

A notional transect across the Volcanic Plateau from Tukorehe Scenic Reserve to Te Urewa National Park

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This article addresses the following curriculum content description from the Australian Curriculum: Geography, The aesthetic, cultural and spiritual value of landscapes and landforms for people, including Aboriginal and Torres Strait Islander Peoples <http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACHGK049>

The emphasis here is on the aesthetic, cultural and spiritual value of landscapes and landforms for Māori. The organising framework is a geographical transect across the Volcanic Plateau, North Island, New Zealand.

Leaving Waikato behind

Dairying, dairy beef, sheep and beef, fat lambs, and, horse racing studs, predominate in Waikato on a journey from Auckland to Rotorua across seemingly endless tracts of intensive grassland farming. Suddenly entering Fitzgerald Glade is a surreal experience. About 40 kilometres from Rotorua, State Highway 5 runs gun-barrel straight through a stand of secondary growth indigenous forest. Australian Geography teachers tend to search for bark patterns and contorted shapes to distinguish between trees but Fitzgerald Glade is dominated by shades of forest green. It is more like a tunnel than a glade. The canopy closes across the road, 'blotting out the sky like some vaulted cathedral ceiling. The effect is profound enough to cause most drivers to slow down as they pass through' (Moon. 2013, 210). It is a unique kilometre-long stretch of road that has escaped recent planning restrictions for 'safe roads' with the mature trees fringing the bitumen.

Fitzgerald Glade is also known as Tukorehe Scenic Reserve, named after a Maori ancestor that settled in the district between Cambridge and Tirau. South Waikato District Council, the local Marae¹, and, the Department of Conservation look after the Reserve. There are green tree ferns lining the road and towering verdant willow-like tawa, olive green mangleo, rimu - red pine, matai - black pine and five species rātā in the

Glade. The Reserve reminds one that much of North Island was once covered with indigenous forest and raises questions about aesthetic, cultural and spiritual values of landscapes to Māori.

Mātauranga Māori

Mātauranga Māori (indigenous Māori knowledge) includes holistic and spiritual components in its knowledge system. It is concerned with Māori beliefs about creation and the relationships between atua, or supernatural guardians and tāngata, humankind. Forested environments then are more than just the sum of the parts: individual flora and fauna. The concept of holism guides the ways in which Māori view and treat the forest (Majurey et al, 2010, 267).

When younger Māori students are told, in school, that the world consists of both living and non-living objects this idea is in conflict with Māori world views. Māori believe the environment has spiritual and metaphysical values as well as a physical presence (Majurey et al, 2010, 267). There is a sacred regard for the whole of nature and its resources – literally gifts from the gods (atua) (Walker, 2008, 3) and there is a sense of reciprocity of giving back what is taken from the forest. A sense of kinship with all living things is expressed in whakapapa, the genealogical descent of all living things from atua to the present time. Everything in the forest has a whakapapa, an imbricated superimposition of one thing upon another, literally laying one generation upon another, 'birds, fish, animals, trees, and every other living thing: soil, rocks and mountains also have a whakapapa' (Majurey et al, 2010, 268).

Whakapapa determines how people behave in terms of their environmental ethical practices as expressed in traditional sayings and oral tales and portrayed in waiata (song) and pepeha (proverbs). (Majurey et al, 2010, 265).

¹ A marae is a fenced-in complex of carved buildings and grounds which belongs to a particular iwi (tribe), hapū (sub tribe) or whānau (family). Māori people see their marae as tūrangawaewae - their place to stand and belong. Marae are used for meetings, celebrations, funerals, educational workshops and other important tribal events. iwi (tribe), hapū (sub tribe) or whānau (family). Māori people see their marae as tūrangawaewae - their place to stand and belong. Marae are used for meetings, celebrations, funerals, educational workshops and other important tribal events. <http://www.newzealand.com/au/feature/marae-maori-meeting-grounds/>

Traditional oral tales (Nunn, 2001, 125), more commonly referred to as myths and legends are much more than nursery room stories. They are deliberate constructs used to encapsulate mātauranga Māori (Miller, 2005, 3) and whakapapa, the basis for a system of knowledge that relates to the creation and development of all things (Barlow, 1991, 173).

The spiritual values that follow from these knowledge systems are expressed in collective action and responsibility.

‘This is part of what is commonly referred to as Māori spirituality, the idea that everything is linked, more or less directly, to everything else. Māori collective responsibility extends beyond the family, beyond the tribe, beyond the Māori race, beyond the human race; it extends to all living things, it extends to the lands and the waters of the earth, it extends to Earth and the Sky themselves’ (Majurey et al, 2010, 269).

Māori recognise that all living things, humans, and flora and fauna, have life cycles. Mātauranga Māori recognises and protects these life cycles through concepts such as kaitiakitanga (guardianship and protection), karakia, (incantation, prayer and ritual) rāhui, (temporary bans on using forest resources) and mauri (a life force that must be protected in forests to ensure the ongoing existence of the mauri or life force of all things, inanimate or animate). (Majurey et al, 2010, 271).

Forestry practices

Traditional Māori oral tales using stories of the atua (gods and spirits) and ancestors guided forestry practices and the need to follow proper protocols before exploiting resources.

‘When Rata (an early ancestor) felled a giant totara tree without performing the proper ritual, the Hakuturi (kaitiaki [guardian] of the forest) punished him by making the tree stand upright again overnight while he was away preparing for his return the next day to carve a waka [canoe]. On his return he was amazed to see the tree standing upright again. He felled the tree again, and again the Hakuturi restored it. This occurred for three nights before Rata suspected he was being tricked. On the third night Rata felled the giant totara tree then hid nearby. Before long he saw the Hakuturi chanting and rebuilding the tree. The Hakuturi then saw Rata and they reproached him for cutting down the tree without performing the proper rituals and seeking authority from his ancestors. Rata was very embarrassed and apologised for his wrongdoing. The Hakuturi eventually went on to help Rata build his waka [canoe]’ (Orbell, 1995, p 150).

‘This tradition highlights the relationship between Māori and natural resources, and the need to respect the mana (prestige, power, authority) and tapu (sacred, restricted, prohibited) of their ancestors and the atua, and is a reminder that such resources can only be exploited after following proper protocols.’ (Majurey et al, 2010, 278).

Tane

Tane is considered one of the most important of the kawai tipuna [revered ancestors]. He is the creator of all living things such as animals, birds and trees. His uri (descendants, offspring or issue) include atua such as Tutewehiwehi, the father of reptiles, and, individual reptiles such as tuatara² or mokomoko (skinks).

‘He has authority over the forests, their products and the birds. His children are the trees. Therefore when a tree was felled to build a house or waka [canoe], Māori gave recognition to the parenthood of Tane through karakia [prayers or incantations], chants or offering. Non-recognition brought punishment in some form, such as obstruction to the work. Since houses and waka are made from trees, they too are Tane.

The *whakatauki Te wao tapu nui a Tane* the great sacred forest of Tane serves as a reminder of the strict rules of tapu [prohibition, restrictions] that apply to the forest and its inhabitants. Trees must not be felled without obtaining permission from Tane. Anyone who neglects this, invites the rebuke *Kei te raweke koe i to tipuna i a Tane* You are interfering with your ancestor Tane. The whakatauki [proverbs, sayings] reminds people that Tane is the tipuna [ancestor] of mankind as well as of the trees, which makes the trees people’s relatives, therefore they should be treated appropriately’ (New Zealand Ministry of Justice, 2001).

Nevertheless, Māori may use the forest’s resources. They are simultaneously an integral part of the forest but also arbiters of its fate (Moon, 2013, 149). A conversation between two giants, the kauri tree and the whale went as follows,

‘The whale asked the kauri tree to join him in the ocean, lest he be cut down and turned into a canoe by the people living in the land. The kauri scorned the idea that he was under any threat from ‘such funny little men.’ The whale responded with caution: ‘Ah ... you don’t know. They may be small and insignificant, but their sharp greenstone axes will bite into you and their fire will burn you’ (149).

2 <http://www.terrature.org/tuatara.htm>

The aesthetic, cultural and spiritual values of landscapes have come into conflict with economic imperatives.

Patupaiarehe and ignimbrite tors

The forest also harboured a sense of foreboding and mystery for Māori. There were also forest spirits. Patupaiarehe (fairy people) also known as tūrehu and pakepakehā, (Wikaira, 2012) inhabited remote, inaccessible and lofty mist covered forest recesses. 'Fearing the light, they were active mainly in the twilight hours and at night, or when the mist was heavy enough to shield them' (Wikaira, 2012).

State Highway 5 cuts across the Mamaku plateau en route to Rotorua. These remote areas were the home of patupaiarehe. Stafford (2001) retells a local Arawa legend about the origin of the prominent ignimbrite tors that can be seen from the Highway. A peaceful group of patupaiarehe was threatened by the invasion of a war party of tipua (giants or more literally, gifted ones,³) who had designs on their lands and lakes. The patupaiarehe called on their tohunga (expert spiritual leader) Tongakohu to rescue them from the invaders. He uses an ancient karakia (incantation, prayer, ritual) to make the tipua so lethargic that they were immobilised and set into stone. The heads and shoulders of the petrified tipua are dotted across the landscape with their bodies are buried under layers of sediment.



Distinctive formation south of Atiamuri. Source: Wikimedia Commons

Whatever the underlying intent of the story is, it is not readily apparent but it should be appreciated that Māori accounts were not concerned with explanations of phenomena but rather with acute observation and 'bringing the landscape within the compass of human understanding' (Andrews, 2010, 16). The kinds of questions that physical geographers ask include What, How, Where, When, but, not Why in the sense that a detective asks this question in search of a motive or purpose. Of course, they ask the question Why in terms of a loose sense of meaning: How does it

happen or come about (Holmes, 1965, 2)? Answering the question Why, then, implies an answer to the question Who. The Arawa legend answers the question Who just as the Sumerians, Hindus, Babylonians and Greeks did by reference to the power of mythical deities. Pliny 'explained' earthquakes in terms of the Earth's resentment against those that 'mutilated and plundered into her skin by mining for gold and silver and iron' (Holmes, 1965, 5). At the time of Tasman and Cook's 'discovery' of New Zealand many earth scientists in Europe believed that volcanic eruptions were the consequence of subterranean coal seams burning below volcanic vents.

Māori observations of volcanic phenomena were more perceptive. The Tarawera eruption of 1886 on the Volcanic Plateau, 24 kilometres southeast of Rotorua was spectacular as three peaks erupted sending smoke and ash thousands of metres upwards and initiating a pyroclastic surge that destroyed several villages. Each of the three peaks already had Māori names, possibly indicating that people had witnessed an earlier eruption 700 years ago. Indeed, perhaps they recognised the Tarawera plateau as volcanic. 'Ruawahia has been translated as 'the split hole' or 'pit broken asunder'; Wahanga as 'bursting open'; and Tarawera as 'burnt peak' (Andrews, 2011, 19).

To get back to the essential questions the study of contemporary physical geography tells us that the Mamaku plateau is covered by deposits of ignimbrite, coming from the Latin words to describe 'fiery showers' or 'fiery clouds' (Andrews, 2011, 7). This ignimbrite erupted nearly a quarter of a million years ago from what is now the Rotorua basin, discharging an estimated minimum of 200 cubic kilometres of fragmented magma from the magma reservoir below (9). 'Much of this hot material, buoyed by gases, travelled across the landscape at speeds calculated at hundreds of kilometres per hour' (9). Although tors are usually associated with granite rocks the mode of formation is similar for ignimbrite tors: vertical cooling cracks the ignimbrite causing lines of weakness that are accentuated by weathering and then exposed as resistant core boulders. Less resistant ignimbrite deposits of broken mineral crystals and pumice are eroded away to expose the tors.

Ngatoroirangi and Ngauruhoe

In 1859, the eminent Austrian geologist, Ferdinand von Hochstetter spent nine months in New Zealand collecting rock specimens, making drawings, preparing maps and compiling reports. He also conversed with Māori observing that they 'clothed their conceptions in the garb of a legend' (Andrews, 2011, 13). Te Heuheu,

3 - for extended meanings see Best, 1907, 191-2

chief of the Ngati Tuwharetoa of the Taupo region explained to Hochstetter that the fire so evident in the Volcanic Plateau had been sent over from Hawaiiki in response to the call from a powerful *tohunga*, Ngatoroirangi. The *tohunga* was acclaimed as the navigator of the Te Arawa whaka⁴. He could make thunder resound across the sky, could navigate by the stars, converse with the moon and knew about the prevailing winds of each season (Taiaroa, 2006).

Ngatoroirangi, an adventurous explorer of North Island, was perishing on the icy slopes of a steep volcanic cone adjacent to Tongariro, caught in a ferocious blizzard. The name, Tonga-riro, commemorates the cold south wind, which chilled Ngatoroirangi and the name of the cone, Ngauruhoe commemorates his slave who perished in the snow. The fire he implored his two sisters in Hawaiiki to send over to revive him came under the sea from Whakaari (White Island) along a subterranean passage to Ngauruhoe reaching to the surface in various localities in the form of volcanoes, geysers, hot springs and other forms of geothermal activity. Hochstetter was impressed that this explanation made the connection between vulcanism and geothermal activity and that it 'affords a remarkable instance of the accurate observation of the natives, who have indicated the true line of the chief volcanic action upon the North Island' (Andrews, 2011,20).

Science tells us that earthquakes, volcanic action and geothermal activity are not the action of some opportunistic deity or laid down as the fiery tracks of subterranean *taniwha* (powerful spirits). They come about as a result of stresses and strains within the earth's unstable interior and from the action of escaping gases and heat on vulnerable parts of the crust (Holmes, 1965, 6). This line of vulnerability, so accurately plotted by Ngatoroirangi's *taniwha*, stretching from White Island to Ngauruhoe is aligned to the subducting edge of the Pacific Plate (Hicks & Campbell, 2012, 24)

The same legend explained how Ngatoroirangi eliminated a rival by calling on Ruamoko (the atua of earthquakes and volcanic activity) to shower the aggressor with clouds of volcanic ash. This is possibly a reference to the frequent pyroclastic falls of ash, pumice and scoria that erupt from Ngauruhoe (Grattan & Torrence, 2002, 149). Ngatoroirangi was also said to have stamped his feet at various locations between Rotorua and Tokaanu, at the southern edge of Lake Taupo, to produce springs of hot water.

Ngatoroirangi also placed *patupaiarehe* in the surrounding hills.



Rangitaiki River. Source: Wikimedia Commons

Fort Galatea and the Rangitaiki River valley

Some twenty years ago one of the more remarkable mapsheets that NSW Higher School Certificate Geography students studied was the Galatea extract (refer to <http://www.topomap.co.nz/NZTopoMap/nz56469/Galatea/Bay-of-Plenty>).

Southeast of Rotorua along State Highway 38 the landscape is dominated by Kaingaroa Forest, hectare after hectare of pine forest growing on acidic soils underlain by ignimbrite deposits, incised by west east sub-parallel flowing streams. Galatea, is a tiny settlement, situated on the eastern terrace of an alluvial plain formed by the meandering habit of the Rangitaiki River, a landscape dominated by small rectangular paddocks: grazing land. The hamlet's name comes from legends enacted in far off places. At the height of the New Zealand Wars in the late 1860s Fort Galatea was set up by Government forces in the heart of the war zone, with the Fort named after the ship HMS Galatea which at that time was visiting the country under the command of Prince Alfred, Duke of Edinburgh. Galatea was an ivory statue carved by king Pygmalion of Cyprus, which then came to life in Greek mythology.

The Rangitaiki River, the largest river in the Bay of Plenty region, is insignificant when compared to the mighty Whanganui River, that has its source further south in the Volcanic Plateau, but the significance of rivers to Māori is evident in the following extract,

'The Whanganui River Tribunal Report (Waitangi Tribunal Report, 1999) highlights the importance of the Whanganui River to Whanganui iwi, stating: It is necessary to consider how Māori saw and related to the river, recalling again the philosophy of their place in the natural order, and the centrality of the river to everyday lives ... It has been a home for a numerous people from

⁴ <http://www.teara.govt.nz/en/te-arawa/page-2>

immemorial time, but a home that was built around a river life. The region was marginal for major food crops, but the river, with its eels, fish, freshwater shellfish, and waterfowl, provided the staples.

The river was also the pathway to the sea, and the roadway that knitted the people spread along its banks into a single entity. ... Small settlements were strung along the entire length of the river...

Around the river had been woven many stories and beliefs. For the Atihaunui people, the river is a doctor, a priest, a larder, a highway, a moat to protect their cliff-top pa, and, with the cliffs,

...when the claimants spoke of the river, or referred to its mana, wairua (spirit), or mauri, they might in fact have been referring not just to the river proper but to the whole river system, the associated cliffs, hills, river flats, lakes, swamps, tributaries, and all other things that serve to show its character and form... (Majurey et al, 2010, 277)

Te Urewera and Ngāi Tūhoe: the kererū story

Fort Galatea was a tiny edifice dominated by the forested hills and mountains further west shown on the map extract as steep sided, hills and ridges dissected by numerous dendritic stream networks. A landscape composed of relatively less resistant rocks such as young mudstones, siltstones and sandstones, commonly known as papa; a landscape of slips and scars; a green cloak of beech, rimu and tawa; a landscape referred to as Te Urewera National Park; and, a landscape profoundly associated with Māori.

At the beginning of the twentieth century Moon described it as the 'other' New Zealand, 'indigenous, wise in the ways of nature, steeped in tradition, and stubbornly resisting the ways of the modern world-eked out a living from the trees, the rivers, the wild fauna that inhabited the misty valleys' (Moon, 2013, 217).

A Landcare Researcher⁵ and a number of members of the Tūhoe iwi wrote about mātauranga and Tūhoe relationships with a culturally significant bird species, the kererū, or New Zealand pigeon (Lyver et al, 2008). They explained, 'The kererū is a taonga (treasure) for Tūhoe from which the iwi draws part of its cultural identity, and it is a highly valued source of food and feathers' (Lyver et al, 7).

'Tūhoe continued to go to great lengths to harvest kererū after the practice was outlawed in 1921



The kererū. Source: Wikimedia Commons

because of the bird's immense cultural significance and value. Kererū have a key role within Tūhoe tradition and it is considered whakama (shameful) to receive a visitor of importance and not serve them huahua⁶. This practice is fundamental in defining the iwi and/or individual as a kaitiaki (guardian)' (Lyver et al, 2008, 15)

Mātauranga Māori, in this instance, shows Tūhoe had intimate knowledge of kererū and its habitat, understood important environmental signals and patterns and they were very well informed about the sustainability of kererū. They recalled how the birds would arrive en masse in March just before the fruiting period of the miro, in April to June. Before 1950, the vast flocks would obliterate the sun, and rumbling sounds would issue from the sky. Kererū would break off the miro branches as they alighted in such numbers to feed. Sadly, their numbers have dwindled since the 1960s. Now few flocks of kererū are observed throughout the forest.

According to Tūhoe this long-term decline in kererū numbers can be attributed to the community's failure to uphold traditional practices and customs regarding the kererū and the forests. The traditional rituals conducted by Tūhoe ancestors showed respect towards the kererū and the bird responded by making itself available to the hunters. Extensive karakia (incantation, prayer) needed to be recited by tohūnga before harvest season. Tāne Mahuta (the atua of the forest) maintained mauri (the life force) of the kererū through strict adherence to traditional practices. The hunters should only pluck and process the kererū when they had returned to the Marae rather than prepare the birds in situ.

Kererū numbers had declined as colonial processes ensued, with the Crown taking over mana (authority) over the kererū. This was accomplished in the first

5 Landcare Research is a Crown research institute, an independent company owned by, and accountable to, the New Zealand Government

6 A substantial number of kererū, perhaps 20 or so, preserved in their own fat

quarter of the 20th century by the imposition of laws outlawing the harvest of kererū. Another explanation offered explained that nature, or Tāne Mahuta, would not replenish a resource if it was not continuously harvested or exploited by people. People are intrinsically part of the ecosystem, a necessary cog in the web of life. The respondents to the researcher's questions believed that if mana (authority) was restored to Tūhoe by the Crown then greater efforts would be expended to ensure the restoration and survival of the kererū.

Of course, the respondents also were very familiar with the introduction of feral species. They knew all about new predators and competitors in the forest, the main ones being rats, stoats, possums, and feral cats. They recalled the stories of their parents and grand parents that saw possums eating flowers, shoots and the fruit of the preferred trees of the kererū. They knew that magpies and spur-winged plovers behaved aggressively towards kererū and harrier hawks preyed on them along the forest edges. Red deer and wild pigs hindered forest regeneration and forestry operations had removed feeding, nesting and roosting sites. They identified increasing climatic variability and a general warming trend over the last ten to fifteen year period knowing that frost or cold clear weather was necessary for miro fruit to ripen. Apparently the fruiting season is now regularly three to four months later than normal. 'In the old days fruit ripened by end of March, and was all gone end of June, but nowadays some trees are fruiting through until mid-October' (Lyver et al, 2008,13).

The spiritual dimensions of mātauranga Māori

The aesthetic, cultural and spiritual value of landscapes and landforms for Māori are unlikely to be embraced by all those that live in the New Zealand environment. But the spiritual dimensions of mātauranga are formidable influences on Māori. Understanding the role of mātauranga Māori in environmental perception and how it shapes decision-making is most important for

the collaborative management and enriched knowledge of New Zealand landscapes.

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Waikato Hill. Source: Wikimedia Commons