā pou o te whare o Ngā Koiora Tuku Iho ko tō mātou ngākau nui ki Te Tiriti o Waitangi, me ō mātou uara (whārangi 5). Mai i te tīmatanga he rite tonu tā mātou whakapau kaha ki te whakarauora i ngā hononga hāpai tahi i te mana i waenga i te tangata whenua, me te tangata Tiriti - kia tū ai Te Ao Māori ki tōna taumata e tika ana ki roto o Aotearoa.

Ka tīmata te nohonga tahitanga tūturu o ngā hoa pātui ki te taumata he mea i whakaaturia mai e mātou i te whakakotahitanga o te Kāhui Māori me ngā Kāhui Mana Whakahaere i te tau 2019. Nā konā i mātua whakarite ai he mana tō ngā tohutohu o ngā rōpū e rua, he ōrite hoki taua mana. Nō reira ko tā ō mātou Kaihautū Ngātahi (Māori) a Shaun rāua ko te Kaihautū Ngātahi Daniel he kōkiri ngātahi noa nei i ngā tū mahi o ia rā, o ia rā o Ngā Koiora Tuku Iho. He wāhanga tēnei o ngā mahi a Shaun i tōna tūranga hei Ahorangi Kaiao, Taiao hoki ki te Pokapū o Ngāi Tahu, Te Whare Wānanga o Waitaha. He wāhanga

Whakaahua: hongī



tēnei o tō rāua kaingākau ki te whakaaro o te wānanga whakahaere i raro i te mana o te tiriti, me te whakatūtanga o te tari hoa pātui tiriti.

Kei reira a Shaun e mahi ana me tō mātou Pou Pūtaiao Erina Watene-Rawiri ki te arataki i te Rautaki Māori i whakahouhia inā noa nei. He mea i tuhia tahitia e Te Aho Mātauranga, tō mātou kāhui o ngā kairangahau Māori mātāmua, ki te ārahi i ō mātou whāinga, kaupapa mātāmua, mahi anō hoki. Mā reira e mātua whakarite e mau tonu ai mātou ki ō mātou uara, koia hoki te awe kōkiri i muri i tō mātou Tauākī Paihere ki Te Tiriti o Waitangi, he mea nō nā noa nei i whakaputaina ai.

He kaiwhakahaere ngātahi kei ō mātou kaupapa rangahau katoa, he whakapapa Māori tō tētahi, kāore he whakapapa Māori tō tētahi. Nā konei he pakari ake ngā kāhui e taea ana te mahi haumaruru i roto i te whānuitanga o ngā momo taiao. Ko te kaupapa matua o ētahi o ngā kaupapa rangahau ko te whakamanatanga o Te Ao Māori. Hei tauira, ko tā te kāhui Oranga ko te whakamārama i tā rātou rangahau he “tangata whenua ake nei”, ka mutu, kua whakanuia ā-motutia ngā kaihautū ngātahi o te kāhui Kaupapahere Urutau, Mana Whakahaere mō tō rātou tohungatanga ki te kaupapa o te mana whakahaere ngātahi.

Nō nā noa nei i whakatū kaupapa ai mātou e kiia nei “He Mātai i te Taiao” (te mātaitanga rōnaki o te taiao). Ko te mahi o tēnei kāhui he tiroiro ki te āhua o te pūnaha pūtaiao i Aotearoa nei mehemea i whakamanatia Te Tiriti o Waitangi mō ngā tau 180 kua hipa ake nei, me aha hoki tātou ināianei kia tae atu ki taua wāhi.

I roto i te ara mahi o Ngā Rākau Taketake e whakamātauria ana e ō mātou kairangahau ko te ara hou mā ngā kaipūtaiao kei ngā whare mātauranga hei honohono ki te mana whenua o tō rātou rohe. Kua tapaina ko ‘Te Whakahononga’ he pitomata tā tēnei kaupapa kōkiri ki te whakapakari i ngā hononga i roto i te rāngai pūtaiao o Aotearoa. Hurihia te whārangi mō ētahi atu taipitopito.

He poho kererū rawa mātou kia tū hei tauira, kua tutuki tēnei e mātou nā runga i te rahinga o te tohungatanga o ā mātou mema o te kāhui Māori. He nui ngā mahi o te hunga i mua i a mātou kia tae ki te wāhi e tū nei mātou i tēnei wā, ka mutu, he hōnore nui kua tautokona mātou ki te whakapakari ake i tēnei mahi.

Te Whakahononga

Kaihautū ngātahi

Ko **Dave Milner** Ngāti Wai, Ngāti Whatua, Ngāpuhi, Ngāti Porou; Perception Planning Ltd. Ko **Juliane Chetham** Patuharakeke, Ngātiwai, Ngāpuhi; Chetham Consulting Ltd. Ko **Waitangi Wood** Ngātirua, Ngāti Awa, Ngāti Kahū, Ngāpuhi Nui Tonu; Kaikirimana Motuhake. Ko **Alby Marsh** Ngāti Ranginui, Ngāi Te Rangī, Ngā Puhī, Ngāti Hine, Te Rarawa; Te Tipu me te Kai Rangahau.

Ngā Rākau Taketake Pou (hoahoanga tautoko)

E piki haere ana te nui o te ngahere o Aotearoa e noho mōrearea ana ki te tāmātemate kauri (kauri dieback) me te waikura rau (myrtle rust). Ehara i te mea he mea whakararu ēnei mate i te rākau anake, engari ko ngā pūnaha rauropi me ngā hononga ahurea hoki, tae atu ki te tuakiri anō kua tuituia nei ki ēnei taonga. Ko ngā momo e noho mōrearea ana ko te kauri, ko te rātā, te pōhutukawa, te maire, te kānuka, te mānuka, te ramarama, te rōhutu, me ētahi taonga whāngai pērā ki ngā hua pītoa.

Kei te whakariterite Te Whakahononga i te urupare nō ngā momo-pūkenga katoa e honohono ana i te tangata whai pūkenga mātauranga Māori, me te mātauranga ā-rohe ahurei ki ētahi atu kaupūtaiao NRT puta noa i ngā wāhi 15 o te whenua kua pāngia e te KDB, e te MR hoki/rānei. Nā runga i ngā momo kāhui mana whenua 15 e eke mai ana, kāore i tua mai, kāore i tua atu tēnei nui o te whai wāhi mai o tētahi hapori/hapū rānei mō Te Koira Tuku Iho (BioHeritage).

He whānui he whāroa ngā kōrero o neherā me te tikanga tuku iho o te auahatanga a te mana whenua mā te whakamahinga o ngā pārahara, o te mātauranga mana whenua pēra ki te rāhui, te kaitiakitanga, o ētahi atu tikanga ā-taiao ki te whai rongoā kia aukati atu te heke haere o ngā momo. He nui ngā momo wero, mai te tatūnga tuatahitanga mai, ki te torohanga atu i ngā pūnaha rauropi o Aotearoa, ahurei ake rā huri noa i te ao, atu ki ngā whakapātariari nunui i ahu mai i te taenga mai o ngā iwi o Ūropi, tae noa mai ki ēnei rā. Mā te tuituinga o te mātauranga me te mātauranga heke iho ki ngā āhuatanga mahi pūtaiao o mohoa nei, ka whakaaturia e Te Whakahononga he tū momo huanui e ahu mai ana i ngā mātāpono o Te Tiriti.

Ko te kaupūtaiao arataki pāpori Māori a Karen Fisher, he uri nō Waikato-Tainui (Ngāti Mahuta), me Ngāti Maniapoto (Ngāti Paretekawa), kei Te Whare Wānanga o Tāmaki Makaurau, ko ia tētahi o te kāhui āwhina ki te hopu, te kōtuitui, me te tohatoha i te mātauranga mai i tēnei kōkiritanga para huarahi hou.

Kei roto hoki i te ohu ko Mana Epiha, he uri nō ngā Ngāpuhi nui tonu (Ngāti Rehia, Ngāti Kura, Te Uriroroi, Patuharakeke), ka mutu, he kaihautū, kaitohu, kaiwaihanga ataata whai tohu toa ia. Kei te hopu ki te ataata te whanaketanga me te pikinga haeretanga o Te Whakahononga.

Ko tā te tū kōkiri a Te Whakahononga he whakaae kāore i tua atu i ngā kaitiaki me ngā tohunga o te mana whenua hei hoahoa ngātahi, whanake ngātahi i ā mātou tū mahi kei mua i te aroaro, ki tua atu, ki te whakaheke i te nui o te mōrearea o te tāmātemate kauri, o te mate waikura rau, me te whakahoki i te ora ki tō mātou ngahere, me ō mātou huanga kai.



Ngā Pī Ka Rere

Kaihautū ngātahi

Ko Aisling Rayne Cawthron Institute. Ko Symon Palmer Ngai Te Rāngi; Te Herenga Waka – Te Whare Wānanga o Te Upoko o te Ika. Ko Helen Warburton Te Whare Wānanga o Waitaha

Te Wero Pūtaiao ā-Motu me Ngā Rākau Taketake Pou (hoahoanga tautoko)

Kei ngā ringa o te hunga e whai mai nei ko te oranga, ko te matenga rānei o te āpōpō o tā tātou pūnaha pūtaiao, otirā, tō tātou motu. Koia tērā te take e whakapau pūtea ana a BioHeritage ki te whakatipuranga e whai ake nei.

I whakatūria te taura tangata mō ngā ara mahi pūmau a Ngā Pī Ka Rere i te tau 2019 kia mātua whakarite ka whiwhi ngā ngaio ara mahi pūmau wawe i ngā tautoko katoa e hiahiatia ana kia puāwai rātou i roto i ngā ara mahi pūmau ka kōwhiria ai e rātou. He take kāore te rōpū i te whakamahi i te kōrero whānui 'kairangahau ara mahi pūmau wawe' nā te mea he nui ake ngā ara mahi pūmau i roto i te pūnaha pūtaiao. Ko tō rātou hiahia ko te hāpai ake i ērā e tīmata ana, e tīmata ana anō rānei kia kaua e pōhēhē kua herea noa rātou ki te ao mātauranga.

Arā anō ngā whāinga a te rōpū, pērā ki te whakarite i te kaupapa tohutohu e whakapakari i ngā pūmanawa ārahitanga i roto i ā mātou 'pīre', te hoatu hoki i ngā tū ara whakamārō i te taura tangata, he kōwhiringa kāore pea e wātea ana i te nuinga o te wā.

Kei te tautoko ngā kaihautū ngātahi a Helen, a Symon, rātou ko Aisling i ngā uara o te whanaungatanga, te manaakitanga me te whakapapa: e honohono ana i ngā ara mahi pūmau wawe, e taunakī ana hei māngai, e āhukahuka ana hoki i te wairua whātuitui, whakapaparanga o tō mātou pūnaha pūtaiao o te motu.

I kī a Aisling "Kei te whakatipuria te mātau ki ngā wero kei mua i te aroaro – mō te taha ki te kanorau koiora, te haumarau koiora, te panonitanga āhuarangi, aha atu, aha atu - he mea tino nui, matatini hoki, me ōna tini muka: ā-taiao, ā-pāpori, ā-ahurea anō.

"Me whai ara kōkiri e mārama ana ki ngā momo ara whakaaro, o te mātau, o te oranga, e hou mai anō ko ngā tini momo tikanga, me ngā tini momo hāpori."



Whakamana

Ki te whakamana tātou
o Aotearoa whānui, ki te
manaaki tō tātou taiao.





Taupū koiora

Kaihautū ngātahi

Ko John Reid Ngāti Pikiao, Tainui; JD Reid Ltd. Ko Kiri Joy Wallace Te Whare Wānanga o Waikato.

Ākuanei, ko te hunga e whai ana ki te takahuri i te whakahekenga o te kanorau koiora puta noa i Aotearoa e whai mōhiohou hou, whāinga hou, taputapu hou hoki ki te whakamōhio i ā rātou mahi, mā runga i ngā mahi a te kāhui Taupū koiora. Me te Matakiteanga Kanorau Koiora ā-Motu 100-tau te roa hei tūāpapa o ā rātou mahi, e aro ana te kaupapa Taupū koiora ki te ārahitanga me te whakapikinga i te haumi kanorau koiora ki ngā putanga whaipanga. Hei konei hoki ko ngā whāinga whakarauora kaiao, ngā taputapu rongomamao, me te tātaritanga hou rawa o te haumi me ngā putanga.

▣ Kaupapa Rangahau

Ka whakaritea e te Taupū koiora te kaupapa mō te panonitanga kanorau koiora

Ka pēhea te āhua o te whenua o Aotearoa ā te kotahi rau tau e tū mai nei? Ko te pātai nui ake anō pea - he aha tā tātou hiahia mō te āhua o tō tātou nei whenua? Koirā tētahi pātai kua tūhuratia e ngā kairangahau i te wāhanga tuatahi o te kaupapa Taupū koiora, hei te mutunga ko te putanga ko tētahi matakiteanga mō te kotahi-rau tau, whai taunakitanga nō te ao pūtaiao, taketake ake nō Te Ao Māori. Ko te wawata o 'Kua Whakamarumarutia, kua Whakarauorahia, kua Tūhonohono 2021' kia kite kaua e iti ake i te 15% o te pūnaha rauropi kua whakarauoratia, kua tūhonohia, kua whakamarumaruhia hoki puta noa i Aotearoa, ki uta, ki tai.

Kei te mōhio mātou e raru ana tō tātou kanorau koiora, ka mutu, kāore i te tino whai hua ā mātou whakapaunga werawera ki te takahuri i te hekenga o ngā momo. Ko te mahi tuatahi ko te whakarite i te wawata ngātahi ki ngā mahi whai taunakitanga ki te whawhai i te hekenga kanorau koiora. "Ko te whāinga nui o ngā mahi katoa ko te hua tūturu ko ngā hua ka puta ki te iwi," te kī a tētahi o ngā kaiwhakahaere ngātahi o Taupū koiora" a John Reid.

I whakawhanaketia ai te matakite mā roto i ngā wānanga kōrero ki te taha o ngā iwi, o te ao ahumahi, ngā kaipūtaiao, me ngā kāwanatanga ā-rohe, i runga i te tātaritanga pakari o ngā rautaki kanorau koiora o mohoa nei. Ko ōna kōrero whāiti he mea ahu mai i te māramatanga pūtaiao o mohoa nei o ngā tino āhuatanga mātuatua e tika ana kia momoho ai te kanorau koiora. "He nui ā mātou mahi kāinga ki te whakarite i te tūāpapa pakari kia whai hua ai te wawata," te kōrero a John.

Kua tātaritia tēnei mahi kia puta mai tētahi wawata i waihangaia ai i runga i ngā kaupapa e toru.

- **Tiaki:** Te whakamarumaruru i ngā pūnaha rauropi i ngā tuma. Kia haumaruru te mauri o te taiao.
- **Whakahou:** Te whakaora, whakahou i ngā pūnaha rauropi i ia manga, i ia manga ki te 15 ōrau rawa o te korahitanga tahito. Kia whakahokia te mauri o te taiao ki te taumata e hiahia ana e tātou.



- **Tūhono:** Ko te mauri o te taiao te taukaea honohono mai i uta, tae atu ki tai. Ko te mauri o te taiao te taukaea honohono mai i uta, tae atu ki tai.

“Kua oti i a mātou tēnei wawata te whakarite hei whāinga tūturu kia tutuki ngātahi ai tātou” te kī a te kaihautū ngātahi o te Taupū Koiora a Penny Payne.

Ināianeī, ko te urupounamu nui e rere nei me pēhea e tutuki ngātahi ai e tātou tēnei whāinga tautini. He aha te rerekētanga o tā tātou tū noho o nāianeī, me te tū noho e hiahiatia ana e tātou mō ngā rā e tū mai nei, he aha hoki ngā whāinga hei whakatutuki mā tātou e hua mai ai taua āpōpō? “Kei te whakahaere mātou i ngā mahi ine, aromatawai, whakatakoto tauira hoki kia mārama ai he aha te kōrero a te raraunga ki a mātou, kia pai ai te tuku tūtohutanga,” te whakamārama a Penny. Mā te whai hoki i tēnei tū ara kaha nei e mātua whakarite ka puta ngā hua i whāia ki waenga i ngā iwi, puta noa i te motu. Ka pānuitia ngā whāinga mō te ahumahi, mō ngā iwi, ngā kaunihera ā-rohe me ngā manga ā ngā marama e tū mai nei

Matua nei ki te ekenga panuku ko te taputapu Taupū Koiora, i mātua hoahoatia ki te ine i te hua o ngā momo mahi katoa ki te āwhina i te kanorau koiora, pēra ki

te whakamatua konihi, te ono rākau hoki. Mā te papa matihiko ā-ipurangi e whakarāpopoto te tūnga o nāianeī o te kanorau koiora ki te taumata ā-motu, me te whakaatu i te nui o te pūtea ka hiahiatia kia whakatinanahia te wawata mā te āpiti haere, te āpiti haere. Mā te tūhono i te haumi ki ngā putanga o te ao tukupū, ka āwhina a Taupū koiora i ngā kaiwhakahaere whenua - ki te whakatau i ngā kaupapa kōkiri e whakanuia rawatia ngā hua e whiwhi ai rātou mō te nui o te whakapaunga pūtea i te huarahi ki 2121.

Me te matakite hei ranga wairua, hei ārahitanga hoki, e eke ana te kāhui Taupū koiora i ngā kaupapa ariā whai taunaki mā te mahi tahi ki te taha o ngā iwi kāinga me te ao ahumahi e kumea mai ana i te raraunga i ngā puna kanorau, kia nui ake te mahi tiroiro i ngā hangarau whakataruna hinengaro rerekē hei āwhina ki te aroturuki i ngā tūtohu kanorau koiora, huri noa, huri noa.

“Kia oti tēnei i a mātou, ka nui te whakarerekētanga ki te whakamōhiotanga atu ki ngā whakataunga e pā ana ki te kanorau koiora, te kī a Penny. “Kua neke atu i te 100 tau mātou e whakakino ana i te whenua kia pēnei rawa te nui o tōna tūkino, nō reira, ka roa rawa te wā kia whakatikaina ai.”



Te Whakamana Kaitiakitanga me te Kaitiakitanga ā-Taiao

Kaihautū ngātahi

Ko Pike Stahlmann-Brown Manaaki Whenua. Ko Jane Kitson Ngāi Tahu, Ngāti Mamoe, Waitaha; Kitson Consulting Ltd.

Ko te whāinga o te kāhui Whakamana Kaitiakitanga me te Kaitiakitanga ā-Taiao kia mārama ai rātou ki ngā uara waiwai me ngā momo kōkiri, ngā wawata e poipoi i ētahi tāngata ki te whakamarumarū mātātoa nei i tō tātou kanorau koiora tuku iho. E hiahia ana hoki rātou kia mārama ki ngā urupare i waenga i ngā tāngata me ngā pūnaha rauropi kei reira rātou e noho ana.

▣ Kaupapa Rangahau

Te waihanga kaitiaki me ngā toa whakaihuwaka mō te wai māori noho tāone

Kua whakakotahi mai a Aotearoa hei kāhui o te rima miriona mō te wāhi ki te Kowheori-19, nō reira me pēhea tātou e waihanga kāhui o te rima miriona mō te taiao?

Ko tā tēnei kaupapa rangahau, e ārahia ana e Pike Stahlmann-Brown rāua ko Jane Kitson, ko te whiriwhiri i ngā tino ara ki te whakamana i ngā kirirarau noho tāone ki te totohe me te whakatinana i te kaitiakitanga ā-taiao mō te taha ki te kanorau koiora o te wai māori.

Hei wāhi i te kaupapa, i ruku hōhonu te kāhui i roto i ngā tuhituhinga mō te kaitiakitanga ā-taiao, kia kohikohia ngā mātauranga katoa e mōhiotia ana e ngā kairangahau mō te wāhi ki te whakamarumarū ā-taiao.

“Ka tuhituhia ngā kōrero mō te kaitiakitanga ā-taiao i ētahi taiao, engari kua i ētahi atu.

Kāore i tino nui te kaitiakitanga ā-taiao mō te wai māori, hāunga anō ngā wāhi noho tāone, nō reira, i whakatauhia koirā te wāhi ka aronuitia e mātou” te kī a Pike.

“Ki a au nei nā te nui o te aro ki te wai māori i te taiwhenua, ka wareware i a tātou he 87 ōrau te tokomaha o te taupori noho tāone.”

“Nā konā, kua tino mārama te hiranga o ngā pūnaha wai māori ā-tāone,” tā Jane, ka whakarārangi ia i ngā tini take e papā ana ki ngā arawai o ō tātou tāone nui: te rerenga kētanga o te wai, te korenga o te whaitua, ngā putanga matū haere ana ki roto ki te pūnaha – nā te ahumahi, me te kāinga, te whakanoa parakaingaki, te tawhito haere o te hanganga... e hia nei te roa o te rārangi wero.

Heoi anō, mō te poipoi i ngā whanonga tautoko taiao, tautoko wai māori i roto i te tangata ki te rutu i ēnei wero, he rauangi te nui o te taunakitanga o ngā hua tūturu – mō ngā mea e rua, te tangata me ngā awa.

Nō reira i uiuia e te kāhui ngā momo mātanga wai māori ki te kohikohi whakaaro mō ngā mahi nui te hua e taea ai e te tangata hei āwhina i ngā arawai o ō rātou rohe, ko tā rātou he whakawhanake i te rārangi whakaaro o ngā tū momo ara 15-20 hei whakaarotanga ake.



Ko te mahi ināiane: ko te patapatai i te iwi whānui mō ngā hua o ēnei mahi, o ēnei whanonga hoki (me ngā tū kōkiri/tauārai i muri atu) mā roto i ngā rangahau whakakanohi ā-motu e rua, e haere ana i tēnei wā.

Mā ēnei rangahau e tautuhi “i ngā ngohe kāore e hāpaitia ana e ngā tāngata i tēnei wā i ngā wai māori noho tāone, e hiahia ana rātou te mahi, ka mutu, ka nui hoki te hua” te kōrero a Pike.

Ko te kaupae i tua atu i tēnei ko te whakawhanake ngātahi i ngā whakataunga whakarerekē ki te taha o ngā hapori me te whakatinana i ēnei whakataunga mā roto i ngā whakamātauranga ā-waho i te tau 2023.

Ka whakahoahoatia ēnei whakamātautau ki te whakamahia i ngā kōkiritanga, te whakaheke i te nui o ngā tauārai ki ngā whanonga tautoko wai māori me te tiki mai i ngā mātāpono hoahoa mārō e kitea ana i te nuinga o te wā i ngā whakamātautau haumanu.

E hiahiatia ana te mārō ki te aromātai mehemea e whakarerekē haere ana ngā whakataunga i te whanonga, mehemea nā reira rawa kua hua mai he putanga ā-taiao whai hua.

“E hiahia ana mātou ki te kite mehemea e taea ai e mātou ngā hua tūturu i roto i te hapori.

E hiahia ana mātou ki te kite mehemea e taea ai e mātou te āwhina te kōkiritanga whai hua i roto i ngā arawai,” te kī a Pike. “Kātahi te hiamō kāore e roa ka tīmata te rangahau whai kiko i tēnei kaupapa, ko te whakaoti kē i ngā mahi whakariterite tā mātou mahi tuatahi.”

He tino rerekē ngā hononga ki te wai māori noho tāone huri noa i te whenua. Ngā mihi ki a Andrea Airey mō te whakaahua.



Ko ngā kaiwhakauru o tētahi hui Whakamana Kaitiakitanga me te Kaitiakitanga ā-Taiao e toro atu ana ki tētahi kaupapa whakarauora. Ngā mihi ki a Tash Tassell-Matamua mō te whakaahua.



Oranga

Kaihautū ngātahi

Ko **Melanie Mark-Shadbolt** Ngāti Kahungunu, Ngāti Porou, Te Arawa, Te Āti Awa, Ngāti Raukawa, Ngāti Tūwharetoa, Te Tira Whakamātaki, Te Manatū Mō Te Taiao. Ko **Valance Smith** Ngāpuhi, Waikato, Ngāti Haina, Ngāti Pākehā; Te Wānanga Aronui o Tāmaki Makau Rau.

Ko te tāhuhu rangahau o Oranga ko te huihuinga o ngā kaupapa kaupapa-Māori me te whāinga kia whakaorangia te oranga ngātahitanga o ngā rākau, ngā ngahere me te tangata. E whakatutuki ai tēnei mā te tūhonohono ki, me te tautoko ā-rauemi i, ngā hapori Māori me ngā kaipupuri mātauranga ā-taiao ki te tūhura i ngā rongoā kua tuituia ki roto i te mātauranga Māori.

▣ Kaupapa Rangahau

Te Whakaora a ngā Kauri: Te whakamahi i te mātauranga hei tikanga whakaora kauri

Ki ngā ngahere o te taitokerau o Aotearoa, kei te matemate haere ngā kauri. Kua pāngia ēnei tipua rākau o te ngahere e te tukumate o te tipu kua tapaina ki te ingoa *Phytophthora agathidicida*. Kia whakapākehātia tēnei ko te tino tikanga o te ingoa ko te '*urupatu tipu, ko te kaikōhuru kauri*'. Engari he kaitiaki marohi tō te kauri i a Matua Tohe Ashby (Ngāti Hine), he tohunga rongoā Māori e noho ana ki Te Taitokerau.

Kua oti i a Matua Tohe te whakawhanake i te maimoatanga rongoā mō ngā kauri e pāngia ana e tēnei mate, he mea tō mai i te whakapapa tūhonohono o te hononga ahurei i waenga i te kauri me te paraoa (tohorā). E ai ki ngā kōrero ahurea o te Taitokerau, he tuakana, teina te tokorua rā - e rua, e rua ō rāua kiri, kiki ana ki te kāpia, ki te hinu rānei, he nui hoki te hanga - nā, ka wehewehea rāua i te kōwhiringa o te pāraoa i te moana, kua te ngahere.

“Ka mate haere ana te kauri, ka kī au māku te tohorā e whakahoki ki te kauri,” te kī a Tohe. “Ka kī mai tētahi o ōku kaumātua, a Kevin Prime, mehemea ka taea e koe te rākau kotahi te whakaora, he mea nui tēnā, ānō nei he whakahokinga koha tērā.”

Nō nā noa nei i tonoa a Tohe e ētahi atu rōpū Māori mai i ngā whenua kauri ki te āwhina mai i te whakaoranga o ā rātou kauri, tae atu ki tētahi tauira o mohoa nei ki runga i te whenua o Ngāti Whātua. “I tae mai tētahi o aku ākongā ki te kite i a au. I ui mai ia me pēhea e taea e rātou te whakaora rākau kauri i te puihi e pātata ana ki a rātou,” e ai ki te whakamārama a Tohe. “Nāku i hoatu ētahi kōiwi me te hinu o te tohorā, me te kī atu me hauhake ētahi kahikātoa, whakawhenumi i te katoa, kātahi ka hoatu ki ngā rākau me te whenua.

“I tohua ngā rākau, kātahi ka hoatuna te rongoā. I whakawhiwhia ngā rākau e whitu ki tēnei rongoā. Ko aua rākau e whitu katoa – kua ora katoa mai rātou. Kua hoki mai te oranga ki a rātou.”





Ko Matua Tohe kei te pūtake o te kauri kua pāngia e te mate tāmatemate kauri. Ngā mihi ki a Jamie Ataria mō te whakaahua

Jamie Ataria (Rongomaiwahine, Ngāti Kahungunu, Ngāti Paki) ka kite ia i ngā hua o te kaupapa e toro ana ki tua atu i te whakaoranga o ngā rākau: “Ehara i te mea mō ngā rākau anake te ariā o te oranga, mō tātou te tangata kē. Kua tino piki tō tātou oranga mehemea he ōrite te nui o te whakaaro ki a rāua tahi, arā, kua tū ngātahi, tētahi ki te taha o tētahi, he hōrite rāua,” tana kī

He ara hoki te kaupapa rangahau ki te hāpai ake i te wāhi ki te mātauranga Māori, e ai ki a Jamie, “Me tautoko tātou i tō tātou mātauranga... me whānui ake te whakaaetanga he momo mātauranga tūturu, ka mutu, kāore pea i tua atu mō te whakatikatika i ngā take, i ngā kaupapa rānei i konei i Aotearoa.”

“Me kī kua āhua aukatia te tukanga mō te rangahau, te pūtaiao me te auahatanga i konei i Aotearoa ki te iwi Māori mō ngā tini tau kua taha ake nei. Ko tā tēnei kaupapa ko te tautoko i ngā moemoeā a matua Tohe me ōna kawenga kaitiaki ki te whakamahu i te kauri mā te whakamahi i ngā ara tino Māori ake nei, nō reira ko tāku e mea nei he tino rerekē ā tātou mahi i konei, me taku kī atu, he pai kē atu ki a mātou. Ko te tūmanako kua whakamanawa te ngākau o ngā tāngata ka rongō i ngā kōrero mō tēnei mahi ki te kī atu, ‘e, te āhua nei, he tūranga, he wāhi anō hoki māku me te mātauranga o ōku kaumātua, kuia hei āwhina i tēnei take. Ko taku manako ka rongō ngā hapori kua whakamanahia rātou e tēnei tukanga rangahau.”

Ko Matua Hori Parata (Ngāti Wai) e taki karakia ana i mua i tētahi kauri. Ngā mihi ki a Jamie Ataria mō te whakaahua



Te Takatū mō te Mahi

Kaihautū ngātahi

Ko Marie McEntee Te Whare Wānanga o Tāmaki Makaurau. Ko Mark Harvey Mātāwaka nō Ngāti Toa Te Whare Wānanga o Tāmaki Makaurau.

E arotahi ana te kaupapa rangahau ki te taha tangata o te oranga ngahere i Aotearoa. Arā, ko ngā tāngata me ngā hapori kua pāngia, e noho mōrearea ana rānei kia pāngia e te mate tāmātemate kauri me te mate waikura rau.



Ngā Mahi Whakanui Matariki 2022 o Te Kura Tuatahi o Konini Tēnā koe mō ngā whakaahua Ariane Craig-Smith

▣ Kaupapa Rangahau

Toitū te Ngahere: Te whakamahi i te toi ki te tūhono i ngā tamariki ki te ngahere

I te tapa tāone raurau o Titirangi, kua korowaitia neke atu i te haurua o te whenua o Te Kura o Konini ki te matomato o te ngahere māori. Kāore he wāhi i tua atu mō Toitū te Ngahere, he kaupapa e whakaemi ana i te toi, te mātauranga Māori me te pūtaiao ki te tūhonohono i ngā tamariki me ngā kaiako ki te ngahere.

“Ko tō mātou hiahia mō ngā tamariki e mahi ana ki tō mātou taha kia tirotiro te pikitia nui o te oranga ngahere, me te wāhi ki a rātou hei tautoko i te oranga o ō tātou taiao māori,” te kī a te kaiwhakarite kaupapa Ariane Craig-Smith. “Nō reira, ko whai akoranga mō aua momo me te tuari i ngā akoranga o tā rātou e mahi nei ki te hapori whānui. Ka mutu, e hiahia ana mātou kia tino whai wāhi nui ki roto i tērā.”

Ko Te Kura o Konini tētahi o ngā kura e rua e whai wāhi atu ana ki te kaupapa i tēnei tau – ko tētahi anō ko Te Kura Tuatahi o Kauri Park i Te Whenua Roa o Kahu. Hei te tau e tū mai nei, ka neke te kaupapa ki ngā kura e toru ki Aotea.

“E inoi ana mātou ki aua kura kia haere mai i runga i tētahi haerenga ngātahi ki tō mātou taha. He hononga ahurei tā ia kura, tā ia kura ki te whenua – nō reira e hōpara ana i tērā. He aha te āhua o te whenua i tēnei wā, he aha ngā kōrero o neherā mō aua wāhi, he aha ngā mātauranga kei roto i te hapori, i roto i ngā whānau? Ka whāngai haere ēnei āhuratanga katoa i te āhua o te kaupapa,” te kī a Ariane.

Ka mahi tētahi kāhui kaiakopono, kua tīkina mai i ngā akoranga paerunga i te toi me te pūtaiao, ki te taha o ngā kura ki te whakahaere i te kaupapa.

“Ko te tuituinga o te toi ki roto i te akomanga, ko tāna tino mahi he taputapu whakamahu, ka mutu he taputapu tino kaha mō te ako,” te kōrero a Justice Hetaraka (Ngātiwai, Kāi Tahu), kaitohutohu mō Toitū te Ngahere.

“He tikanga Māori kē te tukanga me te ara e whāia ana e mātou mō te taha ki te ako. Nā te toi ka riro i ngā tamariki



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Ko te tuituinga o te toi ki roto i te akomanga, ko tāna tino mahi he taputapu whakamahu, ka mutu he taputapu tino kaha mō te ako.”

te pūmanawa ki te whakamahi i tō rātou auahatanga me te pohewa i te ānamata tē mōhiohia i tēnei wā.”

He tino rawe ki te tumuaki o Te Kura Tuatahi o Konini a Andrew Ducat ngā hua o te whakakotahitanga o te toi, te pūtaiao me te mātauranga i te horopaki o tō rātou ake wāhanga o te ngahere. “Ko te hua o te hononga ā-ngākau ki te tūmahi ako, ko te nui o ngā ara ako mutunga kē mai ka toe tonu nei,” tana kī.

“E hia nei ngā karere whiwhi ai mātou mō tā mātou tūkinotanga ki te taiao, tātou te tangata, ā-momo nei,” te kī a Ariane. “Ko te manako e taea ai e mātou te whakarerekē i taua kōrero me te hoatu i te arokā ki aua tamariki kia āhei ai rātou te whai wāhi atu hei wāhanga ora o taua pūnaha rauropi.”



Tiaki

Ka whakawhānake tō tātou
pūnaha tiaki koiora ki te Ao





He Tangata, He Ōhanga, He Taiao: he pou tarāwaho haumaruru koiora ā-uara

Kaihautū ngātahi

Ko John Kean AgResearch, Better Border Biosecurity (B3). Ko Christine Reed Kaikirimana Motuhake.

I runga i te whakapikinga o te honohononga ā-ao me te tipu haere hoki o te whīwhiwhi o te tauhokohoko, ka piki haere te hora o ngā riha me ngā mate. Me pēhea tātou e whakaheke te mōrea o ngā riha e whakaeke mai ana ki Aotearoa?

▣ Kaupapa Rangahau

Ko tā te kāhui rangahau He Tangata, He Taiao, He Ōhanga ko te whakawhanake i te pou tarāwaho aromatawai mōrea haumaruru koiora ki te mātua whakarite e taea ai e ngā tāngata i te pūnaha haumaruru koiora te whai wāhi atu tūturu i te tāutungā me te whakaraupapatanga o ngā mōrea haumaruru koiora.

He aha tēnei mea te whakatau haumaruru koiora pai?

“E mōhio ana tātou ki te nui o ngā whakatau haumaruru koiora e whakatauhia ana i ngā wā katoa, engari he rerekē ō tātou tirohanga ki te pai o ēnei whakatau,” te kī a John Kean, kaihautū ngātahi o He Tangata, He Taiao, He Ōhanga. “Kei te hiahia mōhio mātou he aha ngā āhuatanga o tēnei mea te whakatau haumaruru koiora pai, kia pai ai tā mātou whakawhanake i te pou tarāwaho e whakaputaina ana i ngā whakatau haumaruru koiora pai.”

Ka tīkina mai te pou tarāwaho aromatawai mōrea i tētahi huinga katoa o ngā uara, e whai ana ki te tahu i te whai wāhitanga whānui i te whakatakotoranga whakaaro mō te haumaruru koiora, ina koa i waenga i te mana whenua.

“Arā anō te kitenga he whakatau ā-ōhanga ngā whakatau haumaruru koiora,” te kī a te kaihautū ngātahi Christine Reed. “Nō reira, ko tā mātou e nanaiore nei kia herea mai ētahi atu o aua uara ki roto ki te whakatakotoranga whakaaro.”

I te tau tuatahi o te kaupapa, kua whakahaerehia e te kāhui ko te arotake tuhituhinga o ngā kōrero e mōhio kē ana mātou i tēnei wā mō ngā taiao ōhanga rerekē o Aotearoa, me ngā uara ahurea mō te taha ki te haumaruru koiora. I runga anō i tā ngā manakohanga, i kitea i te arotakenga he tino rerekē ngā uara i waenga i tēnā tāngata, i tēnā tangata – engari he hiranga ngā uara e pā ana ki te wāhi ki te nuinga o Ngāi Aotearoa, ina koa te hunga Māori.

E hāngai ana te maha o ngā uara i tautuhia ki ngā mātāpono e whā mai i te Ao Māori, i tautuhia e te kaitono



PhD Tracey Godfery hei mea nui mō te haumarua koiiora: ko te whakapapa, ko te tauutuutu, ko te tuakana-teina (akoranga ā-hononga), me te mōhio (mātauranga tuku iho). “He mea pārekareka te ōritenga puta noa i ngā ahurea tā ngā ariā pērā ki te tauutuutu me te tuakana-teina,” te kī a John.

I whakakanohihia i te nuinga o te wā ngā uara ā-taiao hei ratonga pūnaha rauropi – “engari kāore ēnei i te hāngai atu ki te Ao Māori i ngā wā katoa,” te kī a Christine, “Nō reira e kimi ana mātou i ētahi atu āhuatanga e hāngai ake ana.”

Kua haere ngātahi tēnei arotakenga uara me te tirohanga hōhonu ki roto i ngā pou tarāwaho aromatawai mōrea e

tū kē ana e te kairangahau Melanie Newfield, nāna i uiui te 26 ngā kaiwhakataua puta noa i te mahi haumarua koiiora. Te āhua nei arā anō ētahi atu pou tarāwaho i waho rā – engari kei te noho noa ētahi kāore e whakamahia ana, arā anō ētahi, he whakarangirua noa te whakamahia. Ka mutu, mō te pou tarāwaho aromatawai mōrea whai hua he mea nui te whakawhirinaki.

“Kāore he take o te hanga pou tarāwaho aromatawai mōrea hou anō,” te kōrero a Christine. “Me tino mārama mātou he aha ngā wero, ngā aukatinga, ngā tauārai mō ngā kaiwhakataua, i mua i te whakawhanaketanga o tētahi mea hou.”

RA1: Whai Wāhitanga - Mātau



RA2: Uara - Mauri



RA3: Papānga - Kōkiritanga



Tūteitanga Kairangatira

Kaihautū Kaupapa

Ko Steve Pawson Te Whare Wānanga o Waitaha

He wāhanga mātuatua te tūteitanga mō te whakamarumaruru i ngā hua ōhanga me ngā taonga māori o Aotearoa i ngā kaiao whakakino nō whenua kē.

I tēnei wā kei te whakapau tō tātou kāwanatanga i te \$125 miriona i ia tau, i ia tau ki te aroturuki haere mō ngā tuma koiora. He tukanga nui te utu nā te nui o ngā haora e whakapauhia ana ki te mahi e mahia ana e ngā mātanga.

Kei te whakawhanake te kāhui Tūteitanga Kairangatira i ngā hangarau tauira tuatahi e whakaaunoa me te whakapai ake i ngā huanga tūteitanga, me te whakaiti i ngā whakapaunga.

▣ Kaupapa Rangahau

Te tino whakakaha i te tūteitanga haumaruru koiora ki te hangarau hou – me te waikōhua ngārara

Mō te motu pēnei i a Aotearoa kāore i tua atu, kāore i tua mai i te whakamarumarutanga o te tuku ihotanga koiora me ngā ahumahi. He pūnaha haumaruru koiora pakari kē tā tātou hei pare atu i ngā kaiao kāore e hiahiatia ana, engari e putaputa mai ana ngā ngārara me ngā tukumate korokē i ngā wā katoa, nō reira he wāhi tērā hei tino whakakaha ake i ngā rautaki tūteitanga kia pakari ake ai.

“He pai tā mātou pūnaha tūteitanga, engari kāore e taea e mātou ngā wāhi katoa,” te kōrero a Steve Pawson, tētahi o ngā kaihautū whakatewhatewha mō te kaupapa rangahau tūteitanga Kairangatira. “Nō reira kei te whai mātou ki te whakawhanake i te hangarau hou e āwhina mātou ki te kimi wawe i ngā mea kino, kia pai ai tā mātou urupatu rawa i aua mea rā.”

I te ngahurutanga i mua i te tau 2017, i haukotia te 71,000 kaiao rawa i te tauārai whenua, ā, i taea ai e ā mātou pūnaha o tēnei wā te tautuhi i te āhua haurua noa iho o aua kaiao. Ka mutu o aua kaiao i tautuhia, kotahi noa iho te kitenga o te āhua haurua anō o ērā.

“Kāore i runga i a wai rā rārangi te nuinga o ngā kaiao hou e taetae mai ana – e hia nei ngā takutaku torohū kāore e paku mōhio ana e mātou. Ko ngā mea e taetae mai ana ki a mātou i konei he hou ki te ao pūtaiao, ka whakaū ki konei. Nō reira, kia whakaritea te pūnaha tūteitanga haumaruru koiora tino pakari rawa atu, me whānui rawa te hora kia pai ai te hopu te tini e taea ai,” te kī a Steve.

I reira kuhu mai ai te waikōhua ngārara. E pēnei ana: ka whakaritea te rore marama hihi katikati (UV) i ngā wāhi pērā ki ngā taunga rererangi, me ngā taunga waka moana. Ka kumea ngā ngārara e te marama, ka taka rātou ki roto i te ipu whakatio-kē. Ka penupenua te whakatio-kē ngārara kia waikōhua te āhua, kātahi ka tātaria te DNA i roto i taua ranunga kia kitea he aha ngā momo ngārara kei roto.

Mā te mātau wawe ki ngā momo, ka māmā ake te tūmahī urupatu – ka iti ake hoki te utu.



“

“Me whakapono rawa koe ki te puna tohutoro DNA, me whakawhanake rānei koe o ake huarahi ki te tango DNA me te pupuri tonu i te katoa o te ngārara. Kei te whai mātou i aua huarahi e rua i tēnei wā tonu.”

Kaimātai Ngārara Tākuta Carl Wardhaugh me te rore mārama ngārara i whakamahia ki te Wāpu o Tauranga. Tēnā koutou Scion mō te whakaahua

Kei te whakawhanake ngā ākonga hoahoa hua, pūkawatanga ā-hiko hoki i Te Whare Wānanga o Waitaha i te rore mārama hihī katikati kua whakaritea ake, he mea whai hiko ā-rā, me te pūmanawa 'Ipurangi o ngā Mea Katoa', kia pai ai te whakahaere ā-mamao. I whakatūria tētahi tauira tuatahi ki te Wāpu o Tauranga hei kohikohi i ngā tauira, e tātarā ana ērā i tēnei wā.

Ko te whāinga kia hangaia he pātengi raraunga o ngā 'waihere pae' tohutoro DNA mō ngā momo mea māori rerekē katoa. Kua tāpiria hoki ngā nahanaha e wātea ana o ngā momo riha e mōhiotia ana ki te pātengi raraunga tohutoro.

Engari e kī ana a Steve he uaua ake tēnei i tā te rongu.

“Me whakapono rawa koe ki te puna tohutoro DNA, me whakawhanake rānei koe o ake huarahi ki te tango DNA me te pupuri tonu i te katoa o te ngārara. Kei te whai mātou i aua huarahi e rua i tēnei wā tonu.”

E whai ana te kāhui ki te whakamātautau i te pūnaha tūteitanga tauira tuatahi ā te raumati e tū mai nei, mō muri tukuna atu ai pea ki te motu katoa.



Ngā Taputapu me ngā Rautaki Rerekē - Hātaretare

Kaihautū ngātahi

Ko Ocean Mercier Ngāti Porou; Te Herenga Waka. Ko Phil Lester Te Herenga Waka. Ko Symon Palmer Ngāti Te Rangī; Te Herenga Waka.

He pānga pokerehū, kino hoki te tini o ā mātou rautaki whakamatua riha o nāiane ki te taiao e karapo ana. Me whai taputapu hou mātou ki te whakamatua tika i ngā riha, me te karo tonu i ngā pānga kino i tua atu kāore e hiahiatia ana.

Ko tā te kāhui Taputapu me ngā Rautaki Rerekē – Hātaretare ko te whai ki te whakawhanake i tētahi taputapu whakahaere riha hātaretare tauine horanuku hou, i mua i te tau 2024.

I a rātou e whai ana i tēnei whāinga, kei te kōrero hoki rātou ki te iwi Māori kia mārama me pēhea ngā taputapu whakamatua riha hou e whakarei i te kaitiakitanga me te whakatairanga i te tino rangatiratanga.

📄 Kaupapa Rangahau

Ka whakakotahi te pūtaiao pāpori me te auahatanga rāpoi ngotatanga ki te rutu i te tuma pī miere

He moroiti te huhu *Varroa* – ētahi mitamano noa iho te whānui. Engari, mehemea he pī koe, he mea whakamate kē ngā whakaariki – nō reira he take tino nui tērā ki ngā Kaitiaki Pī huri noa i Aotearoa. I tēnei wā tonu, ko te rongoā ko te pani i te paitini ki ngā kōpapa pā kua pāngia e te *Varroa*. Ko te mate ka pāngia pea ētahi atu hātaretare, tae atu ki ngā pī, ki te tangata tonu – ka mutu, kia taea ai rā anō e ngā huhu te rongoā te pare atu, kua mutu tōna whai hua.

Nō reira, he pēhea mehemea tērā tētahi ara pai kē atu? He wai hāngai noa ki ngā *Varroa*, he mea pōpopo, haumaruru, e kore e taea te papare? Koia pū te aronga rangahau o tētahi o ngā kāhui i raro i te whakaruruhau o ‘Ngā Taputapu me ngā Rautaki Rerekē’.

Ehara i te mea ka mate ngā huhu *Varroa* i tā rātou wai rongoā engari ka patua tā rātou āhei ki te whakawhānau. “He momo RNZ e rua ōna muka (dsRNA) “he mea whawhāiti i ngā pūmua huhu, nō reira, kāore e kino ki ngā pī, ki te tangata, me ētahi atu momo kāore e tika ana,” te kī a Rose McGruddy. “Ehara hoki i te paitini - kua whakahakaina ki te wai me te oneone.”

I whakatakotoria e Rose ngā huanga o tēnei mahi ki te Huinga Whakatipu Pī Aotearoa, i reira i riro i a ia te tohu mō te tino kaikōrero o ngā ākongā. E mea ana ia “kua hiamō katoa ngā Kaipupuri Pī i tēnei hangarau. He huarahi whakamatua riha matawhāiti me ōna pitomata mō te ao ahumahi.”

Ko te mahi i tua atu ko te hari i te hangarau ki waho atu o te taiwhanga pūtaiao ki ngā whakamātautau ā-waho.

Engari he pēhea ngā whakaaro o ngā tāngata mō tēnei huarahi kairangatira hou ki te whakamatua riha? E whai ana tētahi atu muka rangahau i roto i tēnei tāhuhu ki te rongo i ngā kōrero mō ngā take whakamatua hātaretare i waenga i te iwi Māori – tae atu ki tētahi minenga ‘mātau’, nō te ao pakihī, me te hunga whakapono, whai hononga wairua hoki.

“Kāore mātou i ohore he whānui ngā tirohanga,” te kī a kairangahau Symon Palmer, “Arā ētahi tirohanga



“

“Ehara te kore mahi i tētahi o ngā kōwhiringa,” ka mea a Symon. “I māramatia e te tangata arā ēnei mōrea haumaruru koiora me ngā momo kaiwhakaeke nō whenua kē.”

i whakaaetia ai te whakamahinga o aua hangarau, i tautokona e te katoa o te huihuinga. Heoi anō, i konā tonu te kupu whakahē.”

Āwangawanga tonu ana ētahi tāngata ki ngā pānga i waho o te whāinga, ina koa te whakamahinga o ngā taputapu ā-ira. Heoi anō, i kitea e te katoa me mahi te mahi, ka mutu, i hiahia hoki ētahi atu mōhiohio mai i te tirohanga kūpapa.

“Ehara te kore mahi i tētahi o ngā kōwhiringa,” ka mea a Symon. “I māramatia e te tangata arā ēnei mōrea haumaruru koiora me ngā momo kaiwhakaeke nō whenua kē.”

Ko te hua ka puta i te kore mahi ko te matenga o ngā pī katoa i ngā huhu, nā reira ka mate hoki te kōpapa pī.

“Kua mate mātou te kimi huarahi hei whakamatua i te pirinoa huhu, kua tutuki tēnei i te nuinga o te wā mā te whakamahi paturuha ā-matū. Kua mate te kimi rongoa kē hei āwhina i ngā pī.

“I kitea mai i tā mātou rangahau ko te hiranga nui o te tirohanga tikanga ki tēnei kōrero tino matatini nei – e huri ana i te mana whakahaere ā-pāpori ki te rangatiratanga,” te kī a Symon.

Kei te whakahaeretia e te kāhui he rangahau o ngā kaipupuri pī Māori kia mārama rātou i tō rātou tirohanga whānui ki ngā taputapu hou, pērā ki te dsRNA, ki te whakamatua huhu *Varroa*.



He pī miere me ngā huhu *Varroa* pirinoa. Kei te mate hoki tēnei pī i ngā pānga o te “Wheori parihaui pīari” (“Deformed wing virus”) he mea hora e te varroa. E kore rawa e taea e tēnei pī kua pāngia e te mate te rere. Tēnā koe Phil Lester mō te whakaahua.

Ngā Taputapu me ngā Rautaki Rerekē - Te Tautoko i te Konihi Kore 2050

Kaihautū ngātahi

Ko Chris Jones Manaaki Whenua. Ko Nikki Harcourt Waikato-Tainui; Manaaki Whenua.

E hia nei ngā momo kōwhiringa whakamatua riha rerekē e wātea mai ana, e whakawhanaketia ana hoki, ka uaua te kōwhiri i te tino huarahi pai rawa atu mā ia kaupapa, mā ia kaupapa.

Ko te take tērā e waihanga ana te kāhui rangahau o Ngā Taputapu me ngā Rautaki Rerekē - Te Tautoko i te Konihi Kore 2050 i tētahi taputapu ā-ipurangi kia āhei ai ngā pou whakahaere kaupapa te whakapae i ngā mahi e taea ai i roto i te nui o ā rātou rauemi, he aha rānei te utu ki te whakatutuki ā rātou whāinga urupatu.

Mā te whakakotahi i ngā taurira whakahaere konihi o nāianeī, te raraunga utu, me ngā raraunga manakohanga ā-pāpori, ā-ahurea ka tautokona ngā kaupapa e te kāhui ki te whakawhanake i ngā tūnga mō te whaipainga iho o te utu mō tēnā kōwhiringa urupatu, mō tēnā kōwhiringa urupatu.



□ Kaupapa Rangahau

He taputapu hou mō te whakatutukinga o ngā hua ki waenga i te iwi mō Konihi Kore 2050

I te rapuara ki te whakawātea i a Aotearoa i ngā paihamu, i ngā kiore me ngā hekenga o te tori uaroa i mua i te 2050, he tino whānui ngā momo rore, teihana mōunu, me ētahi atu taputapu e wātea mai ana, he ōrite hoki te whānui o ngā utu. Nō reira me pēhea e whiwhi ai ngā rōpū hapori me ngā kaitawhiti i te hua pai mō te nui o tā rātou whakapaunga?

“Kua tino toko te mauri, nē hā? “Te whaipainga ā-utu o te urupatu konihi,” te whakatoī a Chris Jones, kaihautū kaupapa ngātahi. “I te mahinga tahitanga ki te tini o ngā kaupapa konihi kore, kua puta ake taua take, ko te manako e taea ai e mātou te tautoko ngā kaupapa kia pai ake ngā mahi i a tātou e nuku whakamua ana.”

Nō te pānuitanga o te moemoeā Konihi Kore 2050 i te tau 2016, kua riro mai te pūtea o te āhua \$300 miriona.

“Arā, te āhua e mārara ana, o te ‘tuatahi, ka tuku haumi, kātahi ka kitea ka ahatia,’” te kī a Chris, “Heoi anō, arā ētahi atu wāhi o te ao ahumahi, ka tukuna te \$300 miriona me te kore aromatawai i te nui ka whakahokia mai pea i te haumi.

“Me pēhea tātou e whakapai ake te tautoko ki ngā kaupapa kia taea ai tērā, kia māia ai rātou ko te pūtea ka haumia e rātou, ka haumia rānei e ā rātou kaituku pūtea, e tutuki i tā rātou e hiahia ai?”

Kei te whakawhanake pūmanawa rorohiko a Chris rāua ko Nikki Harcourt (kaihautū ngātahi). Ko rāua hoki te kāhui e āhei ai ngā kaiwhakamahi ki te whakapae i te utu me ngā putanga o ā rātou mahi ki te mata o te whenua ka whiwhi ai pea rātou, hei āwhina i a rātou ki te whakatakoto mahere mō ā rātou whāinga me tā rātou whakapae pūtea hoki.

E taea ana e ngā pūmanawa rorohiko o tēnei wā te whakapae te nui o te papānga e hua mai ana i tētahi tikanga whakahaere rore – e ahu mai ana i te āhua o te

whakatakotoranga, te momo rore, te roa o te kaupapa, te auau o ngā wā ka tirohia ngā rore, me ētahi atu āhuatanga.

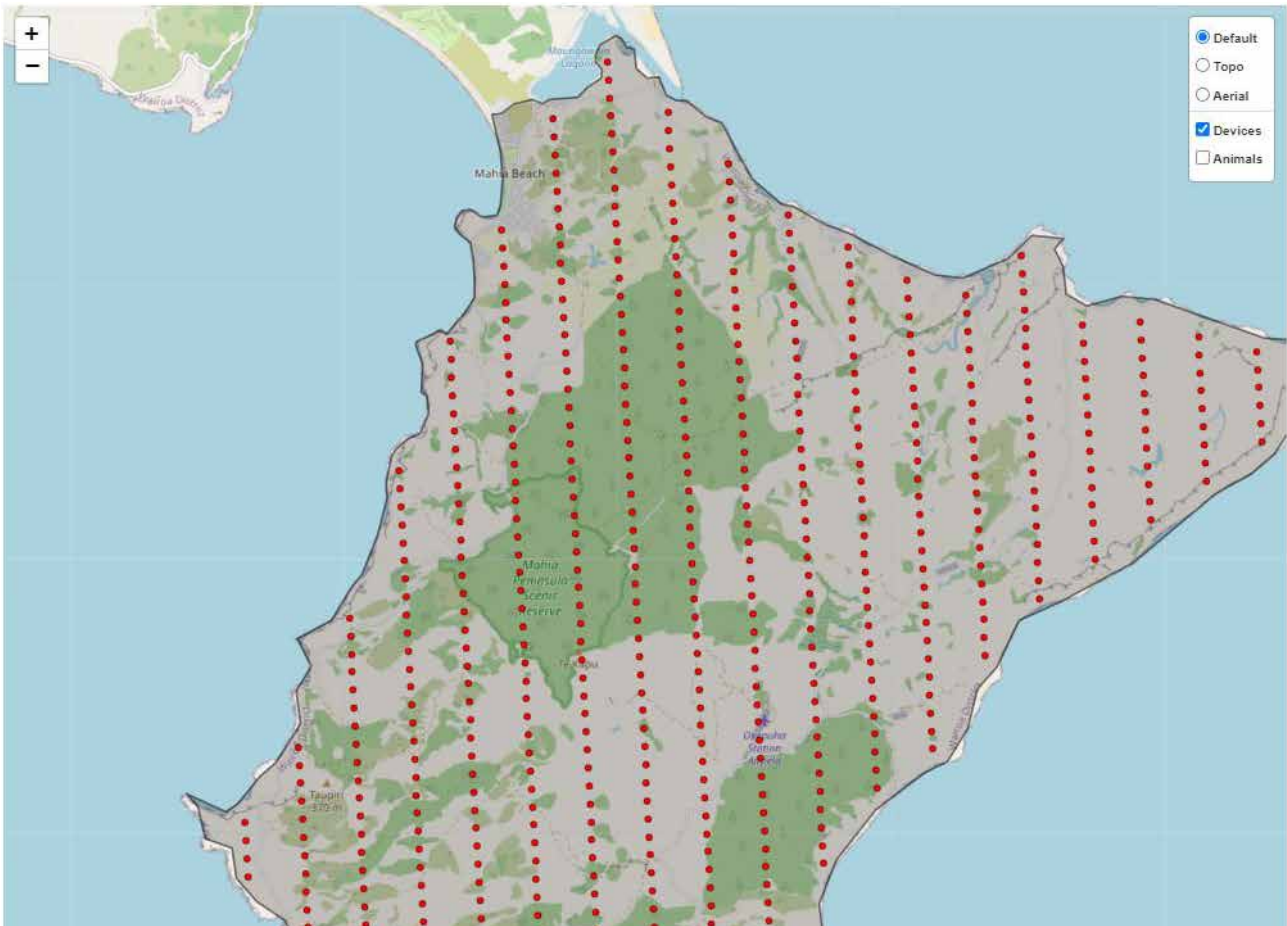
“Engari, e taea ai ināianei te ui atu: e hia te utu o tēnā?” te kī a Chris. Mā te pūmanawa rorohiko e whai mana ai ngā kaiwhakamahi ki te whiriwhiri he aha e taea ai i roto i te nui o te tahua e wātea ana ki a rātou, e hia rānei te nui o te pūtea ka hiahiatia e rātou e whakatutuki ai ō rātou moemoeā konihi kore.

Kua oti i te kāhui te hanga te tāpiringa utu mō te pūmanawa rorohiko, ā, e huri ana tō rātou tirohanga ki ngā

whakaaro ahurea ā-pāpori – hei tauira, ētahi kōwhiringa whakamatua riha, pērā ki ngā paitini, e kore e whakaaetia ā-pāpori, ā-ahurea hoki i ētahi wāhi. “He mea nui te whakamahi te hunga whiriwhiri whakatau ana i runga i ngā āhua i tua atu i te ōhanga noa iho,” tā Chris.

Ko te mahi whakamutunga o te kaupapa ko te tango i te pūmanawa rorohiko me te huri i tērā ki te taupānga ipurangi māmā te whakamahi, e wātea ana ki ngā rōpū hapori, whakahaere rore hoki te whakamahi, ahakoa ko wai. “Kei te mahi mātou ki te taha o ngā hapori kia tūturu tonu,” te kī a Chris.

Te taura rore ki runga Mahia.
Tēnā koe Chris Jones mō te whakaahua.



Te Aromatawai Mōrea me ngā Papānga Pūnaha Rauropi

Kaihautū ngātahi

Ko Luitgard Schwendenmann Te Whare Wānanga o Tāmaki Makaurau. Ko Simon Wegner Scion. Kaitohutohu Māori Ko Nick Waipara Rongowhakaata, Ngāti Ruapani; Te Rangahau Tipu me te Kai.

Me nui ake tā tātou mārama ki te tāmātemate kauri me te mate waikura rau ki te hiahia whakamarumaruru tātou i tō tātou ngahere.

Koia te take ko te whāinga o te kāhui Aromatawai Mōrea, Papānga Pūnaha Rauropi ko te tautuhi i ngā pānga o ēnei mate, i te whakahaeretanga, tae atu ki ngā momo, me ngā pūnaha rauropi e noho tino mōreareatia ana. Mā te mōhiohio whai taipitopito e āhei ai tā mātou whakaraupapa i ngā kaupapa atawhai me ngā whakatau mana whakahaere.

Ki te whiwhi tātou i ngā raraunga tino pai rawa atu ināianei, ka nui ake te mātau ā te 10, te 50, te 100 tau e tū mai nei mō ngā huringa i ngā pūnaha rauropi o te ngahere.

□ Kaupapa Rangahau

Te whai i ngā tukutuku kai whāngai ā-kauri

I te tatūnga o te kaimātai hauropi pūnaha rauropi a Andrew Barnes ki tētahi ngahere kauri o neherā he hari katoa tōna wairua. “Ki a au, koinei tētahi o ngā tino wāhi pai o te ao,” tana kī.

I raro i ōna waewae, ko tētahi ao anō o ngā moroiti, he kararehe pērā ki ngā *nematode*, ngā pūngāwerewere me ngā peketua e noho ana i roto i te oneone. I te mutunga iho kua whai kai tēnei hapori i ngā tipua kauri i runga ake i te papa, nō konā ngā rau e popo haere nei e whāngai ana i te oneone ki ngā taioira.

Ko Andrew tētahi o te kāhui o ngā kaipūtaiao kei te Whare Wānanga o Waikato, e mahi ana ki te taha o Te Kawerau ā Maki i Te Wao Nui a Tiriwā. Kei te wetewete rāua i tēnei tukutuku kai me te whiriwhiri ka pēhea te pānga mai mehemea e pāngia ana te kauri i runga ake e te tāmātemate.

“Kei te pīrangī mōhio mātou mehemea he rerekē te hapori kararehe e noho ana i te oneone i raro i ngā kauri ki ērā nō ngā rākau ehara i te kauri,” te whakamārama a Marijke Struijk, tētahi atu kairangahau i roto i te kāhui. “Kātahi ka hiahia mōhio hoki mātou he pēhea te pānga ki tērā ina ka pāngia e te tāmātemate kauri.”

“Ka ahatia mehemea ka ngaro te kauri i taua pūnaha? Ana, kei te mōhio mātou kei te whai hononga te kauri ki aua momo ngārara rerekē katoa,” te kī a Andrew. “He wāhi nui tō rātou i te whakaritenga o te āhua o te oneone, te matū oneone, te hanganga o te oneone, nō reira, me kī, kua tino tūhonohono rātou ki ngā kaiao katoa e noho ana i tēnei oneone kauri tino whāiti, tino ahurei hoki.”

“Kia pōturi haere ana te matenga o te rākau, ka rerekē pea te nui o te para, me te kounga o te para e taka mai ana i te rākau, nō reira, ka nui pea ngā pānga ki te tukutuku kai,” te kī a Marijke.

Ki te tautuhi ko wai e noho ana ki raro i te kauri, ka kohikohia e te kāhui ngā tauira tangohanga oneone me te whakamahi i te pūmomi ki te whakapatipati i ngā kaiao kia puta mai. Ka āta whakamahanatia te tauira mai i runga, i te wā e makariri ana ā raro, e whakatenatena ana i ngā kaiao oneone, aroha nui ki te wai, ki te neke whakararo ki te karo i te oneone e whakamaroke haere ana. Nā wai rā, kua taka mai ngā kaiao



i te tākere o te tauria oneone, ka kohikohia ki te ipuriki. Hei reira e taea ai aua mea te tautuhi – i te nuinga o te wā me te āwhina mai o te karu whārahi, nō te mea he moroiti rawa aua mea.

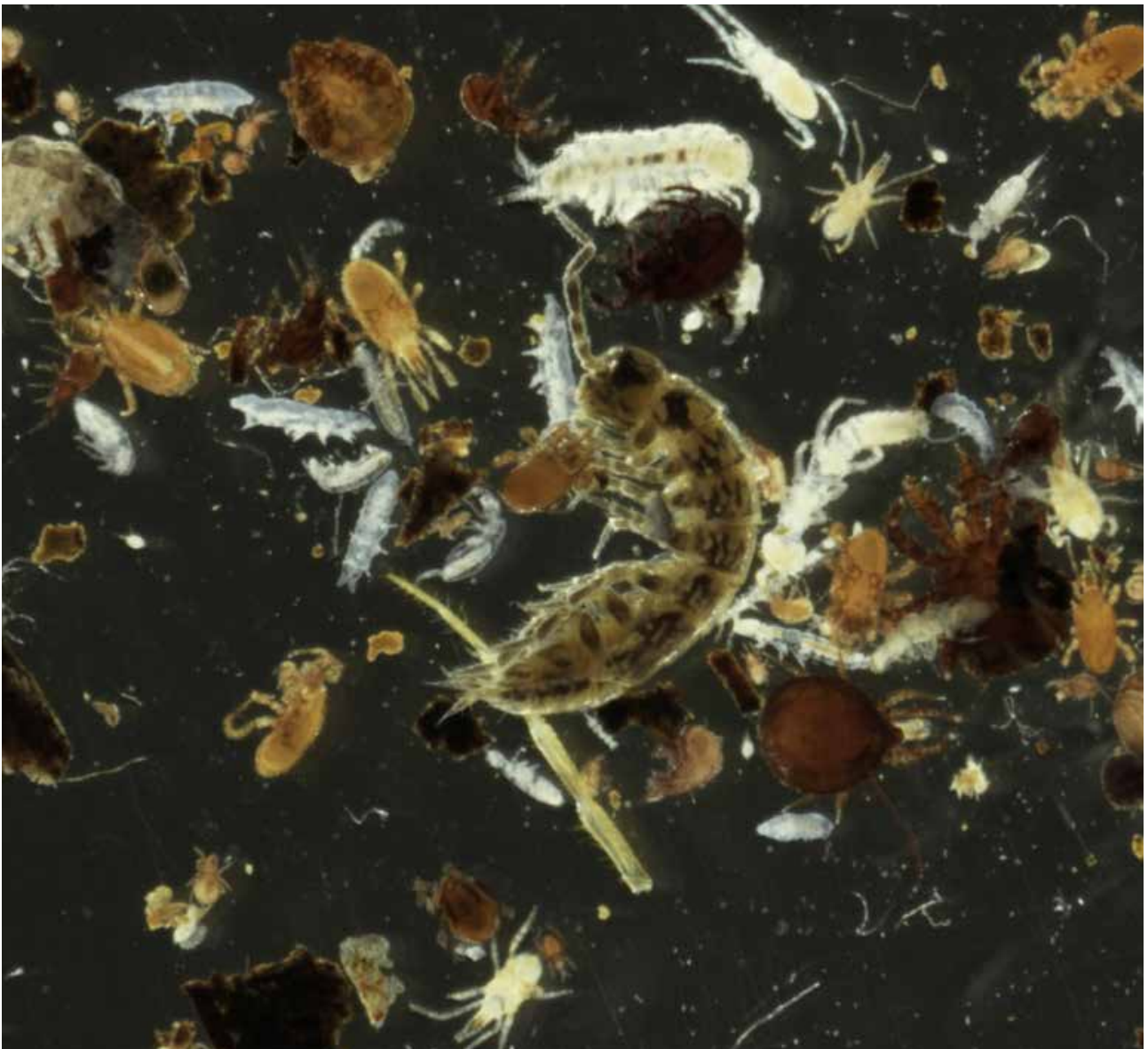
I tēnei wā kua kohia te nuinga o ngā tauria i Te Wao Nui a Tiriwa, ā, kei te whanake haere te kāhui i te māramatanga māmā noa iho o te tukutuku oneone kai i korā. Engari ka roa ake te tukanga whai haere i ngā rerekētanga.

“He uaua te mā mātou ki te mōhio e hia te mōhiohio ka tino hiahiatia kia whakawhanakehia te pikitia paepito. Ki a au nei ko te tīmatanga noa iho tēnei. Kia whiwhi i te raranga paepito e tika ana kia roa ake te tukanga aroturuki,” tā Andrew.

Ka mutu, mā te mārama ki ngā pānga whānui o te tāmamate kauri ki te katoa o te pūnaha rauropi o te ngahere e āwhina i a tātou ki te whakatau i ngā whakatau kia haumarua ai tōna ānamata.

Ngā kainoho o te oneone kauri.

Tēnā anō kōrua ko Poppy Romera rāua ko Marijke Struijk mō ngā whakaahua.



Te Tūteitanga Tuitui

Kaihautū ngātahi

Ko Cecilia Arienti-Latham Manaaki Whenua. Ko Waitangi Wood Ngātirua, Ngāti Awa, Ngāti Kahu, Ngāpuhi Nui Tonu; Tangata Motuhake

E whai ana te kāhui tūteitanga tuitui ki te whakapiki i ngā pūnaha tūteitanga haumarua koiora me ōna momo huarahi i Aotearoa. I runga i te ārahitanga o Te Tiriti o Waitangi, e mahi ana te kāhui ki te taha o ngā kiri whaipānga haumarua koiora ki te whakaaroaro i te raihana ahurea, te mātauranga me te rangatiratanga o te raraunga. Mā tēnei mahi e taea ai e rātou te whakawhanake tahi ngā taputapu me ngā huarahi ki te whakapiki i ā tātou pūnaha tūteitanga.

E aro ana tā rātou pou tarāwaho tūteitanga aronga-taiao ki te āta whakarite kua tuituia te tūnga me te hauora o ngā taonga me te ngahere ki roto ki ngā urupare tūteitanga katoa. E whakamahi ana te kāhui i te *Phytophthora agathidicida* (nō reira te tāmatemate kauri) me te *Austropuccinia psidii* (nō reira te mate waikura rau) hei rangahautanga ki te whakamātau i te pou tarāwaho me te tauira taunakitanga o te kore mate.

Ko tā tēnei rangahau ko te tūāpapa mō ngā huarahi hāngai ake ā-ahurea mō te kohinga me te rokiroki o ngā raraunga tika ki te rā mō te wāhi ki te whānui o ngā tukumate e rua, me te tūnga o te tuku ihotanga koiora kua pāngia.

□ Kaupapa Rangahau

Ko te rangatiratanga o te raraunga te kī ki te whakamana i te mana whenua i te whawhai ki te mate waikura rau, me te tāmatemate kauri

Nā runga i te mea kua hinga ētahi o ngā tino momo tipu, i arohatia nuitia o Aotearoa ki ngā mate, kei te kimi mōhiohia te mana whenua hei āwhina i a rātou ki te whakamarumaru i ō rātou taonga.

Ko tā te *A. psidii* he patu rākau i te whānau myrtle – pērā ki te ramarama me te mānuka – ā, ko tā te *P. agathidicida* he patu i te kauri. He taputapu tino hiranga te tūteitanga hei arowhai me te whakapae i ngā papānga o ēnei tukumate puta noa i te motu, engari i te nuinga o te wā tē taea e te mana whenua te whai wāhi atu ki ngā pouaka raraunga tūteitanga, engari ko rātou kē te hunga e tika ana kia mōhio ināia tonu nei mehemea kei roto ngā mate i ō rātou wāhi Whakahaere Kanorau Koiora (ngā taupā i whakamāramatia i mua, i whakaorangia e tēnei kaupapa rangahau).

“Ki te mana whenua me ōna kaitiaki kua noho wehewehe rātou i ngā whakataunga i whakatauria mō tō rātou whenua,” te kī a te kaitātari raraunga a Audrey Lustig, ka mutu, kāore ō rātou whai wāhitanga ki ngā raraunga me ngā mōhiohia rānei i hiahiatia ai rātou ki te whakarite i te tūteitanga ki te papa e tika ana kia mōhio rātou ki te whakahaere i tō rātou whenua.

“Ko te whakaaro i konei ko te whaihanga aratuku e pai ake ai te tuaritanga o te raraunga me te mōhiohia mō te katoa – mō ngā whare takiuru rangahau a te karauna, ngā hinonga, me te mana whenua.”

Ka eke mai ko te Pou Tarāwaho Tūteitanga Mātauranga Māori.

“Ko tā te Pou Tarāwaho Mātauranga Māori he tiroiro me pēhea te hāpai ake i te mātauranga Māori ki roto ki te pūnaha pūtaiao, me te mana whenua ki roto ki te wāhi rangahau, pūtaiao hoki,” te kī a te kaihautū ngātahi a Waitangi Wood.

“E arotahi ana mātou ki te rangatiratanga o te raraunga, me te rangatiratanga o te ahurea, me te marama me pēhea mātou e mātua whakarite e taea ana e te mana whenua te

whai wāhi atu ki ō rātou ake mōhiohio, raraunga hoki, te mōhiohio me te raraunga rānei e pā ana ki tō rātou taonga, ki ngā kōrero rangahau e whakahaeretia ana ki roto i ō rātou ake wāhi,” e mea nei a Waitangi.

“He mea nui te rangatiratanga raraunga ki ō tātou hapori nā te mea mā reira e āhei ai mātou te whai wāhi atu, ki te kōrero, ki te poapoa,” tana kōrero tāpiri.

Ko tētahi wāhanga o te whakamanatanga, me tōna whakatinanatanga i te rangatiratanga raraunga ko te takitaki i te whakapapa o te raraunga ki te whenua, ki te wāhanga rānei o te taiao i takea mai ai, mā konei e tūhono ai ia ki te mana whenua o taua takiwā.

E tutuki ai tēnei mahi, e whakawhanake ana te kāhui i tētahi aratuku mātauranga tuituia. He taputapu mātihiko tēnei e whakahaumarua ana i te whakapapa o te mōhiohio, e mātau ana ki te rerekētanga o te tangata, o te whakahaere me te hinonga kohikohi, whakamahī, rokiroki, whakarerekē tikanga raraunga, i te mana rangatiratanga o taua raraunga.

“He ara hou i te mahi rangahau me te ara hou o te mahi tahitanga,” te kī a Audrey, “ka mutu, he rawe ki a aua taku whai wāhi mai ki tērā.”

“

“Ko te whakaaro i konei ko te whaihanga aratuku e pai ake ai te tuaritanga o te raraunga me te mōhiohio mō te katoa – mō ngā whare takiuru rangahau a te karauna, ngā hinonga, me te mana whenua.”



Te Whakamatua, te Whakamarumarū, te Whakaora

Kaihautū ngātahi

Ko Dave Milner Ngāti Wai, Ngāti Whatua, Ngāpuhi, Ngāti Porou; Perception Planning Limited. Ko Marion Wood Te Rangahau Tipu me te Kai.

Kei te tino mate ngā wāhi waikura rau me te tāmatemate Kauri i te huihuinga o ngā tū ara me ngā taputapu whakahaere kua tuituia katoatia ki te whakaora i tō tātou ngahere.

Kei te whakamahi te rōpū Whakahaere, Whakamarumarū, Whakaora i tētahi hātepe toro whakawaho nui ki te whakawhanake me te whakaratarata i ngā hangarau hou, ki te aromatawai i ngā uara me ngā māharahara nui, me te whakarite kei te whaipanga te tuituinga o ngā mahi rangahau, ngā mahi whakahaere me ngā rangahautanga.

Kua whakaemia tō rātou rōpū whānui ngā pūkenga ki te whakawhanake me te tūhura i ngā rautaki me ngā taputapu hei whakamahi ki te patu i ēnei kaiao kikino rawa.

▣ Kaupapa Rangahau

Te tūhono i ngā taputapu hopuranga hangarau nui ki ngā moemoeā o te iwi

He māmā noa iho te mōhio ina e mate ana tētahi kauri: toto ana te pia, kua kowhai ngā rau, kua mate ētahi peka me te tūpuhi o te ūwhi rākau. Engari, he mūrere, he whakapau wā te mahi kimi i te tukumate matemate – noho ai ki roto i te oneone – i *mua* i tōna toronga ki te rākau.

He wāhanga a David Williams, ahorangi matū i te Whare Wānanga o Tāmaki Makaurau o tētahi rōpū e whai ana ki te whakamāmā ake i te mōhiotanga o te “ngārara” oneone tāmatemate mā te whakahoahoa pūoko hangarau nui.

Whakarāpopoto ai a David i tana rangahau hei mea “whakarato huarahi hou mō te kite i ngā mea kāre e kitea e ō whatu”. E tutuki ai tēnei, kua whakahoahoatia e ia he pūrere e kiia ana he ‘microfluidic cytometer.’ Oti rā, ka haere ngā mōkitokito tukumate mā tētahi awaawa tūpuhi ake i te makawe tangata, kitea ana i te wā ka hipa ana i ngā irahiko e rua, me te whakapōrearea i te rerehiko.

E āheī ana te whakamahi i ēnei pūrere ki roto tonu i te oneone, me te tuku i te hopuranga o te tukumate tāmatemate kauri i mua i tōna whakapoke i te rākau ā mate noa.

Kua angitu te whakaatu a te rōpū e āheī ana te pūrere ki te rapu i te ngā pōro mōkitokito kōmāmā, me tā rātou whiriwhiri e kaha ana rātou ki te ‘kukume’ i te tukumate tāmatemate i roto i te oneone mā te wairanu kāroti. Ināianei, ko te whakarite i te mahinga o te pūrere ki te taiao, me tōna kite aunoa i te āronga o te tukumate tāmatemate kauri.

I te wā nei, kei te āwhina a Kiri Reihana (nō Ngāpuhi, Te Rarawa, Tūhoe, me Whakatōhea) i te iwi me te hapū ki te whakauru i te mātauranga Māori ki roto i ngā mahinga mā te ‘aroturuki mātauranga’ – e mōhiotia hoki hei aroturuki ahurea – he kaupapa ā-tangata e tautoko ana i te whakawhanaketanga o tētahi pūoko hangarau nui.

“Tangohia ai e ia ngā uara, ngā kitenga ā-ao me ngā mita” o tētahi iwi, tētahi hapū rānei, me te whakamahi hei whakawhanake ara tātai pūnaha rau e taea ai te ine i ngā ariā tūturu me te ariā kore tūturu – ngā mea pērā ki te



whanaungatanga, te mauri, me te manaakitanga. Katahi ka whakamātauria ngā ara tātai pūnaha rau ki te taiao ki te taha o ngā kaimahi, me te whakahou auau anō o te tukanga.

“Ko tāku i kite ai i aku mahi i tēnei momo aroturukitanga, kei te hiahia te iwi i ō rātou ake raraunga kia āhei ai rātou ki te whakatakoto e ai ki tā rātou e hiahia ana, me te whakauru ki ngā whakatakotoranga whakaaro e pā ana ki ō rātou ake rauemi,” te kī a Kiri. “Ko te hanga me te whai māramatanga ki te taiao mai i tō rātou ake tirohanga, me te hopu mōhihio mai i tō rātou ake tirohanga, me te whakahokinga mai o taua kōrero.”

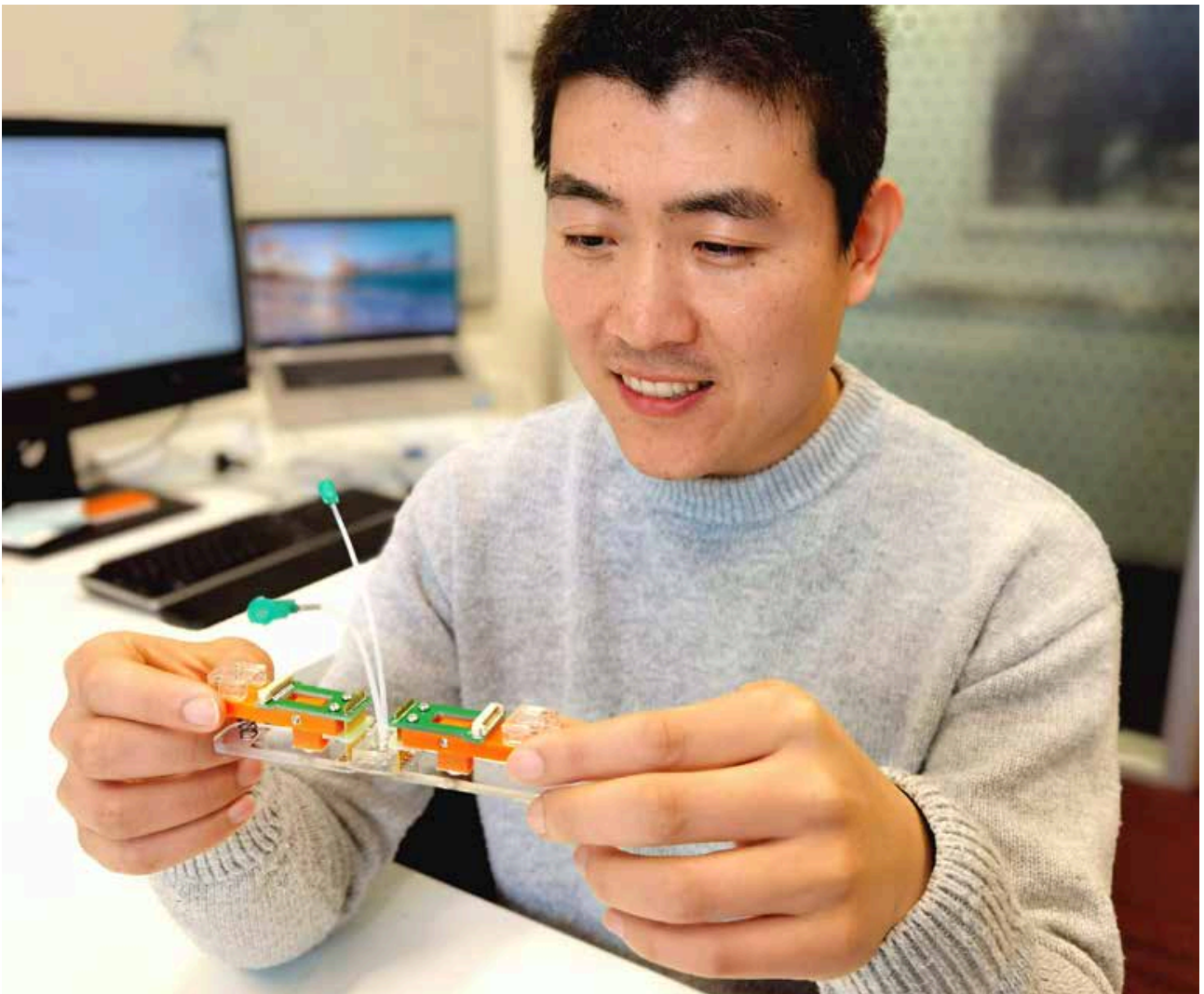
“Ehara te mātauranga i tētahi mea me pupuri kia mau hoki,” e ai ki a ia. “Ko te tikanga he mea hei tuari, kia rite ki te rere timu, rere pari, o tētahi awa, kia taka iho ki ngā reanga me tōna kohikohi haere i ngā whakamōmona i tōna haerenga ka whakatakoto ki wāhi kē.

“Ki ōku nā whakaaro, he mea nui rawa atu taua hononga ki te whenua mō te maha rawa o ngā take: ā-hinengaro, ā-wairua, ā-tinana hoki. He tangata koa ake tātou inā kua hono tātou ki te whenua.”

“

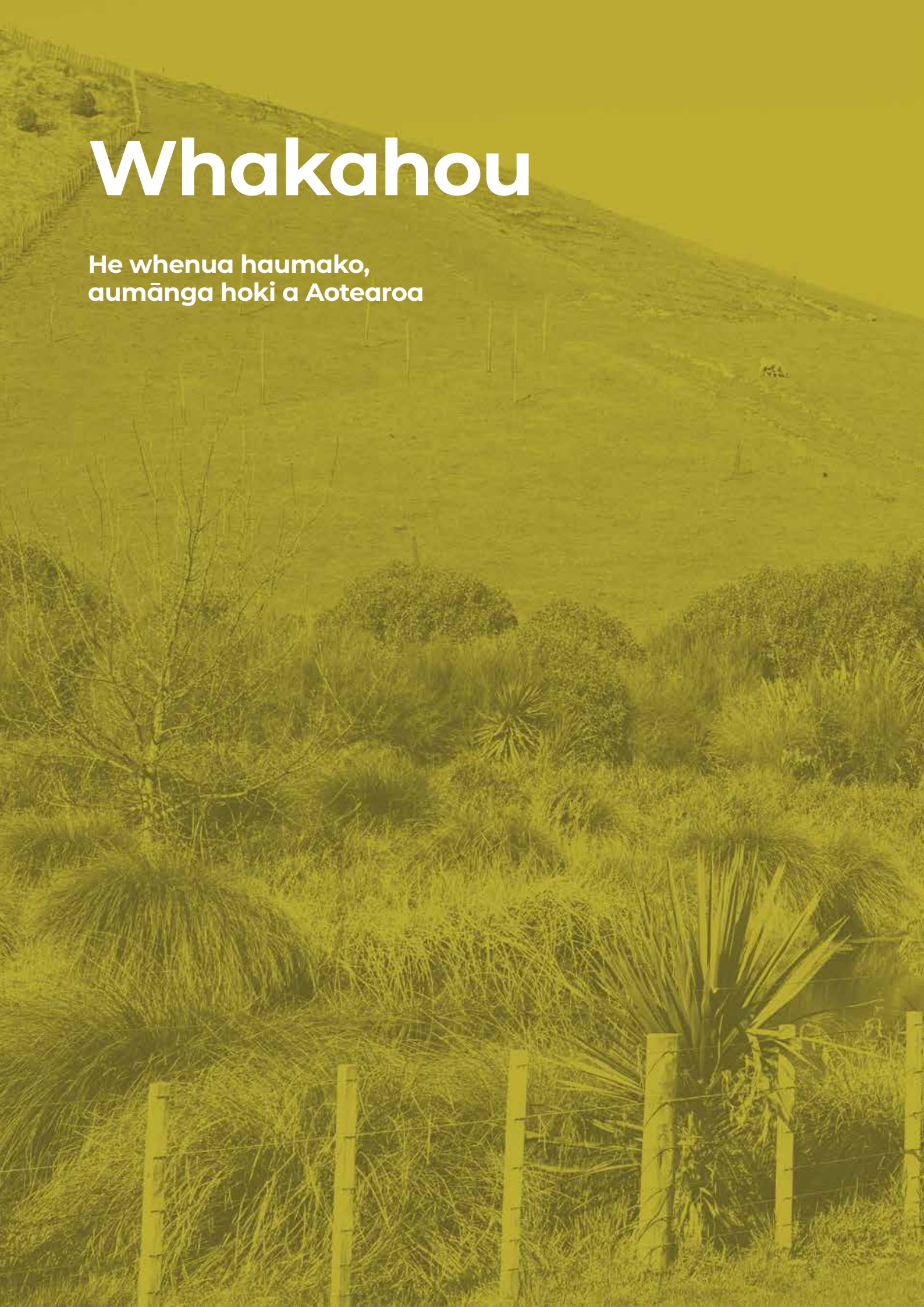
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Ko te Tangata Rangahau Oeikai Zhang (Te Whare Wānanga o Tāmaki Makaurau) e pupuri ana i te microfluidic cytometer.



Whakahou

He whenua haumako,
aumānga hoki a Aotearoa





Ngā Ara ki te Whakaoranga Hou o te Pūnaha Rauropi

Kaihautū ngātahi

Ko Joanne Clapcott Ngāti Porou; Cawthron Institute. Ko Danielle Shanahan Zealandia, Te Herenga Waka.

E whai ana te kāhui Ngā Ara ki te Whakaoranga Hou o te Pūnaha Rauropi ki te hanga manahautanga ā-pāpori, ā-rauropi hoki mā te māramatanga, me te whakarauoranga o ngā hononga i waenga i te tangata me te taiao. E mahi ana rātou ki te taha o ngā hapori ki te whakawhanake taputapu me ngā tū kōkiri e whakaata ana i ō rātou ake hiahia, horopaki ahurei hoki, ka mutu kei te tautokona hoki ā rātou whakapaunga kaha ki te whakanui ake i te kaupapa kia puta ai ngā hua.



Caleb Royal (mātanga mātauranga Māori Kanorau Kōiora Taketake) me Tyler Jarman (kaimātai rauropi Kanorau Kōiora o Farming with Native) i tētahi haerenga o mua tata nei ki tētahi pāmu Iwi ki Te Tairāwhiti. Tēnā koutou NZ Landcare Trust mō te whakaahua.



▣ Kaupapa Rangahau

Te whakamana i ngā kaipāmu kia 'toa ai te katoa' ā-kanorau kōiora

Ehara ngā pāmu hipi, kau, miraka kau rānei i te pātiki noa iho - kei ēnei whenua ko te āhua kotahi hauwhā o te māheuheu taketake o Aotearoa. Hei konei ka noho matua ngā pāmu me ngā kaipāmu kararehe ki tētahi ao o ānamata me ōna pūnaha rauropi taketake matomato.

Engari ko te whiwhi tohutohu mai e pā ana ki te mahi whakamahere taiao pāmu – i te whakatō kai ki te whakamatua riha – he nui te utu, he whakapōraruru, he mōumou wā hoki. E whai ana tētahi kaupapa whakamātau auaha, 'Te Mahi Pāmu me te Kanorau Kōiora Taketake' ki te whakarerekē i tēnei mā te whakapiki i te whai wāhitanga ki ngā tohutohu ngaio, e whakamana ana i ngā kaipāmu, ngā kaimātai rauropi, me ngā kaitohutohu kia eke panuku mō ngā taha e rua te kanorau kōiora me te pakihī.

Ka tū te kaupapa mō te 20 marama, ka whakaritea he kāhui o ngā kaipāmu ki te kōrero mō ā rātou whāinga, mō te tikanga o te kanorau kōiora, me ngā ārai ki te mahi kei mua i a rātou. I te tuatahi ka kōrero te kāhui ki ngā pāmu 40 – tōna tikanga anō me pāmu Māori te 15 ōrau neke atu o aua pāmu.

"Kāore he take o tā mātou tuhi i te mahere pakari ā-pūtaiao, mehemea kāore e taea te whakatutuki," te kī a kaimātai rauropi Josh Foster. "Kua tīmata te kōrerorero, e whiriwhiri ana i ngā mahi e taea ai."

Me ngā tū mahi hei tautuhi i ngā wāhi hiranga kia whakamarumarutia – pēnei ki te hanga taiepa mō ngā wāhi nui te uara ā-kanorau kōiora – e kī ana a Josh e hiahia ana te kāhui ki te kimi huarahi mō ngā kaipāmu hei arotake i ngā huringa i runga i ō rātou pāmu i roto i te wā, me te korenga o ngā utu nui rawa.

"Ka āwhina mātou ki te tuhi i ngā mahere, whai taipitopito, tikanga pai mutunga te mahi i ngā kaupapa e tino hiahiatia ana e ngā kaipāmu. He mea, te āhua nei, whakaputa i ngā tini hua ki tā rātou pūnaha pāmu, tae atu, ki ngā pūnaha rauropi taketake ā-rohe hoki.

"Ka whakapau whakaaro ngā kaipāmu ki te rauropi i runga i ō rātou whenua, engari kāore pea rātou i te mōhio e pērā

ana rātou. Mehemea ka taea e mātou te honohono i tētahi pito ki tētahi pito mō ngā topehatanga o te whakahaere kanorau koiora, ki tō mātou titiro ka tīmata rātou ki te kite i te uara o tō rātou ake mātauranga whakahaere me te māia kia whakamahia taua mātauranga me ngā herenga ā-pūtaiao mō te taha ki te whakamahere me te aroturuki hei ngā rā e tū mai nei,” te kī a Josh.

E whakarite ana te kāhui ki te whakawhanake i ngā momo rauemi, pāpāho hoki ki te toha i ngā tohutohu ngaio tika hoki mā tētahi ara e taea ai e te tini mano o ngā kaipāmu te whai wāhi mai. Heoi anō he nui ake te kaupapa i ngā rārangitaki me ngā aratohu pai noa iho – e aro kē ana ki te hanga i te hāpori whai pūkenga, manawa, māia hoki ki te kōkiri i te mahi whakamarumarū, whakarauora, me te aroturuki i te kanorau koiora ki runga pāmu.

“I roto i te wā, kua kite mātou i ngā tāngata e mānukanuka ana ki te neke whakamua mō te taha ki ngā mahi whakarauora, kanorau koiora rānei, engari ka whai māia rātou kia haere whakamua i ā mātou mahere,” te kōrero a Josh.

Kua tākina te kaupapa e te NZ Landcare Trust, me te tautoko mai i Silver Fern Farms, te Living Water Partnership (Fonterra me Te Papa Atawhai) me Te Wero Pūtaiao ā-Motu mō te Koiora Tuku Iho.

Mō tētahi kaupapa pēnei he mea nui kia whānui te momo o ngā hoa pātui.

E kī ana a Matt Harcombe, Pou Whakahaere Whakapūmautanga Silver Fern Farms, he nui noa atu i te tahua noa.

“Ka taea e ngā hoa pātui kaupapa te tūhono hāngai atu ki te tini mano kaipāmu mā tētahi hononga whakawhirinaki kē,” tana kī.

“He mātāmua, te whakapakari i te āheitanga me te whānuitanga o ngā tohutohu mātaua kia pai ai te toha i te tautoko e tika ana, te whakahāngai tika i aua tohutohu, me te waihanganga i te uara tūturu mō ngā kaipāmu, kia eke panuku ai te kaupapa ki tua atu i tōna tahua tīmatanga.”



A Caleb Royal, te kaitohutohu Mātauranga Māori Kanorau Koiora Taketake, kaimātai rauropi e kōrero ana ki tētahi kaipāmu i tētahi toronga ki tana pāmu ki te whakahaere i tētahi aromatawai rauropi o te pāmu me te uiui mō te kaupapa. Tēnā koutou NZ Landcare Trust mō te whakaahua.

<https://www.landcare.org.nz/current-project-item/farming-with-native-biodiversity>

E rua o ngā kaimātai rauropi whakamātau o Farming with Native (John Foster me Becky Clements) me te hoa pātui whakamātau o Living Water (Peter) i tētahi rā whakarauora repo i whakahaeretia e Tony Watson o NZLT i Waitaha. Tēnā koutou NZ Landcare Trust mō te whakaahua.



Te Kaupapahere me te Mana Whakahaere Urutau

Kaihautū ngātahi

Ko **Maria Bargh** Te Arawa (Ngāti Kea/Ngāti Tuarā), Ngāti Awa; Te Herenga Waka. Ko **Carwyn Jones** Ngāti Kahungunu; Te Wānanga o Raukawa.

E whai ana te rōpū Kaupapahere me te Mana Whakahaere Urutau ki te wāhi i te taura me te waihanga pūnaha hou, kaupapahere hou me te āheitanga hou hoki hei whakarite whakamarumarunui ake i tō tātou tuku ihotanga koiora. Tae atu tēnei ki te mahi tautoko i ngā hononga Tiriti ki te iwi Māori me te āta wherawhera i ngā tini huarahi mō te taiao ka puta ake ina whakauru mai ai te kāwanatanga ki roto i te mahi hoahoa ngātahi i ngā kaupapahere me te mana whakahaere ngātahi o ngā rawa taiao.

Kei te mātai te kāhui he aha ngā mea ka taea te mahi me ngā mea e kore rawa e mahi tika ki Aotearoa mō te taha ki te whakaratorato mana, te whakatakotoranga whakaaro me te haepapa.



Tuna whetū manuhiri i te ataata Champagne Shoes.

▣ Kaupapa Rangahau

Whakaawe ai te whakataetae kiriata i te rangatahi ki te pohewa kitenga mō te taiao kei tua i te awe māpara

Kei a wai te mana ki te whakatau ka ahatia tō tātou tuku ihotanga koiora? He mea uaua mō ētahi rōpū, tae noa ki ngā iwi me ngā mana whenua, kia whakamanatia tō rātou mātauranga me ō rātou uara mō te taha atawhai i te taiao.

Kei te whai te kāhui Kaupapahere me te Mana Whakahaere Urutau ki te whakararu i tēnei tikanga mā te rapu huarahi hou ki te waihanga hononga hāngai ki te Tiriti o Waitangi me te tautuhi huarahi mō te haere ngātahi o te mana whakahaere. Tāpiri atu ki tēnei, i whakahaeretia tētahi whakataetae kiriata poto i te marama o Whiringa-a-nuku 2021, ko 'Future Visions mō te Taiao' te ingoa.

Ko te whakauru ki ngā hapori te whāinga tōrua o te whakataetae me te whakapiki i te arokā mō te ariā ki te kaupapa whakahaerenga ā-Tiriti. I whakatenatena te rōpū i te hapori mā ngā mahi kōrero paki ā-ataata, ā-rongorau hoki ki te takoha mai i ō rātou whakaaro, moemoeā hoki mā te pohewatanga i tētahi ao ki mua mō te taiao, tae noa hoki ki tōna whakahaere me tona whakamarumaruru.

E tekau ngā tono whakauru ki te whakataetae e whakawhiti ana i ngā wāhanga e whā i tae mai: rangatahi (tae noa ki te 11 tau); taiohi (12 ki te 18) te pakeke (wāhanga tau tuwhera); me tētahi wāhanga mō Ngāti Kea me ētahi o te hapū o Ngāti Tuara.

He mea ahurei, he mea rerekē hoki i puta i ia tono ki te whakataetae – te kanikani, te whakaari, te katakata, te reo, te puoro, ngā moemoeā ā-hapori, me te pakiwaituhi tāoreore. Ko ētahi o ngā paraihe, ko te tono pai whakahirahira mō ia wāhanga, te taura pai whakahirahira mō te mātauranga Māori, te tono pai rawa atu mō te reo, te kiriata auaha rawa atu me te kanohitanga o te mahi mana whakahaere tino rerekē rawa atu.

E ai ki te kaiwhakauru, a Ruby Hansen, kaiwhakauru i roto i te rōpū 'Champagne Shoes' nā "Future Visions for Te Taiao i tuku i a au ki te whakaaro hohonu, auaha hoki mō te ao

ki tua e kite ana au mō Aotearoa, ā, i toa hoki rātou mō te wāhanga 'Kiriata tino auaha' mō te kiriata 'Whakarongo ki te Tuna'.

“Koinei tētahi tūmahi pai rawa mō te mahi i te wā o te noho whītiki ki Tamaki Makaurau, i te mea, ahakoa e mau ana mātou ki roto whare, i te kōanga i puta he wā aumārie ki te whakaaroaro i te hiranga o te taiao, te whenua e tū nei tātou, me te mauri kei roto i ia rākau, i ia tangata, i ia kōhatu hoki.

“Nā te waihanga kiriata poto, i whakamātauria rawa aku pou; i puta rawa mai ōku mātāpono e pā ana ki te atawhai i te taiao i whakatinanahia hoki te purenga ihomatua i roto i tētahi mahi toi – kua huri te whakaaro ki te whakatinananga. He takaniti manamana, wanawana hoki te waihanga! Nā tēnei e tino whakamoemiti ana au”, tā Ruby.

Kei te tātari te kāhui Kaupapahere me te Mana Whakahaere Urutau i ngā kiriata kia mōhio ai he aha ā rātou akoranga ki a tātou e pā ana ki te hononga taiao me te mahi whakahaere.

“He mea harikoa, he mea ngau kino hoki, te rongo mai i ngā rangatahi e makere mai ana i ō rātou ake whakaaro ā-ao nei, ngā tūmanako, ngā katakata, me te whakaraeraetanga o tō mātou kaupapa,” te kī a Kahu Kutia, te kaiwhakahaere.

Kei te wātea ngā kiriata te mātakitaki i runga i te hongere BioHeritage YouTube.

Ruby Hansen i te ataata Champagne Shoes.



Ruby Hansen i te ataata Champagne Shoes.



Tuna whetū manuhiri i te ataata Champagne Shoes.



Te Taurima, te Tukumate, me te Taiao

Kaihautū ngātahi

Ko **Juliane Chetham** Patuharakeke, Ngātiwai, Ngāpuhi; Chetham Consulting Ltd. Ko **Nari Williams** Te Rangahau Tipu me te Kai.

Ko tā te kāhui Te Taurima, te Tukumate, me te Taiao ko te arotahi ki te ‘tapatoru o te mate’: ko te noho mōrea a te taurima, ko te tukumate, me te taiao e tika ana mō te puāwaitanga o te mate.

E whakatewhatewha ana te kāhui i te wāhi o ngā āhuratanga ā-taiao ki te puāwaitanga o te tāmatemate kauri me te mate waikura rau me tōna kaha, tae atu ki te rangahau o ngā huinga ira tukumate. Ko te mātauranga ka riro i a rātou e tautoko i te whakapaitanga o te tūteitanga, te whakamatua, te whakahaere me ngā mahi kaupapa atawhai, ko te manako ka kitea ngā ara hou ki te whakatau i ēnei mate.

▣ Kaupapa Rangahau

Nā te rangahau mātai tahumaero kua tūhono te hapū ki te ngahere

Hei māngai mō te taha ki te hapū, ki a Juliane Chetham he wāhanga nui te kauri o te tuakiri o te iwi Patuharakeke.

“Ko tētahi o aku kōrero mai i taku kuhutanga atu ki tēnei kaupapa kauri me tēnei mate, he mea patu hoki i tō mātou tuakiri,” tana whakamārama. “Kia whakahuaina ai tā mātou pepeha, i te kōrerotanga o aua wāhi tapu... me pēhea e taea ai te kī ko Pukekauri mehemea kāore ōna kauri? He mōreareatanga hoki ki tō mātou kōrero... aua mea katoa ka tukuna ihotia ki ō tātou tamariki, mokopuna.”

Ko te ngahere o Pukekauri, koia tētahi o ngā wāhi ka aroturukihia mō te wā roa, he wāhi e mahi tahi ana ngā kairangahau me te mana whenua ki te whai haere i te horonga o te tāmatemate kauri mā roto i te oneone, puta hoki i te whenua. Mā tēnei aroturukitanga e āwhina te whiriwhiri pēhea te haringa o te tukumate i roto i te ngahere, pēhea hoki te roa kia pāngia ai te rākau e te mate me te whakaatu i ngā tohumate – pēnei ki tā mātou i whai haere ai i te horonga o te Kowheori-19.

“He ngahere kauri te whenua e whakaora ake nei, he tini mano ngā kauri i runga rā, he puihi tino hauora nei,” te kī a Juliane. Engari nā te kitenga o te tukumate tāmatemate kauri i te tau 2019 – ahakoa kāore i kitea mai anō i taua wā – kua noho ki raro i te pātai te tūnga tāmatemate kauri kore o tēnei ngahere.

“Kei te tino, tino hiahia mōhio mātou, ahakoa te aha, nā te mea ka pāngia te āhua o tā mātou whakahaere, whiriwhiri whakatau hoki i a mātou e para whakamua ana, ki te taha o ā mātou tikanga kaitiaki katoa hoki,” te kī a Juliane.

Kei te whakaako ngā kairangahau i ngā kaitiaki o Patuharakeke kia taea ai e rātou te whakamātau ngā rākau puta noa i te ngahere, ki te hanga i te pikitia whānui o te hauora o te whenua. Kei te whakamahere hoki rātou i ētahi atu tāupe ā-taiao – pērā ki te tauwāhi o ngā ara me ngā raina rore, te mātauranga mahere whenua me te māku – kia kite he aha ngā āhuratanga pai ake hei āwhina i te whakapānga o te tāmatemate kauri.



“He huarahi e whakaaro ana mō te katoa o te ngahere, e whai tino hononga ana ki te whakaaro Ao Māori (e noho ana hoki ki te taha o tō mātou ake mātauranga),” te kī a Juliane. “Kāore mātou i te hiahia tiroiro noa iho ki te mahi o te tukumate, ki ngā rākau māuiui rānei, e hiahia ana mātou ki te tiroiro ki ngā āhuatanga whakaora, whakamate rānei i te ngahere, he pēhea hoki te haere o te tukumate i roto i tō mātou ngahere – kāore rānei.”

E whakamana ana te tauira mai i waho i te mana whenua ki te kōkiri i te rangahau i tō rātou ake rohe.

“Ko tā tēnei rangahau mātai tahumaero kauri e hāngai ana tēnei ki te kaupapa tūhonohono, me te āhua hoki o tā mātou tūhono anō ki tēnei wāhi? E whai ana mātou ki te kohikohi hoki i ngā kōrero tuku iho hei wāhanga o tēnei mahi. E hono ana ki te whakapuakitanga o te kaitiakitanga, tā mātou e whai nei ki te whakarauora, ki te whakatutuki i konā,” te kī a Juliane.



Te Wae Taiao o Patuharakeke e rangahau ana i te ngahere.
Tēnā koutou te kōwhiri o Te Tauiroa, te Tukumate, me te Taiao

Te Atawhai me te Whakaora

Kaihautū ngātahi

Ko Peter Bellingham Manaaki Whenua. Ko Alby Marsh Ngāti Ranginui, Ngāi Te Rangī, Ngā Puhī, Ngāti Hine, Te Rarawa Te Rangahau Tipu me te Kai.

Kātahi te wero nui ko te atawhaitanga me te whakaoranga o te kauri me ngā tipu taketake e noho mōrearea ana ki te mate waikura rau mō ngā whakatipuranga e tū mai nei. Me whai ko te tirohanga whānui ao Māori me ngā whakaritenga e tika ana i runga i te whenua – kua ki ngā wāhi anake e tipu ai ngā tipu pakeke, engari he wāhi e taea ai hoki te whakaoratanga anō.

E mahi mai ana i te tirohanga o te taurima tukumate, me te pūnaha rauropi, ko tā tēnei kāhui rangahau he tuitui i ngā mātāpono atawhai koiora, kia ora ai ngā tipu e noho mōrea ana ki te mate waikura rau, me te tāmātemate kauri i Aotearoa.

▣ Kaupapa Rangahau

Te whai i te tapukara DNA ki te tautuhi i ngā taupori kauri ahurei

Ko te ngahere kei te tonga rawa o Aotearoa te ngahere kauri o te Kaimai kei Te Moananui a Toi – ko ia hoki te ngahere kauri tino ora nei huri noa i te motu, nā te iti o te pānga mai o te tāmātemate kauri te take.

I tua atu i ngā tumu mātotoru me ngā kāuru teitei rawa, he rerekē ā-ira hoki pea tēnei ngahere o ngā kauri.

“Kāore i te tino nui tā mātou mōhio ki te kanorau ā-ira o te kauri puta noa i te whenua – nō reira, mai te raro ki runga, he pēhea te rerekētanga māori nei?” te kī a Peter Heenan, he kairangahau ki Manaaki Whenua. “Me mārama tātou ki te kanorau ā-ira o te kauri kia taea ai e mātou te whakahaere urupare ki te tāmātemate kauri.”

Kei te tautuhi a Peter i ngā tapukara DNA ahurei e taea ai te tautuhi tēnā taupori kauri, tēnā taupori kauri – he ōrite ki te momo mahi a ngā kaupūtaiao i runga i te CSI e whakamahia ana ngā tohu DNA ahurei ki te tautuhi i te tangata.

“Kei te hiahia mōhio mātou mehemea he taupori wai tapukara DNA ahurei kāore e kitea ana ki wāhi kē, nā te mea, he mea nui kia atawhaingia ērā,” tana whakamārama.

Tōna tikanga, he iti ake te tūpono ka hinga monemone noa ki te mate ngā taupori kaiao nui ake te kanorau ā-ira. Nō reira, mehemea he kauri kei te takiwā rā he iti ake tōna noho mōrea ki te mate kauri, he mea nui kia mārama mehemea e ahu mai ana tērā i te tikanga ā-ira.

“Koia pea te mea – arā anō ngā akoranga mō te tikanga o ēnei tipu, he aha ō rātou whakapapa... me te māramatanga ki te āhua hoki o tā rātou noho tahi i roto i te taiao, ko te taha ahurea hoki tērā i ēnei rā, te papānga a te tangata.”

I ia rā, i ia rā kitea ana e Riki Nelson (Ngāti Te Wai) te papānga a te tangata ki te kauri, a te kauri ki te tangata, i roto i ana mahi ki te taha o te rangatahi. “Me whai tūmanako ā tātou rangatahi, e whakapono ana mātou i te whakahokinga o te tangata ki ō tātou pūtakenga... Mōhio pū ana mātou kia haria e mātou ō mātou tāngata ki roto i te puihi, arā tētahi wairua whakaora i a rātou i reira,” tana kī.



Ko Riki te pou whakahaere mahi ki te Kaimai Kauri, he umanga taunaki i te kauri kei raro i te whakahaere o te hapū nō roto o Katikati, kei reira tō rātou tari matua, e atawhai ana i ngā ngahere kauri o te Kaimai he mea ahurei ā-ira pea.

Ko te mea e hiahia ana a Riki te kite ko te whakapikinga o ngā ariā kua tuarhia i waenga i ngā iwi me ngā hapū nō rohe kē, nō takiwā kē mō te oranga o te kauri te take. “Ko te mea o ngā tari kāwanatanga me mātua tautoko e rātou tēnei kaupapa, me awhina kia whai huruhuru ai mātou kia pai ai tā te katoa mahi tahi, he kotahitanga puta noa i ngā whenua kauri,” tana ki.



Te mahi a Kaimai Kauri ki te papa.
Tēnā koe Kaimai Kauri mō ngā whakaahua



Riki, Trinity, Danielle and Marino

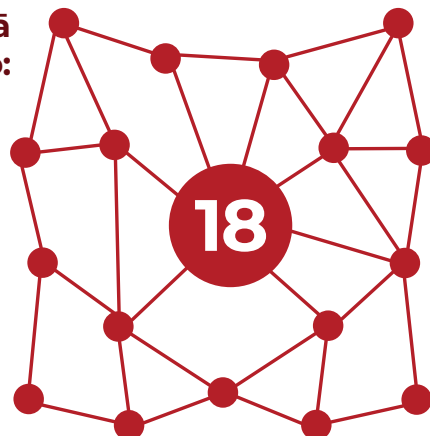
Te Papānga

Te tirohanga whānui



(BioHeritage NSC \$37.9M + Ngā Rākau Taketake \$37.5M)

Te nui o ngā Kāhui Wero:



Te nui o ngā whakahaere me ngā kairangahau motuhake i whakakirimanatia:

>75

Te ōrau o ngā kairangahau katoa kua kīia he toto Māori ōna:



Te nui katoa o ngā tāngata Ara Mahi Pūmau Tōmua:



Te nui katoa o ngā ākonga:



Te Torohanga Atu

2021 – 2022

Ngā putanga me ngā pūrongo:



Te nui o ngā apataki
aka pāpori:

6,219 

Ngā hononga ki ngā iwi Māori me
ngā rōpū hapori:



Ngā whakaeke paetukutuku:

>28,000

I tae atu ngā pōhi aka pāpori ki te

~379,000

tāngata

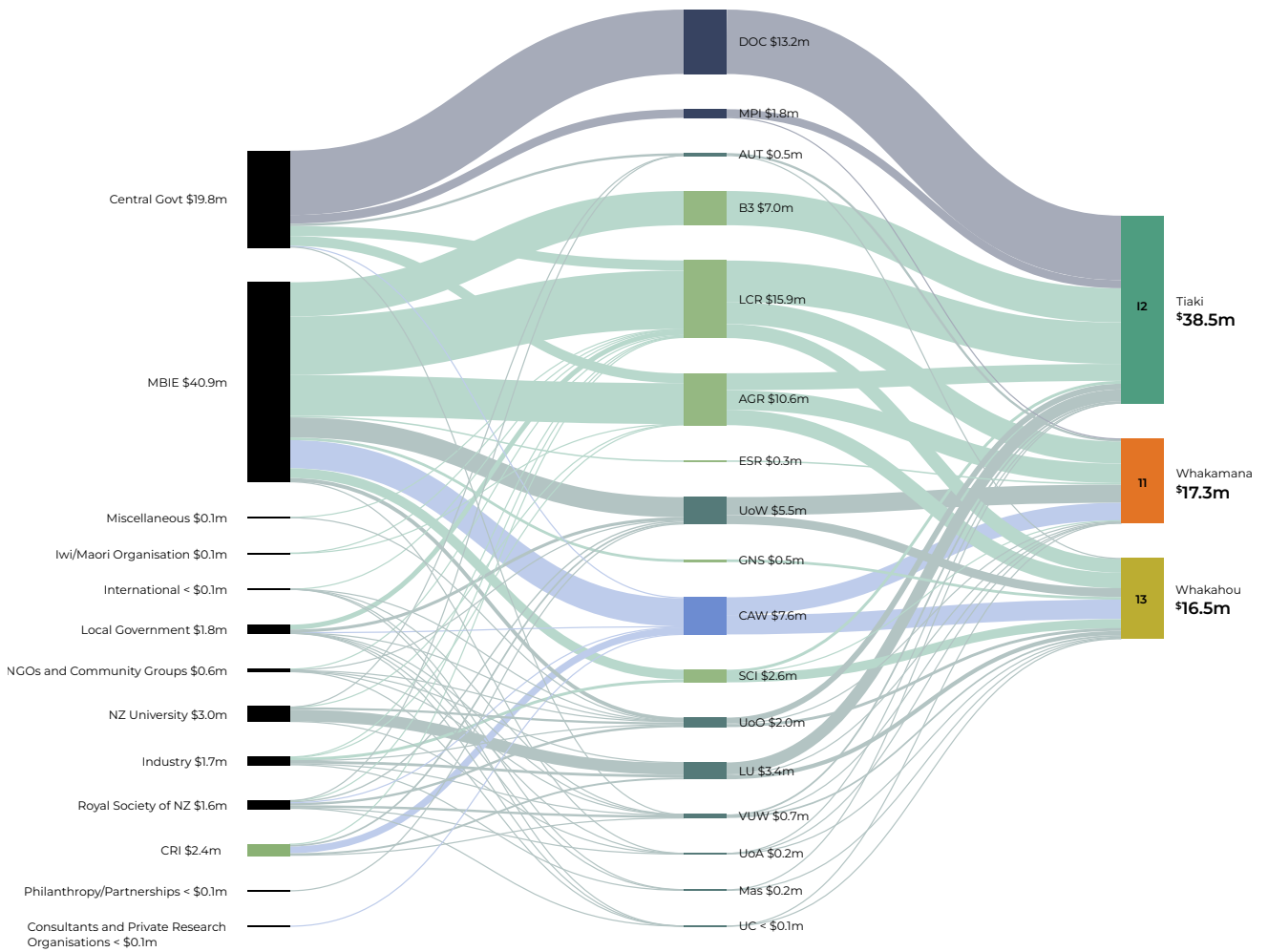
Ngā
whakaaturanga
huinga:

>75



Te ara i te kaituku o te pūtea ki te kaitaunaki rangahau

Ia tau, ia tau ka haere te tahua tini miriona tāra ki roto i te rangahau kua whakahāngaitia ki ngā papānga BioHeritage – Whakamana, Tiaki, Whakahou. Ki raro nei ka kitea ki te taha mauī te puna i ahu mai ai te tahua, ki waenga ko te kaiwhakarato rangahau, ki te taha matau ko te papānga e hāngai ana.



TE WERO PŪTAIAO Ā-MOTU MŌ TE KOIORA TUKU IHO O AOTEAROA | NGĀ MAHI WHAKAHIPIHARA

MBIE: Hikina Whakatutuki

CRI: Te Pūtahi Rangahau a te Karauna

B3: Te Tauārai Whenua Pai Ake Haumarua Koiora

PFR: Te Rangahau Tipu me te Kai

LCR: Manaaki Whenua

AGR: AgResearch

GNS: Te Pū Ao

SCI: Scion

DOC: Te Papa Atawhai

MPI: Te Manatū Ahu Matua

CAW: Cawthron Institute

UoO: Te Whare Wānanga o Ōtākau

UoW: Te Whare Wānanga o Waikato

AUT: Te Wānanga Aronui o Tāmaki Makau Rau

VUW: Te Herenga Waka

Mas: Te Kunenga ki Pūrehuroa

UoA: Te Whare Wānanga o Tāmaki Makaurau

LU: Te Whare Wānanga o Aoraki

UC: Te Whare Wānanga o Waitaha



Manaaki Whenua
Landcare Research

Mō tō mātou kaihautū

He Pūtahi Rangahau o te Karauna tō mātou kaihautū a Manaaki Whenua mō te tajao whenua o Aotearoa.

Ko te mahi o ana kaimahi 450 ko te whakahaere, ko te tautoko rangahau hoki e arotahi ana ki ngā wāhi e whā o te rangahau papānga, ko te whakarauora i te kanorau koiora, me te whakamutu i te tatūnga māi o ngā momo nō wāhi kē; te whakarei ake i ngā oneone, i te wai me te whenua; ko te tohe mō te pānōnitanga āhuarangi; me te whakapakari ake i ngā pūmanawa ā-pāpori, ā-ahurea, te āheitanga rangahau ōhanga hoki kia mārama pai ai ki ngā whiriwhiringa whakataunga a te tangata i ngā take e pā ana ki te taiāo māori.

Kia whai hua te papānga, mahi tahi ai a Manaaki Whenua ki te taha o ngā iwi Māori hei hoa Tiriti, te kāwanatanga

matua, ā-rohe anō hoki, ngā pakihi, ngā ahumahi, te rāngai matua, ngā rōpū hapori, me te rāngai rangahau ā-ao.

He nui ngā tūranga teitei a Manaaki Whenua mō Te Wero BioHeritage, tae atu ki te whakarato i ngā tautoko ratonga ā-ture, tātari pūtea, pūmanawa tangata, hangarau, karu hōmiromiro, pāpāho, me te toi.

E hāngai ana te katoa o te \$9.2 miriona o te Tahua Haumi Rautaki Pūtaiao Tūāpapa 1 o Manaaki Whenua (SSIF) mō te rangahau pūnaha rauropi ā-whenua ki te Wero BioHeritage. Ka whakahāngai hoki a Manaaki Whenua i te rangahau mai i ētahi atu puna tahua ki te Wero BioHeritage, ka mahi hoki i ngā rangahau ka huahokona e te Wero BioHeritage.



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