

Targeted protection from extreme wildfire

Because extreme wildfires are not well understood, fire scientists, in collaboration with kaitiaki, whānau and communities, want to learn more. They are working with whānau/hapū, rural fire-fighters and international and national collaborators to conduct experimental research burns to find out more about how extreme fires behave and how they can be managed and prevented.

The main aims of this project are:

- For fire researchers and community members to learn about extreme fire together. To this end, a research burn will be conducted in Northland to learn more about fire spread in Northland fuel types and to demonstrate the workings of targeted protection sensors. Community members will be invited to attend this burn and learn alongside fire researchers.
- Mythologies, stories and rememberings

about fire in the Māori culture will be collected and placed in context with fire spread observations.

- Those areas of high importance to our whānau, hapū and community will be identified, and a targeted protection plan will be developed to protect these from extreme wildfires.
- The targeted protection plan will be implemented in key areas by making use of different mitigation measures.



Māui rāua ko Mahuika

I tētahi ahiahi pō i muri i tana kai, ka takoto a Māui i te taha o te ahi, ka mātiro atu ki tōna mura. Ka mātaki a ia i te ahi e pūrēhua ana, ka tau te whakaaro ki roto i a ia.

"Ahu mai ai tēnei mea te ahi i hea?"

Nā i runga i te whakaaro o Māui, nā tōna pākiki hoki, ka tau ki a ia māna tonu e rapu i tēnei whai whakaarotanga.

I waenganui pō, i te wā e moe ana ngā iwi, ka haere a Māui ki ia pā, ki te whakaweto i ngā ahi katoa, kāore he ahi o te ao. Ka hoki atu a ia ki tana kāinga ki te tatarī.

I taua ata tonu ka puta ake te umere o tana pā.

Māui rāua ko Mahuika

"Mē pēhea e taea te tunu kai, kāore he ahi!" te tioro o tētahi wahine.

"Mē pēhea tātau e mahana ai i ngā pō?" Te kī a tētahi.

"Kāore tātau e ora ki te kore te ahi!" Te tangī a te iwi.

I te tino pukuriri te iwi. Ka pātaihia e rātau a Taranga, ko tō rātau rangatira, kia riro māna e whakatika i te raruraru nei.

"Mē haere tētahi o tātau ki te tiro i te atua kuia nei, i a Mahuika, ka pātai atu ki a ia mō te ahi," te kī a Taranga.

Kāore te iwi rā e pīrangī haere ki te tūtaki ki a Mahuika, kua rongohoki rātau mō te maunga hū, te wāhi noho o te kuia nei. Ka tonu atu a Māui kia haere ko ia ki te rapu i a Mahuika, ā, e harakoa ana i tutuki pai tāna mahi.

"Kia tūpato koe," te kī a Taranga. "Ahakoa he uri koe nā Mahuika kāore tonu tērā e aha ki te mahi hanariki atu koe ki a ia."

"Māku e rapu te kuia nei a Mahuika, ka whakahoki mai i te ahi ki te ao," te kōrero a Māui ki tana māmā.

Ka toi atu a Māui ki ngā tōpito o te ao, ā, e whai ana i ngā tohutohu a tana māmā, ka kitea e ia te maunga nui rā, e muramura ana i te kaha o te wera. I te take o te maunga ka kite a Māui i tētahi tomokanga ki tētahi ana. I mua i tāna kuhunga atu, ka karakia a Māui ki a ia, hei ārai atu i ngā kino o roto i te ana rā.



Heoi anō, ka tūmeke tonu a Māui ki te mea i kite a ia i roto i te maunga tapu o Mahuika.

Ka ara ake te tipuna kuia rā, e hirahira ana tōna tinana katoa i te ahi. Ko ōna makawe he pū ahi, e torotoro mai ana ōna ringa, ā, he puare kē te wāhi i reira ōna kanohi. Ka hongihongi a ia.

"Ko wai tēnei e tomo nei ki taku kāinga?"

Kātahi rā a Māui ka pakari ake ki te kōrero. "Ko au tēnei, ko Māui, te tama a Taranga."

"Ai!" te kī a Mahuika, "ko Māui-tikitiki-a-Taranga?"

"Āna, te pōtiki, ko Māui-tikitiki-a-Taranga ahau."

"Tika tāu, Māui-tikitiki-a-Taranga, nau mai, haere mai, ki te pūtaketanga o te ahi, nau mai taku mokopuna."

Ka tū a Mahuika ki te taha tonu o Māui, ka hongihongi anō a ia. Torotika tonu te tū a Māui, ahakoa he wera ngā ahi a Mahuika.

"A ... he aha te take o tēnei haerenga mai, Māui-tikitiki-a-Taranga?" te pātai a Mahuika.

Ka kī a Māui, "Kua weto katoa ngā ahi o te ao, i haere mai au ki te pātai i a koe mō tēnei mea te ahi."

Ka āta rongohoki atu a Mahuika ki a Māui, katahi ka kata atu ki a ia. Ka kumea mai e ia tētahi o ōna matikara, ka hoatungia atu ki a ia.

Hoki ake ki runga

"Kawea atu tēnei ahi hei taonga mā tō iwi."

"Whakahōnoretia te ahi nei, ānō nei ko au."

Mutu kau ana, ka wehe mai a Māui i te whare, me tana kawehoki i te matikara ahi a Mahuika.

I a ia e hīkoi ana ka whakaaro ake a ia, "Ki te pau ngā ahi a Mahuika, ka tīkina atu te ahi mai i hea?"

E kore hoki tōna pākiki e puritia, ka

whakatakangia atu e ia te matikara rā ki roto i tētahi manga, ka hoki atu anō ki te ana o Mahuika.

"I hinga au, ka taka," te kī a Māui. "Tēna koa homaingia anō tētahi?"

I te pai katoa o Mahuika, kua roa kē a ia i roto i tana ana, kāore he tangata hei kōrero atu, ā, i te harakoa katoa a ia ki a Māui, i hoatu pai noa iho a ia i tana matikara ki a Māui.

Engari ka tineia anō e Māui tēnei matikara, ka hoki atu ki a Mahuika, me tētahi atu kōrero.

"I paratīngia au e tētahi ika, i au e whakawhiti ana i te awa," te kōrero a Māui.

Ka hoatungia atu anō e Mahuika tētahi o ana matikara, me tana kore e aro i te mahi hanariki a Māui.

Pau noa te rā, kua tata pau ngā matikara a Mahuika, mai i ana ringa ki ana waewae, kua tae tata atu ki te mutunga o ana matikara. Ka mahia e Māui tana mahi, ka hoki atu anō ki taua kuia rā,

pukuriri ana te kuia rā ki a Māui. Kua tau te whakaaro ki a ia, i te mahi hanariki a Māui ki a ia. Ka whiua atu te matikara ki te whenua.

Ka karapotia a Māui e te ahi, ka whaia a ia e te ahi puta noa i te ana. Ka huri a Māui hei kāhu, ka rere atu ki te rangi. Nā te kaha o te ahi, ka tahuna a raro o ōna parihau, ka wherowhero mai ngā huruhuru.

Ka tirikohu atu a Māui ki te awa, i runga i te whakaaro ka tineia te ahi e te wai, he aha hoki, nā te kaha wera, ka tīmata te koropupū o te wai.

Ka kaha mōrearea a Māui, ka karanga atu a ia ki a Tāwhirimātea mō tana āwhina. "Tāwhirimātea atua o ngā hau e whā, āwhinatia mai!"

Kātahi ka pupū mai ngā kapua pōuri, ka taka mai te ua marangai, ki te tinei i ngā ahi rā. Kua kore kē mai te ahi o te maunga o Mahuika, kua pau kē tōna mauri.

Engari kāore tonu tērā i noho hai āraitanga i a ia. Ka tīkina atu e ia tana matikara whakamutunga, ka whiua ki a

Māui, i runga i tōna pukuriri ki a ia. Kāore te matikara rā i ū ki a Māui, i rere tika kē ki ngā rākau, ka ū ki ngā rākau Māhoe, te Tōtara, te Patatē, te Pukatea me te Kaikōmako. Ka ngākau nui atu ngā rākau nei ki te ahi a Mahuika, ki a rātau hoki he taonga.

Te hokinga atu o Māui ki te pā, kāore i whakahokia atu te ahi. Ko tāna kē i whakahoki ko ngā rākau maroke o te kaikōmako, ka whakaatungia atu e ia mē pēhea te mirimiri i ngā rākau, kia puta ake ai he ahi. Ka harakoa katoa tana iwi, kua taea hoki e rātau te tunu kai, te whakamahana hoki i a rātau anō i ngā pō i te taha o ngā ahi nei.

Ka ngata katoa te pākikitanga a Māui ki te kimi i te pūtaketanga o te ahi, ahakoa tata tonu koia kē te utu. I tēnei rā, ka noho tonu ngā huruhuru whero o te Kāhu, kei raro o ana parihau, hei whakamaumaharatanga mō te tata matehanga o Māui. Koia nei te pūrākau mō Māui rāua ko Mahuika.

Story published with permission from author, Wiremu Grace.



Let's learn about extreme wildfires together

Māori have an ancient and intimate relationship with fire. This story of 'Maui and the gift of fire' shows the importance of fire to Māori and the role it played (and still plays) in everyday life and tradition. It explains how fire was gifted to people in the form of flammable taonga plants and how a native hawk obtained the red singed feathers on the underside of its wings. The story illustrates the curiosity of Māori people, and demonstrates the ability of Māori to innovate and solve problems. It is this creative, innovative outlook that we need to draw upon when facing environmental challenges brought about by changes in our climate and pressures on our environment.

Globally, there is a shift towards larger, more intense and faster-spreading wildfires. These are highly dangerous and not easily suppressed by current fire management strategies. Fires that are intense, erratic and rapidly spreading are called extreme fires. Extreme fires are increasing because of climate change and human modification of the environment. This trend is also true for New Zealand and Northland is predicted to have an increasing risk of very intense fires in the future.

When extreme wildfire becomes too big and erratic to suppress, it destroys vegetation and heritage sites as well as whānau and community taonga. In areas where extreme fires have happened, the natural vegetation can take years to restore and taonga habitat can be completely lost. While wildfires cannot always be prevented, we can potentially stop wildfires from becoming extreme. Some of the approaches include:



- Planting green fire breaks of vegetation that does not easily ignite.
- Disrupting fire spread by creating fire-breaks.
- Using low flammability vegetation species as buffers.
- Installing sensors for early warning or to activate automated fire suppression.

Māori, with their own knowledge, mātauranga, understandings and history of fire and their innovative problem-solving skills can assist scientists to develop a better understanding of extreme fire and create strategies to protect taonga from extreme fires. The aim is to keep safe the things that our whānau, hapū and community value.

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Funding for Scion Rural Fire Research is provided by the Ministry of Business, Innovation and Employment (MBIE) along with direct funding and significant in-kind support from NZ Rural Fire Sector organisations (Fire and Emergency New Zealand, Forest Growers Levy Trust Inc, Department of Conservation, members of Local Government NZ, NZ Defence Force and Federated Farmers of NZ Inc).

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