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Cover image: Coastal seep behind Ahu Tongariki on the south coast of Rapa Nui. Tanya Brosnan (California State University Long Beach) measures the conductivity of the water to determine the relative salt content. Photograph by Carl Lipo, 2015.

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HAU: GIVING VOICES TO THE ANCESTORS

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ABSTRACT: Gift exchange within Māori society, underpinned by the notion of hau, is a favoured topic for anthropological research. Hau has become an international phenomenon due to its potential relevance to understanding gift economies in many non-monetary societies worldwide. However, the desire in anthropological and socioeconomic analyses to constantly redefine the concept of hau within the narrow context of gift exchange has led to a separation of hau as the life force from its Māori philosophical base and, moreover, to a separation of Māori from the philosophy of hau. This article attempts to provide an expansive, culturally grounded account of hau by bringing Māori voices to the forefront of this international discussion. The voices of Māori ancestors are privileged and kept alive through the oral literature of respected Māori leaders. Highlighted here is the dynamic interaction of hau with other life forces, and its interwoven philosophy that is nuanced according to a cosmological, spiritual and genealogically based worldview.

Keywords: hau, mātauranga Māori (Māori knowledge), reciprocity, spirit of the gift, gift exchange

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Gift exchange within Māori society is underpinned by the life force of *hau*, an energy that is part of an interconnected assembly of forces central to Māori metaphysics.[1] Hau has become an international phenomenon due to its potential relevance to understanding gift economies in many non-monetary societies worldwide. Hau, in relation to the notion of gift exchange, is well cited in anthropological circles and even has a journal named in its honour.[2] Furthermore, there have been a multitude of attempts to define this ambiguous energy. However, as Metge (2002: 320) has noted:

> For a concept that has attracted so much international interest, remarkably little research has been undertaken into the meanings and use of the *hau*, through either the study of early Māori language texts or interviews with living experts in Māori language and culture.

From an ethical, cultural and *mana motuhake* 'cultural integrity, self-determination' standpoint, it is a cause for concern that Māori voices have not been at the forefront of anthropological and socioeconomic analyses of hau. Both the life force of hau and its associated knowledge are *taonga* 'treasured

objects'. Despite some anthropological interpretations of hau coming very close to Māori understandings (Hēnare 2018; i.e.,. Mauss [1925] 2016), when taonga become separated from their people or lands, they become decontextualised and alienated from their rich *kōrero* 'discussions, narratives' (Tapsell 1997). To honour the customary value of taonga is to acknowledge its *whakapapa* 'genealogy'. It is time to reframe this fundamental Māori concept within a Māori worldview.

This article offers an expansive and contextual account of Māori understandings of the nature of hau. It shows that hau is a wide-ranging concept that encompasses individual personality, collective intention, reciprocal exchanges and human relations. Hau, therefore, can be described as a spiritual force impelling behaviour—an ethic of reciprocity (Hēnare 2018). Moving past a narrow economic framework that dominates many discussions of hau, this article highlights the dynamic interaction of hau with other life forces, and its interwoven philosophy that is nuanced according to a cosmological, spiritual and whakapapa-based worldview. Kōrero with esteemed Māori *tohunga*, *rangatira* and *kaumātua*, collectively 'community and spiritual leaders', provides the authentic cultural context that has been lacking in much of the hau literature. The insights of these Māori leaders are living voices of hau taonga that have been passed down through generations. It is through this exchange of Māori knowledge that Māori concepts are reclaimed, privileged and kept alive.

To begin this discussion on the Māori life force of hau, a review of the issues within the current literary conversation is provided, encompassing the narrow pool of overused sources and the search for an absolute definition. In order to move into a comprehensive description of hau, we must look back to the beginning to where it all began in the cosmic whakapapa, or birth story of the universe, before discussing the various meanings of hau. As hau is not an isolated force, its correlation to other life forces within the "family of energy" is then considered. Finally, the ritual of *whāngai hau* 'feeding the hau*'* is re-examined as an ethic of reciprocity.

Through the provision of descriptions of hau, based on ancient Māori wisdom, Metge's (2002) call to draw on the knowledge of living experts in Māori language and culture is addressed.

THE SPIRIT OF WHOSE GIFT?

Hau is widely recognised as the 'spirit of the gift', made popular by the work of French scholar Marcel Mauss ([1925] 2016). Mauss brought international attention to Māori (and other) gift economies and the concept of hau in a discussion that takes up only a few pages of his seminal work, *Essai sur le don* (*The Gift*) but that has "generated more debate, discussion,

and ideas than any other work of anthropology" (Graeber 2001: 152). However, much of the written literature regarding hau and gift exchange has been by a group of western anthropologists involved in circular critical discussions that do not reference any new sources of material. Mānuka Hēnare [Te Aupōuri, Ngāti Kurī, Te Rarawa, Ngāpuhi][3] (2018: 452) critiques the reflections of Firth (1959), Lévi-Strauss (1997) and Sahlins (1974) as being "utilitarian, materialist, secularist, psychological and rationalist critiques of Māori metaphysics as understood by a French scholar [Mauss]". Thompson (1987: 63) charges Firth (1959), MacCormack (1976) and Sahlins (1974) of mere "reworkings of the same limited data" that "stems from Westerners' ethnocentric separation of spiritual and secular realms". Recent literature (Falcone 2013; Frank 2016; Godelier 1999; Graeber 2001; Rogers *et al.* 2004) still tends to (re)cite the same western anthropological sources, which reflect a particular description of nineteenth-century Māori society.

Literary debates regarding hau are largely based on the written works of colonial New Zealand settlers such as Best (1900), Gudgeon (1905) and Firth (1959); however, many popular writers rely on such authors solely as secondary sources (Graeber 2001; Lévi-Strauss 1997; Mauss [1925] 2016; Prytz-Johansen 1954; Weiner 1985). In most cases, these discussions stem from the writings of New Zealand settler ethnographer Elsdon Best (1900, 1942, 1982), who corresponded in written form in *te reo Māori* 'the Māori language' with Tamati Ranapiri of Ngāti Raukawa. Subsequent scholarly writings have been dependent upon, and influenced by, the transcription and translation of the letters from Tamati Ranapiri into English by Best himself. Yet, Best's ethics, translations and edited written recordings of Māori ways of life are often questioned (Gathercole 1978; Harris *et al.* 2013; Hēnare 2003; Stewart 2017). Hēnare (2018: 452), working with the primary sources of the letters of Ranapiri, found that Best had significantly altered important phrases and consequently turned "Ranapiri's hermeneutics about Māori metaphysics into a secular materialist version, thus reflecting Best's view rather than Ranapiri's own understandings". As Georgina Stewart [Ngāti Kura, Ngāpuhi-nui-tonu] (2017: 5) has pointed out, "Ranapiri's written words became verbatim scientific data in the archives of anthropology, which have been debated and theorized about ever since by many non-Māori scholars."

With a lack of firsthand accounts of Māori interpretations of hau, the Māori voice has been lost in this worldwide discussion (Stewart 2017). There are very few, if any, citations of Māori scholars in articles regarding hau, with the exception of Tamati Ranapiri and the occasional credit to Bruce Biggs [Ngāti Maniapoto]. On its home page, even the journal that owes its name to this Māori concept credits another for its title: "HAU takes its name from Mauss' Spirit of the Gift" (see Notes 2, 3), further isolating Māori participation.

Furthermore, the use of hau is often confined within a narrow framework that omits many layers of meaning and cultural relevance. Falcone's (2013: 126) article on the hau of theory offers the following caveat: "I am not suggesting that the Māori hau and the academic hau are exactly the same." This implies that hau can be separated from its Māori philosophical base and appropriated into another context that distorts its meaning. In other examples, hau is used as a catchword, such as in the article "The Why of the 'Hau': Scarcity, Gifts, and Environmentalism" (Rogers *et al.* 2004), which dedicates only a few paragraphs to hau and refers only to Mauss and Sahlins in relation to hau. The disconnection between *mātauranga Māori* 'Māori knowledge' and scientific anthropology has led Stewart (2017: 1) to assert that "[t]he 'hau of the gift' is a clear example of Eurocentric appropriation of indigenous knowledge: a concept extracted by social science from its authentic cultural context and re-inscribed within the Western discourses of the modern academy".

It is this philosophy of working *with* Māori that is missing in much of the debate regarding the Māori concept of hau. There is a resounding demand for research about indigenous communities to be conducted *with* or *by* indigenous people, in contrast to research conducted *on* these communities (Bishop 2008; Smith 1999; Wilson 2009). This includes a research agenda set by the community. It is this research philosophy in which Māori are recognised caretakers of mātauranga Māori, and therefore active participants in the research, that can enhance and validate the arguments of those who are delving into Te Ao Māori 'The Māori World'. This does not imply that only Māori can undertake research involving mātauranga Māori. Indeed, esteemed Pākehā 'New Zealand European' authors including scholars Dame Anne Salmond, Dame Joan Metge and Dame Judith Binney have worked very closely with Māori over extended periods and produced exemplary texts for both the academic and popular presses. It is the research philosophy of these respected scholars, which recognises the wisdom held within Māori communities and seeks out living experts to discuss mātauranga Māori, that validates their work.

VOICES OF THE ANCESTORS

Offered in this article are descriptions of hau, as conveyed by contemporary Māori tohunga, rangatira and kaumātua, that draw on traditions handed down through generations. Each individual voice presented here represents the wisdom and voices of their ancestors—past, present and future (Hēnare *et al.* 2017; Kelly 2017). Māori oral history is privileged, in te reo Māori and te reo Pākehā 'English', through the insights provided by these *ngā pou herenga* 'wisdom holders' who are fluent in both languages. Ngā pou herenga share interpretations based on their own lived experiences, whakapapa-based understandings and revered teachings of both traditional and contemporary

whare wānanga 'schools of higher learning' (Appendix 1). Kōrero were conducted both one-on-one with me, a Māori researcher of Ngāruahine descent with an understanding of te reo Māori, and within group kōrero settings in which English semantics were orally clarified and debated.

Kōrero as a method (following Hokowhitu 2002) involves face-to-face, in-depth individual and group interviews. Semi-structured in-depth interviews as conversations enact the principles of hau through a reciprocal participatory approach that intends to create a mutual connection to the story and experience. Multiple interviews with some participants were necessary to clarify the nature of the spiritual energies discussed in these conversations, ensuring that their ancestral stories and whakapapa are told in their own collective voices. Eleven kōrero were conducted with eleven participants, with some being involved in up to four sessions over a period between 2016 and 2017. Māori *tikanga* 'customs' guided the research process.

I was solely responsible for recording and transcribing the rich data conveyed in these korero. Relevant themes within transcripts were identified and manually coded into collective themes that included other kōrero and literature. Certain themes would be queried in subsequent kōrero. Not only did this prompt further discussion of the theme itself but when I had permission to name earlier participants the ngā pou herenga that was being interviewed often responded as if the named person had posed the question themself. This incited more thoughtful responses than had I asked the question myself, due to the associated *mana* 'spiritual power and authority' of the named person.

Māori literature, as Māori orator Sir James Hēnare [Ngāpuhi] described it, is the "oral form of transmitting knowledge" (cited in Hēnare 2001: 199). Thus, excerpts and citations of tohunga, rangatira and kaumātua are woven throughout this article alongside other published secondary sources, as a form of oral literature (Hēnare 2001; Hēnare *et al.* 2017). This chosen method of dissemination gives the oral literature of esteemed Māori experts the same level of recognition as published authors. The voices of participants in this research are in many ways more relevant, enlightening and encompassing than many of the written texts; that is, they are recognised authorities on Māori tikanga. This is due to their lived experiences in Te Ao Māori, their *mātauranga* and *mōhiotanga* 'knowledge and wisdom base' and their mana within the Māori community (Appendix 1).

Māori *whānau-hapū-iwi* 'kinship groups' have their own histories, dialects, tikanga, kōrero, whakapapa and place-based ecological knowledge (Harris *et al.* 2013; Ruwhiu and Wolfgramm 2006), what Salmond (1985) refers to as "tribal epistemologies". These differences are a reflection of particular ancestral landscapes and sets of intertribal relationships. Competing accounts may all be accepted as *tika* 'accurate' if they are validated by reason and experience (Salmond 1985).

HAU: A DESCRIPTIVE TERM

Hau is a vital force in Te Ao Māori, interconnected with all other spiritual essences. According to Hēnare (2003: 51), hau is "essential to the totality of life as understood by Māori" but, he says, is one of the least understood essences in traditional Māori religion. Whilst many have attempted to define and describe this force, there exists little clear explanation (e.g., Best 1900, 1982; Firth 1959; Gathercole 1978; Godelier 1999; Graeber 2001; Gudgeon 1905; Hēnare 1988, 2003; McCall 1982; Mead 2003; Parry 1986; Prytz-Johansen 1954; Salmond 2000, 2017; Stewart 2017; Weiner 1985; Winks 1953). Prytz-Johansen (1954: 117) remarks that "hau is a word which offers considerable difficulties as there are no doubt several homonyms"; Gudgeon (1905: 127) finds hau "the most difficult to comprehend" due to the many abstract ways in which the word is used; and Winks (1953) lists 11 meanings of the word hau. Furthermore, as Metge (2002: 320) points out, "[k]ey texts in Māori cosmology and epistemology … mention it indirectly or not at all".

The enigma of hau stems from its nature as an all-encompassing life essence. Māori embrace ambiguity, which invokes deep thinking and wonder: Mika [Tūhourangi, Ngāti Whanaunga] suggests there is a "sense of mystery to the world", where cognition alone is not enough to unravel enigma (2012: 1084). Rereata Makiha [Ngāpuhi, Te Māhurehure, Te Arawa, Rangitāne] (pers. kōrero, 2016) refers to hau as a *matangaro* 'hidden face' that cannot be seen from the material world. In order to describe it, he says, "you need to go cross over to Te Ao Wairua, to the spiritual realm. It can't be explained from this side, can't be seen from this side. That's the difficulty."

Thus forces such as hau have multiple meanings that are applied differently, yet with an overarching connection. The confusion surrounding hau results from a desire to define absolutely and individually this spiritual essence. In attempting to do so, the spiritual becomes separated from the secular, and the many interrelated facets of hau are compartmentalised. The principle of interconnectivity and inseparability of all things is paramount to a Māori worldview; therefore, to describe the nature of hau is not to identify a tidy secular definition but an attempt to capture the cosmic essence of this vital force. Towards such a descriptive approach, Patterson (1992: 98) concentrates on the values that are conveyed by Māori spiritual concepts. It is through the process of how these concepts have come to be regarded similarly that we can penetrate meaning.

THE COSMIC WHAKAPAPA: THE ORIGIN OF HAU

In Māori thought, to know the nature of something is to understand its whakapapa, that is, its place, origin and function in the universe. Whakapapa is a key tenet of the Māori knowledge system, the primary tool used by Māori to make sense of worldly experience. As a form of oral literature, whakapapa

conveys how and why things came to be (George 2010; Graham 2005; Roberts *et al.* 2004; Wolfgramm and Waetford 2009). The cosmological whakapapa shows that everything in creation can be traced back to the elemental energies of the universe (pers. kōrero: Te Poihi Campbell 2016, Rereata Makiha 2016, Robert Newson 2016; Salmond 2017). The reflections of ngā pou herenga all refer to whakapapa, and thus to explain hau, we must start at the beginning.

As told by Ngāpuhi *tohunga* 'spiritual leader' Māori Marsden (2003: 33):

> The Breath of Life (Hau-ora) was infused into the Void and the veil was lifted to allow the Dawn light to enter. It shattered the darkness and freed the bounds of Night to release the richness of life conceived in the womb of Te Kore and Te Kowhao to being, to emerge. Shape and Form came into being in Time (Wā) and Space (Atea). Thus, Heaven and Earth were formed.

Salmond (2000: 39) refers to the cosmological whakapapa of Te Kohuora of Rongoroa (cited in Taylor 1855) where from *hau tupu* 'the hau of growth', *hau ora* 'the hau of life' the material world was formed.

Naa te kore i ai	From nothingness came the first cause
Te kore tee whiwhia	Possessed nothingness
Te kore tee rawea	Unbound nothingness
Ko hau tupu, ko hau ora	The hau of growth, the hau of life
Ka noho i te atea	Stayed in clear space
Ka puta ki waho ko te rangi e tuu nei	And the atmosphere emerged

Ngāti Ruanui tradition, as recorded by Tony Sole [Ngāti Ruanui, Ngāruahine] (2005: 6–7), presents how hau (hou in Ngāti Ruanui dialect)[4] begat Heaven and Earth:

Ko Hou-tupua	New growth
Ko Hou-ora	New life
Ora ki te whakatupua	Sustaining of life anew
Ora ki te whakatawhito	Sustaining of life at its beginning
Tupua nuku	Earth evolves
Tupua rangi	Heaven evolves

Te Poihi Campbell [Tāngāhoe, Ngāti Ruanui, Ngā Rauru, Ngāruahine] (pers. kōrero, 2016) offers another translation of hou from this whakapapa:

Hou-tupua	The impetus of growth and development
Hou-ora	The vitality of new life

Other oral traditions refer to Hauora as a child of the primordial parents, Ranginui and Papatūānuku (Sky Father and Earth Mother). Hauora presides over the life forces of hau and *mauri* 'life essence', which permeate all of creation. After the separation of Rangi and Papa, their children quarrelled with each other, attempting to destroy the hau of others in order to invalidate their power and authority (Hēnare 2003: 53).

Tribal variances in creation stories add to the depth of hau, which is universally presented as a spiritual essence that emerges at the beginning of creation. It is the interaction and exchange of hau with other vital forces that produces and animates all phenomena, from landscapes to human thoughts. To dispute a metaphysical explanation of hau is, therefore, contrary to whakapapa. It is through whakapapa that hau is instilled throughout the natural and spiritual realms, and it is hau that gives vitality to whakapapa (Mika 2007). Only in knowing the whakapapa of hau can we begin to describe it.

DESCRIPTIONS OF HAU

Locating hau within a Māori framework gives rise to a variety of interpretations. Whereas Māori are comfortable with such ambiguity, there exists no shortage of attempts in the academic literature to narrowly define hau. Table 1 offers descriptions of hau from Te Ao Māori contrasted against some of the anthropological discourse. Where some commentators reduce hau to a social transactional power (e.g., Firth 1959; Sahlins 1974), it can be seen that in Māori thought, the socio-cultural-economic system is not disembedded from the spiritual. These descriptions depict the nature, the breadth and depth of hau.

The Wind of Life

One direct meaning of hau is wind, referred to as the manifestation of hau itself (Hēnare 2003). As explained by Rangi Matamua [Tūhoe] (pers. kōrero, 2017), "When you feel the wind blowing on you, that's actually feeling the power or the essence or the vitality of the environment." Salmond (2000, 2017) refers to hau as the wind of life activating all human and non-human networks. The wind signifies movement, a sustainable motion that carries things across the intersection of Te Ao Wairua and Te Ao Mārama. As explained by Te Poihi Campbell (pers. kōrero, 2016): "I see the hau more of engaging with the other side and this side; I see that as the conduit between both worlds … that's the umbilical cord between that realm and this realm [Te Ao Wairua and Te Ao Mārama]." This interpretation is illustrated in the cosmic whakapapa, where hau begat material shape and form.

As a force that interacts and engages at the liminal and potent intersections between realms, hau must be in constant movement (Hareruia Aperahama, pers. kōrero, 2016). Hēnare (2003) purports that hau is always moving towards goodness. This is supported by Te Poihi Campbell (pers. kōrero, 2016) who explains that the ever-moving hau aspires to the ora, a healthy state of being.

Table 1. Māori and anthropological descriptions of hau.

Māori descriptions of hau*		Anthropological descriptions of hau
Wind of life	• Wind—the manifestation of hau (Hēnare 2003; Matamua 2017) • Conduit between spiritual and material realms (Campbell 2016) • "[C]arrier or mediator between the cosmic poles (including that of ora-mate ['life-death']) from which the Māori cosmos is constructed" (Stewart 2017: 7) • Moving force (towards ora) (Aperahama 2016; Campbell 2016; Hēnare 2003) • "Essential to the totality of life as understood by Māori" (Hēnare 2003: 51) • Matangaro—hidden face (Makiha 2016)	• Economic principle of exchange of goods • "[T]he 'yield' on a gift" (Sahlins 1974: 161) • General principle of productiveness (Sahlins 1974) • A passive force (Firth 1959) • Personal hau differentiated from the hau of things (Best 1942; Firth 1959; Gathercole 1978; Graeber 2001) • A negative phenomenon (Gathercole 1978) • Counter-gift (*utu*) (Prytz-Johansen 1954) • Intellectual spark; force of character; actual essence of a man's life that can be bewitched (Gudgeon 1905)
Breath of life	• Reciprocal flow of breath (Nicholson *et al.* 2015; Spiller and Stockdale 2012) • Reciprocal connection to the environment • *Kaitiakitanga*†: looking after the hau of the environment (Aperahama 2016; Matamua 2017) • "[H]eart of life itself" (Salmond 2017: 10) • Sustenance of life (Mihaere 2016)	
Vital essence	• Vitality, vital essence (Best 1900; Matamua 2017) • Aura (Best 1982; Campbell 2016; Mead 2003) • *Ia* 'flow' (Milroy 2004) • *Ira* 'life principle' (Milroy 2004) • Intention (Aperahama 2016) • Personality (Campbell 2016) • "[A]ssociated with well-being and being in a healthy state" (Mead 2003: 58)	

* Personal kōrero in this table comes from interviews with Hareruia Aperahama, Te Poihi Campbell, Rereata Makiha, Rangi Matamua and Awhitia Mihaere (see text and Appendix 1 for details).

† Kaitiakitanga can be glossed as 'a long-term obligation to preserve the spiritual wellbeing of the ecosystem and its resources, including people'.

> I see the hau as the moving component. It's got to move ... The hau can't sit still, it can't become stagnant, it needs to be ignited, and it needs some kind of energy to propel it, to keep it moving. So within words like hauora … it has to be a moving and progressive hau that pushes the ora around so that it can aspire to the ora.

In this explanation, hau can be seen as intrinsic to the growth and development of being—it is the energy that strives towards meeting ora 'potential'. Stewart (2017: 7) likewise explains that in the case of hau ora, hau is the "carrier or mediator between the cosmic poles (including that of ora-mate ['life-death']) from which the Māori cosmos is constructed". Figure 1 depicts hau as the conduit between Te Ao Wairua and Te Ao Mārama. It also shows the constant aspiration of hau towards ora.

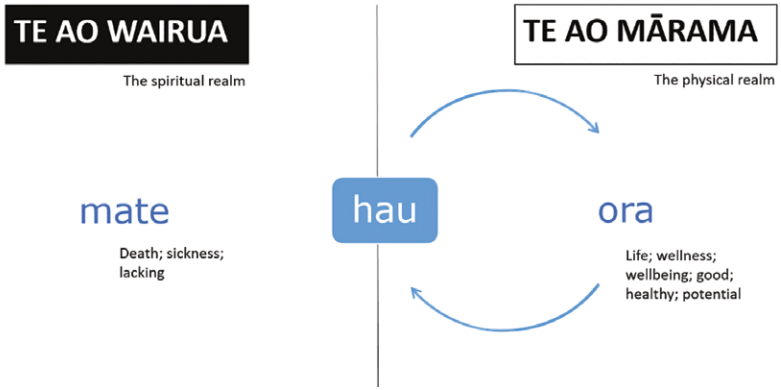

Figure 1: Hau aspires to ora.

The Breath of Life

Hau also means breath. Breath, according to a Native American Tewa view, "represents the most tangible expression of the spirit in all living things" (Cajete 2000: 261). Breath signals the beginning and end of life, and physical, mental, emotional and spiritual well-being is inspired and dependent on the rhythm of breathing (Aldridge 2001; Nicholson *et al.* 2015). In creation there is a continual give-and-take flow of energy and of breath, a gift exchange between elements where exhalation of one life force is inhaled by another (Makuini Ruth Tai [Tūhoe, Whakatōhea, Ngāi te Rangi, Ngāti Awa, Tūwharetoa], pers. kōrero, 2016; Nicholson *et al.* 2015; Spiller and Stockdale 2012). This is seen in the Māori greeting custom of *hōngi*, whereby noses are pressed together. Due to the close proximity, the breath

of each party is shared with the other, signifying the interconnected web of life (Salmond 2014). Hareruia Aperahama [Tūwharetoa, Te Aupōuri, Ngāti Kurī, Te Rarawa, Ngāti Whātua, Ngāpuhi] (pers. kōrero, 2016) spoke of the human creation story in which Tane-nui-a-rangi breathed force into the first human, Hine-hau-one[5] 'Woman Created from Earth': "He not only breathed force inside the earth and transformed the earth … through the hau, humanity becomes the imprint, or the evidence of that hau."

Awhitia Mihaere [Te Aitanga aa Mahaki, Rongowhakaata, Ngāi Tahu Matawhaiti, Rangitāne, Maniapoto] (pers. kōrero, 2016) sees hau as a compound word of *hā* 'breath' and *ū* 'breast' as "the sustenance of all things given from the Atua [Spiritual Being]". *Hā-ū-ora* is a respectful connection with the spiritual ecosystem, which creates reciprocal relationships that can be easily seen in the natural world: "The flowers [of the kōwhai tree] give sustenance to the tui [bird], and the leaves give sustenance to the kererū [bird]." She then expresses how Papatūānuku, the Earth Mother, gives life to humans:

> Hā, ū and ora, the breath, the sustenance of the living breath and sustenance of Papatūānuku. And that's where hau is: if it wasn't for Papatūānuku we would not be returning and we would not come from her. It's impossible. So hau for me is that we've always maintained, always look after Papatūānuku, otherwise we don't have the breath, the sustenance, the rays of her, the continued oneness with Papatūānuku. She's amazing. She is everything for us.

Hau ora denotes a spiritual and physical connection with the environment. Through reciprocal energetic exchanges, hau is linked to the notion of environmental sustainability (pers. kōrero: Hareruia Aperahama 2016, Rangi Matamua 2017).

> If we were to talk about sustainability in the environment and the ecology, for me that's hau, because hau continues … [A]s kaitiaki and caretakers of the hau, the hau is fundamental and crucial to long-term sustainability for Māori thinking and Māori spirituality. Without hau we are stuffed: having lost that connection with the hau, we're stuffed. (Hareruia Aperahama, pers. kōrero, 2016)

Māori understandings of sustainability are enclosed within the broader notion of *kaitiakitanga*, which is to preserve the essential life forces of hau*,* mauri*, tapu* 'being with the potentiality of power', mana and *wairua* 'spirit, soul' of the ecosystem and its resources, including people. The role of the *kaitiaki* 'caretakers' is not to care for the *whenua* 'landscape', as that will always survive, but to care for its hau—its sustainability and vitality (Rangi Matamua, pers. kōrero, 2017).

Māori see the environment as ancestors and kin. Māori identity is deeply intertwined with the surrounding ecosystem (Kawharu [Ngāti Whatua, Ngāpuhi] 2010). Pa Hēnare Tate [Te Rarawa] (2010) speaks of the interrelation between *Atua* 'Supreme being', *tangata* 'person or persons' and whenua. If one relationship is positively or negatively affected, so too are the other relationships. Therefore, there is no differentiation between the hau of a person and that of the environment. Where some commentators reduce the hau of the forest to its material productivity and fertility (Graeber 2001; Sahlins 1974), Māori see these characteristics as the outward expression of its hau. The hau itself is the forest's vital essence, just as it is in humans.

Vital Essence

Like the breath and wind that animates life, hau is perceived as the vital essence of a person. As it instilled life into the cosmos, hau is said to be imbued into the embryo and bound in humans when called up at birth (Gudgeon 1905; Hēnare 2003; Salmond 1997). Wharehuia Milroy [Ngāi Tūhoe, Ngāti Koura] (2004) describes hau as the *ia* 'flow', the *ira* 'life principle' of a person. Rangi Matamua (pers. kōrero, 2017) sees it as "your vital well-being—it's a vitality, it's your sustainability". To be *haumate* is to be "spiritless, lacklustre, unhealthy, weak, ailing (in body, mind or spirit), depressed" (Moorfield 2018).

Te Poihi Campbell (pers. kōrero, 2016) likens hau to aura and personality, explaining that people bring their own individual hau into each situation and leave an essence of themselves behind.

> My understanding of hau is like the aura. I'm on the seat here, right? And so I've got my own aura around me. So if I leave this seat, my hau is still there; it's like an imprint of my aura is still there. And so the longer I leave that hau, the less that hau will be recognisable or identified.

Hirini Moko Mead [Ngāti Awa, Ngāti Tūwharetoa, Ngāi Tūhoe, Tūhourangi] (2003) also describes hau as an invisible aura, as does Best (1982). Furthermore, Te Poihi Campbell explains that rituals performed to clear space, such as *takahi whare*, which cleanses a house of the spirit of a deceased person after their burial, are used to settle the hau and bring it to a place where people feel comfortable again within that space.

An extension or imprint of one's hau is left behind, purposely or unconsciously, when beings move from one place to another; as such, Mead (2003: 59) describes hau as "the most vulnerable part of a person". These extensions are referred to as *āhua* 'representations', *ohonga* 'material tokens' (Best 1900) or *manea* 'the aura of footprints' (Best 1900; Mead 2003). It is said that *tohunga mākutu* 'those trained in the arts of attacking life forces' are able to scoop up the āhua and perform witchcraft in order to negatively affect the hau of that being. Rangi Matamua (pers. kōrero, 2017) tells of how his uncles used to attack the hau of ever-evading prey:

> We would be chasing a pig all day, chasing its footprints, the dogs can't get onto it, we'll be tired and I remember sitting next to my uncles and the pig has walked past, and his foot marks are in the thing and one of my uncles will get up and take his knife out of his pouch and he will stick the footprint of the pig and he'll go "Anā! That pig will be limping for a week". What he is doing is he is impacting the hau of that pig, so that's a living object, and he is cursing the thing.

Robert Newson [Te Rarawa, Ngāpuhi] (pers. kōrero, 2016) describes manea as "remembrancing of people, the hau" and connected to tapu, which can be purposefully used to mark an area.

Each person, object or thing has its own intrinsic hau, which is shaped, influenced and enhanced (or diminished) by the hau of others and the hau of the collective—of spiritual, natural and social ecosystems. *Rangatira* 'respected leader' carry the hau of their ancestors; thus, when the hau of rangatira is affected, so too is that of the whenua and its people (Salmond 2000). Like the wind, hau is only sensed when it moves: "[H]au is the detectable movement of spiritual force, carried by the acts, intentions and associated objects, of those with whom we interact" (Stewart 2017: 7).

It is the hau of a taonga that determines its identity, not its material form. This is demonstrated in heirlooms that are considered ancestors where it is the hau (as well as mana, tapu and kōrero) of the heirloom, not the materiality of the heirloom, that is, the taonga (Salmond 2017; Tapsell 1997; Tcherkézoff 2012). Hareruia Aperahama (pers. kōrero, 2016) explains that oral literacy—itself a taonga—is a way of focusing intention. It is the hau—carried by words and committed to memory—that is passed down through generations.

> When the tohungas made something tapu, the object itself, while that might have power, the real power was the word that they spoke over it, the intention that was impregnated in it … an heirloom or a taonga tūpuna ['ancestral treasure'] that's been passed down. It's not just the matter or the physical substance of the object.

As the wind, the breath and the spirit of life, hau is a vital essence imbued in and shared with all of creation. Hau, according to Spiller and Stockdale (2012: 164), "is a process of continuous receiving and giving, in which all of creation exists in a state of reciprocity through the exchange of life-energy". Hau, then, is a reciprocal force, an essence that is vitalised by its interaction with other hau. The energy of hau does not work in isolation; thus, to examine hau as a singular notion, in a singular context, is to provide an incomplete description of such a phenomenon (pers. kōrero: Rereata Makiha 2016, Rangi Matamua 2017). In this context the next section looks at some of the other interacting life forces.

ASSEMBLY OF FORCES

> *Kahore he mea i hangātia i ahu noa mai rānei kia noho wehe i tēnei ao. Ahakoa matangaro ka mōhiotia te mauri.*
>
> *Nothing was ever created or emerged in this world to live in isolation. Even the hidden face can be detected by its impact on something.*
>
> Tukaki Waititi [Ngāti Hine, Te Whānau-ā-Apanui] as recited by Rereata Makiha

Hau, as a cosmic power and vital essence, is part of an "assembly of life forces" (Hēnare 2003: 211), a "family of energy" (Hareruia Aperahama, pers. kōrero, 2016). Various elements have been said to make up this assemblage. Salmond (1985) attests that all things in the phenomenal world possess a *tinana* 'physical body', wairua, mauri and hau, whereby the mauri protects the hau in the same way that the wairua protects the tinana. Hēnare (2003) and Mead (2003) extend these powers of spiritual, psychological and social well-being to include tapu. "When considered as a unity mauri, hau and wairua appear to protect tapu and so maintain the mana of the person or group, the tree or forest, the dandelion or plants, the stream or ocean" (Hēnare 2003: 53). Ngamaru Raerino [Mataatua, Te Arawa] (1999) states that the balance of mauri, mana and hau are the most important aspects of individual well-being and wholeness.

There is much overlap between the life energies, and it is hard to tell where the function of one ends and another begins. It is thus very difficult to separate and define each essence. Whilst it is not necessary—or even possible due to tribal differences—to define a universal set of energies that interact with hau, it is agreed that hau itself can only be understood in relation to its counterparts (pers. kōrero: Te Poihi Campbell 2016, Rereata Makiha 2016, Rangi Matamua 2017). The following sections will look into the interactions between hau and the other cosmic elements of mauri, wairua and mana. These descriptions are not exhaustive or definitive, but rather paint a picture of the interconnected world of Māori in an attempt to describe hau.

Mauri

Mauri is a well-described term that permeates much of Māori literature (Hēnare 1988, 2001, 2003; Hēnare and Kernot 1996; Marsden 2003; Morgan 2006; Pohatu 2011; Spiller *et al.* 2011; Spiller, Pio *et al.* 2011; Wolfgramm and Waetford 2009). It is seen as the spiritual essence or life force inherent within all that descends from Te Korekore 'the void of endless potential'. Mauri is "the bonding element that holds the fabric of the universe together" (Marsden 2003: 44). As expressed by Mānuka Hēnare (pers. kōrero, 2016), mauri is the "nature of something":

> So the mauri of a tōtara tree is the nature of being a tōtara tree. It can't be a mānuka tree or a kauri. So while mauri is common to all trees … it expresses itself biologically in different species, but they all have mauri.

In the kōrero provided for this research, rangatira were very clear about a distinction between mauri and hau. Few comparative differences between these forces (and others) were offered; rather, all rangatira immediately pointed out the similarities and interconnections. To Rangi Matamua (pers. kōrero, 2017), mauri is the life force, and hau is the well-being or vitality of that mauri. When the hau is affected, so too is the mauri. Milroy (2004) suggests that damage of the hau is the pathway to harming the mauri. When referring to resources (such as rivers or land), to affect the hau and mauri of that resource is to affect the hau and mauri (and subsequently the mana) of the people connected to that resource (Rangi Matamua, pers. kōrero, 2017). Marsden (2003: 44) considers hauora the "agent or source by and from which mauri is mediated to objects both animate and inanimate". However, he says, when applied to animate objects, mauri ora and hauora are one and the same. It is the indivisibility of mauri and hau that leads Hēnare (2003: 101) to state that they are "two life forces recognised as separate realities yet are so closely linked in effect and power that they can be considered in a symbiotic type of relationship".

Wairua

Wairua is said to denote spirit, akin to a soul, and protector of the body (Hēnare 2003; Mead 2003; Salmond 1985). Mead (2003) relays how the wairua is bound to one human being for the duration of their life, and then allows that person to transcend death by living on in another plane. Marsden (2003: 47) refers to wairua and hau synonymously: "*Wairua* (spirit) or *hau* (the breath of the divine spirit) is the source of existent being and life." However, other sources distinguish wairua from hau (pers. kōrero: Te Poihi Campbell 2016, Mānuka Hēnare 2016, Rereata Makiha 2016, Rangi Matamua 2017).

Hareruia Aperahama and Rereata Makiha, both well versed in traditional *karakia* 'ritual chants', agree that hau is used in the traditional pre-Christian karakia to convey the term spirit:

> Once you see the word wairua appear in the karakias, you know that it's been a Christian influence. Go before, pre-Christian, the word that they used instead of wairua for spirit was hau. And so you'll find in a lot of karakia pre-Christian the word hau, hau-tapu, hau-nui, hau-roa. (Hareruia Aperahama, pers. kōrero, 2016)

Wairua, says Rereata Makiha, was a term used by the old people but in reference of Te Ao o te Wairua 'The World of Spirits'. This realm is not a singular one-dimensional whole that separates itself from the material world; instead it is the wider dimension in which the material world of Te Ao Mārama operates (Te Poihi Campbell, pers. kōrero, 2016). Te Poihi Campbell describes wairua as an action: "a union taking place for something to come to fruition, or two opposites coming together to make something come to fruition". As stated earlier, hau acts as the conduit and umbilical cord between Te Ao Wairua and Te Ao Mārama.

Mana

Mana is conveyed as "spiritual power, authority, and prestige and status" (Tate 2010: 84); the "ethic of power, authority and the common good" (Spiller *et al.* 2011); and "a potent human state with the profound ability to impact upon, affect and transform the lives of others" (Dell 2017: 89). Mana, expressed through action, is "directly related to human agency" (Mika 2007: 188) and "involves the wholeness of social relationships, wellbeing and integrity, as well as continuity through space and time" (Hēnare 2003: 49).

The relationship between mana and hau can be seen through environmental connections. "The hau of tribal land and forests is their vitality and fertility, which is also a sign of their *mana*, their honour, prestige and power" (Hēnare 2003: 52). The greater the ability to protect and maintain the hau of an environmental resource, the greater the mana of that resource and its people (Rangi Matamua, pers. kōrero, 2017). Mana, according to Tom Roa (Husband 2017), is vital in the ethic of reciprocity. Recognition of the mana of another demands a reciprocal recognition of mana. As explained in the following section, hau inspires reciprocal exchange.

Family of Energy

The observation to make regarding the interaction of energies is that Māori are not fixated with defining the differences between life forces. Instead it is recognised that they all work together. To affect the hau of something is to affect its mauri, mana, wairua and tapu. This interconnectivity hails back to the cosmic whakapapa, in which all forces coalesce to create form. The ethic of reciprocity that underpins a Māori worldview begins in and between the spiritual energies that guide life.

WHĀNGAI HAU: RECIPROCITY

> *Hau, the wind of life, thus emerges at the very beginning of the cosmos, animating exchanges of all kinds in the whakapapa networks* (Salmond 2014: 292)

By concentrating on the values conveyed by hau, it can be seen that hau encompasses a complex ethical value system of reciprocity (Hēnare 2003; Nicholson *et al.* 2015; Salmond 2014, 2017; Spiller and Stockdale 2012). The claims that hau is "the heart of life itself" (Salmond 2017: 10) and "at the heart of being truly human" (Mānuka Hēnare, pers. kōrero, 2016) are supported by the many indigenous writings that place mutual reciprocity at the heart of all relationships (Archibald 2008; Cajete 2000; Husband 2017; Kelly 2017; Nicholson *et al.* 2015; Roberts *et al.* 1995; Spiller *et al.* 2011; Wilson 2009). In the letters of Ranapiri, it is explained that failure to uphold the obligations of exchange may result in harm to the hau, and in this sense

the hau can be seen as a "moral force" that inspires reciprocation (Mānuka Hēnare, pers. kōrero, 2016).

Rituals such as whāngai hau are to nurture and protect the hau of the human and natural world. Whāngai hau involves making offerings (such as the first catch of fish or birds, or the first potato of the crop) to the spiritual beings of waters, forests or the like (Hēnare 2003). Rangi Matamua (pers. kōrero, 2017) speaks of *whāngai te hautapu*, where *hautapu* refers to the sacred food that was used to feed the stars:

> So as Matariki [Pleiades] brings a bounty back every year, so when it rises it'll tell you, yes, it's bringing back the food from the ocean, the food from the rivers, the food from the land, the food from the sky. And you honour and thank Matariki by feeding it. So actually, the symbolic food items, you cook them, and then let the steam rise and the star actually consumes the food. So you're feeding that, so that's hautapu, in that sense, or hau.

By returning the offering back to its source, intentions are set and the principles of reciprocal gift exchange are established (Hēnare 2003). Whāngai hau rituals were seen to maintain the ora—hauora—of both the entity to which the offering was made and the donor. "When the exchanges are in a state of balance, hau flows unimpeded and the networks of relations (families, communities, and ecosystems) are in a state of ora—healthy, prosperous, and in good heart" (Salmond 2014: 293). It is in this purposeful movement towards ora that hau is also understood as intention—the intention to protect, maintain and feed hau (pers. kōrero: Hareruia Aperahama 2016, Rangi Matamua 2017) and to provoke reciprocal action (Mānuka Hēnare, pers. kōrero, 2016).

A gift economy is another process that aims to revitalise the hau of human relationships. The gifting process has broader parallels to Polynesian and other indigenous economies: Tcherkézoff (2012) links hau to the Samoan concept of sau, while Kelly and Hēnare (2018) write of the comparable philosophies underlying Stó:lō and Māori economies. In worldviews that see the socio-cultural-economic system as intertwined with the spiritual, it is not merely the exchange of material things that must be reciprocated but the energies impelling the exchange (Kelly and Hēnare 2018). Stewart (2017: 7) explains that "the thing someone gives us, in return for a valuable we were given in the first place, carries the spiritual force or memory of those relationships, and is referred to metaphorically as the hau taonga". Reciprocal acts are bound with social, economic and political complexities, whereby the gifting of taonga between kinship groups creates both an indebtedness to return an offering and an obligation to care for the total well-being of the taonga (Kelly and Hēnare 2018; Tapsell 1997). Hēnare (2003: 53) explains the connection between hau and the gift economy:

> Over the millennia, hau was established as a complex totalising system of obligatory gift exchange. The exchange followed some basic principles where the intrinsic hau of the taonga and the hau belonging to the donor are imbued in the taonga; these in turn infuse Māori social, economic and religious life with profound implications for the management of social relations and guardianship of the natural world.

For Māori, hau is a way of life, a philosophy that guides behaviour. Hau illuminates reciprocal relationships between the spiritual, natural and human worlds. The hauora of natural resources affects all those to which it provides sustenance. To privilege human needs over that which sustains us is not respecting whakapapa. This article articulates the link between the vital essence of hau and its practice as a moral force that is fundamental to a Māori economy, which services both material and spiritual needs (Hēnare 2003). The modern economy is beginning to turn towards a more sustainable, holistic approach where its function is to reflect and enhance the well-being of society. The reintroduction of hau as a supreme virtue and economic practice reinserts the human–spiritual connection into economic transactions. To understand hau is a pathway towards understanding what is needed to achieve hauora. Achieving hauora, a balanced state of well-being, will lead to a more inclusive and prosperous society.

* * *

There is a multitude of voices weighing in on the Māori notion of hau, as made popular by Mauss ([1925] 2016). The lacuna of Māori knowledge relevant to a Māori concept that has become fundamental to social science understandings of non-western economies, relations and worldviews highlights the disconnection between the discourses of scientific anthropology and mātauranga Māori (Bishop 2008; Salmond 1983; Smith 1999). European writers, as argued by Salmond (1983: 314), "gained far more public acclaim than the Māori authorities with whom they worked, and their attitudes often reflected as much patronage as respect for Māori thinking". For too long, Māori have been regarded as passive receivers of knowledge. The simplification and commodification of mātauranga Māori has displaced and misrepresented Māori lived experiences (Bishop 2008).

The life force and whakapapa of hau, and the associated knowledge, are taonga. Tapsell [Ngāti Whakaue, Ngāti Raukawa] (1997: 342) notes that taonga are indicators of the wealth of a kinship group; the "potential value of any *taonga* cannot be fully realised, however, until it is reunited with the descendants of the original possessors upon their ancestral lands." In the spirit of the gift, in the ethic of reciprocal exchange, questions then arise: How are Māori benefitting from this intellectual exchange? Where is the return gift

of the knowledge that has been shared with the international community? I argue that to honour the gift of hau is to return to its source and address the lack of Māori ancestral knowledge in the literary arena. This in turn ensures its spiritual essence is maintained for future generations.

Hau as defined by much of the anthropological literature is not necessarily wrong, but it is too narrow and leaves out Māori voices. Many interpretations fail to recognise the spiritual whakapapa of a Māori worldview in which the physical emanates from the spiritual. In doing so, they are unable to convey any deeper understandings of such a vital force of Te Ao Māori. As argued by Kelly and Hēnare (2018: 12):

> A Māori understanding of reciprocity in terms of *hau* derives from a deep understanding of energetic relationships that exist at a cosmological level as opposed to an understanding of economy that accounts only for what is exchanged in the human-to-human experience of economic interaction.

This article has moved the debate past a transactional economic framework and offered an expansive and contextual account of the human–spiritual connections of hau using the knowledge of ngā pou herenga. The implications of understanding a philosophy of hau can reach into modern societal interactions through the recognition of hau as a moral force at the heart of all relationships.

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NOTES

1. There is a tendency for those unfamiliar with te reo Māori ‘Māori language’ to pronounce hau as the English word “how”. The correct pronunciation can be heard here: https://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=hau
2. *HAU: Journal of Ethnographic Theory* “takes its name from Mauss’ Spirit of the Gift” (https://www.haujournal.org/index.php/hau/index) but fails to acknowledge the Māori origins of Mauss’s hau.
3. When known, kinship affiliations are provided for Māori authors and authorities at first citation in square brackets.
4. Ngāti Ruanui are an *iwi* ‘tribe’ affiliated with the Taranaki region of Aotearoa New Zealand. In many Taranaki narratives words are spelled or spoken using the vowel “o” as an alternative to “a”.
5. Also referred to as Hine-ahu-one.

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APPENDIX I: NGĀ POU HERENGA[1] (WISDOM HOLDERS)

Hareruia Aperahama
Ngātipikiahu, Ngātiwaewae, Ngātitūtemohuta, Tūrangitukua, Ngāti Tūwharetoa, Ngāti Kurī, Te Aupōuri, Ngāti Whātua

Hareruia (Ruia) Aperahama was bought up at Rātana Pā and raised in the Rātana Church[2] in a rural area in the lower west coast of the North Island. Te reo Māori is his first language and he is respected for his knowledge of Māori custom and lore. He is a superb and passionate vocalist as well as being a gifted singer-songwriter who is comfortable in traditional Māori or contemporary musical environments. Ruia is an internationally acclaimed song artist and a recipient of many New Zealand music industry awards. Ruia's career has also included work as a Māori and Japanese teacher, illustrator and writer for a te reo Māori children's magazine, radio host, te reo Māori translator and university researcher. He also works with youth at risk and inmates in the hope of inspiring alternative choices in life.

Te Poihi Campbell
Tāngāhoe, Ngāti Ruanui, Ngā Rauru, Ngāruahine

Te Poihi Campbell is a strong cultural advocate for and supporter of his Taranaki community. Te Poihi is regularly summoned to provide guidance on te reo, *tikanga* 'customs' and other cultural matters. His grassroots leadership in the community and in the many *marae* 'community organisations' of Taranaki is significant. Te Poihi is a trustee of Meremere Marae, Pouwhakakori (programme manager) at Te Kotahitanga o Te Atiawa Trust, on the board of Te Korimako o Taranaki, and chair of Te Reo o Taranaki. Formally, Te Poihi was a broadcaster at the radio station Te Korimako o Taranaki, where he worked to promote and preserve the use and integrity of te reo Māori in the organisation's programming and in the community. Over the years he has been involved in the facilitation of many cultural activities and te reo Māori revitalisation initiatives throughout the Taranaki region. He is a family man devoted to his wife and three *tamariki* 'children'.

Mānuka Hēnare
Te Aupōuri, Ngāti Kurī, Te Rarawa, Ngāpuhi

Associate Professor Mānuka Hēnare is a respected *kaumātua* and *rangatira* 'community elder and leader', husband, father and mentor in Te Ao Māori. He has over 40 years' research and consultancy experience in the field of Māori and Indigenous business enterprise and development economics. Mānuka's leadership in collaborative research has seen him head a number of multidisciplinary research project teams, advise government departments, hold ministerial appointments and serve as an expert witness for the Waitangi Tribunal, a national standing commission of inquiry related to Māori Treaty of Waitangi claims. As an associate professor at the University of Auckland Business School (UABS), Mānuka is called upon for spiritual, cultural, academic and pastoral care of University staff and students. He teaches Māori business and economic history, strategy and management of tribal enterprises.

Rereata Makiha
Ngāpuhi, Te Māhurehure, Te Arawa, Rangitāne

Tohunga 'spiritual leader' Rereata Makiha is a renowned Māori astrologer and a leading authority on the *maramataka* 'Māori lunar calendar'. Raised and immersed in the traditions of the maramataka, Rereata has been a student of his ancestral *whare wānanga* 'school of higher learning' from a young age. Rereata is widely sought after and involved in bringing *mātauranga Māori* 'Māori knowledge' of science and astrology to Māori communities, frequently speaking at marae and school functions. His research projects look to recover, revive and pass on knowledge around star lore and the maramataka. Rereata is a member of the Society of Māori Astronomy Research and Traditions and co-founder of Te Potiki National Trust, which administers the Māori Maps website. Rereata has 30 years' experience as a reporter, news editor, director and presenter and has held senior positions in media organisations. He has worked as a Māori cultural advisor for Auckland Council and the University of Auckland Business School.

Rangi Matamua
Tūhoe

Professor Rangi Matamua is fifth generation in a long line of Māori astronomers. He has extensive knowledge relating to celestial bodies and space, passed on to him by his *tipuna* 'ancestor' Rāwiri Te Kōkau. By day, Rangi is a professor at the University of Waikato, lecturing, researching and inspiring Māori academics. His research fields are Māori astronomy and star lore, Māori culture and Māori language development, research and revitalisation. By night, he is a star gazer, reading, watching and translating the messages left to us and written in the skies. He is the author of the critically acclaimed book *Matariki: The Star of the Year* (2017), which represents an authentic Māori view and understanding of this culturally important star cluster (the Pleiades) and associated traditions. Rangi is passionate about genuine Māori star knowledge and disseminating such knowledge broadly.

Awhitia Mihaere
Te Aitanga a Māhaki, Rongowhakaata, Ngāi Tahu Matawhaiti, Rangitāne, Maniapoto

Awhitia Mihaere is an indigenous traditional practitioner of *rongoā* Māori 'traditional Māori healing' and *romiromi*, *koomirimiri* and *mirimiri*, collectively 'bodywork', whose experiences derive from her whakapapa. Her grandparents were traditional rongoā Māori healers and midwives to their *whānau* 'family' and *hapū* 'kinship group'. Awhitia re-awoke to her calling under the tutelage of renowned tohunga the late Hōhepa Delamare. Awhitia is a restorative justice facilitator and works tirelessly to deliver positive health outcomes for Māori, including advocating for traditional healing methods to be applied alongside mainstream medicine. She is responsible for implementing romiromi and *hapūtanga* 'pregnancy' practices and cleansing ceremonies in correctional facilities. Her work with marae justice panels for urban Māori authorities has seen these elevated to a national level. Awhitia teaches rongoā Māori at Te Wānanga o Aotearoa and has worked as a government cultural advisor in education. She is studying towards a PhD in rongoā Māori healing.

Robert Newson
Te Rarawa, Te Aupōuri, Ngāpuhi

Robert (Bobby) Newson has over 40 years of public service, beginning in Māori Affairs and the Māori Land Court, followed by service in the New Zealand Army, 17 years with the New Zealand Police, and 20 years as a cultural advisor to various organisations including the Human Rights Commission, the Families Commission and the Auckland City Council. He is currently the Tumu Here Iwi Relationships Manager at the Auckland Museum. Robert holds a Bachelor of Māori Studies from Auckland University of Technology and has lectured in Māori theology and spirituality. As a certified translator and interpreter of te reo Māori he has worked in the District and High Courts in Auckland and on Treaty of Waitangi claims. A Justice of the Peace, he currently serves on a diverse range of boards and committees, including Unitec Council, Mercy Charities, Waitakere Community Law Centre, Sport Waitakere and Te Rūnanga o Te Haahi Katorika. Bobby is married to Gemma and has three children and four *mokopuna* 'grandchildren'.

Makuini Ruth Tai

Tūhoe, Whakatōhea, Ngāi te Rangi, Ngāti Awa, Tūwharetoa

Makuini Ruth Tai was raised when *papakāinga* 'ancestral home' living was still the norm and old-time spiritual practices were still very much alive. Today unconditional *aroha* 'love' provides the guidance for all that she does. Makuini is a te reo Maori scholar and an author. She facilitates REO (Rich Earth Oratory) communications workshops and online seminars, and hosts international programmes aimed at well-being and peace. Her REO philosophy recognises that spirituality, performance and voice tone are inherent in the words, expressions and communications of the old-time orators. Formerly, Makuini was a teacher trainer for the New Zealand education system and a lecturer at the Hamilton Teacher's Training College. She left in late 1990 to explore learning and teaching methodologies that were not used in the system at the time, travelling widely and participating in various well-being and cultural activities. In 2011 Makuini returned with her husband, Wayne, to his papakāinga at Tapapa to support the revitalisation of the marae and implementation of eco-sustainable principles.

Appendix Notes

1. Literally "authorities or repositories of knowledge ".
2. The Rātana Church was founded in early twentieth century Aotearoa New Zealand as part of a trans-tribal interdenominational and political movement under the leadership of Tahupōtiki Wiremu Rātana; it remains an important religious and political force in Te Ao Maori.

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THE ETHNOHISTORY OF FRESHWATER USE ON RAPA NUI (EASTER ISLAND, CHILE)

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ABSTRACT: Sources of drinking water on islands often present critical constraints to human habitation. On Rapa Nui (Easter Island, Chile), there is remarkably little surface fresh water due to the nature of the island's volcanic geology. While several lakes exist in volcanic craters, most rainwater quickly passes into the subsurface and emerges at coastal springs. Nevertheless, the island sustained a relatively large human population for hundreds of years, one that built an impressive array of monumental platforms (ahu) and statues (moai). To understand how Rapanui acquired their scarce fresh water, we review ethnohistoric data from first European arrival (1722) through the mid-twentieth century. Ethnohistoric accounts identify a diversity of freshwater sources and describe various Rapanui freshwater management strategies. Our findings highlight the importance of coastal freshwater seeps and provide much-needed insight into how Rapanui procured this vital and necessary resource.

Keywords: Rapa Nui (Easter Island), coastal springs, freshwater management, puna (wells), ethnohistory, Polynesia

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> Here is no safe anchorage; no wood for fuel; nor any fresh water worth taking on board.
>
> —Captain James Cook, March 1774

Rapa Nui (Easter Island, Chile) evokes a rich array of superlatives, both positive and negative. On the one hand, the island boasts almost 1,000 multi-ton statues (*moai*), several hundred of which were transported across the volcanic landscape and placed on top of massive stone platforms (*ahu*) (Hochstetter *et al.* 2011). For these accomplishments, Rapa Nui is known as one of the world's greatest examples of prehistoric megalithic monument construction. On the other hand, the island is small (164 km^2), remote (nearly

2,000 km from Pitcairn Island and 3,500 km from the coast of Chile) and poorly endowed with natural resources (Fig. 1). The subtropical climate, variable rainfall, unproductive soils and lack of large coral reefs, lagoon or timber offered significant challenges to Rapanui. Among these challenges, the scarcity of drinking water may have been the greatest. Despite these limitations, Rapanui flourished and left a spectacular legacy.

Reliably sufficient fresh water is a biophysical constraint that determines whether habitats can support human communities. As Rapa Nui has unpredictable rainfall and lacks permanent streams, fresh water has always been a limited resource on the island. As Thomson (1891: 489) commented during his 1886 visit, "[T]he greatest mystery is how such a number of people obtained a sufficient supply of fresh water." While Rapa Nui does have a few crater lakes and numerous coastal freshwater seeps (Brosnan *et al.* 2018; Herrera and Custodio 2008), places to access freshwater resources are relatively scarce, patchy and likely predictable, which makes them good candidates for highly contested and "economically defendable" resources (Dyson-Hudson and Smith 1978; DiNapoli and Morrison 2017). Indeed, many argue that the distribution of this scarce yet vital resource had a major influence on the structure of Rapanui settlement locations and patterns of competitive interaction (e.g., DiNapoli *et al.* 2019; McCoy 1976; Rull 2016, 2018, 2019; Vogt and Kühlem 2018; Vogt and Moser 2010). Uncertainties and debates persist, however, about the range of freshwater sources used and which sources were likely the most important in the past. While ethnohistoric evidence can better resolve the locations and strategies of traditional freshwater procurement, as well the potential archaeological signatures of these strategies, the ethnohistoric record has been largely overlooked on this topic.

Here, we offer a systematic review of the Rapa Nui ethnohistoric accounts to better resolve patterns of traditional freshwater use and management. Using written accounts from European visitors to Rapa Nui between 1722 (Jacob Roggeveen) and 1955 (Thor Heyerdahl), we review known sources of fresh water and document strategies used by Rapanui for freshwater procurement and storage. We document the use of fresh water from both natural and constructed contexts including crater lakes, inland springs, coastal seeps, lava tubes/caves and constructed "wells" (*puna*), rainwater catchment basins (*taheta*) and reservoirs. We also briefly discuss historic accounts that describe the use of plants that may have had key roles in traditional Rapanui water-resource management. These historic accounts provide significant insight into the relative importance of different water procurement strategies and help provide the basis for generating hypotheses about Polynesian adaptations to freshwater scarcity and the influence of freshwater scarcity on Rapanui community patterning. While Rapanui used a range of freshwater sources, our review of the historical and archaeological evidence suggests that natural coastal seeps and constructed puna were likely of critical importance.

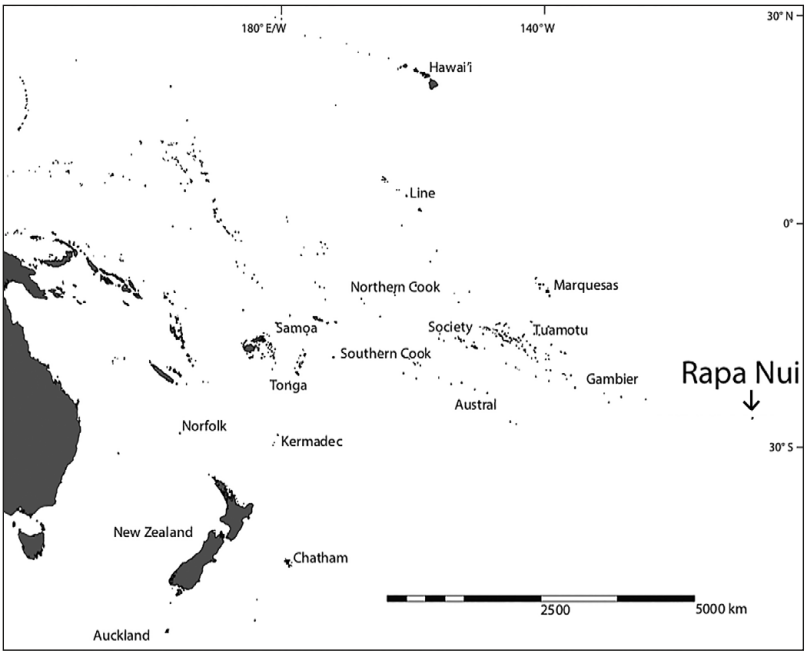

Figure 1. Location of Rapa Nui (Easter Island, Chile) in the southeastern Pacific.

RAPA NUI HYDROGEOLOGY

Rapa Nui is a volcanic island formed through hot-spot volcanism starting around 2.5 Myr (million years) ago (Bonatti *et al.* 1977; Vezzoli and Acocella 2009). Between 2.5 and 0.18 Myr ago, a series of eruptions created Poike and Rano Kau on the northeastern and southwestern corners of the island, respectively (Fig. 2). Starting approximately 360,000 kyr (thousand years) ago, numerous lava flows from two main fracture systems created Terevaka, which currently dominates the geology of the island. Lava flows that created Terevaka are quite young, and some date to as recently as 10 kyr ago (Vezzoli and Acocella 2009).

These largely jointed basalt lava flows that characterise the island constitute what Herrera and Custodio (2008: 1333) term a large-scale "high permeability apron" and hold dramatic consequences for the hydrology of the island. Although the island enjoys abundant rainfall (a maximum of approximately 2,100 mm/yr on the summit of Terevaka [Stevenson *et al.* 2015]), its porous substrate largely prevents the pooling of surface water and limits easy access

for terrestrial flora and fauna (Herrera and Custodio 2008: 1331). Instead, the highly permeable volcanic apron rapidly transmits much of the water to the island's subterranean aquifer, which has elevations that average only a few metres above sea level (masl) (Brosnan *et al.* 2018; Zeferjahn 2016). Consequently, rain falling onto the surface of the island quickly vanishes and rarely (only intermittently after torrential downpours) forms streams or surface ponds. This phenomenon is often reflected in comments by visitors. For example, Brown ([1924] 1979: 25) noted that "a half an hour after a downpour the ground is as dry as before it" and that "the greatest defect of the island is its porous character".

Given Rapa Nui's porous substrate, water entering the ground flows through cracks and fractures in the bedrock. Where the land intersects the ocean, fresh groundwater seeps out into the sea (Fig. 3). This flow can occur at the surface as coastal springs or seeps, or underwater as submarine groundwater discharge (Kim *et al.* 2003; Montgomery & Associates 2011), which is an overlooked water resource in many parts of the world (Moosdorf and Oehler 2017). The coastal fringe of the island, therefore, can offer locations for people to access groundwater relatively easily. On Rapa Nui, coastal springs exist in many areas along the coast and are easily accessible during low tide (Brosnan *et al.* 2018; Zeferjahn 2016).

The height of the water table on Rapa Nui is fairly low and typically between 1 and 3 masl (Álamos y Peralta 1992; Herrera and Custodio 2008; Montgomery & Associates 2011). The amount of fresh water contained within the island is substantial, and significant flows emerge along the coast. Although there exist uncertainties in the values of coastal substrate transmissivity and hydraulic gradient, Montgomery & Associates (2011) estimate a recharge rate of between 3,200 and 4,700 L/s. This rate is impressive when one considers that even a fraction of a percent of this discharge could supply a population of over 5,000 (Herrera and Custodio 2008: 1346).

Though accessible at the points where it emerges at the coast, these sources of water tend to be brackish due to the mixing of seawater with fresh groundwater in both surface and subsurface mixing zones. On Rapa Nui, this mixing zone is evidently thick, for salt water intrudes into near-coastal springs to create salinity levels of greater than 1,000 mg/L Cl^- (Herrera and Custodio 2008: 1329). While humans can survive with brackish water, there are limits to the salinity that the body can tolerate. On Rapa Nui, it is estimated that 90 percent of the population's salt intake might have come from brackish water consumption (Brosnan *et al.* 2018; Norton 1992).

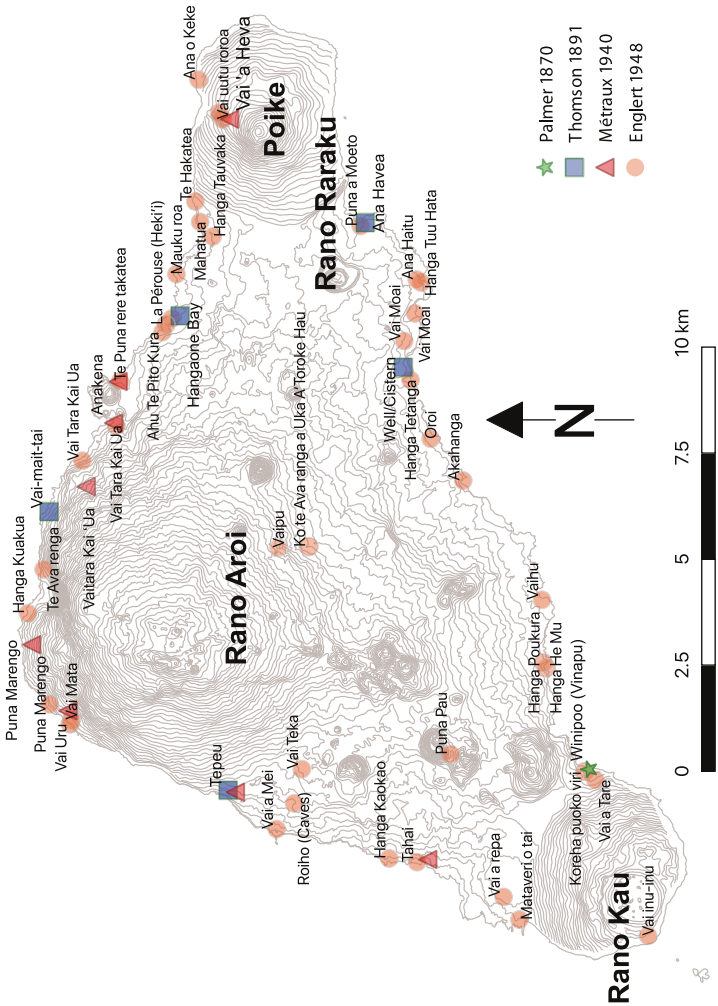

Figure 2. Rapa Nui and sources of fresh water mentioned in historical accounts; DEM sourced from https://earthexplorer.usgs.gov/.

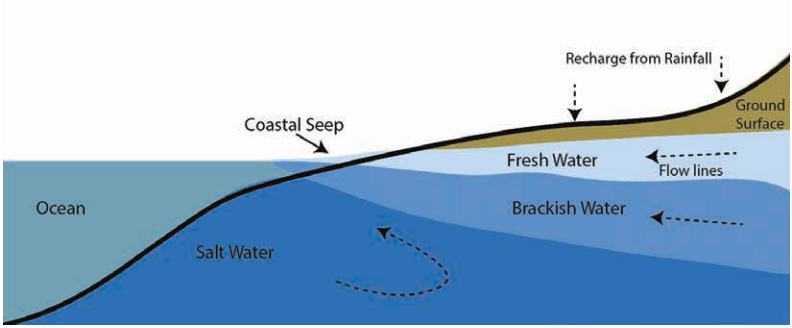

Figure 3. Schematic of hydrogeological model for Rapa Nui. Water from rainfall quickly enters the porous volcanic ground and flows towards the coast. Fresh water floats atop salt water that enters the ground from the ocean. At low tide, the lens of fresh water emerges at the coast. Where fresh water mixes with salt water, the resulting water is brackish.

HISTORICAL ACCOUNTS OF FRESHWATER USE: 1722–1956

European accounts of Rapa Nui began with the arrival of the Dutch captain Jacob Roggeveen, who sighted the island on Easter Sunday, 1722. Roggeveen's visit was a short one of just two days. Nearly five decades passed until the Spanish captain Don Felipe González arrived in 1770. This visit was followed in 1774 by the English captain James Cook and then in 1786 by French explorer Jean-François Galaup de La Pérouse. After this time, European explorers, missionaries, traders, whalers and, most tragically, slave raiders repeatedly visited Rapa Nui (Fischer 2005; Maude 1981). These earlier voyagers made a variety of observations about the natural and cultural features they encountered on the island (Richards 2008), including fresh water and its uses.

The first relatively thorough descriptions of the island's archaeology can be traced to John Linton Palmer, who arrived as a surgeon on the HMS *Topaze* in 1868. In a brief account, Palmer (1870) provided some of the first basic descriptions of four ahu that he references on a map. Geiseler ([1883] 1995) added details to these basic descriptions. The first comprehensive survey of the island comes from William J. Thomson (1891). During his visit, Thomson walked the coastline of Rapa Nui and described 113 ahu. In 1914, Katherine Routledge (1919) travelled to Rapa Nui and spent 16 months doing survey, excavations and interviews that resulted in detailed archaeological and ethnographic information on the island and its inhabitants. In 1934–35, Alfred Métraux (1940, 1957) of the Franco-Belgian expedition conducted

ethnographic documentation that expanded upon Routledge's work. At around the same time, Father Sebastian Englert, a Catholic priest and prolific observer, arrived and lived on the island for more than 30 years. Englert's (1948, 1970) detailed documentation of more than 40 natural freshwater sources and numerous water-management features provides a significant source of knowledge on these issues. In 1955–56, Thor Heyerdahl led an international team for field research on Rapa Nui that included extensive documentation and excavations (Heyerdahl and Ferdon 1961).

One feature that unites these visitors and distinguishes them from more recent researchers is their heavy reliance on traditional local sources of fresh water during their visits. Since the mid-twentieth century, residents and visitors have become dependent on obtaining drinking water from wells sunk into the deep groundwater or from imported bottled water. Predating the era of contemporary well technology or regular and frequent cargo deliveries, residents, visitors and foreign researchers had to find drinkable water where they could. Thus, these historic notes offer relatively keen observations about the island's freshwater resources. More importantly, while these earlier ethnohistoric sources are often fragmentary, they provide some of the best available evidence for freshwater use by ancient Rapanui.

Coastal Groundwater Discharge

The earliest European visitors on Rapa Nui provide only limited information about the sources of fresh water used by Rapanui. During the first European visit in 1722, Roggeveen makes no reference to fresh water, though Captain Cornelis Bouman, in command of the *Thienhoven*, mentions water obtained by local populations that he "tasted and found to be quite brackish" (von Saher 1994: 99). Given the hydrogeology of the island described above, it is likely that Bouman's brackish water came from a coastal seep.

While the 1770 visit by the Spanish provides only a brief comment on the brackish nature of the drinking water they were provided with (Ruiz-Tagle 2004), the expedition in 1774 led by Captain Cook provides more details about fresh water on Rapa Nui. Cook (Ruiz-Tagle 2004: 160), for example, notes that Rapanui brought members of the English expedition that had travelled inland to "brackish and stinking" water that was only "rendered acceptable by the extremity of their thirst". Later, Cook mentions that the islanders even brought the inland party "real salt water" (p. 162). The fact that some of the islanders "drank pretty plentifully" of this seawater shocked Cook, who comments that "so far will necessity and custom get the better of nature!" (p. 162).

Cook indirectly mentions the source of this apparent seawater when he refers to the water collected from Rapa Nui: "The little we took on board could not be made use of; it being only salt water which had filtrated through

a stony beach, into a stone well. This the natives had made for the purpose, a little to the Southward of the sandy beach so often mentioned; and the water ebbed and flowed into it with the tide" (p. 167). Through this reference, Cook became the first European to mention Rapanui use of a freshwater resource that is now recognised as a coastal seep (Fig. 4).

Cook's naturalist, Johann Forster, made specific notes about the lack of water on the island and correctly identifies the role of the island's geology. He notes that water availability is influenced by "those different porous substances, dry and burnt, that make the island dry and arid, as the rain gets absorbed and the plants cannot draw water from the dry and spongy ground, so they are not able to spread sufficiently to cover [the soil] and retain humidity, so necessary for the vegetation. This dryness influences not only the vegetable kingdom, but also animals and people" (Jakubowska

Figure 4. Coastal seep behind Ahu Tongariki on the south coast of Rapa Nui. This location is likely near where Routledge took a photograph of a freshwater pool emerging at the coast. The 1960 tsunami, however, dramatically altered the area. Here, Tanya Brosnan (California State University Long Beach) measures the conductivity of the water to determine the relative salt content. Photograph by Carl Lipo, 2015.

2014: 79). He also comments that much of the water consumed was brackish given the mixing that occurs at coastal seeps between the ocean and fresh groundwater. For example, Forster (p. 83) states "water from several wells existing on the island is his usual drink; it is almost always brackish or has an admixture of other saline solutions, nevertheless that does not render it nasty or unhealthy for the inhabitants". His mention of "wells" likely refers to traditional features called puna, which we discuss in more detail below.

The use of coastal groundwater discharge directly at the tide line, however, caused some confusion among Europeans as to whether Rapanui were capable of drinking directly out of the ocean. Forster ([1777] 2000: 323), for example, notes that "some of our people really saw them drink of the sea-water when they were thirsty". Later observers often made the same mistaken observation. La Pérouse (Dos Passos 1971: 61), who visited the island in 1786, writes, "I have seen the natives of Easter Island drink the sea water like the albatrosses at Cape Horn." This misunderstanding of the use of coastal groundwater discharge gained popular use through the early nineteenth century when numerous whaling ships stopped by the island for supplies. For example, James Wolf (Richards 2008: 54), a mate on the HMS *Blossom*, writes during his ship's visit to the island in November 1825: "Pérouse says he had seen these people drink salt water like the albatross off Cape Horn, though his officers discovered a spring of less saline nature. This fact I may collaborate by one of our party having witnessed a native stooping down on the rocks and slaking his thirst from the water of the great Pacific Ocean." A later account by Captain Du Petit-Thouars of the *Venus* in February 1838 omits any mention of even brackish water and instead claims that "the natives are accustomed to drinking sea water" (p. 75). Though Rapanui use of coastal seeps evidently existed through this time, many early European visitors apparently lacked a clear understanding of what they were seeing.

William Thomson, paymaster aboard the USS *Mohican*, visited the island in 1886. During his visit, Thomson noted at least five locations around the coast that provided fresh water (Fig. 2), and most of the water he found was likely from coastal seeps. As he observes: "The so-called springs are holes into which the sea-water percolates, and are as salt [*sic*] as the ocean, at high tide, and decidedly brackish at all other stages" (Thomson 1891: 491).

Writing in 1919, Katherine Routledge provides an excellent description of the hydrology of the island. She states that "owing to the porous nature of the ground the water sinks beneath the surface, sometimes forming underground channels from which it flows into the sea below high-water mark: thus giving rise to the curious statement of early voyagers that the natives were able to drink salt water" (Routledge 1919: 132). Routledge provides a photo of a pool formed by water emerging from the ground along the coast behind Ahu Tongariki (Fig. 4).

At the time of Routledge's visit, the dominant use of the island's landscape was for sheep ranching. Beginning in 1888, the Williamson-Balfour Company managed up to 60,000 sheep on Rapa Nui and used islanders as indentured labourers (Fischer 2005). In 1920, with the visit of biological engineer William Bryan, the ranch management started to recognise the value of coastal groundwater discharge for providing fresh water to the sheep herds. In his report including recommendations to increase ranch productivity, Bryan considers blasting "shallow wells at seepage sites and equip[ping] them with small windmills" (Porteous 1981: 135).

In sum, the available historical descriptions of traditional freshwater use highlight the importance of coastal seeps for Rapanui people in the eighteenth and nineteenth centuries. The association of significant archaeological material around coastal seeps (i.e., ahu and moai) strongly suggests that these sources of drinking water were also key during pre-contact times (DiNapoli *et al.* 2019).

Wells (Puna)

One inherent drawback to reliance on coastal groundwater discharge is its relatively high salinity from mixing with seawater. Brown ([1924] 1979: 25) claims that Rapanui "never made salt like the Hawaiians, and never took salt water as a seasoning like the other Polynesians" to accommodate the relatively high levels of salt intake associated with use of coastal groundwater. Rapanui also possibly reduced their salt intake by accessing groundwater inland of the coastal mixing zone. As Herrera and Custodio (2008: 1340) describe, however, "there is no clear relationship between water-table elevation and salinity, and distance to the shore and salinity, although the trend is to find higher salinity closer to the shore."

Though lower levels of salinity can be found in more inland groundwater, these sources are more difficult to access given the island's low-lying water table. With modern drilling technology, it turns out that many inland sources are only moderately less saline than coastal groundwater. For example, samples collected from a borehole in Hanga Roa about 1.3 km from the coast, where the land surface is around 100 masl, yielded a slightly brackish salinity value (570 mg/L Cl^-) in 2002 and a somewhat fresh salinity value (484 mg/L Cl^-) in 2003 (Herrera and Custodio 2008: 1337). These borehole samples are admittedly half as saline as the coastal groundwater samples and thus of greater use for drinking (p. 1337). It is important to keep in mind that the elevation of the water table at the Hanga Roa borehole is 2.35 masl and that digging wells to a depth of nearly 100 m without modern equipment would be highly impractical (p. 1334). Thus, deciding where to build a well with the maximum ease of construction and minimum salinity levels becomes a problem of optimisation.

While Rapa Nui's thick and porous volcanic apron makes inland groundwater virtually inaccessible without modern drilling equipment, it does not eliminate the practicality of near-coastal wells. Several historic accounts mention the use of both inland and near-shore wells, thus suggesting that such wells did provide a useful source of relatively fresh groundwater. In 1774, Georg Forster noted the use of shallow coastal wells that were likely associated with areas of coastal groundwater discharge. Forster ([1777] 2000: 327) writes, "[W]e met Captain Cook, whom the natives had conducted to a well very close to the sea, which was cut deep into the rock, but full of impurities. When our people had cleared it, they found the water in it rather brackish, but the natives drank of it with much seeming satisfaction." Similarly, in 1786, La Pérouse (Dos Passos 1971: 61) notes that "a little brackish water was found in some holes on the sea shore".

In 1868, Palmer provided the first account that identified a specific location for a shallow near-coastal well (puna, Fig. 2). Palmer (1870: 168) states:

> [A]s to the supply of fresh water on the island, a good deal of misapprehension has existed. In several of the craters there are many deep pools of it; in those of the Terano Kao [Rano Kau] these are fully 25 feet deep, and I have tasted it pure and fresh from many places, near the shore. At Winipoo [Vinapu], not only is there a subterranean reservoir (to which a tunnel leads from the face of the cliff), but on the very sea beach the natives have made a cistern to catch the water which distils from a little tunnel.

In this passage, Palmer mentions the location of a coastal seep that is near Ahu Vinapu on the southwest coast of the island. He also points out that water is available in the crater lakes and in at least one cave (we discuss descriptions of these additional sources of fresh water below).

Thomson (1891: 491) later mentions a puna during his visit, but he also calls the feature a "cistern". Specifically, at a location on the south coast near Tongariki, he (p. 491) describes a set of features in which "only the remains of walls and cisterns were found ... They were generally small, the largest being 9 feet in diameter, 14 feet deep, and surrounded by a sloping bank paved with small stones to facilitate the collection of rain water."

Métraux (1940) makes the first detailed discussion of puna, which are equivalent to the relatively shallow near-coastal wells first noted by Georg Forster and later described as cisterns by Palmer and Thomson. Métraux (p. 11) states that puna served a double function as reservoirs "which impounded rain water and perhaps some fresh water springs". He adds significance to such wells by observing that "ruins of ancient settlements are always thick around water holes" (p. 11). Métraux (1940: 11) goes on to describe a puna (Fig. 5):

> A deep ditch, between 2 and 3 meters deep, is dug near the shore. The seaward, lateral sides are perpendicular and lined with stones perfectly fitted. The landward side slopes at an angle of 45 degrees to the base of the opposite wall and is paved with boulders. After a rain the running water is led to the interior of the basin where, at the same time, water from the underground water body collects ... According to my informant, there is always water in them even though it does not rain.

Puna, therefore, enabled people to both access groundwater and reduce its salinity by limiting mixing with seawater and aiding rainwater catchment. Métraux (1957: 65) specifically adds that "the ancestors of the modern natives sought to prevent salt water from mingling with the fresh by constructing walls that formed a kind of reservoir".

Métraux (1940: 11) provides a specific location for one of these features at Vai a Hoa near Ovahe on the north shore. He also mentions that "at Tahai there is a kind of basin, separated from the sea by a wall, where fresh water mixes with salt water" (p. 11). Such walls designed for pooling coastal groundwater are likely similar to those noted by members of Cook's 1774 expedition. By the time of Métraux's writings, however, only "the cattle are watered there" (p. 11), and he notes that "a few of these reservoirs or springs still contain water, but most of them are filled with mud" (Métraux 1957: 65; see also Englert 1948: 219).

Heyerdahl (1961: 26) also notes the close association of puna with areas of coastal groundwater discharge when he writes that "a short distance inland from such places [of coastal seeps], [Rapanui] had occasionally constructed an artificial well with retaining masonry walls". Like Métraux, Heyerdahl (p. 26) noticed that the water in puna becomes brackish when it is mixed with salt water at high tide.

Englert records an oral tradition relevant to the discussion of puna. According to this oral tradition, the scarcity of fresh water on Rapa Nui concerned Hotu Matu'a (the legendary first settler on the island). Englert (1970: 84) records, "Hotu Matu'a's concern led him to the discovery that shallow wells could be excavated on the extreme edge of the coast, which would produce water somewhat contaminated by the sea but still fit for human use. He had such wells dug at several points." Though the age of this oral tradition cannot be established, it does suggest the past importance and early use of puna and coastal seeps.

Recognising the essential role that freshwater sources have for communities, Englert (1948) provided one of the most comprehensive summaries of locations in which water was collected (see Fig. 2). Englert (p. 219) notes that these coastal seeps are quite abundant but often brackish and thus likely were the main dietary source of salt. He (p. 220) lists 21 coastal seep locations but admits that these are merely the significant locations, the

Figure 5. A coastal well (*puna)* feature located on the north coast of Rapa Nui near Ahu Raʻai. Photograph by Terry Hunt, 2015.

full list being beyond the scope of his book. These include Mataveri o tai, Tahai, Hanga Kaokao, Hanga Kuakua, Te Ava Renga, Te Puna rere takatea, Mauku roa, Te Pito Kura, La Pérouse (Hekiʻi), Hanga Tauvaka, Mahatua, Te Hakatea, Puna a Moeto, Hanga Tuʻu Hata, Ana Haitu, Vai Moai, Hanga Tetenga, Akahanga, Vaihu/Hanga Tee, Hanga He Mu and Koreha puoko viri. Some of these features are quite elaborate. Vai Moai, for example, is a large constructed well located between Hanga Tuʻu Hata and Hanga Tetenga that consists of a paved slope 5 m wide and 80 m long (p. 220). Similarly, Englert (p. 221) describes the well at Vaihu/Hanga Tee as composed of a long tank that once defended fresh water against mixing with seawater.

Inland Springs and Reservoirs

Springs occur where a groundwater aquifer is filled to the point that the water overflows onto the land surface. However, the porous nature of the island's geology provides only limited areas where springs occur above the coastline. Observations from the Spanish expedition to Rapa Nui in 1770 give one reference to an inland spring. Specifically, Sublieutenant Don Juan Hervé

provides only a passing reference to a spring that his group discovered when they dug pits for planting three wooden crosses on the northeastern side of the island: "At the moment of digging the hole on the centre hill, a fine spring of fresh water broke out, very good and abundant" (Ruiz-Tagle 2004: 91).

Cook (Ruiz-Tagle 2004: 161) too notes the existence of an inland spring when he writes that "towards the Eastern end of the island, they met with a well whose water was perfectly fresh, being considerably above the level of the sea". Cook (p. 161) also mentions that the islanders used this well to bathe. In contrast to this perfectly fresh spring, Cook (p. 285) notes that "on the declivity of the mountain [Terevaka?] towards the West, they met with another well; but the water was a very strong mineral, had a thick green scum on the top, and stunk intolerably".

Georg Forster of Cook's expedition also mentions the use of an inland well. Forster ([1777] 2000: 590) notes, "From this spot we continued our march a good way inland, and were conducted to a deep well, which appeared to have been formed by art, and contained good fresh water, though somewhat troubled." The inland locations and elevations of the described wells suggest that these wells were built around perched springs that formed due to the few impermeable volcanic dikes that crosscut the island's porous apron. While such features are relatively rare on Rapa Nui, Englert (1948: 218–19) documents about one dozen inland springs: Vai inu-inu, Puna Pau, Roiho, Vai teka, Vai taka-tiki, Vai tapu iru, Te Pahu, Roiko, Puna Marengo, Vai Uru, Vai Tara Kai Ua, Ana o Keke and Oroi. Métraux (1957: 66) documents two of these features. Dudgeon and Tromp (2014) use freshwater diatoms identified in the dental calculus of prehistoric Rapanui to argue for past reliance on inland spring water. Still, the output of these springs likely pales in comparison to that of coastal seeps. Additionally, the correspondence between the abundance of freshwater diatoms in dental calculus and the magnitude of reliance on fresh versus brackish drinking water is unclear.

Thus, in cases when the subsurface lacked sufficient permeability for fresh water to immediately enter the ground, it appears that Rapanui people modified the landscape to create pools. The best-known example of this activity can be found at Ava Ranga Uka A Toroke Hau (Vogt and Moser 2010). In a gully that runs south from Terevaka and near an ahu, Vogt and Kühlem (2018) have documented an elaborate set of water-retention features that include a stone-lined basin and possible dam feature. Stevenson (1997: 142) has also documented similar features possibly used for water diversion at the agricultural complex on Maunga Tari. Such features on the island are rare, yet further detailed surveys might reveal similar inland structures.

It should be noted that some authors (e.g., Heyerdahl and Ferdon 1961) claim that ravines on the slopes of Terevaka are indicative that the island

once was much wetter and that streams were present. Heyerdahl (1961: 26), for example, notes, "A limited number of dry ravines are observed in the basalt on the north coast, some with series of whirlpool depressions and other apparent evidence of such a considerable water erosion that it is tempting to suspect that they once contained permanent streams." Métraux, however, correctly noted that "the little ravines [known as *ava*] that furrow the slopes of its hills are volcanic in origin" (Métraux 1957: 65). Indeed, the porous substrate can account for the absence of permanent streams even during relatively wet times.

Lava Tubes and Caves

The subsurface of Rapa Nui is relatively rich in caves and lava tubes (Ciszewski *et al.* 2009). These tubes form when lava flows beneath the hardened surface. As solid basalt, the floors of these tubes can be impermeable and can collect substantial amounts of fresh water that percolates from the surface.

In 1774, Georg Forster became the first European visitor to mention the presence of caverns on Rapa Nui, but he states that his group did not enter any of them because "the natives always refused to admit us" (Forster [1777] 2000: 341). Palmer (1870: 168) later mentions a "subterranean reservoir" that exists in a lava tube pool at Vinapu. Routledge provides an extensive discussion of Rapa Nui caves, but she mostly describes them as places of burial and storage. She does mention, however, that "in one district underground ways filled with water extend to a great length, and the whole surface rings hollow to the tread of a horse" (Routledge 1919: 272). Unfortunately, Routledge does not specify whether or not this water is fresh. Heyerdahl comments that lava tubes provided useful access to freshwater springs and claims that "subterranean springs with evidence of early human improvements are … located at the floor of some of the deepest and largest underground caves, especially inland from Ovahe bay and near Vaihu" (Heyerdahl 1961: 26). He also notes that "a dependable subterranean water pool with good fresh water is found inland in the rocks of Vai-tara-kau-ua, where the fairly deep descent to the pool is artificially narrowed by large blocks, barely allowing a passage wide enough for one person" (p. 26).

Given the limited references to freshwater use in lava tubes, little can be said on the topic based on European accounts. It is possible that they were used throughout the historic period outside of the observations of European visitors. While caves are fairly common, the presence of water sources in them is less consistent. When water was available, these sources were likely used, although they were far sparser than the more consistent water found along the coastal margins of the island.

Crater Lakes

The only perennial bodies of surface fresh water on the island are the steep-sided crater lakes that exist where there are impermeable volcanic cores. There are three such lakes: in Rano Kau, Rano Raraku and Rano Aroi.

Given the size and depth of these three crater lakes and the lack of surface water elsewhere on the island, it is tempting to believe that Rapanui made early and extensive use of them. These bodies of water certainly have the potential to provide relatively stable sources of fresh water. Butler and Flenley (2010: 5), for example, argue that the lake at Rano Kau was "a permanent water supply for early inhabitants". Questioning the earliest dates known at Anakena (cf. Hunt and Lipo 2006, 2008), Flenley and Bahn (2007: 11) argue, "[I]s it not more likely that the early settlements would be near a good supply of fresh water, such as the crater lakes?"

While some researchers, in particular Rull and colleagues (e.g., Rull 2016, 2018, 2019; Rull *et al.* 2015, 2018), have recently emphasised the importance of fresh water from the craters at Rano Raraku and Rano Kau, even arguing that these were the only available water sources on the island (e.g., Rull 2018), there is little historical or archaeological evidence that the lakes were important sources of drinking water. There is some evidence, in the form of terrace features and plant microfossils, that the lakes may have been the focus of limited horticultural and/or domestic activity (e.g., Ferdon 1961a, 1961b; Horrocks, Baisden, Flenley *et al.* 2012; Horrocks, Baisden, Nieuwoudt *et al*. 2012; Horrocks *et al.* 2015; McCoy 1976). Additionally, the area around Rano Raraku was the primary location of moai carving, and the ceremonial site of 'Orongo on Rano Kau was the centre of the island's famous Tangata Manu ("Bird Man") ceremony. However, unlike areas along the coast and spots inland, the edges of the lakes are comparatively devoid of domestic features such as earth ovens (*umu*), gardens (*manavai*), areas of lithic mulching, and houses that characterise much of the island's settlement pattern (e.g., McCoy 1976; Morrison 2012; Stevenson and Haoa Cardinali 2008). The lack of other resources (e.g., marine food, land for cultivation) coupled with the steep walls of the volcanic craters, particularly at Rano Kau, made habitation in these areas less attractive. Thus, while drinkable water was available in the craters and likely consumed for activities that took place in these areas, these lakes were likely not daily sources of drinking water for pre-contact communities. Of course, further investigations into the deposits around the lakes may shed additional light on this topic.

Historic accounts support the conclusion that prehistoric Rapanui did not rely heavily on fresh water from the crater lakes. European visitors often commented on the presence of these lakes, but none state that Rapanui relied

on these freshwater resources. In 1797, for example, John Myer, on board the sperm-whaling ship *William*, joined a landing party that the islanders led to Rano Raraku. He writes, "Several of them [Rapanui] presented us with water, and firewood, and made signs for us to follow them, which we did to a small pond, filled with stagnant water, the surface of which was a mass of animalcula, of a green colour" (Richards 2008: 22). Sainthill ([1870] 2000: 107), an officer on the HMS *Topaze*, observes that "though the craters contain an abundant supply [of fresh water], our guides drank little". Similarly, Geiseler ([1883] 1995) notes that the crater lakes could be used in times of emergency, but he does not provide any evidence for such use. He merely states that "the craters of Rana Kau [Rano Kau] and Rana Roraka [Rano Raraku] always present the richest of freshwater reservoirs and these would be capable of supplying the needs of a population even larger than the one on Rapanui" (Geiseler [1883] 1995: 75). Additionally, Thomson (1891) notes that the water from the Rano Raraku lake is abundant but not particularly palatable. He states: "Drinking-water, the great desideratum on the island, obtained from sources that form the crater of Rana Roraka [*sic*], was, owing to its animal and vegetable impurities, unpalatable" (p. 491).

Later historic sources also indicate that crater lakes were not important sources of fresh water. Routledge relied on water from Rano Raraku during some of her 1917 visit, but she did so only in the absence of other, more convenient sources. She notes that dependence on this water resource "rendered us tiresomely dependent on getting native labor" (Routledge 1919: 137). Brown ([1924] 1979: 25) also notes that Rapanui people used water in the crater lakes for laundry at the time of his visit: "A procession of native horsemen and horsewomen passes up the slope of Rano Kao here every Saturday with bundles of clothes to wash." Though Routledge and Brown present a few cases of crater-lake water use, Métraux (1940: 12) generally states that "the water of the crater lakes (*rano*) … is apparently too inaccessible to have been much used". He goes on to write that the crater lakes "are difficult, and even dangerous, of access. Today as in the past the natives only draw water from them under the pressure of extreme necessity" (Métraux 1957: 66). Englert (1948: 217) similarly suggests that the lakes were not primary water sources for most of the island's population given the relative difficulty of access and lack of transport methods other than gourds. Heyerdahl's comments on the crater lakes mirror those of Englert and Métraux. Heyerdahl (1961: 26), however, adds that recent modern piping from the lakes makes these reservoirs a more viable resource. Overall, despite the relatively large amount of water held in the crater lakes, these sources of fresh water appear to have been of limited use until quite recently.

Carved Rainfall Basins: Taheta

As previously mentioned, puna serve a dual function by both allowing access to groundwater and catching rainfall. Métraux also mentions the possibility that the islanders previously carved basins into rock outcrops for the sole purpose of rainfall catchment. Métraux (1940: 12; see also Métraux 1957: 66) states, "I noticed on a few rocks near ancient settlements small rectangular depressions artificially carved. The natives explained them as tanks to collect rain water." Métraux (1940: 11) mentions a water catchment basin at Vai a Heva, where "a hole in a cliff where water collects has been carved all around into the form of a big human face". Englert (1948: 221–22) lists the names of six well-known carved rainwater basins: Vai a Tare, Vai a Repa, Vai a Mei, Vai uutu roroa, Vai a Heva and Vai a Are. He notes that there are hundreds of other features like this across the landscape in small and large sizes. These features are locally known as *taheta* and are typically ovoid or square in shape and often relatively small (e.g., less than 1 m in diameter) and shallow, though larger features occur (Fig. 6). Heyerdahl (1961: 26) also records the presence of taheta at several locations (e.g., Puna Marengo and Ahu Tepeu). In contemporary surveys, taheta features are quite common and are among the most numerous of prehistoric features found on the landscape. In Morrison's (2012) survey of the northwest coast, for example, taheta comprise 5.5% of all the features found.

Though numerous, taheta likely served as only a secondary water source for activities across the landscape and away from more substantial sources. The fact that most taheta are small and shallow suggests limited investment in them for long-term water storage. Englert (1948: 222) argues that these basins would go dry without sufficient rainfall and that Rapanui must have instead relied more heavily on spring water. Indeed, recent estimates of evaporation rates on Rapa Nui indicate that taheta cannot store sufficient water during the driest months (Brosnan *et al.* 2018). The timing and amount of rainfall on Rapa Nui are highly variable. Morrison's (2012) analyses of 60 years of rainfall demonstrate no regularity in the patterning of annual rainfall.

Despite Rapa Nui's unpredictable rainfall, references to rainfall catchments exist in historic and modern contexts. In 1774, Forster ([1777] 2000: 341) noted that the crew harnessed rainwater when a "smart shower falling on board the ship, enabled our people to collect a quantity of fresh water in the awnings and sails of the ship, which were spread to catch it". Additionally, Routledge (1919: 137) relied primarily on rainwater collected in barrels from the roof at Mataveri. Métraux (1940: 12) also notes that "today abundant water from the corrugated iron roofs is collected in tanks or barrels". Even as late as the 1980s, Porteous (1981: 177) states that many residents in Mataveri still "retain supplementary roof tanks" due to the slightly brackish nature of the water pumped from modern wells.

Figure 6. A shallow carved stone basin (*taheta*) for capturing rainwater. Photograph by Carl Lipo, 2015.

Sugarcane, Gourds and Moss

Historical sources suggest that Rapanui used several plants for past water procurement and storage. Mieth and Bork (2003) speculated that Rapanui may have consumed sap of the palm *Jubaea chilensis*. However, it is the consumption of sugarcane (*Saccharum officinarum*) as a thirst quenching plant that is documented in numerous historical accounts that start with Dutch captain Cornelis Bouman in 1722 (Dos Passos 1971: 68; Forster [1777] 2000: 327, 332; Geiseler [1883] 1995: 75; von Saher 1994: 99; Sainthill [1870] 2000: 107; Thomson 1891: 456).

Additionally, past visitors noticed that gourds (*Lagenaria siceraria*) were the primary tool for water transport. Bouman notes, "We found no furniture or pots, except calabashes in which they kept water which I tasted and found to be quite brackish" (von Saher 1994: 99). Though Cook observed that a scarcity of gourds for water storage meant that "a cocoa-nut shell was the most valuable thing we could give them" (Dos Passos 1971: 47), Thomson (1891: 29) later witnessed a profusion of bottle gourds that grew on the island. Englert (1948: 217) also notes the use of gourds for water storage. Relatively late accounts that start with Routledge (1919: 256) suggest that Rapanui used moss (*Campylopus* spp.) from the island's crater lakes to some extent "as a sponge to retain fresh water when at sea".

THE RELATIVE IMPORTANCE OF RAPA NUI'S FRESHWATER SOURCES

Our review of ethnohistoric evidence of freshwater use indicates that while Rapanui used a range of natural freshwater sources (e.g., crater lakes, inland springs, coastal seeps, caves, rainwater) and management strategies (e.g., taheta, puna, large basins), some of these were likely more important than others. Use of rainwater and taheta appear to be opportunistic and impermanent solutions to the limited surface fresh water, as most taheta are small and shallow and would dry up during times of low rainfall (Brosnan *et al.* 2018). Inland springs and large water diversion and catchment features, such as those discussed at Ava Ranga Uka A Toroke Hau by Englert (1948) and identified archaeologically by Vogt and colleagues (Vogt and Kühlem 2018; Vogt and Moser 2010), were also used, but these were likely of lesser importance given their limited numbers. Rano Kau and Rano Raraku were important locations of ritual activity (the Tangata Manu ceremony and moai carving, respectively), and the crater lakes were likely used as water sources during these activities. However, ethnohistoric accounts suggest that the crater lakes were not primary freshwater sources in the post-contact era, likely because of their difficulty of access. This is also clearly reflected in the archaeological record: the vast majority of pre-contact settlements are located along the island's coasts and away from the crater lakes. The ethnohistoric and archaeological data indicate that coastal freshwater seeps, and the puna constructed to impound this water, were some of the most numerous and most often used freshwater sources. While ethnohistoric and hydrological studies demonstrate that these sources are often brackish, they nevertheless provided some of the most readily available sources of drinking water.

How the use and abundance of different freshwater sources documented in the ethnohistoric record relate to pre-contact times is a matter of debate. Several researchers have suggested that deforestation and/or climate changes directly reduced surface freshwater availability on the island (e.g., Bahn and Flenley 1992, 2017; Mieth and Bork 2018: 52; Rull 2018, 2019; Steadman *et al.* 1994; Vogt and Kühlem 2018). Some have also suggested that deforestation led to the disappearance of possible streams (e.g., Bahn and Flenley 1992: 178; Steadman *et al.* 1994: 93). The effects of deforestation on freshwater availability are unclear, however, and limited existing hydrogeological evidence supports these claims. Given the very porous nature of the island's volcanic substrate, it is unlikely that perennial streams were ever prominent on Rapa Nui. Even if we assume that the loss of the palm forest decreased the amount of available surface fresh water, the process of forest loss took several centuries (e.g., Horrocks *et al.* 2015; Hunt and Lipo 2009; Mann *et al.* 2008) and would have led to the increased importance of coastal freshwater seeps and the other water sources discussed.

Regarding possible climatically induced droughts, some evidence for sedimentation and vegetation changes from cores taken from the island's crater lakes suggests that a drought possibly occurred from the 1500s to 1700s (e.g., Cañellas-Boltà *et al.* 2013; Rull 2016). Rull (2016, 2018, 2019) argues that this drought would have necessitated population migration to Rano Kau to access its fresh water as other sources, such as coastal seeps, became depleted. While droughts are well documented historically and certainly would have reduced fresh water available from taheta and the crater lakes (e.g., a drought in 2018 left the crater lake at Rano Raraku nearly completely dry), the impact on coastal seeps is questionable. While Rapa Nui's fresh water, including in the crater lakes, is ultimately fed by rainwater, the discharge rates and massive volume of the island's freshwater aquifer suggest that coastal groundwater could possibly remain a stable source even through drought periods. The lakes would suffer from not only loss of water through subsurface flows (Montgomery & Associates 2011) but also greater evaporation than groundwater. Thus, it is possible that the impacts of drought would be first observed in the lakes, as is occurring now. While there is some evidence for habitation and cultivation within and around Rano Kau crater, the density of archaeological features around the lake is insufficient to support claims of a large-scale abandonment of coastal areas. Indeed, throughout pre-contact and early historic times, most of the population lived along the coast, and both the ethnohistoric evidence presented here and recent archaeological analyses (e.g., DiNapoli *et al.* 2019) demonstrate the key importance of coastal water sources for Rapanui communities.

* * *

As a volcanic island with a highly porous substrate, Rapa Nui's geology makes surface water scarce and inland groundwater difficult to access. Coupled with unpredictable rainfall, these hydrogeological conditions necessitated diverse and innovative strategies to procure this vital resource. Guided by an understanding of the island's hydrogeology and an examination of ethnohistoric accounts, our review suggests that Rapanui used a number of creative strategies to procure and store fresh water. While additional chronological information about the use of these strategies is needed, many of them (e.g., puna and taheta) are associated with pre-contact remains and can be attributed to pre-European water-resource management. Early accounts repeatedly noted Rapanui use of brackish water from pools in coastal areas. These sources were abundant and often enhanced with constructed near-coastal "wells" known as puna, which improved access to groundwater and reduced its salinity. Water from coastal sources was likely stored using gourds and supplemented with water from the crater lakes, inland springs, lava tubes,

taheta and sugarcane. Historical and archaeological evidence suggest it is unlikely that Rapanui relied heavily on water from the island's crater lakes, which challenges recent claims that the crater lakes were the only or most important sources of drinking water (e.g., Rull 2016, 2018, 2019; Rull *et al.* 2018). The diversity of freshwater procurement strategies and reliance on coastal seeps highlights the successful adaptations and resilience of Rapanui communities to the challenges posed by the island's marginal environment. Overall, the ability of Rapanui to thrive despite their limited access to fresh water is a remarkable feat that warrants recognition and further study through archaeological and hydrogeological field research.

Using this ethnohistoric information, in combination with recently published hydrogeological data (Brosnan *et al.* 2018), we now have a solid basis for generating hypotheses about how patterns in the archaeological record relate to freshwater access. For example, it is worth considering how the spatial distribution of community patterning, in particular Rapa Nui's dispersed settlement pattern (organised around group-level competitive and cooperative behaviour connected to ahu), may be related to the constraints imposed by the locations of fresh water on the island (e.g., DiNapoli *et al.* 2018: 216–17; Hunt and Lipo 2018; McCoy 1976). Our recent spatial analysis of the relationship between ahu and different environmental variables suggests that ahu locations are closely tied to the availability of fresh water and coastal freshwater sources in particular (DiNapoli *et al.* 2019). This analysis shows that previously described associations between ahu and fresh water (e.g., Vogt and Kühlem 2018; Vogt and Moser 2010) are indeed part of an island-wide pattern. However, further theoretical, field and analytical work is needed to more fully evaluate hypotheses for both the cooperative and competitive processes that underlie this pattern. Importantly, resolving these issues requires additional baseline research, such as functional classifications of freshwater features like puna and taheta, continued surveys of freshwater resources, and chronological data on the development of these freshwater procurement strategies. For example, chronological information on the development of puna would help resolve current uncertainties about the relationship between periods of drought and differential use of coastal versus lacustrine fresh water. At the same time, the demands on the island's water supply continue to grow with increases in the resident population, along with the ever-increasing numbers of tourists (Figueroa and Rotarou 2016). As pumping from contemporary wells begins to reach its limits, such information about historic sources of water likely will become key to future communities on the island.

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ŌHĀUA TE RANGI AND RECONCILIATION IN TE UREWERA, 1913–1983

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ABSTRACT: This essay is an ethnohistorical reconstruction of Tūhoe Māori cognatic descent groups (*hapū*) in their struggle to maintain control over ancestral lands centred around the community of Ōhāua te Rangi deep in the Urewera mountains of New Zealand. The famous social anthropologist Raymond Firth happened to visit this community when it was in the middle of these struggles in 1924, documenting one hapū and its settlement with photos. The wider context of his visit serves as a sequel illustrating the continuing interplay of Māori kinship and power in Te Urewera that was examined earlier in this journal, but in the midst of predatory rather than benevolent colonial policies. The earlier policy of 1894–1912 had established Te Urewera as a large statutory reserve under virtual Tūhoe home rule, but the Crown soon subverted the statute and attempted to obtain the entire reserve. While examination of the earlier era was guided by Eric Wolf's theory of kinship, Marshall Sahlins's quite different theory helps to explain an apparent paradox of tatau pounamu, the Tūhoe ideal of reconciliation between kin groups.

Keywords: Tūhoe Māori, kinship, settler colonies, political economy, ethnohistory, assimilation policies, New Zealand

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I recently completed a detailed ethnohistory of how leaders of Tūhoe, a Māori *iwi* 'tribe' of New Zealand, established their traditional sanctuary as the very large Urewera District Native Reserve (UDNR) under Crown statute and their virtual home rule between 1894 and 1912 (Fig. 1) (Webster 2017, forthcoming; see Shore and Kawharu 2014 on the Crown). In my earlier report to the Waitangi Tribunal (Webster 2004, under contract), I had described how between 1915 and 1926 the Crown betrayed the intentions of the 1896 statute through a predatory purchase campaign and Urewera Consolidation Scheme (UCS) that took 70 percent of their spectacular and rugged reserve and relocated the Tūhoe *pupuri whenua* 'land withholders' to over 200 small blocks scattered throughout what by the 1950s was to become the Urewera National Park (Fig. 2).

These remnants of their sanctuary, a proud history buried in their ancestral lands, lay restlessly for nearly a century. Finally in 2014, confronted by similarly stubborn Tūhoe descendants and Waitangi Tribunal research revealing these and other treaty breaches since the 1860s, the Crown returned

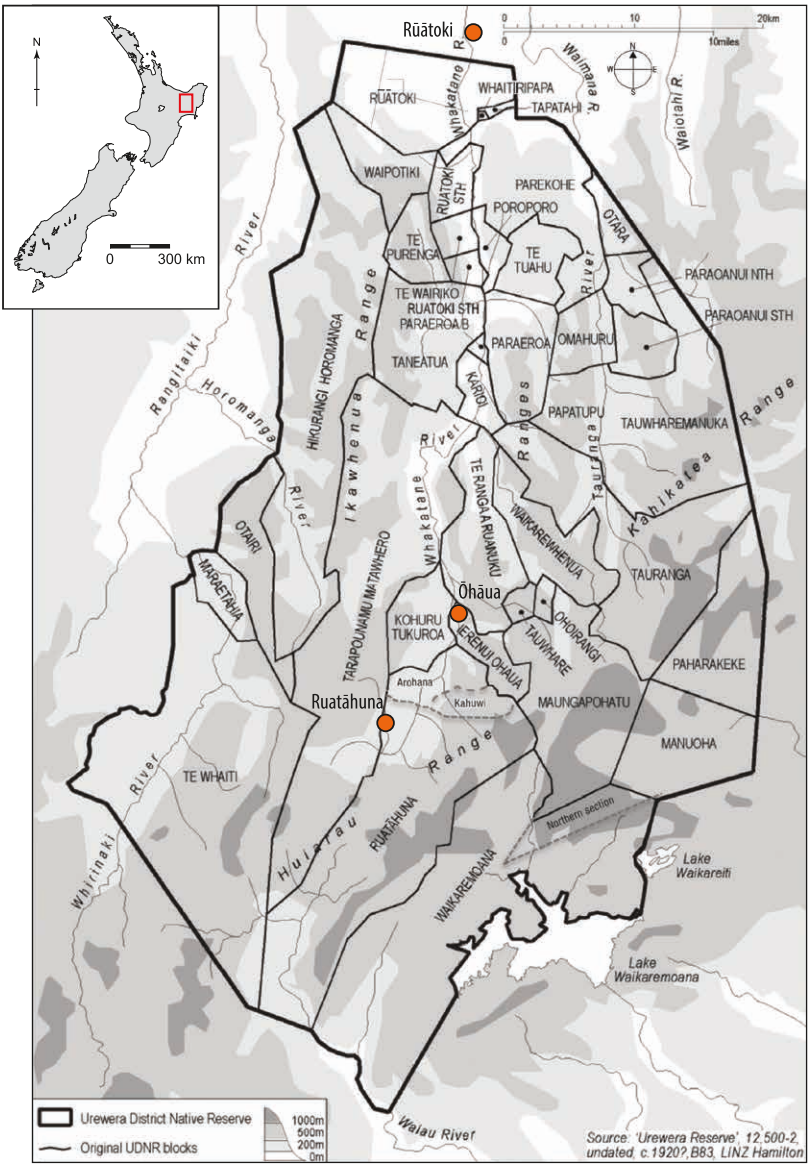

Figure 1. Urewera District Native Reserve showing topography and original blocks (1907). Adapted from "Urewera Reserve", 12,500-2, undated (c. 1920?), B83, held at LINZ, Hamilton, New Zealand.

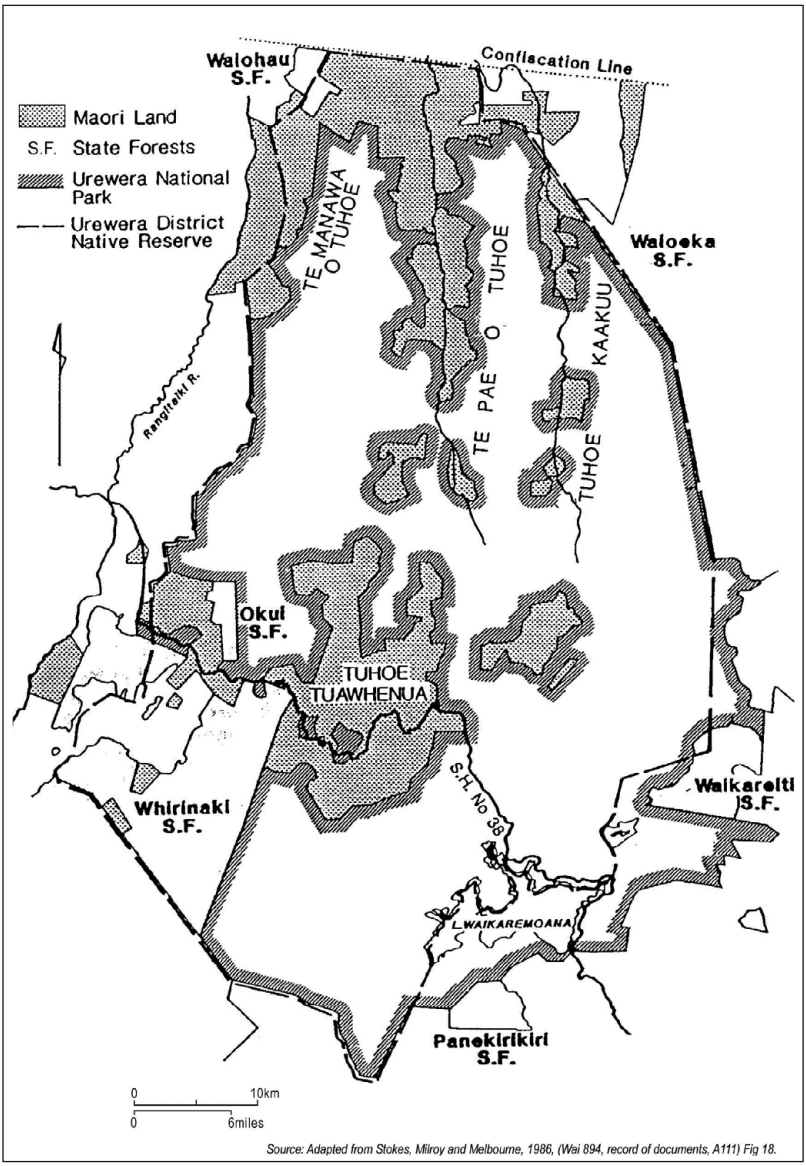

Figure 2. Tūhoe pupuri whenua land rights relocated in the new Crown "A" block under the Urewera Consolidation Scheme 1921–1926. Adapted from Stokes *et al.* (1986: Fig. 18).

control of their sanctuary to the Tūhoe with 50 specific acknowledgements and apologies. Setting a precedent for New Zealand, and even globally for indigenous claims to such a large tract of land, the parliamentary settlement was made under two statutes detailing the transfer of control and support of their future social and economic development (Te Urewera Act 2014; Tūhoe Claims Settlement Act 2014; see also Johnson 2016).

In my 2004 report to the Tribunal regarding the Crown's betrayal of the reserve, I had argued that contrary to the conclusions of other authoritative reports to the Tribunal (Binney 2002; Sissons 2002) the home-rule intentions of the 1896 Act had been followed sincerely by the investigative commission 1899–1903. Unlike the later appeals commission of 1906–7, it was comprised of a majority of influential Tūhoe *rangatira* 'leaders' (five of the seven members) and, for the first two years, chaired by the amateur ethnologist Percy Smith and assisted by another, Elsdon Best, who served as the commission secretary throughout its five years of work. The investigative commission's procedure deferred quite systematically to independent negotiations and decisions of the Tūhoe commissioners and other Tūhoe leaders outside its sessions, routinely reviewing and approving their conclusions and hearing for commission decisions only claims that the Tūhoe brought before them for adjudication. As well as in my 2004 report, I also argued my case for the relative control of the UDNR Commission by the Tūhoe themselves in my later publications (Webster 2010; 2017) and, in more detail, in my ethnohistory of the Tūhoe's establishment of their sanctuary as the UDNR 1894–1913 (Webster forthcoming). As recent histories documenting the continuous resistance of indigenous peoples in settler colonies have pointed out, persistent assumption of their assimilation (or passive victimisation) has often obscured these historical facts (Hill 2004, 2009; Johnson 2016).

However, by 1908 the relatively benevolent colonial policy that had established the UDNR under Tūhoe control began to be reversed, and by 1915 it had become systematically subversive of the 1896 Act (Webster 2004, under contract). Pursuing the thesis of my earlier article in this journal (Webster 2017) and Eric Wolf's kinship theory (Wolf 1982), this essay describes how Tūhoe leaders nevertheless continued to deploy the political-economic power of marriage alliances consolidating a cluster of several *hapū* 'cognatic descent groups' in an effort to stem this reversal of Crown policy. Whereas my earlier essay focused on a hapū cluster controlling the Ruatāhuna-Waikaremoana amalgamation proposed in 1902 at the southern end of the UDNR, this essay focuses on a hapū cluster controlling the four blocks immediately north of Ruatāhuna proposed in 1902 as the Ōhāua te Rangi amalgamation (Fig. 1; see also Fig. 8 below). As described in my earlier essay, between 1901 and 1912 leaders of the Ōhāua te Rangi hapū cluster had deployed its kin-based power behind the scenes of the UDNR

Commission and Native Appellate Court to advance land claims against the Ruatāhuna-Waikaremoana hapū cluster. The present essay describes how and to what extent these two previously antagonistic hapū clusters were able to close ranks against the increasingly predatory strategies of the Crown in its attempt to gain control over their Urewera lands.

This confrontation between the kin-based power of Tūhoe leaders and the capitalist-based power of the Crown happened to coincide with the visit of Raymond Firth, later to become an internationally renowned New Zealand social anthropologist, to the settlement of Ōhāua in 1924, located at the northern end of the Ierenui-Ōhāua block (Fig. 1). There he documented and photographed the buildings and resident members of Ngāti Rongo hapū (Figs 3, 4 and 5). Firth's account of the economic organisation of the Māori, drawing importantly upon this visit, was apparently oblivious to this chaotic and even tragic historical context of Urewera land and the Tūhoe. This reveals his implicit support of the assimilationist assumptions of settler colonies that dominated social anthropology through the 1960s regardless of continuous resistance of indigenous landholders.

In our early years of visiting Te Urewera 1972–86, I and my family navigated in relative innocence the maze of kinship relations laid out in some detail here, simply trying to understand how the many individuals we were meeting were related to each other. My effort since then has been to recover the wider historical context that the Tūhoe have lived but of which many of us remain oblivious. This has led me to understand the particular confrontation described here in terms of *tatau pounamu*,[1] perhaps best translated in this case as the paradoxical but determined reconciliation between antagonistic hapū which, in the face of an overpowering force of colonisation, must repeatedly close ranks generation after generation in the watchful but compassionate shadow of their ancestors.

THE ŌHĀUA TE RANGI HAPŪ CLUSTER AND THE UDNR 1899–1907

The ancestral *kāinga* 'settlement' of Ōhāua was located deep in the heart of "Te Rohe Pōtae o Tūhoe" or the Tūhoe sanctuary by the 1890s, low, old, heavily forested mountain ranges inland from the Bay of Plenty (Fig. 2). By 1908 the whole area had become the Urewera District Native Reserve and by the 1950s the Urewera National Park (Fig. 2), and since 2014 is officially known simply as "Te Urewera". In Figure 1, Ōhāua is located at the northern end of what was the Ierenui-Ōhāua block in 1907. In Figure 2, it is located at the north end of the eastern finger of the large Tuawhenua group of Tūhoe blocks surviving in Urewera National Park. As can be seen best in Figure 1, Ierenui-Ōhāua and surrounding blocks that were closely associated with it straddle the Whakatāne (traditionally, Ōhinemataroa) and Waikare Rivers halfway between the Tūhoe towns of Ruatāhuna and Rūātoki. Ruatāhuna is

in the low but steeply forested mountains of the interior of the old reserve and Rūātoki is at its north end where the river widens toward its coastal floodplains (Webster 2017: Fig. 1). As marked by the "confiscation line" in Figure 2, it is these more arable plains that were taken from the Tūhoe in punitive confiscations following the 1860s land wars, unjustly according to the 2014 Act.

The settlement of Ōhāua has been occasionally occupied by a few Tūhoe but usually deserted since the 1930s. Figures 3, 4 and 5, which will be examined later, show it as it was in 1924 when Firth visited there. After the Crown's relentless purchase campaign and chaotic Urewera Consolidation Scheme 1910–1926, the pupuri whenua, stigmatised by the Crown as "non-sellers", had often radically relocated their preferred ancestral land rights to other locations in order to vacate Crown preemptions or to be near the roads that the Crown promised to build along both the Whakatāne and Tauranga/Waimana rivers. Under Crown pressure to establish small "family farms" on the few lands still available to them, they usually gave up the traditional control of ancestral land by hapū consolidated in the UDNR and attempted to plan relatively small blocks for radically reduced descent groups. However, the roads were never built, and the over

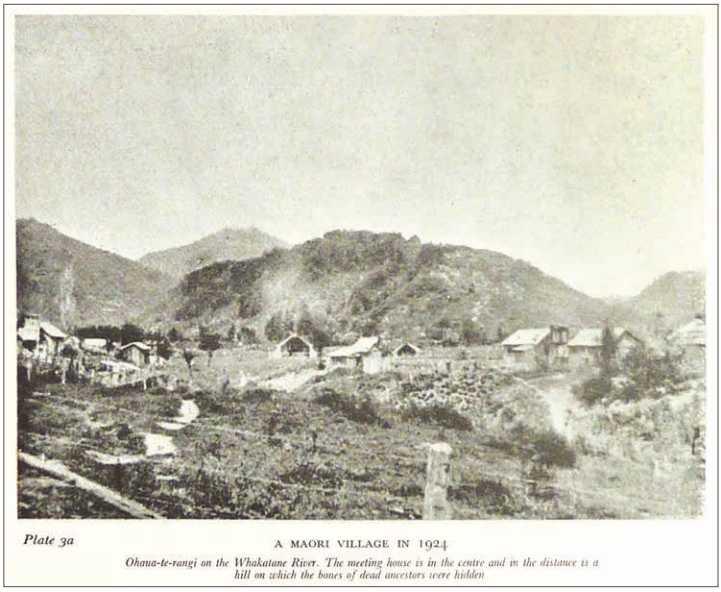

Figure 3. Settlement of Ōhāua in 1924, looking south up the Whakatāne/Ōhinemataroa valley. From Firth ([1929] 1959: facing p. 253).

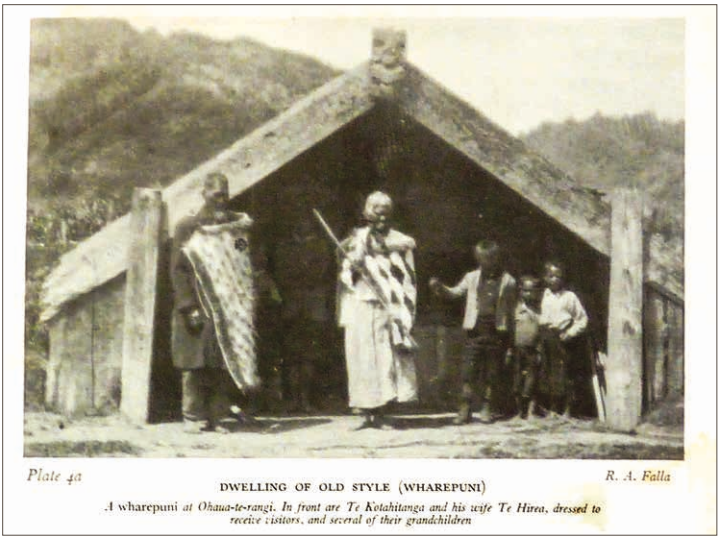

Figure 4. Waewae Te Roau and Te Hirea Pahiri at Ōhāua *wharepuni* 'sleeping house', 1924. From Firth ([1929] 1959: facing p. 284).

Figure 5. Waewae Te Roau with some of Ngāti Rongo hapū in front of Ōhāua *wharenui* 'meetinghouse' Te Poho o Pōtiki, 1924. From Firth ([1929] 1959: facing p. 253).

200 small and often isolated blocks were increasingly unable to support continued occupation without them. By 1930, in the wake of the UCS as well as Tūhoe participation and big losses in World War I, the flu epidemic and the depression, most of the hapū living at Ōhāua for generations had slowly moved out to Rūātoki or Ruatāhuna for schooling and employment.

My previous article described my exploration of hapū clusters as the likely basis of Tūhoe support of a proposed amalgamation of the 34 UDNR blocks into only 10 in 1902, and my reconstruction of an extensive marriage alliance between the hapū of two of the four clusters I examined, one of which I called the Ruatāhuna-Waikaremoana migrant marriage alliance (Webster 2017: Fig. 4). Following Wolf (1982), I presented these marriage alliances as examples of the deployment of kin-based power between hapū clusters extending their claims against other hapū clusters for control over certain blocks being established with the patronage of the Crown through the UDNR Commission, and argued that Tūhoe leaders themselves probably initiated the proposed amalgamations in order to control the intramural confrontations that establishment of their reserve had precipitated.

A review of the Ruatāhuna-Waikaremoana migrant marriage alliance is needed here because throughout the establishment of the UDNR it was threatened by Numia Kererū, a leader of Ngāti Rongo, the dominant hapū of the Ōhāua te Rangi amalgamation. The alliance had been developed since the early 1800s between the long-established Te Urewera hapū of Ruatāhuna led by Te Whenuanui I and migrants to and from the Lake Waikaremoana region resulting from what the Tūhoe call a "conquest" of lands formerly controlled by the Ngāti Kahungunu iwi southeast of Te Urewera (Webster 2017: 162, forthcoming: chap. 6). I argued that this conquest is better understood as an assimilation by intermarriage with friendly Ngāti Ruapani iwi or hapū loosely affiliated as a cluster of Ngāti Kahungunu. By 1898 the migrant marriage alliance was characterised by elaborate intermarriages between five descent groups that had gained through marriage only limited rights in the blocks of the UDNR outside Waikaremoana (probably due to the stigma of immigration or "conquest") but had major influence in Ruatāhuna due to their double marriage with two children of Te Whenuanui I. Judith Binney's correction of the common conflation between Te Whenuanui I, II and III (Binney 2002: 20–23) was indispensible to my untangling of the prolonged confrontation between Numia Kererū of Ngāti Rongo and Te Whenuanui II of Te Urewera hapū and the wider migrant marriage alliance.

It turned out that although Ngāti Rongo had little or no influence in either the Ruatāhuna or the Waikaremoana blocks in 1901, by 1906 Numia Kererū had insinuated his Tamakaimoana hapū allies in Maungapōhatu into the northern section of Waikaremoana, and by 1913 he had taken full control of the Kahuwī part of Manawarū at the coveted northern end of Ruatāhuna just south of Ōhāua te Rangi (Fig. 1) (Webster 2017: 171–74, forthcoming:

chaps. 6–8). Numia's strategy was persistent but ruthless, beginning in 1902 with tactful requests to Te Whenuanui II to recognise the Ngāti Rongo predecessor Kahuwī along with Arohana among the founding ancestors of Ruatāhuna. By 1906 he had subverted rising resistance from the Ruatāhuna-Waikaremoana migrant marriage alliance and Te Urewera hapū. By 1907 he had instigated a compliant successor to Te Whenuanui II following the latter's accidental death. Finally by 1913, he had entrenched his influence in Arohana as well as full Ngāti Rongo control of Kahuwī by supervising the partition of the entire Ruatāhuna block. In this strategy he had shamed the remnant opposition of the Taratoa cousins, a leading Te Urewera descent group of the migrant marriage alliance, before the Native Appellate Court, while gaining the public admiration of its chief judge.

Although Numia died in 1916, by the time of the Urewera Consolidation Scheme 1921–26 the formally recognised ancestral land rights of the Ōhāua te Rangi and Te Urewera hapū clusters in Kahuwī and Arohana, regardless of their earlier antagonism, had become closely cooperative in Manawarū. As will be described later, they also became the uncompromising centre of resistance to the UCS.

The 1901 survey plan of the four Ōhāua te Rangi blocks proposed for amalgamation in 1902 (Fig. 6) reveals several compromises and confrontations that were underway by that time, later resolved as shown in Figure 1. Below I will describe the hapū cluster that was found to hold dominant rights throughout the four Ōhāua te Rangi blocks by the time the investigative commission had settled these compromises and confrontations in 1903. The following section will then discuss the influence of this hapū cluster on the relocation of Ngāti Rongo and other hapū rights that survived the Crown purchase campaign and consolidation scheme in 1908–26. It will be shown that while the kin-based power of the Ōhāua te Rangi and Ruatāhuna-Waikaremoana hapū clusters had been deployed primarily against each other in 1901–7, their closure of ranks thereafter often enabled them to defend the remnants of their lands against the Crown's subversive policies.

Identification of leading descent groups and their intermarriage in the case of the proposed Ōhāua te Rangi hapū cluster was less striking than in the Ruatāhuna-Waikaremoana hapū cluster, but nevertheless suggested a marriage alliance across several hapū that was being developed in its early stages by 1903 (Fig. 7). Ngāti Rongo tended to dominate several other hapū in this emerging cluster, and they in turn were allied with hapū dominating adjacent blocks. Although on first analysis these peripheral alliances did not appear to include Te Urewera hapū of the Ruatāhuna-Waikaremoana alliance, this hapū also turns out to have been implicated in several ways.

Figure 6 is an enlarged portion of the 1901 survey plan 6873 for the UDNR, the most detailed plan I have encountered. Superimposed upon this map (unfortunately obscuring many details) were the outlines of the

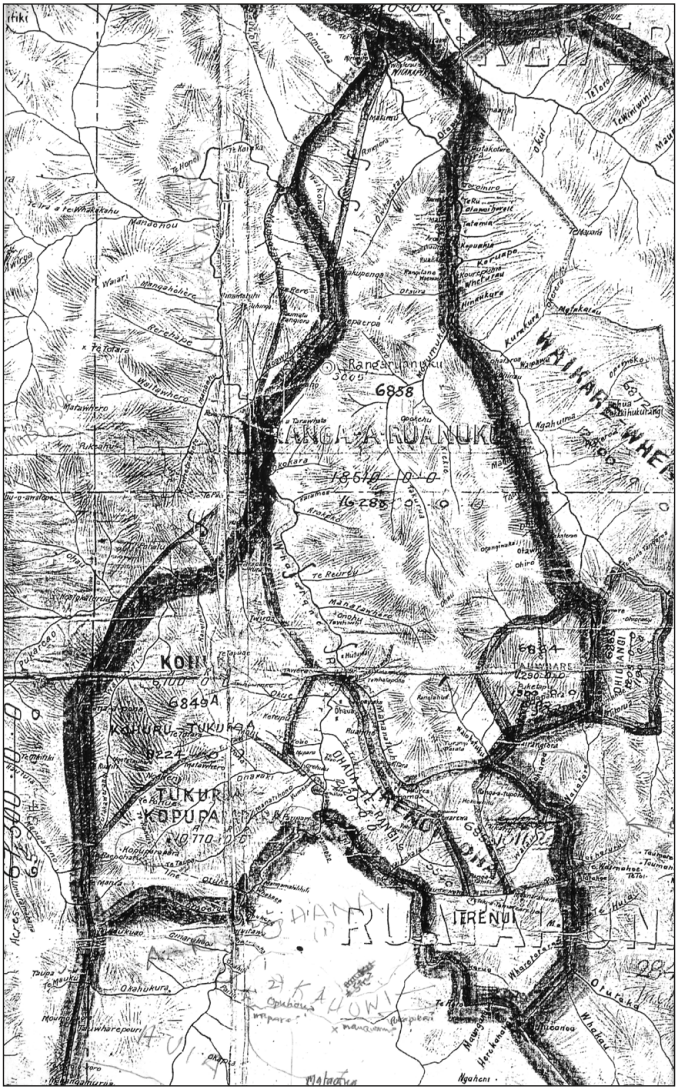

Figure 6. The four blocks of the proposed Ōhāua te Rangi amalgamation, May–Oct. 1902 (enlargement of plan amalgamating all 34 UDNR blocks into 10 titles). Note that the village of Ōhāua is at the northern end of Ōhāua te Rangi block. From "Plan as set forth in the UDNR Act 1896", Plan no. 6873, August 1901 (as modified for the 1902 amalgamation proposal), held at LINZ, Hamilton, New Zealand.

amalgamations proposed in 1902. The amalgamation of the Ierenui-Ōhāua, Kohuru-Tukuroa, Te Ranga a Ruanuku and Tauwhare blocks was to be known as "Ōhāua te Rangi", the name by which Ōhāua was first claimed for Ngāti Rongo hapū by Numia Kererū Te Ruakariata before it was merged with Ierenui. Numia later gave evidence that Ōhāua was "named after Rākeinui['s] wife Haueiterangi" (NACMB 1, 1912: 25). The following October 1902, soon after the amalgamation proposal was cancelled, the Ierenui-Ōhāua block was confirmed by the commission in the name of Ngāti Rongo and Ngāti Rākei hapū; the Kohuru-Tukuroa block was confirmed in the name of Ngāti Rongo, Ngāti Tamariwai and Ngāti Korokaipapa hapū; Te Ranga a Ruanuku, the largest block, was confirmed in the name of Ngāti Hā hapū, and Tauwhare, the smallest block, was confirmed in the name of Ngāti Mura hapū. On the face of it then, all these hapū together comprised the Ōhāua te Rangi hapū cluster.

Although this official naming of hapū in 1902 reflected recognition of a priority of rights in each block, it also obscured a shifting overlap of rights that extended not only between the four blocks but also beyond their proposed amalgamation. The people of Ngāti Hā are nowadays known as Ngāti Rongo, Ngāti Tāwhaki and Tamakaimoana (Kruger 2004: 29). While neither Ngāti Tāwhaki nor Tamakaimoana hapū were named as holding rights in the Ōhāua te Rangi amalgamation in 1902, Ngāti Tāwhaki was recognised to hold dominant rights over the adjacent Tarapounamu-Matawhero block to the west, and Tamakaimoana was dominant or influential in all three of the adjacent blocks to the east (Maungapōhatu, Ohiorangi and Waikarewhenua). The latter two blocks were awarded in the name of Ngāi Tama hapū, but this was primarily part of Tamakaimoana hapū (Best [1925] 1973, Vol. I: 223). Indications of confrontations and compromises can be seen in Figure 6 along the western boundary of the Ōhāua te Rangi amalgamation, probably between Ngāti Rongo hapū and Ngāti Tāwhaki hapū, dominant in the adjacent Tarapounamu-Matawhero amalgamation. Similarly, details of Figure 6 shown along the eastern boundary of Ōhāua te Rangi amalgamation reflected closely overlapped rights there, probably with Tamakaimoana hapū, dominant in the Maungapōhatu amalgamation. Although Te Urewera hapū of the Ruatāhuna-Waikaremoana alliance was nowhere named, as will be described below it was influential throughout the four blocks, albeit subordinate to the named hapū.

The procedure described in my previous article led to the identification of three descent groups with leading shares in at least three of the four blocks of the Ōhāua te Rangi amalgamation. Figure 7 is arranged to depict these three leading descent groups: from left to right in larger font, descendants of Rongokataia and his wife, Kiwaenga Tamahore; descendants of Ruakariata and his wife, Patu Rangiwhakahaerea; and descendants of Tamaro and his wife, Miriata. As indicated by the extent of their recent shared ancestry as well as their land rights by 1903, these three descent groups were the dominant deployers of kin-based power in the four Ōhāua te Rangi blocks.

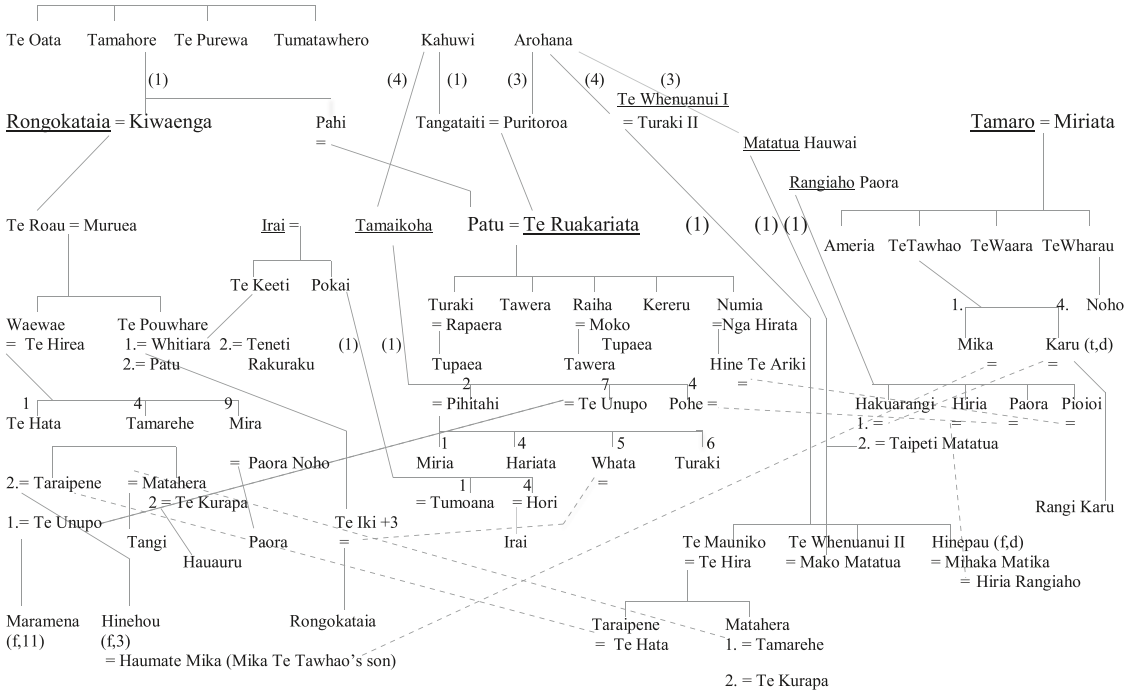

Figure 7. Intermarriage of descent groups of the Ōhāua te Rangi hapū cluster.

1. descent groups identified by underlined elders or predecessors (those of three leading descent groups in larger font);
2. vertical lines denote filiation (parent to child) or descent (if numbered, this denotes the number of generations spanned);
3. horizontal lines connect siblings (only those important to intermarriages shown; numbered by birth order);
4. = denotes marriage to person above or adjacent (numbered by priority if more than one marriage);
5. dotted lines denote the same marriage or person connecting different descent groups;
6. if notable, (f,11) denotes female gender and age; (m,d) denotes male gender and deceased.

The Rongokataia and Ruakariata descent groups include the leading rangatira of Ngāti Rongo hapū at what by the 1930s were called its two "sister marae". These *marae* 'meeting areas with meetinghouses (*wharenui*)' are located at Ōhāua in the original Ōhāua te Rangi block and at Tauarau marae in Rūātoki further down the Whakatāne River at the northern end of the reserve. Both these branches of Ngāti Rongo traced their descent from the ancestor Rongokarae some 12 generations earlier, but through one or another of the four famous war-leader brothers at the top of Figure 7 (Best [1925] 1973, Vol. II, plate 8). These four brothers are memorialised in the four *pou* 'posts' at the entryway of the wharenui at Ōhāua, Te Poho o Pōtiki (Fig. 5). The wharenui at Tauarau in Rūātoki is named after Rongokarae, the founding ancestor common to both branches of Ngāti Rongo. The relative seniority between these two sister marae is apparently ambiguous and, as is the case with many forms of *tuakana* and *teina* 'senior and junior siblings, cousins or ancestors' ranking, jokes are made about it between the two hapū branches.

Searching for evidence of a wider a hapū cluster, I also inserted in Figure 7 the bare outlines of five other descent groups with whom the three leading descent groups had significant intermarriages, although none of these held leading rights in most blocks of this amalgamation and their subaltern or subordinate status relative to the three leading descent groups can be assumed. These five subordinate or minor descent groups are underlined from left to right as the Irai, Tamaikoha, Te Whenuanui I, Matatua and Rangiaho groups.

As well as depicting significant marriage alliances within the Ōhāua te Rangi hapū cluster, my choice of the five subordinate or minor descent groups inserted in Figure 7 reflect overlap with the descendants of Arohana and Kahuwī as laid out by 1912 to support Numia Kererū's claim for Ngāti Rongo hapū against Te Urewera hapū for Manawarū at the northern end of Ruatāhuna block (Webster 2017: Fig. 5). Tamaikoha, Te Ruakariata, Te Whenuanui I and Matatua Hauwai (from left to right in Figure 7) appear in both genealogies. The comparison also revealed the significance of *two* double marriages in Te Whenuanui I's line. The first double marriage was between his children Te Haka and Hinepau and the migrant marriage alliance cousins Mako Matatua and Mihaka Matika, and the second was between his *mātāmua* 'first-born' daughter Te Mauniko's two daughters, Taraipene and Matahera, and Waewae Te Roau's two sons, Te Hata and Tamarehe.

While the first double marriage had consolidated the Ruatāhuna-Waikaremoana migrant marriage alliance with Te Urewera hapū, the second had apparently established an alliance between Te Urewera hapū and Ngāti Rongo hapū, which by 1902 was nevertheless confronting Te Whenuanui II, Te Urewera hapū and the migrant marriage alliance on both its Ruatāhuna and Waikaremoana fronts. As will be described later, marriages becoming

apparent in Figure 7 revealed still further unanticipated affiliations between Te Urewera hapū and its Ngāti Rongo antagonist, certainly by the 1950s but even in 1903 in the midst of these confrontations.

The double marriage between Waewae's two sons and Te Whenuanui I's two mātāmua granddaughters probably occurred in the 1890s. If this is seen as an alliance between the Rongokataia branch of Ngāti Rongo and Te Urewera hapū, the most significant alliance in Ngāti Rongo's Ruakariata descent group was the double marriage with the Tauranga-Waimana River branch of Te Urewera hapū led by the famous war leader Tamaikoha (Fig. 7) (Webster 2010, forthcoming: chap. 4). Including Te Unupo's first child by mātāmua Te Hata Waewae, these marriages produced 12 children.

The complex intermarriages of the Irai descent group can also be followed in Figure 7, marking closer alliance between the two branches of Ngāti Rongo hapū but apparently none with Te Urewera hapū. Marriage of Irai Paraheka's three grandchildren into the Ruakariata as well as the Rongokataia leading descent groups appears to have been quite a coup for his line. His son Pokai's wife Rakapa Mohi's strong shares in three blocks of the Ōhāua te Rangi amalgamation were the only source of his grandsons Tumoana and Hori's rights there. The Irai alliance can even be seen as a triple marriage alliance because Miria and Hariata Tupaea's younger sister Whata soon married Te Pouwhare and Whitiara's mātāmua son, Te Iki.

The other four descent groups depicted in Figure 7 because of significant marriages with the three leading descent groups (Tamaikoha, Te Whenuanui I, Matatua and Rangiaho) all turn out to be closely affiliated with Te Urewera hapū by 1903. The often double marriages between siblings or cousins of the Te Whenuanui and Tamaikoha branches of Te Urewera can be seen in terms of their role in allying the Rongokataia and Ruakariata branches of Ngāti Rongo hapū indirectly. Similarly, the line from Matatua Hauwai was affiliated with Te Urewera hapū of Ruatāhuna as one of the five closely intermarried descent groups of the Ruatāhuna-Waikaremoana migrant marriage alliance, as well as by marriage of his daughter Mako to Te Whenuanui II (Fig. 7). Matatua's descent from Arohana was furthermore through his mother Hinepoto, the source of Te Urewera's leading rights in Ruatāhuna and also the mātāmua line from Arohana (Webster 2017: 159). It furthermore turns out that Rangiaho Paora and his children were leading descendants of Te Urewera hapū, and indeed were tuakana or senior, in ancestral birth order, to Te Whenuanui I's line if they choose to affiliate with that hapū (Best [1925] 1973, Vol. II, plate 8: 1–2). As can be seen in Figure 7, Rangiaho's four children appear to have been married strategically into every descent group of the Ōhāua te Rangi amalgamation except the Rongokataia branch of Ngāti Rongo. Most importantly as one of the marriages between Te Urewera and Ngāti Rongo, Rangiaho's youngest son, Pioioi, was married to Hine te Ariki, the mātāmua daughter of Numia Kererū Te Ruakariata.

It can be concluded that by the time Tūhoe had established their sanctuary as the Urewera District Native Reserve in 1907, the Ōhāua te Rangi hapū cluster was in the process of consolidation throughout its four blocks, and that regardless of Ngāti Rongo's rising confrontation with Te Urewera hapū in Ruatāhuna and Waikaremoana blocks immediately to the south, at least indirect alliances were being established between these same two hapū in the Ōhāua te Rangi blocks. What had become of these alliances by the time the Crown had dismantled the reserve in its purchase campaign and the Urewera Consolidation Scheme?

THE ŌHĀUA TE RANGI BLOCKS IN THE CROWN'S BETRAYAL OF THE UDNR 1908–1921

This is the chaotic era that I sought to clarify in my report to the Waitangi Tribunal (Webster 2004, under contract). My report also examined the preceding Crown purchase campaign that persisted from 1908 to 1921 and left both the Crown and Tūhoe in a predicament that was thought best resolved by the 1921–26 consolidation scheme. The whole era 1908–26 was, objectively, the Crown's betrayal or at least subversion of the UDNR, but the policies were more sympathetically seen by some of both parties of the time as intended to assist assimilation of so-called "primitive" Māori with the aim of effecting "modernity". In any case, the resulting chaos was compounded by the global crisis of war, flu epidemic and post-war euphoria. While the establishment of the UDNR exemplified Tūhoe deployment of kin-based power with the passive patronage of the Crown, its betrayal exemplified the Crown's power (and that of opportunist Tūhoe) "to break through the bounds of the kinship order" foreseen by Wolf (Webster 2017: 164–77). Nor can the subversion be stereotyped as Māori victims on the one hand and *Pākehā* 'European settler' oppressors on the other.

The UDNR started to come under threat in 1908, less than a year after it had finally been statutorily established. The previously benevolent assimilationist policy toward Māori became more forceful and, perhaps guided by the "enlightened" colonial policy of indirect rule (Crowder 1964), by 1910 Apirana Ngata was being used to facilitate the new Crown strategy. Seddon had died, his "half-caste" Native Minister "Timi" Carroll had been replaced by William Herries and Prime Minister Joseph Ward met with the Tūhoe prophet Rua Kenana to discuss the UDNR. Meanwhile, the UDNR Komiti Nui (General Committee) was elected by UDNR block committee representatives and, chaired by Numia Kererū, purged Rua's followers from among its members. Rua Kenana's determination to sell his followers' shares in the UDNR to develop his commune in Maungapōhatu had been recognised by the government as an opportunity to break down the Komiti Nui's effective use of its home-rule powers to resist land sales under the cover of short-term leases (Webster 1984–85). Apirana Ngata's rise to influence

in Parliament was bolstered in 1910 by his intervention in the Komiti Nui to force the inclusion of Rua Kenana's followers. Although I think I was the first to report Ngata's "breaking" of the Komiti Nui in 1910, Judith Binney's later account (2002: 442–45) of his subversive role in the Crown's purchase campaign supports my assessment.

Numia Kererū Te Ruakariata died in 1916, unable to stem the Crown's strategy, especially as it systematically circumvented the 1896 statute and the Komiti Nui by seeking out and dealing with individuals in vulnerable or tempting situations (Webster 2004: 143–212, under contract). After 1910 the Crown purchase campaign intensified by approaching individual Tūhoe and treating their shares, which had been intended by the 1896 Act to be electoral rights, as if they were shares of ownership in land instead, thereby purchasing in bad faith if not illegally under that act. A decade later, Apirana Ngata's political ambition was capped by his rapid organisation and supervision of the Urewera Consolidation Scheme in 1921, the repeal of the UDNR Act the following year, and the Crown's acquisition of 70 percent of the reserve that it had purchased piecemeal as individual shareholdings held in common throughout the previous decade, covering up possible illegalities with retrospective legislation.

The predatory purchase campaign that had been organised when sales by Rua's followers began to slow found itself confronted in 1918 by increasingly organised pupuri whenua preventing the Crown from acquiring all the shares in any one of the 34 blocks of the reserve. Petitions from Tūhoe requesting relief from the campaign in order to develop agricultural production in their reserve were ignored, and implicitly accusatory lists of "non-sellers" were published and circulated instead. However, the government was becoming aware of its predicament: the shares it had obtained, although often the majority in a block (especially in the Tauranga-Waimana valley, where Rua's followers predominated), were held in common with the pupuri whenua in "every part" of every block (according to the Solicitor General) and separable from them only by outright expropriation by Parliament or by laboriously pressing partition orders for each block through the distrusted Native Land Court. Alarmingly for the government, despite unusual losses in the war, the flu epidemic and poverty, through a higher birth rate than mortality rate the number of Tūhoe "non-sellers" had actually become greater than that of the original owners of the reserve.

Ngata's innovative consolidation plans were intended to gather together Māori land shares fragmented by successions and alienations through the Native Land Court so that they could be economically farmed (or sold) by their Māori owners. However, by 1921 this plan was mobilised by the government for the opposite purpose in the Urewera Consolidation Scheme: to consolidate *the Crown's* scattered purchases for its own goals of Pākehā

'European' settlement, mining, forestry, scenic conservation and moving the troublesome Tūhoe onto the labour market. Native Minister Coates confidentially reassured the Minister of Lands that the "underlying principle of consolidation of [Māori land] interests is the extinction of existing titles and the substitution of another form which knows no more of ancestral rights to particular portions of land" (Webster 2004: 223, citing O'Malley 1996: 100). Furthermore, Ngata himself was used to organise the scheme in a three-week *hui* 'meeting' gathering all pupuri whenua or their representatives at Tauarau marae in Rūātoki in August 1921. He apparently gained the confidence of most Tūhoe in closed negotiation sessions and agreements that were not recorded but later became controversial.

Ironically, the only accurate source regarding the size and relocation of pupuri whenua consolidated shares in the old UDNR is the survey plan of UCS blocks and detailed but chaotic accounting compiled near the end of the scheme in 1925–26 (UCMB 2A: 203–18; Webster 2004: 316–48, Map 10). Figure 8 is an expanded portion of Map 11 from Webster 2004 (p. 342), which overlays the new (UCS) blocks on the original (UDNR) blocks shown in Figure1. Along with repealing the 1896 Act, the 1921 scheme apparently intended to expunge all such records of the UDNR, supporting Coates's intention of a result that "knows no more of ancestral rights to particular portions of land".

The compilation of information on the new Urewera Consolidation Scheme blocks cited above (Table 1, Fig. 8) tabulated consolidated shares, gross area, value and equivalent area deducted for roading, cost and equivalent area deducted for survey, net area, survey plan number and date of final approval (usually unsigned) for each of 232 blocks (including some small *urupā* 'graveyards', school reserves and *papakāinga* 'homesteads'). The piecemeal deduction of an average of 40 percent of the gross area of each block was ambiguous and perhaps never made clear to most Tūhoe (Webster 2004: 263–67, under contract). These large deductions *in land* were taken from *each* block for roading (which was never built) and survey (which, if the predicament resolved by consolidation had been admitted by the Crown to be its own predicament rather than the Tūhoe's, would have been for the Crown to pay).

Throughout the UDNR the result of this often unanticipated reduction of each block obviously compromised the feasibility of the small-farming ideal. Moreover, especially in the upper Whakatāne River basin, overcrowding of the relocated pupuri whenua blocks was aggravated by two developments: refugees from the scheme's compulsory evacuation of Waikaremoana and most of Te Whaiti blocks, and the UCS commission's reaction to the rising influence of the Apitihana ('oppositionist') movement refusing cooperation with the scheme and centred in Manawarū (Webster 2004: 130–40, 290–316, 456–65, 554–96, under contract; O'Malley 1996). Many of the refugees from

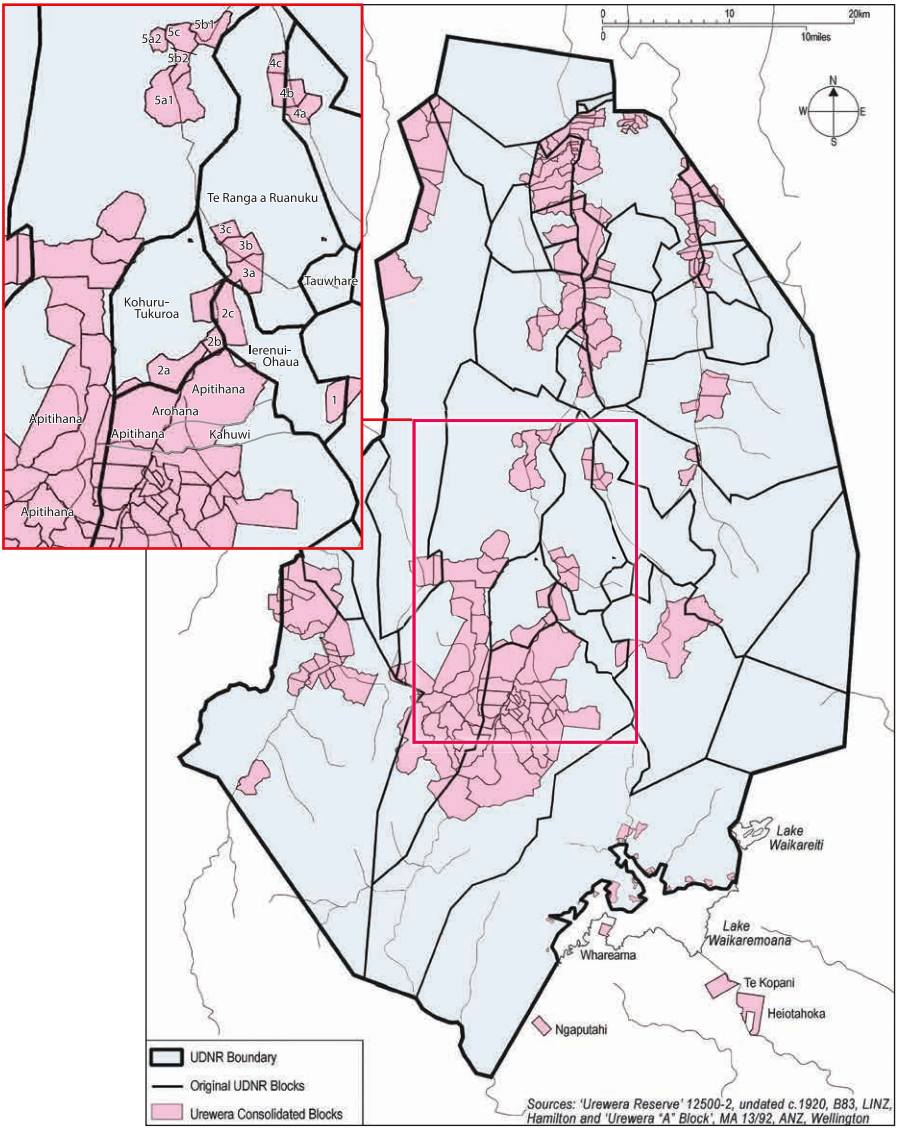

Figure 8. Pupuri whenua (UCS) blocks relocated in Ōhāua te Rangi and nearby UDNR blocks by 1926. All locations approximate, including Manawarū (Kahuwī and Arohana). Adapted from Webster (2004: Map 11, p. 342). See Table 1 as a key to the blocks.

Table 1. Key to UCS blocks in Figure 8.

1.	Kakewahine block: 1,007 acres reduced to 624; leading contributors Poniwahio, Wakaunua; Tamakaimoana or Ngāti Hā hapū.
2a.	Houhi block: 1,192 acres reduced to 715; leading contributor Te Amo Kokouri; Te Urewera and Ngāti Rongo hapū.
2b.	Paripari block: 155 acres reduced to 100; leading contributors Waewae, Taratoa, Tangira; Ngāti Rongo and Te Urewera hapū.
2c.	Ruahine block: 2,138 acres reduced to 1,234; leading contributor Waewae; Ngāti Rongo, Ngāti Tāwhaki and Te Urewera hapū.
3a.	Raketihau block: 900 acres reduced to 615; leading contributors Te Wao, Pareihe; Te Urewera hapū.
3b.	Tutu block: 528 acres reduced to 326; leading contributors Wharekiri, Matahera; Ngāti Rongo and Ngāti Tāwhaki hapū.
3c.	Taumapou block: 296 acres reduced to 178; leading contributors Putiputi, Heurea; Ngāti Tāwhaki and Te Urewera hapū.
4a.	Totoramau block: 713 acres reduced to 443; leading contributors Taihakoa, Wirimu; Ngāti Tāwhaki, Te Urewera and Tamakaimoana hapū.
4b.	Pakihi block: 893 acres reduced to 548; leading contributors Putiputi, Hori, Tahuri; Ngāti Tāwhaki and Tamakaimoana hapū.
4c.	Korouanui block: 227 acres (including part of 90 from Ruahine) reduced to 153; contributors Wharekiri and son Hieke; Ngāti Rongo and Ngāti Tāwhaki hapū.
5a.	Te Honoi block: 2,975 acres reduced to 1,533; leading contributors Tangohau, Moihi; Ngāti Tāwhaki, Te Urewera and Ngāti Rongo hapū.
5b.	Marumaru block: 1,263 acres reduced to 652; leading contributors Motoi, Matioro; probably Ngāti Tāwhaki and Te Urewera hapū.
5c.	Uruohapopo block: 718 acres reduced to 411; leading contributors Peka and Tame, perhaps Tangohau relatives; hapū affiliations unclear.

Te Whaiti as well as Waikaremoana had their shares relocated in the upper Whakatāne River valley, and many of them joined or actively supported the Apitihana (Webster under contract: chap. 9). Finding the Apitihana intransigent, UCS commissioners punished them by refusing access to purchase records that would facilitate their independent negotiation with other pupuri whenua groups cooperating with the commissioners as well as prioritise relative rights between different Apitihana groups. Especially in the upper Whakatāne River valley the divisive and confusing results of these two UCS policies continue to arouse antagonisms between contemporary Tūhoe.

The UCS commissioners furthermore attempted to weaken the Apitihana by splitting its loyalties. They recruited what they saw as supporters of the scheme "from Rūātoki" to confront them in the Ruatāhuna hearing of April 1923 (Webster 2004: 563–64, 568–79, 592–94, under contract: chap. 9). The Ōhāua te Rangi hapū cluster was probably often caught in the middle of these ambiguities. Among what the commissioners perhaps naively assumed to be UCS supporters were Te Hata Waewae, Te Pouwhare Waewae, Tawera Moko, Paora Noho, Taihakoa Poniwahio and Wiremu Motoi. The first three of these were leaders of Ngāti Rongo, and Paora was a Te Urewera hapū leader married to a Waewae sister (Fig. 7). Taihakoa Poniwahio was prominent in Tamakaimoana hapū and probably a key influence in relocation of the new blocks in the Te Ranga a Ruanuku–Waikare River area, and Wiremu Motoi was prominent in Ngāti Tāwhaki hapū and probably an important influence in relocation of the new blocks in the Hanamahihi-Uruohapopo area (Fig. 8, Table 1, UCS block groups 4 and 5, respectively). Some of these "supporters" ignored the commissioners' invitation and did not attend the confrontation with the Apitihana in Ruatāhuna, and others may have had the commissioners fooled or were "playing to both sides". Nevertheless, Te Hata's, Poniwahio's and Tawera's criticisms of the Apitihana were clearly hostile, probably putting some of their own descent groups in difficult positions and even splitting their own hapū. All were leaders of consolidation groups holding large shares that were finally strategically relocated in many of the new blocks. They themselves finally relocated their own shares to Kawekawe, Waikirikiri and Waiharuru blocks in the Rūātoki vicinity.

What were the results of these converging pressures on the Ōhāua te Rangi pupuri whenua's relocation of their surviving UDNR land rights? It is difficult to determine the proportion of shares retained by any group of pupuri whenua because the government's own reports were contradictory as well as misleading (Webster 2004: 247–71, Maps 5, 6, 7, 13, under contract). A rough estimate of shares retained by the Ōhāua te Rangi hapū cluster by 1921 would be as follows: (i) 60 percent in Ierenui-Ōhāua block, (ii) 50 percent in Kohuru-Tukuroa block, (iii) 30 percent in Te Ranga a Ruanuku block, and (iv) 40 percent in Tauwhare block. In blocks surrounding the Ōhāua te Rangi blocks the rough proportion of shares still held by pupuri whenua was similar: to its east, about 50 percent was retained in Maungapōhatu and 30 percent in Ohiorangi and Waikarewhenua blocks; to its west, about 40 percent was retained in Tarapounamu-Matawhero block. To the south in Ruatāhuna's five partitions, the proportion of shares retained by pupuri whenua was much higher, averaging 75 percent primarily because purchasing had been delayed by the misplacement of the 1912–13 partition order (Webster 2004: 116–30, under contract: chap. 9).

However, fully 81 percent had been retained in the Arohana and Kahuwī partitions of Manawarū immediately south of the Ōhāua te Rangi blocks. This relatively high proportion was probably due to the leadership of Te Amo Kokouri, his son Wharepouri, Pineere (Pomare) Hori and Matamua Whakamoe, who by 1923 had emerged as leaders of the Apitihana movement steadfastly refusing cooperation with the consolidation scheme (Webster 2004: 130–40, under contract: chap. 9). It is also significant that although all four leaders were primarily affiliated with Te Urewera hapū, Te Amo was a key ally of Numia Kererū in his strategy to gain control of Kahuwī for Ngāti Rongo, and Pineere and Matamua were leading members of the migrant marriage alliance that had supported Te Whenuanui II's resistance against Numia (Webster under contract: chap. 9). This closing of ranks between the opposing sides of the confrontation over northern Ruatāhuna and northern Waikaremoana reveals the rising sense of urgency in the Apitihana resistance to the UCS.

Despite all these adverse circumstances, it turns out that the stronghold of Apitihana resistance to the UCS were the pupuri whenua of Arohana and Kahuwī, the partition of Manawarū finally achieved by Numia in 1913 (Fig. 8). Along with leaders of the migrant marriage alliance and refugees from the evacuation of Waikaremoana, it was Ngāti Rongo and Te Urewera, the same two hapū that had fought each other for control of these areas 1902–13, who had most steadfastly closed their ranks against the consolidation scheme. Surprisingly (and perhaps only to avoid intervention by the Native Ministry), in 1925 the UCS commissioners finally deferred to these leaders in their decision that the Apitihana groups in Ruatāhuna 1 and 2 (Arohana and Kahuwī, respectively) would remain joined in their preferred area east of the Whakatāne River in Manawarū, including all of Arohana and most of Kahuwī. Their new block there would also be coextensive with the part to the west of the river, which was to stay with the Apitihana supporters of Ruatāhuna 3, Huiarau (Webster 2004: 569, under contract; UCMB 2A: 178–79).

The general results of these conflicting factors for the Ōhāua te Rangi hapū cluster can best be seen in Figure 8 and Table 1. The radical 40 percent deductions and anticipation of a road that was never built, aggravated by inclusion of refugees and the divisive strategy of the UCS commissioners against the Apitihana on the one hand and the loyalties of the Apitihana movement on the other, resulted in relatively small blocks widely scattered throughout and beyond the four blocks that had been entirely controlled by this hapū cluster in 1907. Considering the solidarity of some hapū of the cluster (and especially Ngāti Rongo) with the stronghold of the Apitihana movement in adjacent Manawarū, many of their shares probably ended up in ("thrown in with", to quote a contemporary leader) the catch-all Apitihana block lists rather than in the new blocks established in or near the four original Ōhāua te Rangi blocks.

TATAU POUNAMU: ENDURING PEACE?

Given the fraught historical background outlined above, what can be said of Firth's visit in 1924 to the settlements of Ōhāua and Mātaatua near the conclusion of the UCS? What more can be seen in his photos (Figs 3, 4, and 5)? What can be made of the apparent paradox that despite sustained confrontation between Ngāti Rongo and Te Urewera hapū in this area at least until 1913, their solidarity there became the anchor of the Apitihana movement by 1923?

The settlement of Ōhāua was probably central to this paradox. Waewae Te Roau was the Ngāti Rongo rangatira who had hosted Firth (see Fig. 7). Figure 5 shows him standing with his wife, Te Hirea Pahiri (of Ngāti Tāwhaki hapū), and probably great-grandchildren in front of their Ōhāua *wharepuni* 'sleeping house'. Figure 6 shows him probably with some of the Rongokataia branch of Ngāti Rongo hapū in front of Te Poho o Pōtiki, the Ōhāua wharenui. (The frontispiece of Firth's classic work, not included here, also displays Waewae holding a birding spear in front of Te Poho o Pōtiki.) In Figure 4 I recognised, from our visits in the 1970–80s, the familiar landscape behind the old village of Ōhāua and noted that there was already no sign of most of the buildings that were there in 1924. However, beyond the array of *kāuta* 'cooking houses' in the middle ground of the photo, one can glimpse the old wharenui, Te Poho o Pōtiki, to the east and the old wharepuni to its west; by 1983, while the former had been restored, no sign of the latter was left. Another of Firth's photos not included here shows another view of the wharenui in the background, with food-storage gourds and implements (and an unidentified person, perhaps Firth himself) in the foreground ([1929] 1959: plate 9b, facing p. 349). Excitingly, over 50 years after Firth had published the photos in his classic work, I was able to correspond with the aging author in England and relay copies of some of his original field notes (mainly on "material culture") to the descendants of his hosts.

More recently I have also realised that the younger man in Figure 5 standing on the meetinghouse *pae* 'bench' behind Waewae, similarly tall and wearing a rangatira's feathered cape, was probably Waewae's mātāmua son, Te Hata Waewae, who married Te Whenuanui I's mātāmua granddaughter, Taraipene (Figs 7 and 9). On the other hand, if Te Hata had moved to live in Rūātoki, it might be Wharekiri Pakaratu, husband of Waewae's elder daughter, Hera, and father of his eldest grandson, Hieke. Third- or fourth-generation descendants of his cousins were recently able to identify the younger man third from the right in Figure 5 as Hieke (Pakitu) Wharekiri, the "Paki of Ōhāua" mentioned by Firth, who showed him how birds were hunted ([1929] 1959: 158, 342). By the following year (1925), Wharekiri and his son Pakitu were leading contributors to Ruahine, Tutu and Korouanui (Fig. 8, Table 1),

relocating some of their ancestral shares to these new blocks. Pakitu married Hikawera Te Kurapa's older sister Meriaira (also known as Hauauru, Fig. 9). Their daughter Rangiwhaitiri, later to become rangatira of Mātaatua marae in Ruatāhuna, was also identified as the little girl in the white dress at the opposite end of the group from her father, Pakitu, in Figure 5. Firth also visited Mātaatua marae in Manawarū in 1924, on the occasion of a gathering for the *tangi* 'funeral' of Te Pouwhare, Waewae's younger brother (Firth [1929] 1959: 100; plate 5a, facing p. 285). Te Pouwhare had probably been living in Rūātoki as a leader at Tauarau (the Ngāti Rongo marae there), so Firth's visit to Mātaatua marae at this sad time was especially significant.

By the 1980s my family and I had probably met some of the other young people in this photo, by then old men and women. Although Pakitu and Hauauru had died by 1972 when we first visited Mātaatua, their daughter Rangiwhaitiri (and only birth child, among many adopted) became our host. Months later, when Rangiwhaitiri sat me down in her kitchen to sketch out parts of her *whakapapa* 'genealogy', she had carefully noted "no issue" at the end of several descent lines. When she herself died unexpectedly in 1977 she passed her care of us on to her son (and only birth child, among many adopted), Tumoana Tumoana. He lived in Rūātoki, born of Rangiwhaitiri's first marriage to Kunare Tumoana, great-grandson of Numia Kererū's mātāmua sister, Turaki (Fig. 9). By 1980 we had vaguely realised that as *manuhiri* 'guests' or, rather, *whānau pani* 'orphans' from faraway "America", we had been passed from the care of Te Urewera hapū in Ruatāhuna to the care of Ngāti Rongo hapū in Rūātoki. But only now am I beginning to understand some of the implications of this gesture.

Only recently, furthermore, have I more fully realised that both of these marriages (C and D in Fig. 9) were extraordinary: as mentioned above in the discussion of Figure 7, each of them was a marriage between a young leader of Ngāti Rongo hapū and a young leader of Te Urewera hapū. As painstakingly printed out for me by their granddaughter Rangiwhaitiri in my notebook in about 1975, Te Hata Waewae's brother Tamarehe had, like him, married a granddaughter—the other one—of Te Whenuanui I, Matahera. When Rangiwhaitiri died, our new host in Rūātoki would be her son Tumoana Tumoana, the son of Te Whenuanui I's great-great-granddaughter *as well as* great-great-grandson of Numia's mātāmua sister, Turaki. Furthermore, Tumoana's wife, our hostess Ngā Hirata (Kui) Hohua, was a great-granddaughter of Numia Kererū himself. Of course, we were never told all this in so many grand words; the *mana* 'authority' of rangatira does not need to announce itself, least of all to innocent "Yankee" *kaupois* 'cowboys' lost in the Urewera.

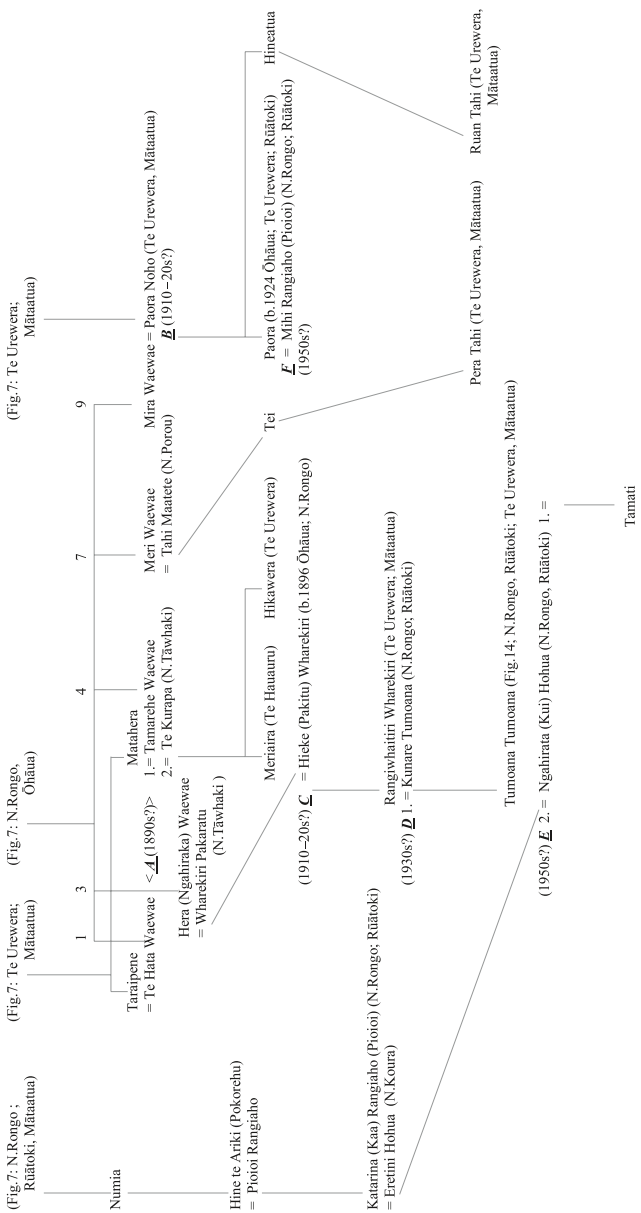

Figure 9. Ngāti Rongo and Te Urewera hapū intermarriages, 1890s–1950s (continuation of Fig. 7, with same genealogical symbols).

A more recent photo of Te Poho o Pōtiki meetinghouse that I had taken in 1983 (Fig. 10) now looks back at the photo Firth took of Waewae Te Roau and his people in front of the same meetinghouse in Ōhāua in 1924. Three generations had passed, but the two photos now gaze out at each other, just as old photos hung in Tūhoe meetinghouses always do. In 1983 we had been invited to join a reunion in Ōhāua of Waewae and Te Hirea's descendants to mark the redecoration and reopening of that meetinghouse with a Tekaumārua, a traditional Ringatū church ceremony. Without being aware yet, I had taken a photo of the reunion in front of Te Poho o Pōtiki that echoed the photo taken in 1924 by Firth.

My 1983 photo includes, among the descendants of Waewae and Te Hirea, Te Whenuanui I's great-grandson Hikawera himself (male, seated in the middle, leader of Te Urewera hapū in Ruatāhuna), Numia Kererū's great-granddaughter Kui Ngā Hirata Hohua (seated just to Hikawera's left, of Ngāti Rongo and Ngāti Koura hapū in Rūātoki) and Paora Noho's son Paora Kruja of Te Urewera hapū in Rūātoki (standing behind and to the left of Kui).

Figure 10. Gathering after Tekaumārua and reopening ceremonies for Te Poho o Pōtiki, the carved meetinghouse (*whare whakairo*) at Ōhāua, February 1983. Photograph by author.

As mentioned above with regard to the Ruatāhuna partition in 1912, Paora's father, Paora Noho, was the Taratoa cousin who in 1912 had unsuccessfully opposed Numia's claim for Kahuwī in Manawarū, just south of Ōhāua. In 1983 it was Paora Noho's son Paora who, as our nanny had several years earlier in Mātaatua, sat me down by a shed in Ōhāua and carefully drew several whakapapa in my notebook, patiently explaining to me how some of the persons at the reunion were related to each other and to others that we had come to know. Of course, most of the implications of the momentous marriages in Figure 9 were still invisible to me.

It became apparent to me only recently (after examining my old field notes) that events at the 1983 reunion in Ōhāua resurrected, or continued, the old confrontation between Ngāti Rongo and Te Urewera hapū of 1901–13. During evening discussion in Te Poho o Pōtiki, Pera Tahi stood to assert the rights of Te Urewera hapū to Ōhāua but was responded to by young Tamati, birth son of Kui (Hohua) Tumoana and restorer of the meetinghouse (Fig. 9), who asserted the prior rights of Ngāti Rongo hapū. Members of Te Urewera hapū, including Pera, had been contributing work toward the use and maintenance of Ōhāua since the 1970s, certainly strengthening their assumed rights to Ruahine block including the Ōhāua marae. In response to Tamati's contrary opinion, Pera asked Paora Kruja, as a respected *tohunga whakapapa* 'expert in genealogy', for clarification of the dominant rights to Ōhāua. Hikawera spoke up to say that from what he knew Ngāti Rongo had always held dominant rights to Ōhāua, but deferred to Paora's knowledge of the relevant whakapapa. Paora proceeded to recite the descent line from Rongokarae through Tamahore to Meri Waewae to her grandchildren, among whom was Pera (Figs 7 and 9). This confirmed that although descendants of Te Urewera hapū (such as Pera, and Paora himself) were included, Ngāti Rongo continued to hold dominant rights to Ōhāua. Thus both Hikawera and Paora, tohunga and rangatira both primarily affiliated with Te Urewera hapū at Rūātoki and Ruatāhuna, respectively (but secondarily with Ngāti Rongo as well), agreed that regardless of Te Urewera hapū activity in Ōhāua, Ngāti Rongo had maintained dominant rights there. Although Pera may have been disgruntled, he appeared to accept their decision.

Nevertheless, there are grounds to suspect that the 1983 confrontation, echoing that of several generations earlier, continues in the present. In 2018 I distributed earlier versions of this essay to several Tūhoe and friends who had also been visiting Ruatāhuna and Ōhāua in the 1970s–80s. I was surprised it aroused distraught reactions from two of these old friends (and consequently refusal by one of them to support publication of the essay), who concluded that my account of the confrontation was biased in support of Ngāti Rongo. In the 1980s one of them had married a close friend of ours in Te Urewera

hapū, settled there in Mātaatua and had children, and had worked ever since to develop business and environmental projects in support of the Tūhoe Tuawhenua blocks in that area (Fig. 2). In a subsequent version of this essay I characterised the history of reconciliations between Ngāti Rongo and Te Urewera hapū, despite their history of confrontations, as a tatau pounumu, an enduring peace-making. I was again taken aback when a Ngāti Rongo leader strongly rejected this characterisation, emphasising that a tatau pounamu, unlike other traditional forms of reconciliation, was absolutely inviolable and marked by symbolic transactions between the two parties. This person asserted that, quite to the contrary, there had been no such reconciliation between Ngāti Rongo and Te Urewera hapū, and that Ngāti Rongo continued to exercise their dominant rights over Ōhāua.

Although the paradox of confrontation and reconciliation between the two hapū had probably often lay unobtrusively before me and my family in the past, I had now finally come face-to-face with it. Like its previous forms since the early nineteenth century, the paradox took different shapes but continued to be, in Wolf's terms, a deployment of kin-based power variously supported, threatened or subverted by the capitalist power of the Crown, the settler state or its agencies. Indeed, the neoliberal state's patronage of iwi has often led to conflicts between them and hapū associated with them (Webster 2016).

Tatau pounamu or not, how far back into the history of the 1901–1913 confrontations between Numia Kererū of Ngāti Rongo hapū and Te Whenuanui II of Te Urewera hapū do the marriages between the two hapū go? By way of review, these marriages can be traced through Figure 9, which can be seen as a continuation of the wider Ngāti Rongo hapū genealogy in Figure 7. In Figure 9, these more recent marriages are marked A through F, in approximate chronological order:

A. Taraipene Te Hira and Te Hata Waewae; Matahera Te Hira and Tamarehe Waewae (1890s?);
B. Paora Noho and Meri Waewae (1910s?);
C. Meriaira (Hauauru) Te Kurapa and Hieke (Pakitu) Wharekiri (1920s?);
D. Rangiwhaitiri Wharekiri and Kunare Tumoana (1930s?);
E. Tumoana Tumoana and Kui Hohua (1940s?);
F. Paora (Paora) Kruja and Mihi Rangiaho (1950s?).

The more recent marriages may have occurred when the difference between these two hapū had begun to blur, partly as a result (or the intention) of these marriages. Working "backwards" through them: Paora Kruja and Mihi Rangiaho were probably affiliated primarily with Te Urewera and Ngāti Rongo, respectively, and probably married sometime in the 1950s;

Tumoana Tumoana and Kui Hohua, who were probably married sometime in the 1940s, were probably both affiliated primarily with Ngāti Rongo, but Tumoana was also affiliated closely to Te Urewera through his mother (and Kui to Ngāti Koura hapū through her father). Rangiwhaitiri Wharekiri and Kunare Tumoana, who were probably married sometime in the 1930s, were probably primarily affiliated with Te Urewera and Ngāti Rongo, respectively. Hauauru Te Kurapa and Pakitu Wharekiri, who were probably married sometime in the early 1920s, were primarily affiliated with Te Urewera and Ngāti Rongo, respectively. Paora Noho and Meri Waewae, who were probably married by 1912, were primarily affiliated with Te Urewera and Ngāti Rongo, respectively. The two sisters Taraipene and Matahera Te Hira and the two brothers Te Hata and Tamarehe Waewae, who (respectively) probably had their double marriage in the 1890s, were primarily affiliated with Te Urewera and Ngāti Rongo, respectively (Te Hata's other marriage was with Te Unupo, a daughter of Tamaikoha, also primarily affiliated with Te Urewera hapū).

I have emphasised that this early double marriage appears have been especially significant. It may have been importantly associated with the final settlement in 1900 by the UDNR Commission of the long-running confrontation over Whaitiripapa block between Tamaikoha for Te Urewera hapū and Numia Kererū for Ngāti Rongo hapū (see Whaitiripapa in Figure 1, between Rūātoki and Parekohe blocks). Apparently a still earlier *pākūhā* 'marriage gift' of a Ngāti Rongo woman to a Te Urewera man, marking a reciprocal gift of land, had been an issue in the confrontation over that block since the 1860s (Webster forthcoming: chap. 5). The double marriage in the 1890s may even have been another such pākūhā or tatau pounamu peace-making between Te Urewera hapū and Ngāti Rongo hapū, but momentarily more successful.

On the other hand, it apparently did not impede the confrontation between these two hapū breaking out again over Manawarū in the Ruatāhuna block by 1902 and seething for more than a decade. While the marriage of Pakitu and Hauauru in the 1920s may have reinforced the realliance of Ngāti Rongo and Te Urewera hapū in Manawarū and the Apitihana movement, the succession of at least three such signal marriages since then appears to have been needed "to keep the peace". The confrontation between them that emerged again at Ōhāua in 1983 may continue to simmer today, contrary to the opinion of some leaders that the two hapū have become indistinguishable. Perhaps the paradoxical charm of tatau pounamu is not that it is needed to hold the two hapū together but that it is needed to hold them apart. Insofar as this is so, it may be doubly ironic that in the 2014 Settlement Act the Crown characterised its reconciliation with Tūhoe with precisely these words (Tūhoe Claims Settlement Act 2014: 10(8), p. 24).

Marshall Sahlins's account of kinship offers an anthropological defence of my interpretation of this history in terms of tatau pounamu. Wolf's approach would probably lead me to view the Tūhoe concept and associated forms of reconciliation in terms of "mythological charters ... [that] allow groups to claim privileges on the basis of kinship ... [and] permit or deny people access to strategic resources" (Webster 2017: 153, 162–64). However, Sahlins's approach defines the essence of kinship as "mutuality of being: persons who are members of one another, who participate intrinsically in each other's existence", and goes on to consider "kinship solidarities and conflicts" at some length (Sahlins 2011a: 2; 2011b: 234–37). In this latter regard, he emphasises that the mutuality of being common to his anthropological examples regardless of their variability is often expressed in such paradoxical terms (even playfully noting the current teenager term "frienemies"). His examples range from "the Amazon, where enemies are generically known as potential affines" to "the New Guinea Highlands [where] 'we fight the people we marry'—or vice versa" (Sahlins 2011b: 233, 236]. "Relations of alliance are endemically ambivalent, sometimes notoriously so ... especially insofar as the alliance between kin groups rides on intermarriage" (p. 235); "Hence the 'inherent' powers of the affines: shared being still, for all its conflictual aspects" (p. 236); "Reflecting on the ambivalent relations of marriage, Maori say they would like to be like the stars, who effectively live alone and forever" (p. 236); his source for several Māori examples is Prytz-Johansen, who put it this way: "Death entered the world with woman, says the Maori; otherwise man would live unchangeably like the stars" (Prytz-Johansen [1954] 2012: 42).

As well as the definitions of tatau pounamu cited in Note 1, an array of ordinary Māori words as well *whakataukī* 'proverbs' or *pepeha* 'charm, witticism' reflect the paradoxical ambivalence of similar concepts. The word "enduring" in Kāretu's translation "enduring peace" can similarly be taken in the sense of remaining firm under adversity, patient or long-suffering, as well as permanent. Similar ordinary Māori expressions are loaded with irony or ambivalence: *hoa* 'friend, spouse, partner', but *hoariri* (lit.) 'angry friend', *hoawhawhai* (lit.) 'impatient friend' and *hoa-ngangare* (lit.) 'quarrelling friend' are bluntly translated as 'enemy', 'opponent', 'adversary' or 'foe' (Williams 1957: 54, 229; Ryan 1995: 54, 155). Already among early colonial British scholars, Māori were adulated for the subtle ironies of their marae orations and not merely as so-called "noble savages".

Sahlins's examples of kinship in conflict also overlap with Wolf's approach: "Precisely because of the equality, a certain measure of conflict—ranging from studied distance to violent rupture—is likely wherever the primary group holds offices, privileges, or objects of differential value"

(Sahlins 2011b: 235). Nevertheless, the absence of attention to the wider historical context, and confrontations of power in *that* context, that characterise Sahlins's ahistorical culturalist approach to kinship lead me to prefer Wolf's. In Wolf's (1982) ironic terms, Sahlins's approach to kinship as an ahistorical essence still treats other cultures like "people without history". In previous publications, I argued that even Sahlins's analyses of Pacific history are misled by structuralist enthusiasms regardless of his poststructuralist theorisation. Maurice Bloch's tactful critique of Sahlins's essay on kinship similarly insisted that "[h]umans are uniquely caught up in a unified evolutionary and historical process" (Bloch 2013: 253), and that "by getting caught up in the misleading chase for static essential pure kinship" (p. 257) we overlook its foundation in this process.

Firth's ahistorical assumption that the Māori were naturally being assimilated to capitalist "modernity" similarly led to his blindness to the predicament of his hosts in Ōhāua in 1924. As Richard Hill has documented, the assumption of assimilation dominated New Zealand state policy toward Māori indigeneity until the 1970s (Hill 2009) and continues to obtrude in subtle ways. Even 30 years later in one of the few revisions of his classic work, Firth dismissed the continuing confrontation between Māori deployment of kin-based power and capitalist colonisation which had lain unquietly before him in Ōhāua te Rangi: if "memories of their traditional ways of life ... assume a politically aggressive form they can be dangerous to the life of the wider community, of which the Maori now form an inextricable part" (Firth [1929] 1959: 481). The recent return of Te Urewera to Tūhoe control, and unforeseeable implications for Ōhāua te Rangi and other hapū clusters and their ancestral lands, dramatises the essential unpredictability of any lived history.

* * *

The reversal of the Crown's policy toward Tūhoe's Te Urewera sanctuary from benevolent (1896–1907) to predatory (1908–26) has been reviewed above in terms of two hapū clusters centred in the four Ōhāua te Rangi and two Ruatāhuna-Waikaremoana blocks, dominated by Ngāti Rongo and Te Urewera hapū, respectively. Although the evidence must often be read between the lines of the Crown's record, these hapū clusters tended to confront each other during the first era but reconcile their differences to mount a joint defence against the Crown during the second era. In each era, these hapū clusters deployed kin-based power developed in extensive marriage alliances, first in intramural confrontations backed by the passive patronage of the Crown, and later by closing their ranks against its threat. However, as early as the 1890s these marriage alliances began to be extended

between the two hapū clusters themselves. While these signal reconciliations were apparently overridden by mutual antagonism in the first era, they served the joint solidarity of the two hapū clusters against the Crown by the time of the UCS, even forming the stubborn stronghold of the Apitihana movement refusing cooperation with the scheme.

Nevertheless, while the reconciliation between Ngāti Rongo and Te Urewera hapū withstood the Crown's divisive tactics in the Manawarū of northern Ruatāhuna, there is evidence that this alliance was more precarious in the Ōhāua te Rangi blocks. There, half the land was lost to the Crown, and relocated consolidation of pupuri whenua shares were scattered in 13 blocks sometimes relying on the surviving shares of other hapū controlling what was left of adjacent blocks. In Eric Wolf's terms, in this case it appears that kin-based power was indeed the Achilles heel exploited by the Crown to pursue its explicit intention to break down the solidarity of Tūhoe hapū. Yet this solidarity continued to be systematically built between Ngāti Rongo and Te Urewera hapū by signal marriages between their leaders at least through the 1950s. If this resurgent reconciliation was the tatau pounamu perhaps originally intended in the 1860s, its disruption at the 1983 Tekaumārua reunion in Ōhāua—and later reverberations of it dividing my own and my family's loyalties—suggest that resurgent antagonism is the other side of its special dialectic. Perhaps this is why a "door of greenstone" is needed.

While Wolf's insistence on the recognition of a specific historical context enabled me to understand the interplay of Tūhoe and Crown power in the establishment of a Tūhoe sanctuary in the UDNR, its loss in the UCS and its recovery in the 2014 settlement, Marshall Sahlins's proposal of a transhistorical dialectics of kinship "being" enables me to better understand the Tūhoe conception of tatau pounamu. And while Firth's insight into the structure of hapū may have been blind to their tortured history in Te Urewera, his photos of the stolid occupants of Ōhāua in 1924, already representing the precarious reconciliation between Ngāti Rongo and Te Urewera hapū that I and my family must continue to straddle, gives me great comfort.

ACKNOWLEDGEMENTS

If my commentary has not already made it clear enough, I want here to thank our hosts in Mātaatua, Ruatāhuna, Ōhāua and Rūātoki for their hospitality and aroha 'compassion', extended from the dead as well as the living. I also want to thank Himaima Tumoana, Clementine Fraser and the staff of the Waitangi Tribunal for their research in support of my 2004 report, and the current Te Uru Taumatua of Tūhoe for their interest in my later research. I am also grateful to other scholarly interlocutors Judith Binney, Joan Metge, Jeff Sissons, Peter McBurney and Fiona McCormack, and to this journal's editorial-production team for their patient professionalism.

NOTE

1. Timotī (Sam) Kāretu, from Tūhoe and Ngāti Ruapani of Waikaremoana, translated tatau pounamu as "the door of greenstone", defining it as a "figurative expression for an enduring peace, which was often cemented by the exchange of valuable greenstone heirlooms" (Kāretu 1987: 106). He cites two *whakataukī* 'proverbs' as examples: "Me tatau pounamu, kia kore ai e pakaru, ake, ake" (Let us conclude a permanent treaty of peace, that may never be broken, for ever, for ever) and "He whakahou rongo wāhine he tatau pounamu" (Peace brought about by women is an enduring one), adding, "Normally, in times of crisis, high-born women, puhi, were married to the victors to cement the peace and to ensure there would be no more warfare." In response to a version of this essay, Robert Rapata Wiri (pers. comm.), also from Tūhoe and Ngāti Ruapani, translated tatau pounamu as "reconciliation" among Tūhoe. Hirini Mead of Ngāti Awa discusses peace agreements including tatau pounamu along with several other traditional accounts (Mead 2016).

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DID SĀMOA HAVE INTENSIVE AGRICULTURE IN THE PAST? NEW FINDINGS FROM LiDAR

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ABSTRACT: During recent field survey work in Aleipata on the southeast coast of the Independent State of Samoa several new archaeological features have been discovered by a LiDAR-guided ground survey. The survey confirmed evidence from LiDAR images of a dense habitation zone from the coast to several kilometres inland with an extensive drainage system. We suggest that prior to the nineteenth century, when Sāmoan political organisation was first described, the extent and interconnectivity of the channels suggest that a larger population, a more intensive organisation of labour and resources for agricultural production, and a more extensive system of political authority existed.

Keywords: Sāmoan archaeology, agricultural intensification, cultural heritage, political organisation, LiDAR survey, remote sensing

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Archaeological evidence of past agricultural practices and food production systems has long been important when considering the prehistoric evolution of political organisation in Sāmoa and other Polynesian societies (Earle 1978; Kirch 1984; Ladefoged *et al.* 1996; Lepofsky and Kahn 2011). Intensification of agriculture, defined as increased labour, capital and skill input against constant land (Brookfield 1972), is thought to lead to increased production, and in the prehistory of Polynesia, is associated with more stratified and extensive political organisation (Kirch 2006; Leach 1999; Morrison 1996; Quintus and Cochrane 2018). Earlier archaeological research on Sāmoa suggested that agricultural systems were not intensive (Carson 2006; Green 2002). For example, comparing cultivation in Sāmoa with other Polynesian societies, Carson argued that agriculture was practised on a comparatively small scale in Sāmoa, consistent with autonomous family production, rather than large-scale cultivation under the leadership of chiefs who controlled large territories, as in Hawai‘i for example (Ladefoged and Graves 2006).

As Carson put it, food production involved "family-operated parcels rather than a single unified field system", perhaps indicating "a small resident population" (2006: 19) so that "development of vast and complex agricultural fields apparently did not transpire in Sāmoa" and that "elaborate systems for production, storage, and distribution of food crops are not a material necessity for long-term or large-scale settlement [in Sāmoa], unless perhaps a certain population threshold is approached or breached" (p. 23). This view matches descriptions of land use and political organisation by anthropologists in the twentieth century (Gilson 1970; Holmes 1974; Mead 1969; Shore 1982) who saw Sāmoa's political system as characterised by small, fragmented rival chiefdoms comprising groups of allied villages and kin groups.

These conclusions have recently been questioned by Quintus and Cochrane (2018), and the data presented here provides grounds to further question Green's and Carson's conclusions. Our paper discusses evidence of what appears to be extensive terrestrial modifications that are evidently drainage systems for inland agriculture and for the protection of structures such as house platforms. These suggest a much greater degree of organised land use and drainage, to allow extensive planting of food crops and protect inland settlements from the effects of heavy rainfall, than has been evident in Sāmoa in historical times.

As we have argued elsewhere (Jackmond *et al.* 2018), although there were few inland villages in Sāmoa in the nineteenth and twentieth centuries, there is now archaeological evidence, revealed by LiDAR (Light Detection and Ranging) imagery, of extensive inland settlements throughout Sāmoa, suggesting there was a much higher population in the past compared to that recorded in the nineteenth century. Our analysis of LiDAR images,[1] in addition to identifying extensive inland settlements, has found what appear to be tens of square kilometres of channels (Fig. 1) on arable lands of the north and south coasts of 'Upolu. These are so extensive that they suggest that in the past there were larger populations, more intensive agriculture and larger-scale organisation of labour and resources than previously supposed to be the case in Sāmoa. If this was so, then there was probably more extensive chiefly control over land in the past than has previously been recognised in the ethnographic and archaeological literature.

This paper discusses the findings from a LiDAR-guided ground survey of the systems of channels and their archaeological contexts on the land of Sāmusu-uta in Aleipata district of 'Upolu (Fig. 1). Specifications of LiDAR images[2] of Sāmoa are described in Jackmond *et al*. (2018). The Sāmusu survey and findings described below are part of a long-term project, planning for which started in 2011, to build a Sāmoan Archaeology and Cultural Heritage Database[3] at the Centre for Samoan Studies (CSS), National University of Samoa, with the aim of recording, analysing and where possible preserving

ancient and historical heritage areas (Jackmond *et al.* 2018). The database will support archaeological research in Sāmoa, build a knowledge base on Sāmoan prehistory and heritage, and assist the Government of Samoa to develop heritage protection polices and legislation that are lacking at present (see Sciusco and Martinsson-Wallin 2015).

LiDAR-GUIDED GROUND SURVEY AT SĀMUSU

The population of the district (Aleipata Itūpā i Lalo) was recorded as 3,887 in 2010 (Government of Samoa 2011), and its two electoral sub-districts (*faipule*) comprise over a dozen villages. The district consists of a gently sloping broad coastal plateau with a small elevated hilly area along the north coast, several volcanic craters to the southwest and an eastern lower coastal floodplain, which was recently inundated by a tsunami in 2009. Since the tsunami many households of the affected villages have established inland sub-villages on land previously only used for agriculture. Numerous intermittent streams (only a few of which are named) run from west to east across the plateau and coastal plain. Behind the coastal villages, gently sloping plantation land mixed with forest rises up through the coastal plateau.

The survey was part of a field school with a team composed of five lecturers, five research assistants and 30 students from the programme in Archaeology and Heritage Management at the National University of Samoa (16 September–21 October 2018). Before the survey area described here was selected for intensive ground survey, a preliminary reconnaissance had been conducted of possible survey areas on ‘Upolu using LiDAR, aerial photos and quick on-the-ground GPS point survey to gauge the feasibility of a further study.

The ground survey area measured from 100 to 300 m in width and was almost 1.5 km in length (see coloured squares in Fig. 2). It was chosen because it comprises a relatively open area for grazing cattle and consists of a large swath of plantation covered in low grass, brush and coconut trees. This location made it easier to examine more closely the systems of ditches revealed by LiDAR. The land belongs to one of the authors of this article (Tautunu), a leading *matai* ‘head of household’ and orator (*tulāfale*) of Sāmusu-uta, and the survey was approved and supported by the other matai of Sāmusu-uta.

The survey area was marked off digitally using 100 x 100 m blocks (Fig. 2) to give the survey teams a frame of reference, though these were greatly modified by the boundaries of the intermittent streams to the north and south of the Sāmusu survey area. Priority was given to areas of low vegetation, which ensured the best possible positive outcome from the survey.[4] The area bears evidence of extensive settlement extending several kilometres inland from the modern village of Sāmusu-uta. The archaeological features

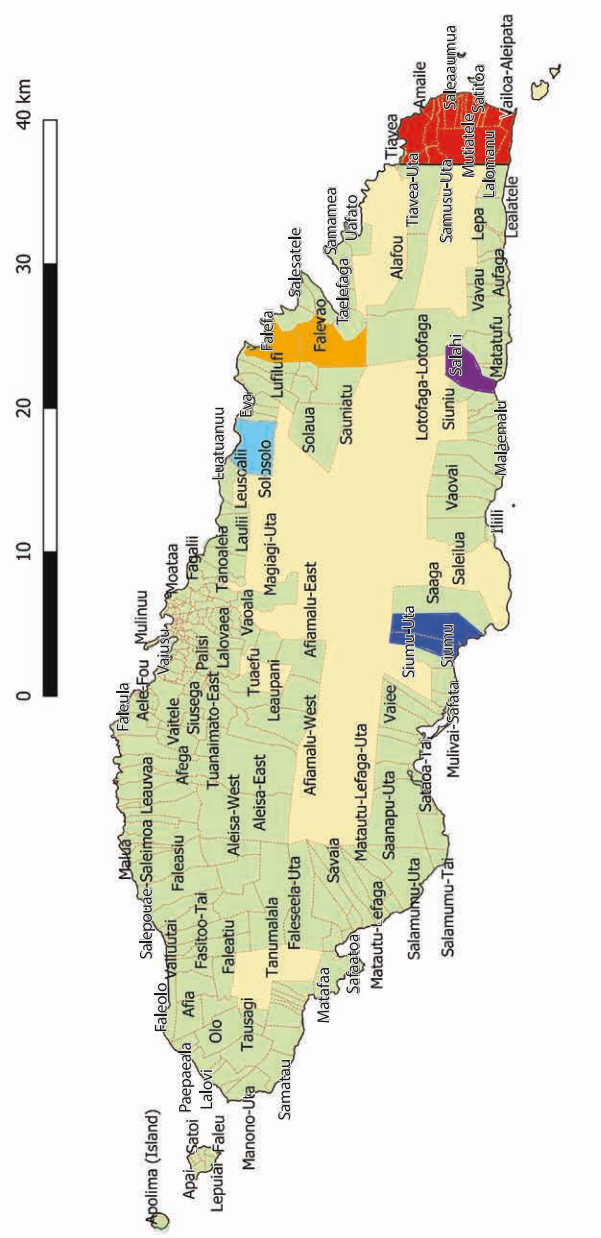

Figure 1. Map of ʻUpolu showing locations where the Centre for Samoan Studies has analysed extensive interconnected ditches from LiDAR images. The Aleipata district is highlighted in red.

included terraces, a *malae* 'village green', star mounds, earthen ovens and forts. The general features discovered during the ground survey match those previously described (Buist 1969; Green and Davidson 1969, 1974; Jennings and Holmer 1980; Jennings, Holmer and Jackmond 1982; Jennings, Holmer, Janetski *et al.* 1976; Scott 1969). A significant difference is the relative scarcity of stone building material for constructing platforms and walls in Aleipata compared to elsewhere.

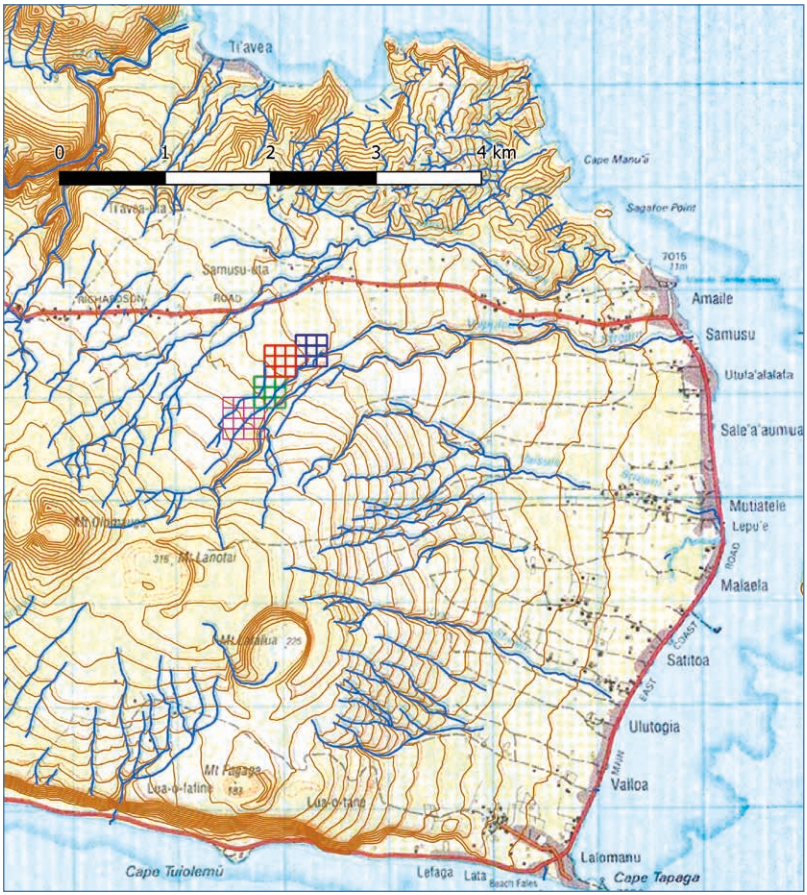

Figure 2. Topographic map of Aleipata. Coloured squares show the general location of the survey area.

ARCHAEOLOGICAL FEATURES IDENTIFIED

The main objective of the survey was to assess the function of the channels in Aleipata as seen on LiDAR (Figs 3 and 4), and to contextualise them with other archaeological remains of prehistoric settlements. An earlier archaeological survey in 1966 of a portion of Aleipata (Lalomanu, 6 km to the south of the survey area) was done by Davidson (1974a: 190–95), who recorded numerous star mounds, platforms, walls, ditches, scarps and terraces. Her survey did not extend to Sāmusu to the north and did not identify the extensive channel system described here, which is not easy to identify at ground level.

Channels

LiDAR images[5] of Aleipata district reveal an extensive system of human land modification: a network of over 150 km of channels covering an area of 20 km^2 or more encompassing the entire eastern tip of ʻUpolu (Fig. 3). Although deep forest cover obscures the LiDAR readings in some areas, those portions of the forest that have been cleared for contemporary agricultural purposes show a network of drainage channels extending in all directions for several kilometres associated with an apparently dense and extensive habitation zone consisting of house platforms, terraces, walls, earthen ovens and numerous walled and elevated walkways. LiDAR images usually show only a small portion, approximately one-third or less, of archaeological features compared to what may subsequently be found by a ground survey. However, in the case of Aleipata, drainage channels were often more recognisable on LiDAR images than from the ground survey, due to their low profile and eroded condition (see Figs 5 and 6). In some places they appear to form boundaries around platforms, but more widely they appear to form a network of interconnected channels that occasionally connect to larger intermittent streams (Fig. 2). A high-resolution image of those located by LiDAR within the Sāmusu ground survey area can be seen in Figure 3. The ditches are not confined to gently sloping terrain; rather, they start several kilometres inland, in the uplands of Aleipata, and continue down toward the coast. In most areas their downhill orientation has been obscured by the 2009 tsunami (Fig. 3).

Some of the channels may have originally been natural watercourses or intermittent streams but are obviously modified by human actions. Most channels have what appear to be purposefully low raised edges on one or both sides, capped in some places with small rounded river stones that may have formed a protective embankment to reduce erosion. They made a fine walkway when the ground turned muddy during our survey after the numerous rains, suggesting that they functioned similarly in the past (Figs 5 and 6a). Many channels also intersect at right angles. Some run perpendicular to existing

streams and parallel to contour lines across the ridges between streams (see Figs 3 and 4). They range in width from less than half a metre to several metres, and in depth from a few tens of centimetres to a metre or more. Their raised banks or berms were formed with the excavated earth or with earth dug from their sides. The sides are often gently sloping, not vertical, and are now completely covered in vegetation (Figs 5 and 6). According to the people of Sāmusu-uta, the channels have not been worked on in recent memory (for the past 70 years or more); however, they still appear to function today, without maintenance, by draining the excess rainwater from the land.

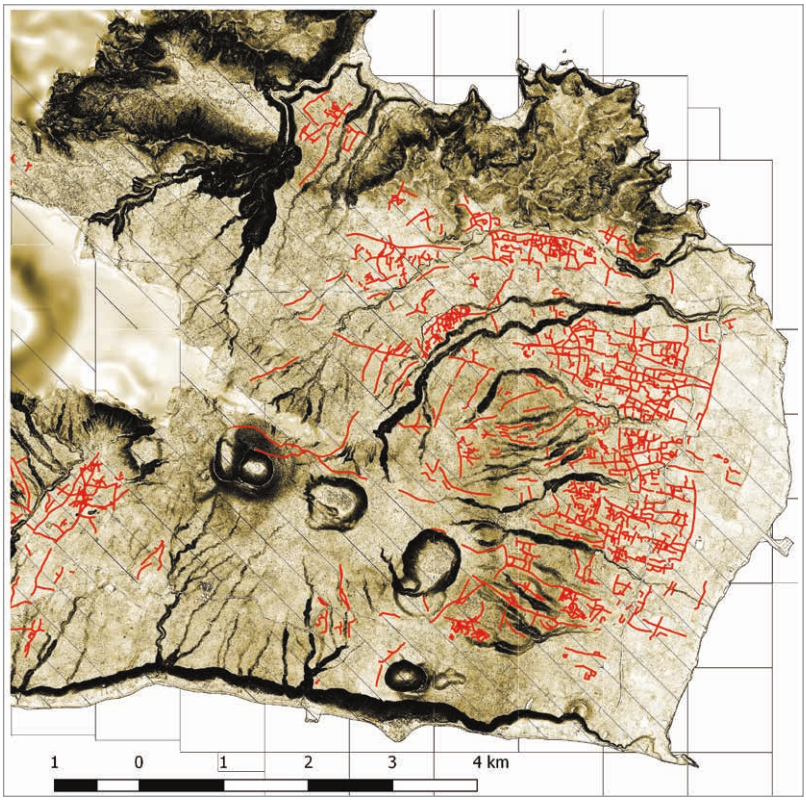

Figure 3. Some of the probable Aleipata channels (red lines) extrapolated from LiDAR.

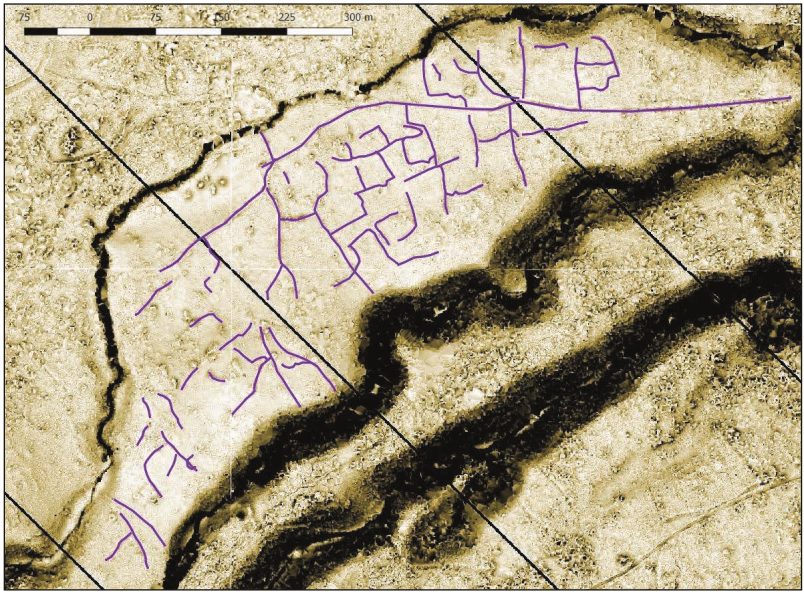

Figure 4. Channels as extrapolated from LiDAR in the Sāmusu gound survey area (vectored in purple).

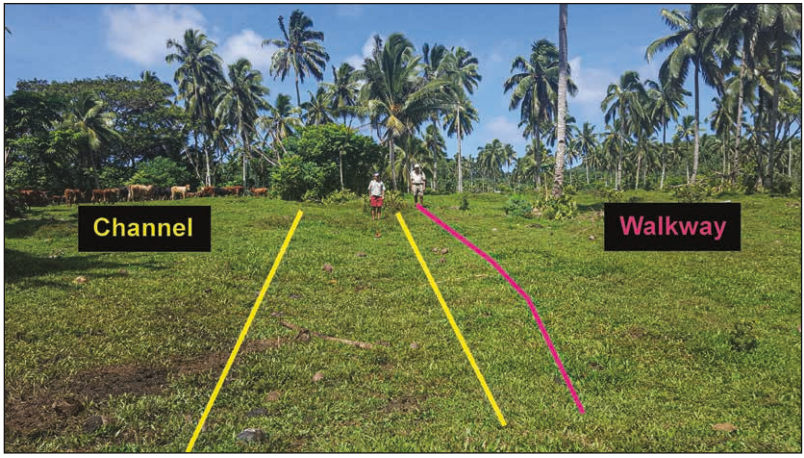

Figure 5. An example of a wide channel (the sides of which are marked in yellow) with its associated elevated stone alignment, a possible "walkway", marked in red.

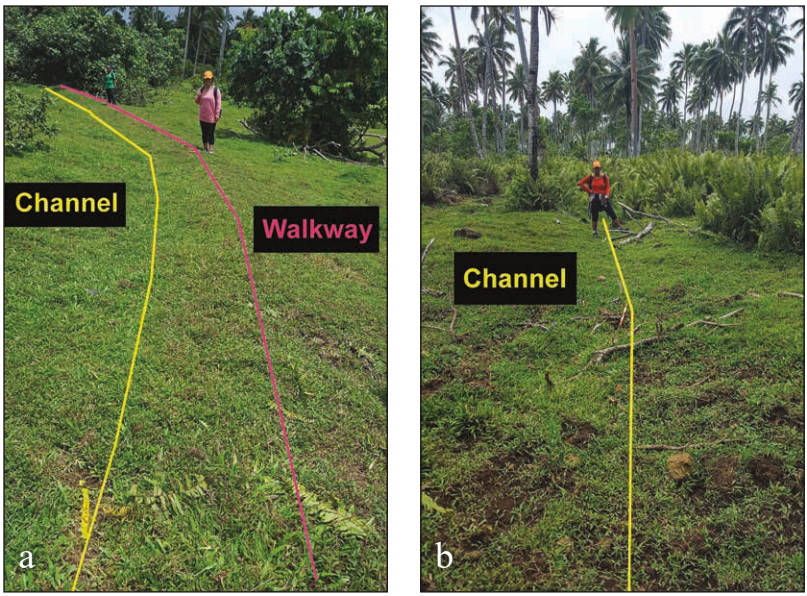

Figure 6a. A narrow channel (marked in yellow) with associated elevated stone alignments that may have functioned as "walkways" or paths (marked in red).
Figure 6b. A channel (marked in yellow) with no associated "walkway".

Terraces

Hundreds of terraces (level ground formed by removing earth from the uphill side of a slope and depositing it on the lower part) can be seen on the LiDAR throughout Aleipata, on almost every visible ridge or area of uneven ground. Over 30 were examined in the ground survey to get a better understanding of how they appear on LiDAR. Terraces are one of the most prevalent anthropogenic features of the landscape, but they have not yet been counted. Their function, for habitation or agriculture, could not be discerned from the LiDAR images, but many of those inspected showed evidence of past habitation. Presently most of those examined are or have been planted with crops, but more detailed work needs to be done to investigate their original function.

Malae

As Davidson noted over 50 years ago (1969), it is difficult, even impossible, to identify former malae sites archaeologically. Malae were, and still are in many villages, an open space in a central position, without any artificial features that could be expected to survive archaeologically. The sites were usually

associated with one or more *faletele*, which were the houses of the highest-ranking chiefs and were of ceremonial importance. We found an open space likely to have been a malae, measuring 150 to 190 m long by 60 to 70 m wide (Fig. 7), bordered on the north by an intermittent stream and on the south by a small shallow channel and its associated low rock embankment about 10 m upslope (the light-coloured diagonal line in Fig. 7b). Its possible historical significance is suggested by the fact that the landowner's grandfather left the space unplanted with coconuts over 70 years ago. The space contains seven large piles of small-to-medium-sized river stones, ranging in size from 7 to 13 m long and 5 to 9 m wide with a height of 0.1 to 1.3 m (Table 1).

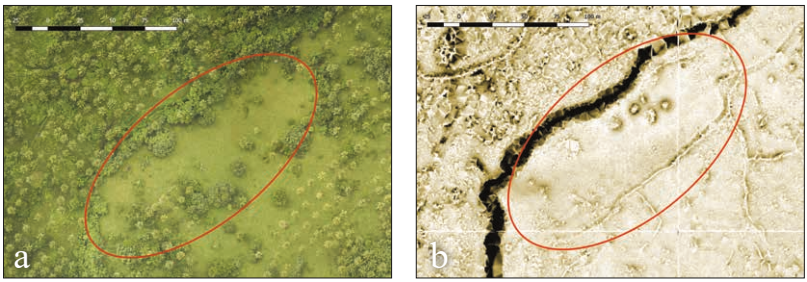

Figure 7a. Sāmusu survey malae (aerial). A clear malae area (marked by a red oval) is evident in the photo, but platforms are obscured by vegetation.
Figure 7b. Sāmusu survey malae (LiDAR). Platforms appear as "raised" light areas surrounded by darker shapes.

Table 1. Dimensions of platforms in malae area shown in Figure 7.

Designation	Length (m)	Width (m)	Height (m)	Sides
P1001	9	8	0.2	sloping
P1002	11	9	0.8	sloping
P1003	7	5	0.5	sloping
P1004	7	9	1.4	sloping
P1005	9	8	1.1	sloping
P1006	13	8	1.3	sloping
P1015	11	9	0.1	sloping

Star Mounds

Overall for Aleipata, 85 star mounds or possible star mounds were observed on the LiDAR (Fig. 8), and the team recorded nine of them. Davidson (1974a: 191, Fig. 77) recorded 16 star mounds in her Lalomanu survey, but only a little more than half were visible on LiDAR because of the deep forest cover.

Umu Ele'ele (Earthen Ovens)

For Aleipata, 136 *umu ele'ele* 'earthen ovens' were found on LiDAR (Fig. 8). Eight of them were recorded within the survey area, and an additional nine were found that are not visible on LiDAR.

Forts

Four probable ditch-and-bank type forts were observed on LiDAR, one of which was previously recorded (Cochrane, pers. comm., March 2017). Of those previously unknown the team recorded one in the ground survey. This

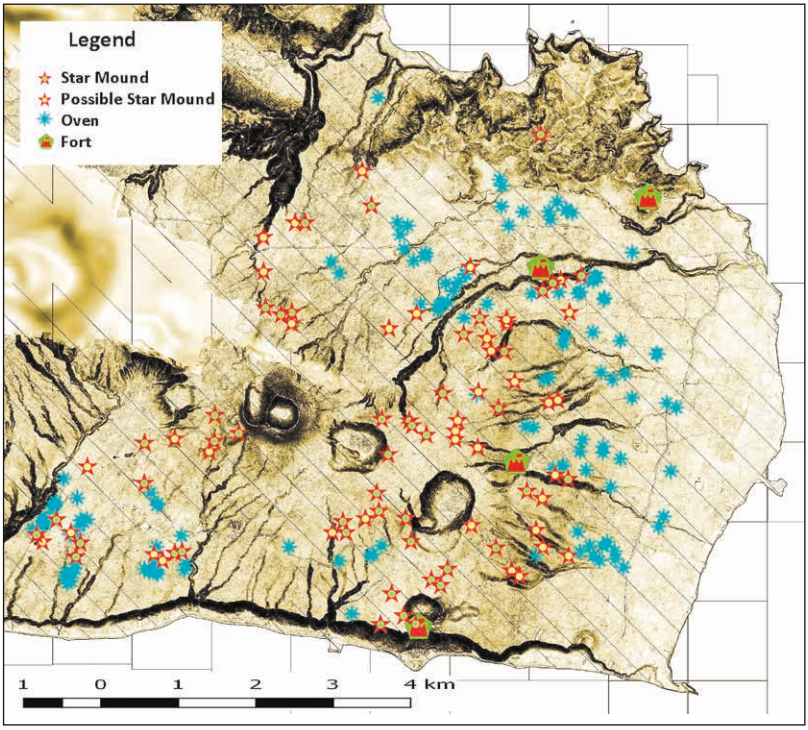

Figure 8. Other LiDAR features of special interest in Aleipata district.

conformed to the type of ditch-and-bank fort that extends across a ridge from gully to gully described by Davidson (1974b: 240–42). It differed only by the deepest portion of the ditch being on the inland side of the fort with the bank on the seaward side, suggesting that this fort may have been built to defend from an inland attack as opposed to a seaward attack, as assumed for forts examined by Davidson (1974a: 181).

Table 2. Summary of features recorded in the 2018 Sāmusu ground survey.

Features	Total ID in survey (24 ha)	No. ID in 17 ha parcel*
Drainage channels	34	25
Pits	23	16
Platforms	95	80
Stone piles	82	58
Walls	19	15
Elevated walkways	39	29
Walled walkways	21	16
Umu ele'ele	17	14
Star mounds	1	1
Other	2	2

* During the first four days 17 hectares were surveyed almost completely, while the remaining seven hectares were only partially surveyed on the last day.

DISCUSSION

Survey Findings

The LiDAR and ground survey findings indicate the existence of an extensive ancient indigenous population zone stretching from the coast to three or more kilometres inland throughout most of the area of Aleipata and characterised by an extensive system of channels (Fig. 9, Table 2). These may once have had many functions: to drain cultivated land, to mark field boundaries or to protect malae and house platforms, as Quintus *et al.* (2015) noted in their analysis of similar features on the island of Ofu in the Manu'a Islands of American Samoa. For example, if the feature we think is an old malae and the channel south of and above it were both constructed at the same time, they show how a channel could divert the heavy runoff of rainwater and protect the site. At different times each channel could have functioned as

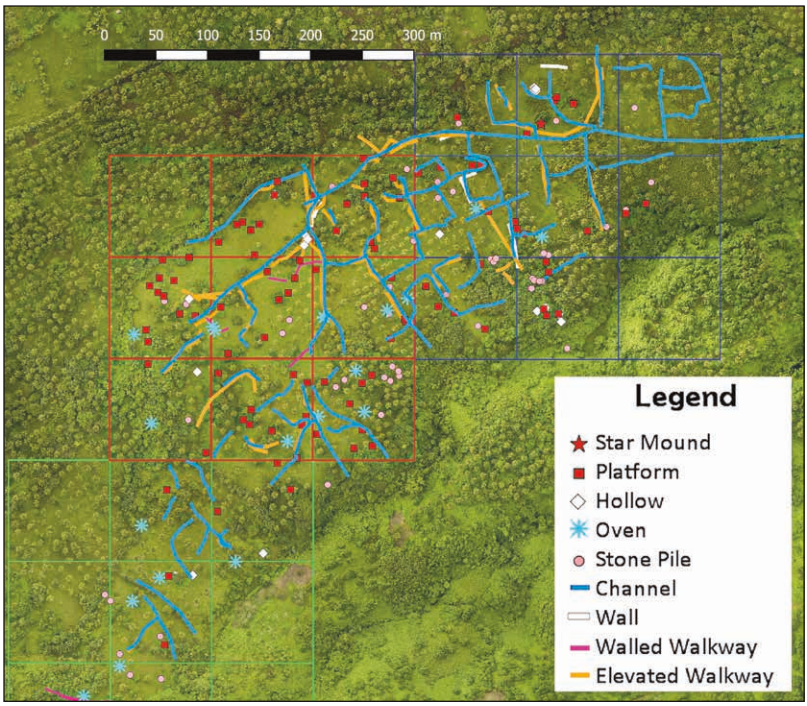

Figure 9. Distribution of features found in the Sāmusu ground survey, with traversed areas indicated by 100 m^2 coloured grids.

an embankment and walkway as well as a drain. There is no evidence that they were once used for irrigation as they did not connect to the intermittent natural streams at a level that would allow water to flow into the channels and onto the surrounding terrain.

Our findings show a system of channels extending in a honeycomb pattern, from Sāmusu at the north end of Aleipata to Lalomanu on the south coast, 6 km away (Fig. 3). Further investigation is needed in this and other areas of ‘Upolu where LiDAR images reveal similar features. We interpret the Aleipata channels as an extensive system of dryland drainage channels that appear to be a more extensive and complex variation of those described by Barber (1989, 2001) in northern Aotearoa New Zealand. Barber described what he termed “Category B ditches” as “gentle slope ditch systems”, used to demarcate land units, reticulate water and counteract water erosion, unlike the systems for dryland irrigation or wetland drainage systems commonly found in Polynesia, as described by Kirch and Lepofsky (1993).

The findings suggest a much larger population for Aleipata in the past than at present (Fig. 9, Table 2). Within the 17 ha most completely surveyed, 80 platforms were located, numbering about 4.7 platforms per hectare. If we assume that only one-tenth of those platforms were occupied at any one time, with five occupants per house platform ($4.7 \times 5 = 23.5$) in a habitable area of 3,000 ha (6×5 km), it allows us to estimate a population of at least 7,050 compared to the present population of 3,887 for the entire northern district of Aleipata Itūpā i Lalo.

Chronology

Although no excavations were carried out and no dates have been directly obtained, other research in Sāmoa suggests a general chronology for Aleipata. Cochrane's 2013–14 corings and excavations, covering a little more than 10 percent of the Aleipata coast, gives us evidence of an AD 1400 date for habitation of coastal areas of Aleipata (Cochrane 2015). The numerous archaeological features apparent on LiDAR indicate extensive human activity, likely between AD 1400 and 1800, the dates previously associated with these features by Holmer (Jennings and Holmer 1980), Herdrich and Clark (1993) and Wallin *et al.* (2007). And, although we have no dates for the channel system in Aleipata, similar, smaller examples have been dated in American Samoa to between AD 1400 and 1600 (Quintus 2015).

* * *

The significance of our findings from field surveys and LiDAR images for the Aleipata district of 'Upolu call for a reanalysis of Sāmoa's ancient agricultural, and possibly its political, systems. The evidence we describe here strongly suggests that in the past a much more centralised system of political authority and leadership existed to manage drainage systems on land for the production of food. These findings question conclusions that Sāmoa did not have an intensive agricultural system (Carson 2006) and that the pre-contact population of Sāmoa was less than 50,000 (McArthur 1967). As Quintus and Cochrane have argued, more research is needed:

> Large stretches of land in the interiors of many islands remain to be surveyed, especially on the island of Savai'i. Even those landscapes for which information is present have been the subject of only limited archaeology relative to agricultural landscapes in places such as Hawai'i and New Zealand. (2018: 495)

The extent of the channels we describe logically suggests they had a function in food production. In the rainy season of November to March, Aleipata may receive over 300 mm of rain per month (Government of Samoa 2018), so it can be assumed their functions were to minimise the

excessive saturation of the soil and mitigate soil erosion by channelling water away from inundated areas. Past assumptions (previously cited) that Sāmoan food production was small-scale under dispersed local authorities are challenged by the extensive network of drainage channels we describe. These, unlike walls and other stone structures and earthworks, are unlikely to have developed piecemeal, as each unit of channel construction must receive and expel water in conjunction with each adjoining unit, if the system was to drain land efficiently. If there had been an unregulated system of small family plots, neglect by one family would undermine the function of the whole system. It is assumed that to support extensive agricultural production and a large population, the construction and maintenance of the channels would have required a considerable investment of time and cooperative labour. It is likely that channels were also once used as boundary markers in locations where stone is not sufficiently abundant to build walls as boundary markers.

In contemporary Sāmoa households rarely cooperate in their farming practices. As things are done today, it would be difficult to maintain a widely shared system of drainage channels without a system of authority that required cooperation. For example, in Aleipata today there are over 10 villages, many with sub-villages, comprising some 200 to 300 matai and their families. Although matai are still ranked according to the importance of their titles, today this speaks more of ceremonial precedence than of the extent of authority over land and land use that likely existed in the past.

Earlier archaeological research in Sāmoa that found no evidence to show that Sāmoa had, in the past, the kind of extensive food production systems that would indicate the exercise of chiefly authority on a large scale has been from islands in the Sāmoa Archipelago that are much smaller than ʻUpolu and Savaiʻi (Athens and Desilets 2003; Ayres *et al*. 2001; Carson 2003, 2006; Clark 1988, 1990; Clark and Herdrich 1993; Cochrane *et al*. 2004; Moore and Kennedy 1996; Quintus 2011; Quintus and Clark 2012; Quintus *et al*. 2015, 2016; Valentin *et al*. 2011). However, more recently Quintus and Cochrane (2018), from their work in American Samoa, note that larger-scale political patterning is apparent even in the small islands of the Manuʻa Group. Recent ongoing research by Cochrane in the comparatively extensive land of the Falefā Valley on ʻUpolu is, like our work, questioning past conclusions about the absence of agricultural intensification in Sāmoa and the nature of prehistoric political organisation.

ACKNOWLEDGEMENTS

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NOTES

1. The LiDAR images rendered for this project, covering the entire archipelago of the Independent State of Samoa, are presently available online at: http://samoanstudies.ws/AFCP/MapServer/
2. A full account of the original LiDAR survey can be found in *Report of Survey: Airborne LiDAR Bathymetric and Topographic Survey of Samoa 2015, Survey Period 6 July to 9 August 2015*, Doc. No. TLCS00.047.008, prepared by Fugro (Australia) for the Ministry of Natural Resources and Environment, Government of Samoa. Available online at: http://samoanstudies.ws/AFCP/Books/Fugro2015_Airborne%20Lidar%20Bathymetric%20and%20Topographic%20Survey%20of%20Samoa%202015.pdf
3. A detailed description of the database is available online at: http://samoanstudies.ws/AFCP/Books/UTUoverview.pdf
4. Unsurveyed blocks are evident in Figure 9 by the lack of mapped sites (features).
5. The general criteria used for recognising archaeological features on LiDAR can be seen on the "LiDAR Information" (http://samoanstudies.ws/AFCP/MapServer/Lidar.html) and "Recognizing Archaeological Features on LiDAR" (http://samoanstudies.ws/AFCP/MapServer/SAA/Tutorial/Recognize.html) web pages of the Centre for Samoan Studies Map Server.

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REVIEWS

CROWE, Andrew: *Pathway of the Birds: The Voyaging Achievements of Maōri and Their Polynesian Ancestors*. Albany: David Bateman Ltd., 2018. 288 pp., biblio., illus., index, maps, notes, plates. NZ$49.99 (softcover).

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It comes as no surprise that "popular science" books are often overlooked by scientists themselves. Unfortunately, this contributes toward a gap between academic researchers and the general audience. Thankfully for both sides, some authors still produce admirable contributions that help bridge this gap. Andrew Crowe succeeded in such an endeavour with his new book, bringing together a vast amount of information and piecing it together in an understandable and engaging way to tell us the story of the ancient Polynesian voyagers. The task was certainly daunting when one considers how quickly the related literature has increased and information has become more complex. It took Crowe 15 years to read, absorb and synthesise the dense scientific literature which, to be honest, is not always the most digestible for someone "outside the field".

As Crowe explains himself, his efforts are aimed at redressing a bias in the way the amazing migrations of Polynesians are usually covered in the media, with "Māori and their settlement history [being] portrayed in a manner that is condescending, distorted or muddled" (p. 14). This book was thus initially written for a New Zealand audience, which drove both the main thread—how did Polynesians come to discover and settle in Aotearoa?—and the organisation of the chapters. The latter may appear confusing at first. As an archaeologist obviously concerned with chronology, I was expecting the structure of the book to follow the migrations of the Polynesians as we now know they happened, from West Polynesia to the margins of the Polynesian Triangle. Instead, Crowe chose to visit groups of islands along three main voyaging routes: from Easter Island to Pitcairn and the Austral Islands; from Hawai'i to the Society Islands; and from the Marquesas to the Cook Islands. All roads, potentially, lead to Aotearoa. Crowe justifies this approach in order to "challenge a common misconception that the first inhabitants of these islands remained in isolation, lacking the capability of getting back" (p. 15). In between, he includes chapters focused on traditional wayfinding, exploration and discovery, and adaptation to New Zealand's particular ecological conditions. Although departing from classical narratives of migrations, his organisation remains compelling and surely succeeds in demonstrating the unrivalled voyaging capacities of Polynesians generally and Māori specifically.

Anyone familiar with Crowe's previous publications knows that he is one of New Zealand's most famous writers of natural history and a specialist of native plants and birds. He did not abandon his passion for Pacific flora and fauna in this new volume. Indeed, he superbly brings together evidence from archaeology, oral traditions, ecology, ethnobotany, navigation, bird migrations and astronomy to reconstruct the reasons and conditions of these deep-sea voyages and subsequent regional interactions. Crowe takes the reader on a journey through the archipelagos,

highlighting for each the specificities of the local environment as well as the cultural and linguistic characteristics that make them both truly Polynesian and unique at the same time. For each, he devotes much attention to describing introduced crops from Southeast Asia and South America, discussing potential routes of transfer into the islands. Unsurprisingly, he also lingers over birds' patterns of migration, traditionally observed by the Polynesians themselves and potentially an incentive for them to travel further. Although those lines of enquiry have proved to be very valuable for understanding the human colonisation of the Eastern Pacific, they sometimes sound a bit repetitive throughout the chapters. On the other hand, one would have appreciated deeper exploration of other aspects of Polynesians' lives, such as the sociopolitical features of the chiefdoms or the importance of the *marae* 'ceremonial sites'. Although these topics are touched upon, their critical importance in the development of the complex Polynesian societies may be not stressed enough. These small omissions are, however, compensated for by the rich illustrations that further enhance the quality of this book. More specifically, I would highlight the quality of the numerous maps that were created for each chapter, summarising linguistic (e.g., sharing of names), archaeological (e.g., interisland exchange of artefacts) and environmental information in a clear fashion, and on which I am sure many colleagues will rely for teaching.

Another noteworthy quality of the book lies in the exhaustive review of Polynesian places. Crowe does not omit archipelagos commonly left aside in the big narratives: the Pitcairn group is covered with Mangareva, a whole chapter is dedicated to the Tuamotu atolls, discussion of the Line Islands is included with Hawai'i, and the Polynesian Outliers play a significant role in Crowe's final sections.

Chapter 10 remains in my view a tour de force of this volume. Crowe describes here what a voyage of settlement may have looked like in the most accurate and vivid way. Imagining a planned voyage from Rarotonga to New Zealand, we embark on a canoe and visualise Matariki rising on the horizon, follow the humpback whales and the petrels, observe the clouds and swell patterns, and learn how the Māori survived at sea for weeks with regards to such factors as hydration, provisioning and changing temperatures. Again, readers familiar with the anthropological literature on the subject will find no new information here, but very few writers since K.R. Howe's (2007) edited volume *Vaka Moana* have brought such freshness and liveliness to these accounts. This, undoubtedly, makes a difference in engaging global audiences with the topic.

The final two chapters review current theories on the origins of the Māori people as well as potential later contacts with not only Eastern Polynesia but also the Polynesian Outliers and other parts of the Western Pacific. Crowe remains cautious in discussing hypotheses, some of which still require further research, and simply offers the reader a truthful synthesis of the current state of knowledge. The excellent 12-page list of references included at the end of the volume will certainly guide the enticed reader.

I would, without a doubt, add this book to the list of readings for any students enrolled in an Introduction to Pacific Archaeology and Anthropology course alongside more specialised and topical volumes. But I would also surely recommend it to anyone curious about Polynesian peoples and their incredible achievements.

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MAGEO, Jeanette and Elfriede Hermann (eds): *Mimesis and Pacific Transcultural Encounters: Making Likenesses in Time, Trade, and Ritual Reconfigurations*. New York: Berghahn, 2017. 278 pp., biblio., figs., illus., index, notes. US$130.00 (cloth).

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The eighth volume in the successful ASAO Studies in Pacific Anthropology series, this fine volume of 11 chapters (including Introduction and Afterword) has been admirably edited by Mageo and Hermann. Mageo's broadly theoretical Introduction in Part I frames the volume thus: "Our aim is to examine the (re)production of cultural likenesses, along with the cultural forms and forces they configure, as well as to explain how these (re)productions repeat and vary identifiable practices and performances and at the same time are turning points in a cultural history or an interesting set of histories: points of transcultural encounter" (p. 6). Key themes prominently interwoven throughout the collection include—as one might hope to find in such a thoroughly thought-out collection addressing this topic—questions of personal and cultural authenticity, the performative constitution of identity, Western acculturation and (of course) materiality and tradition. The ethnographic contexts of the papers are diverse: Australia, Papua New Guinea (four cases), Sāmoa, Aotearoa New Zealand, Tahiti, Banaban Fijians and the Marshall Islands. Equally, the historical range is large—from narratives of Indigenous Australians' first interaction with Europeans to contemporary Tahitian tourist weddings. Several chapters trace diachronic transformation in mimetic practices between these two poles, and so there will be many things in this volume to inform the more specific research interests of every reader: from warfare to fashion, Christmas to Paramount Studios. This variety, quirkiness and juxtaposition of contexts is one of the real delights in the volume. It is entirely as entertaining a read as it is a thought-provoking one.

Mageo (pp. 6–15) posits three ("heuristic" and mutually "porous") forms of mimetic practice that arise in transcultural relationships—with at least some implied linear correlation to the historical processes of colonial acculturation: first, incorporative mimesis, in which extraneous cultural symbols may be drawn into local cognitive schemata, or vice versa, under politically benign conditions; second, emblemising mimesis, in which indigenous cultural tropes are essentialised, reified as identity-defining and performatively instantiated in contrast to intrusive forms; and third, abject mimesis, which is informed by the writings of Homi Bhabha and Julia Kristeva to characterise the kind of "abjectly" acculturated personhood Mageo identifies in mature colonised middle classes (citing Bhabha's "not quite/not white" and V.S. Naipaul's "mimic men"). This trichotomy is an elegant, rational model and goes far beyond any interpretive constructs we have hitherto had for reading the trends of cultural mimesis in the Pacific. As with all fruitful ideas, however, it provokes questions: one might ask where a classificatory space exists in the model for a cognitively congruent and holistically actualised bicultural personhood—something that Hermann's chapter addresses. To my thinking, it is precisely the individual, intracommunity variability of transcultural experience, and the contextual power asymmetries that it frequently indexes, which drive many expressions of both incorporative and emblemising mimesis; abjectness, therefore, is perhaps only the most negative of a potential range of outcomes, or etic readings of them. Equally, I

am left uncertain about how (or whether) these three forms of transcultural mimesis further transmute in the variably decolonialised, globalised and urbanised contexts of the contemporary Pacific.

On a smaller sociological scale, the ensuing ten chapters (including Joshua Bell's Afterword) can each be viewed as a working out of these intercultural dynamics and blurred boundaries of performative representation. The central nine chapters are organised into three thematic parts. Part II, "Mimesis through Time", addresses the historical specificity of mimetic practices. In Chapter One, Francesca Merlan presents an interesting study of mimesis in early encounters between Indigenous Australians and the crew of Nicolas Baudin's cartographical voyage (1800–1803), framing imitative behaviour as relational, politicised and ethnohistorically specific. Mageo's own chapter deftly interweaves strands of psychology, visual anthropology and dress history to explore the interpretive utility of two Winnicott-influenced constructs—transitional images and transitional imaginaries. She uses these constructs to narrate the mimetic interplay of cultural schemata of self-presentation and representation between Sāmoans and German colonists around the turn of the twentieth century. In Chapter Three, Sarina Pearson brings Part II of the volume to a close with a fascinating analysis of transcultural mimesis between hosting Māori (Te Arawa of Whakarewarewa and Ngāti Raukawa of Ōtaki) and touring Native American performers of the Hopi and Navajo nations, during a 1926–27 Paramount Studios promotional tour for the western *The Vanishing Race*. Against a contextual backdrop which takes in Cook Islands cowboys and the short stories of Witi Ihimaera, she makes a close analysis of contemporary news media and a set of wonderful photographs to deftly elucidate the mimetic capital at play in a distinctive encounter, carefully teasing out themes of ethnic objectification, the front stage and back stage of cultural performance and the nascent discourse of a globalised indigeneity.

Part III, "Selling Mimesis: From Tourist Art to Trade Stores", analyses the relationship between mimesis and economic forces. It opens with Joyce D. Hammond's delightful and incisive exploration of authenticity play and performative mimesis in "contemporary traditional" Tahitian tourist weddings, thoroughly embedded in a close reading of Karen Stevenson, Anne Salmond, Adrienne Kaeppler and others. The situation one encounters in Tahiti today, Hammond concludes, is "a cumulative expression of complicated exchanges that draw heavily upon mimesis" (p. 133), which has been fed by both western and Māʻohi imaginaries over the last 250 years. In Chapter Five, Sergio Jarillo de la Torre picks up analogous themes in his study of Trobriand Islands tourist art carving since the 1960s. As well as usefully charting the early history of western encounters with the marvels of Trobriands sculpture, de la Torre applies Mageo's concept of emblemizing mimesis to critically unpack the classificatory category of *tokwalu*—works that emblemise Trobriandness for foreign consumption—within an enduring carving context of initiation, magic and the dreaming of new prototypes: for readers with an interest in the ontological specificities of the artistic process, this is a rich and stimulating text. Roger Ivar Lohmann closes Part III with an engaging and impassioned discussion of what he happily describes as the recent "failed mimesis" of capitalist market economics—that ubiquitous Pacific icon, the "trade store"—among the Asabano of southern Sandaun province, PNG. As he concludes, "The Asabano engagement with capitalism is a case of attempted

mimesis that is short-circuited by the stability of characteristics of Asabano society that are antithetical to the functioning of capitalism: intimacy, egalitarianism, and isolation" (p. 182); what an admirable situation to be in.

Part IV, "Ritual Mimesis and Its Reconfigurations", explores the role of mimesis in the performative instantiation of both ethnic and religious identities. Elfriede Hermann's own ethnopsychological chapter focuses on mimetic transculturation among the modern Banabans of Rabi Island in Fiji. It concerns itself with elucidating the complex conceptual interplay between sameness and difference on one hand, and universality and cultural specificity on the other; she does this through a charming materiality study of decorated cakes and costumes associated with first and twenty-first birthday celebrations that is both historically and ethnographically fruitful. In Chapter Eight, Laurence Marshall Carucci takes the reader to the Marshall Islands at Christmastime with a study that first echoes and then extends Mageo's concept of emblemising mimesis to incorporate antithetical transcultural representations. The *wöjke* 'Christmas tree' of Ujelang—which he describes as "an exploding piñata-type contraption, but often much larger" (p. 214)—features prominently in his early analysis and evokes a wide-ranging exegesis from echoes of cargo phenomena to postwar nuclear testing; thereafter he develops a useful concept of the antithetical mimesis of Westerners within a more everyday context of timekeeping schemata and churchgoing. Doug Dalton closes Part IV with a study of interaction between the Rawa people of New Guinea and German missionaries in the years after 1900, and the development of Rawa Christianity thereafter; Dalton's chapter is theoretically intricate and closely argued in a landscape of ideas drawing upon Gregory Bateson, Roy Wagner and Bronwen Douglas, but deeply rewarding for it—as one might expect. Joshua Bell's Afterword both is a perceptive analytical discussion of the foregoing chapters and offers its own ethnohistorical case study: an exploration of mimetic material interactions and staged field photography between the Tombe villagers of northern West Papua and the personnel of the 1926 American-Dutch Expedition, in which the Smithsonian Institution participated. As Bell concludes, this volume cannot be the "last word" on mimesis in anthropological thought, but it does offer a theoretically rich, ethnographically varied and historically sweeping collection of interpretive tools and approaches. This powerful collection will undoubtedly become essential reading for any scholar working in this area.

McRAE, Jane: *Māori Oral Tradition: He Kōrero nō te Ao Tawhito*. Auckland: Auckland University Press, 2017. 252 pp., biblio., index, notes. NZ$45.00 (softcover).

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I was fortunate to have grown up in a world where my elders taught our oral traditions predominantly by word of mouth. When I hear or read about oral traditions now, I appreciate, however, that there is a difference between oral traditions and oral histories, particularly in western scholarship. Many of our own people, I suspect, would likely think that these are the same thing, but those who dedicate themselves to the scholarly

pursuit of understanding Māori or indigenous oral accounts will know that little attention has been given to their different meanings and valuations. For Māori, this is a continuing dilemma because the tensions between supposed viable history and not-so-reliable traditions have been significant to the colonisation and displacement of our historical knowledge. In his 1926 essay published in the *Journal of the Polynesian Society*, Te Rangihīroa (1926: 181) suggested that Māori oral traditions were "more closely associated with historical narratives" and "must be regarded as history derived from an unwritten source". Decades later, Jan Vansina (1985: 27–28) also highlighted the value of "oral tradition as history", pointing out that while these include "verbal messages" and songs, in truth not all sources are oral traditions. Few writers have addressed the relationship of power between oral tradition and history. For that reason, Jane McRae's *Māori Oral Tradition, He Kōrero nō te Ao Tawhito* was a text that I was looking forward to with much anticipation. In an earlier work, "E Manu, Tena Koe!", McRae (2001) explored an array of Māori writing produced in nineteenth-century Māori-language print and newspapers, and in *Ngā Mōteatea: An Introduction* she (2011) examined Apirana Ngata's renowned written collection of tribal songs. Much of McRae's focus has been on written oral accounts, which are very different to the oral recordings most oral historians work with. This perhaps explains why she prefers the term oral tradition.

McRae writes that her aim in *Māori Oral Tradition* "has been to describe the oral tradition as a whole, its genres and special character, that is, the compositional style which demonstrates that it derives from an oral society, from *te ao tawhito*, the old world before the arrival of Europeans " (p. 3). The orality she invokes is drawn from an ancient world, but I found this curious and odd, when so much of the knowledge she is referring to, whether sung, spoken or performed in various other ways, is still a living practice. This is where the book itself feels most limited. Here, in a book about oral tradition, the archive McRae draws on is static and flattened out on the page, but in living reality the *waiata* 'songs', *whakapapa* 'genealogies', *whakataukī* 'proverbs' and *kōrero tuku iho* 'histories, stories of the past' she refers to also have a vibrant living archive of orators, singers and composers in the present. Thus, a focus on oral traditions as "literatures" and texts is only one minor part of a living oral history and tradition well beyond the writing McRae draws on. Had she undertaken interviews with present-day orators, singers, composers and tribal historians, this would have been a very different book, one where orality might be seen as much more than archaic textual sources.

There are five core chapters in this book, in addition to an introduction, a conclusion, notes and a bibliography. The structure of the study is fashioned to parallel that of a *whaikōrero* 'formal speech' where orators carefully select and deliver the appropriate whakapapa, whakataukī, korero and waiata in a specific order "to fit the circumstances and to make a point" (p. 5). McRae notes the importance of this order relevant to "the form of each genre", highlighting the priority of whakapapa over "all other genres" in that the "prior knowledge of a genealogy" may be necessary to understand allusions or cryptic references in a saying, narrative or song (p. 5). Whakataukī, she argues, are significant as they "anticipate the numerous set phrases which, as is typical of oral traditions, make up the patterned or formulaic language that

Māori oral composers used in the longer genres of *kōrero* … the songs and chants" (p. 5). This emphasis on "long ago" seems to ignore the existence of an ongoing and evolving living practice of whaikōrero, song composition and language delivery that is not limited to ancient written texts. These *taonga* 'treasures' continue to grow and develop as our people continue to live these practices at *tangi* 'funerals', *hui* 'meetings' and various tribal performances today.

McRae notes that one aspiration for her book "has been to draw attention both to nineteenth- and early twentieth-century writing of the traditions from memory and to some of the writers, as a way of acknowledging their assiduous and enterprising recording and their skills as composers" (p. 5). This is an important point, an opportunity to witness the transition of purely oral worlds in an expansion where oral forms were already mixed with visuals and texts. Carving, which preceded writing, and *tā moko* 'tattooing' were both part of the world of oral delivery. Writing became a new vehicle for remembering and transmission. But how did these histories become traditions? On what grounds were they relegated from the ranks of historical accounts to the far less verifiable classification of native traditions? This book does not answer these questions. *Māori Oral Tradition*, McRae states, is written for a particular audience in "Māori language and oral literature". Her intention is to explore how Māori oral knowledge was passed on and came to retain its "orality" in print. Unfortunately, in many ways McRae's study furthers the misunderstanding that Māori oral traditions or kōrero tuku iho are something different from, and lesser than, actual history.

"The oral tradition", according to McRae, "comprises what Māori in te ao tawhito (the old world) composed, remembered, told and retold over generations—and their descendants, from the nineteenth century, wrote down" (p. 11). This statement highlights some of the problems with McRae's framing of oral tradition, which seeks to confine the authenticity and indigeneity of our knowledge to one particular recorded version or account. Our traditions continue to evolve and grow as we do, incorporating many traditional teachings but also newer, more recent episodes featuring the values, adventures and understandings passed on by our relatives from living memory. They are living and vibrant accounts, and are disputed, especially the accounts committed to print.

Traditions, then, should perhaps be considered the actual practices and rituals of transmission, whereas the content, narratives and memories—the history component—is a separate body of knowledge based in experience, all of which is kept and shared to maintain this historical knowledge—our kōrero tuku iho. So this is where descriptions of Māori oral histories as traditions tend to collide, converge and diverge, in a confusing fashion that maintains a reductive and distanced view of oral traditions as synonymous with the Māori past, but not credible enough to be afforded the position of history.

Beyond my preoccupations with the contest between tradition and history, Jane McRae's book is an important text that reveals how interconnected Māori oral history is with writing and "literature". It offers an important thesis on the orality of Māori knowledge, particularly in her reference to the oral formula—a popular theory employed by ethnomusicologists and folklorists interested in ballads and oral traditions where composers recited and kept knowledge in a system of recall centred around set

patterns and rhythms. McRae's book fits within a large international body of work where native histories are unfortunately reduced to traditions. The use of Māori *kupu* 'words' to describe what McRae calls oral traditions is interesting. She uses "kōrero tuku iho" (lit. 'words handed down'), a phrase that others, myself included, have used to define oral history and not just traditions. I encourage anyone who wants to deepen their knowledge of Māori and New Zealand history to take into account Maori perspectives on these issues. More importantly, the obvious entry points to understand Māori oral histories and traditions is to ask and speak with Māori themselves. These are not bodies of knowledge best learnt from books. They need to be experienced, heard, felt, shared, seen and lived.

Māori Oral Tradition is a good book, well written, easy to read and follow. It is set in a western-style field of tradition and oral literature that sometimes appears to forget that indigenous peoples have our own ways of thinking about the sources that too many define as "traditions". For oral historians in Aotearoa New Zealand and beyond, this is a lesson worth learning. Where do oral traditions in New Zealand really fit in the disciplines of history and oral history? Are Māori oral traditions, if that is what they truly are, just another form of oral history in New Zealand? In exploring these questions in the twenty-first century, Jane McRae's book might be a good place to start.

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PUBLICATIONS RECEIVED*

October 2018 to May 2019

CARREAU, Lucie, Alison Clark, Alana Jelinek, Erna Lilje and Nicholas Thomas (eds). *Pacific Presences: Oceanic Art and European Museums*. Vol. 1. Leiden: Sidestone Press, 2018. 254 pp., biblio., illus., index, notes. €39.95 (softcover).

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* The inclusion of a publication in this list neither assumes nor precludes its subsequent review.