



# 1 Māori oral histories and the recurring impact of tsunamis in Aotearoa-New

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25 **ABSTRACT**

26 Māori oral histories from the northern South Island of Aotearoa-New Zealand provide details of  
27 ancestral experience with tsunamis. Exchanges with key informants from the Māori kin groups of  
28 Ngāti Koata and Ngāti Kuia reveal that these histories, recorded in a narrative form, are not merely  
29 another source of information about past catastrophic saltwater inundations but, rather, reference  
30 multiple layers of experience and meaning, from memorials to ancestral figures and their  
31 accomplishments, to claims about place, authority and knowledge. Notwithstanding these  
32 confirmations, to engage as insider-outsiders with Māori oral histories (and the people who  
33 genealogically link to such stories) requires close attention to a politics of representation as well as  
34 sensitivities to the production of 'new' and 'plural' knowledge itself. Individuals and families from  
35 Ngāti Koata and Ngāti Kuia permitted us to record some of *their* histories. They share the view that  
36 there are multiple benefits to be gained by learning from differences in knowledge, practice and  
37 belief. This paper makes these narratives available to a new audience (including those families who no  
38 longer have access) and recites these in ways that might encourage those more intimately connected  
39 to know and transmit these histories differently.

40 **WHAKARĀPOPOTOTANGA**

41 Ko ngā kōrero tuku Māori o Te Taihū o te Waka a Māui e whakaahua nei i tā ngā tūpuna rongō i te  
42 aituā nui o te parawhenua waitai. Nā runga i ētahi whakawhitinga kōrero ki ētahi māngai matua o  
43 Ngāti Koata me Ngāti Kuia, i mārama ai ko ēnei kōrero tuku, he mea mau ā-pakiwaitara nei, ehara noa  
44 i te puna kōrero mō te tai āniwhaniwha o nehe, engari kē, he mea whai tikanga maha, mai i te  
45 whakamaumahara i ētahi tūpuna o nehe me ngā mahi i oti i a rātou, tae atu ki ngā kōrero mō te rohe,  
46 mō te mana, mō te mātauranga anō. Hāunga ēnei whakaūnga, e whai kiko ai te whai wāhi atu hei  
47 'rāwaho-whai-hononga' ki ngā kōrero tuku Māori (me te hau kāinga e hono ā-whakapapa ana ki ngā  
48 kōrero), me aro pū ki te taha tōrangapū o te tū hei māngai mō iwi kē, ā, me ngā kaupapa mana nui me  
49 mātua whakaaro i te whakaritenga o te mātauranga 'hōu', o te mātauranga 'mātāpuna-tini' anō. I  
50 whakaae mai ētahi māngai takitahi me ētahi whānau anō o Ngāti Koata me Ngāti Kuia kia hopukina



- 51 ētahi o *ā rātou* kōrero tuku. E whakaae ana rātou he hua nui ka puta i te whai māramatanga ki ngā  
52 rerekētanga ā-mātauranga, ā-tikanga, ā-whakapono anō. Ko tā ngā kōrero i tēnei tuhinga he  
53 whakawātea i ngā pakiwaitara tuku nei ki tētahi whakaminenga hōu (tae atu ki ngā whānau kāore i  
54 whai wāhi ki ngā kōrero nei i mua), ā, ko te āhua e takoto nei ēnei kōrero hei akiaki pea i ērā e whai  
55 hononga ana kia mātau ka tahi, ka rua, kia tuku hoki i ngā kōrero mā ara kē atu anō.

78 [The Rival Wizards: Grace, 1907a]



79 In 1907, Alfred Grace (1867-1942) published a series of Māori “folk stories”, imparted by the Ngāti  
80 Koata<sup>1</sup> elder Karepa Te Whetu. Within the extensive narrative of one of these stories, ‘The Rival  
81 Wizards’ the “wizard-chief”, Te Pou, summoned three great waves to exact retribution upon the rival  
82 Titipa for openly defying his instructions. Descriptive details of the impact of great waves striking and  
83 scouring the beach were narrated, including many contextual details about the relationships and  
84 connections between people, place and the metaphysical world. The reciting of this narrative in print,  
85 however, did not occur again until King et al. (2007) and McFadgen (2007) cited the story, among  
86 other traditional stories, and made a case for the scientific value of Māori oral histories in  
87 understanding catastrophic saltwater inundations or tsunamis in pre-colonial Aotearoa-New Zealand  
88 (A-NZ). King and Goff (2010) surmised that the descriptive nature of the language in the story  
89 resembled those of modern-day tsunami survivors and argued that it might represent an historical  
90 narrative recording direct experience with one (or multiple) tsunami inundations, prior to the arrival  
91 of the first Europeans to A-NZ in the late eighteenth century. However, they also acknowledged that  
92 the interpretation of Māori stories by ‘outsiders’ is fraught with the potential for misrepresentation  
93 and concluded the need to engage with Māori who share ancestral and kinship linkages with specific  
94 oral histories to tell our/their own stories.

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<sup>1</sup> Ngāti Koata is one of several Māori kin-groups [*iwi*] who hold territorial rights, power and authority associated with possession and occupation of *iwi*-land over the northern South Island (Mitchell and Mitchell, 2004). They date their occupation in the area from the late 1800's, and recognise the successive movements of earlier peoples migrating to and through the area. Details surrounding occupational patterns are provided in: Keyes (1960), Mitchell and Mitchell (2004).



95 This study builds upon these collective contributions by working alongside key informants from the  
 96 Māori kin groups of Ngāti Koata and Ngāti Kuia<sup>2</sup> from the northern coast of the South Island of A-NZ  
 97 (Figure 1). These informants share linkages not only with Karepa Te Whetu but also the places and  
 98 ancestral figures named in the ‘The Rival Wizards’ story. The paper begins by providing an overview of  
 99 past work in the geosciences to have benefitted from the insights provided by indigenous oral  
 100 histories. This necessarily includes a brief review of complementary lessons in political,  
 101 epistemological and methodological theory. The research framing for this work and the methods of  
 102 analysis are next outlined, before providing detailed accounts of the key elements of the story  
 103 supported by examples of contemporary dialogue, discussion and conversation. Finally, consideration  
 104 is given to the lessons, challenges and opportunities that can come from bringing the knowledge-  
 105 practice-belief complex of Māori Knowledge [Mātauranga Māori] together with the earth system  
 106 sciences.

## 107 2. INDIGENOUS ORAL HISTORIES AND TSUNAMIS

108 Consideration of Indigenous oral histories as tsunami narratives is not new. Vitaliano (1973) discussed  
 109 the scientific benefits to be gained by considering “myths and legends” as transmission devices for  
 110 knowledge about (and experience with) tsunamis, among other geologic phenomena. Her work  
 111 detailed examples of coastal deluge attributed to tsunamis (and their likely sources) from classical  
 112 Greek history through to more recent times from the Pacific coasts of the Americas to islands across  
 113 the Pacific Ocean. Accordingly, Vitaliano (1973) argued that such insights provide invaluable  
 114 information about extreme environmental disturbances in the pre-written past. A series of scientific  
 115 contributions have since emerged from the Pacific Northwest coast of North America detailing ‘Indian  
 116 myths’ and the transmission of knowledge about great sea level disturbances (Heaton and Snively,

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<sup>2</sup> Ngāti Kuia is one of several Māori kin-groups (*iwi*) who hold territorial rights, power and authority associated with possession and occupation of *iwi*-land over the northern South Island. They are often referred to as one of the ancestral *iwi* of the region (Mitchell and Mitchell, 2004).



117 1985; Clague, 1995; Hutchinson and McMillan, 1997; McMillan and Hutchinson, 2002; Ludwin et al.,  
 118 2005; Ludwin and Smits, 2007; Thrush and Ludwin, 2007; Vitaliano, 2007).

119 Heaton and Snively (1985) and Clague (1995) concluded that many details within indigenous oral  
 120 histories are consistent with tsunami inundation processes (e.g. the sudden receding of coastal  
 121 waters). Recognising this experience with earthquakes and tsunamis along the northern Washington  
 122 and southern British Columbia coasts McMillan and Hutchinson (2002) argued that oral histories can  
 123 provide independent sources of information which can complement geological and archaeological  
 124 knowledge about the role of infrequent yet catastrophic events in landscape evolution and social-  
 125 cultural transformation. They also made explicit that such histories may have other independent  
 126 meanings. Advancing this scholarship, Ludwin et al. (2005) considered 40 stories from 32 independent  
 127 sources about coastal earthquakes and marine flooding; and with help from Japanese historical  
 128 records determined that the most recent large-scale event captured in multiple stories along the  
 129 Cascadia coast occurred on 26 January 1700. Importantly, Thrush and Ludwin (2007) recognised that,  
 130 Native American and First Nations oral histories not only include rich and explicit accounts of seismic  
 131 events, but also that scientific inquiry is grounded in the historical relationships between indigenous  
 132 and settler societies, and that this has resulted in the privileging and production of certain kinds of  
 133 knowledge about the region's seismic past. Likely informed by transformative and decolonising  
 134 research theories, this corollary point raised important questions about geology's relationship with  
 135 colonialism, intellectual and cultural property, as well as the complex and fractious relationships  
 136 between researchers and the researched. Thrush and Ludwin (2007) highlighted the tremendous  
 137 potential for benefitting from differences in knowledge, practice and belief about some of the largest  
 138 seismic events known to human-kind.

139 Considerable scholarship has outlined the scientific value of indigenous expertise and information  
 140 about tsunamis referenced in oral histories from the Pacific Islands (Nunn, 2001; Lum-Ho and Lum-  
 141 Ho, 2005; Nunn and Pastorizo, 2007; Goff et al., 2008; Stewart, 2009; Goff et al., 2011; Johnston and  
 142 Dudley, 2009) and in A-NZ (Goff et al., 2003; King et al., 2007; McFadgen, 2007; McFadgen and Goff,



2007; King et al., 2010; Pearce and Pearce, 2010; Goff et al., 2012; Goff and Chagué-Goff, 2015; King, 2015; King et al., 2017). Further, there are likely to be contributions from other non-English science communities about the potential value of indigenous histories enriching the geo-archaeological sciences, but such references were not identified in the sweep of English language scholarship conducted here. Notable contributions from the Pacific include Nunn (2001), who identified ethnographic narratives of probable experiences with tsunami inundation, including a story from Pukapuka Atoll in the northern Cook Islands where time is divided into before and after a huge wave swept over the island. Nunn and Pastorizo (2007) also identified that Pacific Islander ‘myths’ might inform the chronology and social impacts of such hazards. Similarly, Hawaiian scholars are also re-examining their own oral histories that relate an extended history of exposure to tectonic and geologic hazards – including tsunamis (Lum-Ho and Lum-Ho, 2005; Stewart, 2009). This work is as much about adding to the scientific pool of scholarship surrounding Hawaii’s tsunami risk-scape as it is about cultural revitalisation and connecting with the ancestors.

Meanwhile in A-NZ, Goff et al. (2003) emphasised the limited time frame of the historical record for understanding tsunami risk in A-NZ and thereby pointed to the Māori oral record as a potentially rich source of information about tsunamis occurring prior to European arrival. Succeeding this work, there have been varying attempts to link geo-archaeological evidence and modelling output with historical events inferred from Māori tsunami narratives (Walters et al., 2006; McFadgen and Goff, 2007; King and Goff, 2010). King et al. (2007) argued that Mātauranga Māori is a neglected area of expertise in scientific assessment and declared that greater Māori involvement is required in natural hazards science to make the most of all the knowledge and skills that Māori possess. After this, King and Goff (2010) mapped selected Māori oral histories that potentially related experience with tsunamis around the A-NZ coast. These narratives were compared with contemporary scientific data and the implications of this ‘new’ information for tsunami science were considered. Importantly, this work signalled the need for new research approaches that openly and respectfully engage with Māori who hold ancestral and kinship linkages to oral histories to tell our/their own stories. Such perspectives



169 have the potential to amend (and perhaps replace) accepted scientific views about pre-colonial  
 170 tsunami disturbance and risk in A-NZ.

### 171 3. DEVELOPMENTS IN POLITICAL, EPISTEMOLOGICAL AND METHODOLOGICAL THEORY

172 Developments in political, epistemological and methodological theory from a range of disciplines are  
 173 relevant to research that explores the potential of indigenous narratives to inform about  
 174 environmental histories and extreme disturbances such as tsunamis. A key debate relates to how  
 175 knowledge is constructed and legitimised, including whether a meaningful transfer of knowledge  
 176 between different knowledge histories can occur (or alternatively do harm) when removed from its  
 177 cultural context. As Mikaere (1995) argued, the outcomes of early 'research on' Māori (or rather the  
 178 inaccurate recordings and imaginary portrayals of narratives) rendered oral histories as “fantasy” and  
 179 resulted in “epistemological disarray”. Bishop and Glynn (1999) contend that this reflected the  
 180 inadequacy of non-Māori to understand and accept the nature of Mātauranga Māori. Whatever the  
 181 case may be an ongoing challenge is to understand that narratives embedded within indigenous  
 182 knowledge systems provide more than alternative sources of information or even alternative  
 183 perspectives (Binney, 1987; Smith, 1999; Mead, 2003). Rather they have their own purposes, which  
 184 may include devices that help to establish meaning for discrete and repeated events through time  
 185 (Masse et al., 2007).

186 According to Cruickshank (1994), debates or understandings about knowledge construction are as  
 187 much about “epistemology” as they are about “authorship”. She explains that for many Indigenous  
 188 peoples there is a reluctance to analyse and publicly explain the meanings of oral histories as this  
 189 takes away from the value and different messages that come from listening to repeated tellings from  
 190 family and extended kin, in place. This contrasts with a scholarly approach which encourages the  
 191 scrutiny of texts, and contends that by openly addressing conflicting interpretations, meanings can be  
 192 determined to enrich understanding. Many Indigenous commentators are thereby challenging  
 193 researchers within the academy of science to reframe how they construct and use knowledge. This  
 194 includes the treatment of Indigenous experience and knowledge as archaic and unchanging which



195 can, without consequence, be used by science to produce “authoritative” and “universal” insights  
 196 (Howitt and Suchet-Pearson, 2003; Shaw et al. 2006; Coombes et al. 2010). In response, Johnson et al.  
 197 (2016: 3) argue “scientists have to learn to see our own privilege, our own context, our own deep  
 198 colonizing. We have to learn to think anew - to think in ways that take seriously and actually respond  
 199 to information, understanding and knowledges as if difference confronts us with the possibility of  
 200 thinking differently”.

201 The production of knowledge is deeply entwined with power relationships and who holds control and  
 202 authority over knowledge and its applications (Stephenson and Moller, 2009). This challenge is based  
 203 on the premise that power underpins the place of science in contemporary society, and that the  
 204 narrators of science (and history) ultimately hold power, whether knowingly or not (Johnson et al,  
 205 2016). Indigenous commentators (and others) have discussed legacies of extractive research practice,  
 206 whereby non-Indigenous researchers have treated the holders of Indigenous knowledge as if they  
 207 have no moral or legal rights to decide how it will be represented or used within the wider world.

208 Such practices have often resulted in leaving those studied disenfranchised from the knowledge they  
 209 have shared (Kovach, 2009). Indigenous scholars have thereby mounted a critique of the way history  
 210 has been told from the perspective of the colonisers – and this has resulted in debates over who gets  
 211 to frame and legitimise knowledge, whose voices are prominent in these discussions, and for whom  
 212 the writing is being done (Smith, 1999). A number of scholars have also challenged the notion of  
 213 including ‘voices’ in projects that aim to speak (or write) on behalf of ‘others’ (Howett and Suchet-  
 214 Pearson, 2003). For example, Coombes et al. (2014, 849) argue that “research that took the once-  
 215 radical step of ‘giving voice’ now patronizes and silences those whose voice is quite capable of self-  
 216 expression”. While we recognise as researchers and authors the contradiction in the work completed  
 217 here, we acknowledge at the same time the collaborative basis of the research and the contribution  
 218 such grounded histories provide to scholarship.

219 In response to these histories and ethical challenges, all of which are taking place against a broader  
 220 background of indigenous self-determination and cultural affirmation, there is increasing recognition



221 of ‘decolonising’ and ‘counter-colonial’ research methodologies that seek to reframe and transform  
 222 the way research and knowledge is produced (Smith, 1999; Mead, 2003; Kovach, 2007). Key elements  
 223 of this discourse (although not limited to) include (i) valuing not only specific forms of Indigenous  
 224 knowledge but also the values underpinning such systems, (ii) recognising the authority of Indigenous  
 225 peoples to determine the rules for producing new knowledge, (iii) safeguarding the authenticity of  
 226 indigenous narratives, (iv) supporting research that enriches everyone who is connected with the  
 227 research project, and (v) promoting the benefits that come from learning from different ways of being  
 228 and knowing. Howitt and Suchet-Pearson (2003: 559) remind us also that “choosing whom to include  
 229 and how to include them, the choices other people have made in representing themselves to the  
 230 author and other authors, the ways the readers interpret the words and the ulterior motive for the  
 231 usage of the ‘voices’, all involve relationships of power”.

## 232 **4. RESEARCH FRAMING**

### 233 **4.1 Methodological approaches**

234 This research applies an inductive-based methodological approach informed by ‘collaborative  
 235 storytelling’ to consider the meaning and memorials presented in the ‘Rival Wizards’ narrative. The  
 236 methodology does not fit neatly into any category, but draws on decolonising research approaches  
 237 (Smith, 1999; Kovach, 2009) and grounded theoretical principles (Glaser and Strauss, 1967; Pidgeon,  
 238 1996), while simultaneously seeking plural spaces of learning (Howitt and Suchet-Pearson, 2003;  
 239 Zanotti and Palomino-Schalsha, 2006; Johnson et al., 2016). This theoretical framing was underpinned  
 240 by Kaupapa Māori research principles (Smith, 1990; Te Awakotuku, 1991; Smith, 1999; Mead, 2003).  
 241 All informants were assured of their right to maintain authority over their contributions by reviewing,  
 242 editing and approving the ‘new’ narrative produced through this work. The National Institute of  
 243 Water and Atmospheric Research (HREC2017-005) and the University of New South Wales (HREC-  
 244 17085) provided human research ethics approvals.

### 245 **4.2 Methods, analysis and interpretation**



246 Semi-directive individual and paired interviews with 20 key informants from Ngāti Koata and Ngāti  
 247 Kuia were used to discuss the construction, key elements and purposes of ‘The Rival Wizards’  
 248 narrative. In advance of all interviews a copy of the ‘Rival Wizards’ story (Grace, 1907a) was provided  
 249 to all informants from Ngāti Koata and Ngāti Kuia. Interview participants self-selected and/or were  
 250 recommended by participants and extended family members. Each session lasted between 0.5-2  
 251 hours and was attended by a research facilitator. All interviews were electronically recorded. Analysis  
 252 of interview material was inductive and consisted of (i) ‘content analysis’ whereby ideas or words  
 253 were identified along with the frequency of their use, (ii) ‘thematic analysis’ whereby the principal  
 254 elements emerging from the data were examined and sorted, and (iii) cross-checking the integrity of  
 255 emergent ideas and interpretations through follow-up discussions with key informants with  
 256 adjustments made where necessary. Central to these analyses was an emphasis on participant views  
 257 about the narrative (rather than the meaning the researchers brought to the research). Secondary  
 258 sources of information provided supplemental support. In following such methods, we sought to  
 259 avoid subjecting the story to external judgements, or in other words, risk turning the story into  
 260 something it is not.

## 261 5. THE RIVAL WIZARDS (ABRIDGED)

262 An abridged version of the Rival Wizards story is outlined below to provide context for the  
 263 summarised commentaries that follow. Importantly, in abridging the story, we are mindful that where  
 264 one chooses to begin and end a story can alter its shape and meaning, and so we encourage a reading  
 265 of the full story as published by Grace (1907a).

### 266 5.1 Synopsis of the story

267 The story begins with Rongomai, a “wizard-chief” renowned for being able to shape-shift from  
 268 monstrous to human form. One day, with his revered greenstone fish-hook (named Huakai after one  
 269 of his most famous ancestors) Rongomai paddled from his island settlement of Motiti to the shore of  
 270 the mainland opposite the settlement of Motu to fish for *hapuku* [wreckfish] and *kahawai* [A-NZ



271 salmon]. Boastful of his prowess as a fisherman Rongomai soon lost Huakai to a large fish, leaving him  
272 miserable and despairing. Te Pou, the rival “wizard-chief” from Motu, watched these proceedings  
273 from the shore. Famed also for his shapeshifting capabilities, Te Pou waited until after dark and then  
274 stepped into the water turning himself into a shark and searched for the coveted hook. However,  
275 Rongomai initiated an immense fishing haul, and relocated ‘Huakai’; although there was  
276 consternation at a large hole in one of his nets presumably caused by a shark. Te Pou was furious at  
277 Rongomai for having found ‘Huakai’, and for almost having been caught in his fishing nets. Vowing  
278 revenge, Te Pou later swam to the village of Motiti and in the middle of night he thrust a burning stick  
279 into the thatch of Rongomai’s house. Rongomai’s human form was burnt and he was thereafter  
280 confined to an aquatic existence as a voracious and malevolent salmon. The fish from the coast near  
281 Motu were soon thereafter driven away by Rongomai, and then while swimming, Te Pou’s son,  
282 Kopara, was eaten by Rongomai. The mourning Te Pou subsequently planned a great farewell for his  
283 son, but realising the scarcity of fish he transformed himself into a porpoise and travelled to have an  
284 audience with Tangaroa, the supreme ruler of the sea. Here Te Pou requested that all the salmon  
285 over whom Tangaroa held sway to come to Motu, be summoned to the mouth of the river, to weep  
286 for his son. Tangaroa agreed to the request, but also indicated his interest in joining the occasion. In  
287 reply Te Pou acknowledged the great pleasure this would bring, but he cautioned that the water at  
288 Motu is hardly deep enough, with extensive mudflats and the river so shallow that it would be a most  
289 inconvenient place for Tangaroa. Returning home Te Pou advised his people to prepare their nets for  
290 the fish that would come, advising that he expected the pick of three fish for his own use. Standing on  
291 the shore Te Pou proceeded to say incantations while Titipa, the next chief in command and secret  
292 rival, ignored Te Pou’s requests. When the great haul of fish was pulled ashore, Te Pou returned to  
293 inspect the catch only to find Titipa claiming it. Te Pou therein warned all to stand back from the  
294 beach as three great waves were called forth, advancing and receding from the beach, eventually  
295 taking Titipa with them. The story ends with Te Pou selecting the three largest fish from the collective



haul, gifting the first to his son and the sea, the second to his wife, and the third for himself, ending  
 Rongomai's existence.

## 6. STORY-TELLING THROUGH WHAKAPAPA<sup>3</sup>

### 6.1 Narrative sources

The published version of the 'Rival Wizards' story (Grace, 1907a) was "not known" by the informants  
 from Ngāti Koata and Ngāti Kuia prior to the formal discussions carried out for this study. There were,  
 however, many repeated qualifications about parts of the narrative being very familiar. Independent  
 of one another, informants from both kin groups initially expressed "I am not familiar with the story",  
 "the story does not ring a bell for me", "I've never heard our people talk about it" and, among others  
 "the first time you gave me the story is the first time I had come across this". There was, however,  
 widespread awareness of Karepa Te Whetu (the informant of the story), first by the research  
 participants from Ngāti Koata who hold direct genealogical connections, and second by those from  
 Ngāti Kuia who recognised his name from pan-tribal history. From these collective voices, we know  
 that Karepa Te Whetu lived on D'Urville Island (Rangitoto) and that he was the elder son of Te Whetu,  
 a respected Ngāti Koata leader who migrated with other Ngāti Koata descendants from the North  
 Island in the 1820s to settle on Rangitoto and other areas across the northern South Island (Figure 1).  
 Te Whetu had a settlement at Te Marua (north-eastern side of Rangitoto), which is known for its  
 swampy ground and cliffs. An informant suggested that Karepa Te Whetu most likely grew up at Te  
 Marua alongside kin from Ngāti Koata and the already occupying people of Ngāti Kuia. For example,  
 an informant from Ngāti Koata reflected: "Ngāti Koata moved down here in the 1820s. And there was  
 a whole big history on that island [Rangitoto] before we moved in so I wonder how much of that  
 history, those stories, that he [Karepa Te Whetu] heard". In his later years, it was widely understood  
 that Karepa moved to Croiselles Harbour where he spent his final days (although one informant

<sup>3</sup> Ancestral and kinship linkages to people and place, genealogy, literally means 'to place in layers'.



319 suggested that he may also have lived at Taranaki for a while). According to Grace (1907b) it was  
320 during this period that he got to know Karepa Te Whetu, leading eventually to the sharing of  
321 numerous stories, until Karepa's death in 1903.

322 Reflecting further upon the 'Rival Wizards' story shared by Karepa Te Whetu with Alfred Grace, many  
323 informants from Ngāti Koata and Ngāti Kuia noted that knowledge holders had probably passed on  
324 and/or moved away from the Island, thereby taking many of their stories with them. One informant  
325 also remarked that, "Some of our old people were cautious about who they told things to, so they  
326 never told them". Other explanations for not knowing the 'Rival Wizards' story included reference to  
327 changes in the resident population of Rangitoto following the arrival of the first Ngāti Koata peoples  
328 and thereafter the broader social-cultural changes stemming from the arrival of the first missionaries.  
329 Statements from both Ngāti Koata and Ngāti Kuia informants included: "What happened prior to the  
330 *heke* [migration] ... there are a lot that probably won't know what those stories were ... so yeah it is  
331 probably a Ngāti Kuia story", and "These events [in the story] are before Ngāti Koata. It's probably a  
332 Ngāti Kuia story eh?" and "Ngāti Kuia lived on the Island, right up until the 1870s, early 1880s. My  
333 great grandfather was born on the island [Rangitoto] but he was straight Kuia... And then all the Kuia  
334 left... so lots of those *korero* [stories] about Rangitoto were not spoken about anymore. Ngāti Kuia lost  
335 a lot of those *korero* whereas our Ngāti Koata-Kuia relations who stayed on the island retained their  
336 knowledge of the place". Whatever the case might be, two informants (one from Ngāti Koata and the  
337 other who recognised their links to both Ngāti Koata and Ngāti Kuia) also affirmed that they had no  
338 reason to doubt the story from Karepa Te Whetu: "If it [the story] came from Karepa, I have no reason  
339 to doubt it". Finally, upon questioning the informants about the role of Alfred Grace in the telling of  
340 the story there was no mention of misgiving or distrust, as is common for other Māori when reflecting  
341 on the work of other ethnographers of the time (Mikaere, 1995; Smith, 1999; Haami, 2012).

## 342 6.2 Key elements and story-telling devices

343 Many of the informants expressed familiarity with the places and contextual details described in  
344 Grace's account. The most common reflections included reference to the two settlements named in



345 the story, Motiti and Motu. Initial discussions suggested informants were unaware of such settlement  
346 names on, or surrounding, Rangitoto. However, several informants from Ngāti Koata and Ngāti Kuia  
347 (in conversations independent of one another) were quick to point out that there is a Motuiti Island,  
348 also known as Moutiti, Motiti and Victory Island, just off the northern coast of Rangitoto (Figure 1).  
349 For example, one Ngāti Kuia informant stated: “In the old books, it is referred to as Motiti and  
350 Moutiti. Motiti - that could be just a misspelling if it has been orally translated. That kind of thing was  
351 prevalent when they [ethnographers] were transcribing as they heard it and I would expect it would  
352 have been the same kind of situation here...Motiti, Moutiti, Motuiti”. However, one Ngāti Koata  
353 informant questioned these possible linkages, drawing specific attention to there being no beaches  
354 on Motuiti and no visible signs of having been occupied (i.e. pits or middens). Notwithstanding these  
355 literal inconsistencies, the same informant described the island as an important site for ongoing  
356 traditional harvesting of wild-foods.

357 With reference to the settlement of Motu, one Ngāti Kuia informant noted the proximity of Motuiti  
358 Island to the historical settlement at Otu Bay at the northern end of Rangitoto, and questioned  
359 whether Otu Bay might be a misspelling of Motu (Figure 1). Another Ngāti Kuia informant questioned  
360 whether Motu might be a shortening of a longer name such as Motungararara (now formally named  
361 Titi Island) which was not only the site of a settlement held by Te Pou Whakarewarewa [an historical  
362 figure understood to have lived during the late 18<sup>th</sup> century] but also a position where he had control  
363 of all the area. It was surmised by another informant from Ngāti Koata that by using the name Motu  
364 (translates as Island) Karepa Te Whetu may have been ‘generically’ referring to all the islands in the  
365 area, not just a specific place. Alternatively, another informant from Ngāti Koata offered that “just  
366 because people don’t know this name ‘motu’ it doesn’t mean that there wasn’t a place called motu,  
367 but the name may have been buried or usurped by new peoples coming in...”. Given these initial  
368 commentaries, there was general agreement that the story was derived from (and/or around)  
369 Rangitoto but it was not possible to confirm any specific location.



370 The description of extensive mudflats and a shallow river at the settlement of Motu, also led some  
371 informants to specifically reflect on several locations on Rangitoto and its surrounds with similar  
372 physical characteristics. For example, a Ngāti Koata informant stated “When I think about that, I think  
373 about Whangarae on the Nelson mainland, just before Okiwi Bay. It was closer than other places on  
374 the Island. My recollection is going there as a child for a *tangi* [funeral] and we anchored our boat out  
375 there and on the low tide it was stranded. We just waited for the tide to come back in again. And  
376 there was a big settlement in that place...at Whangarae... That area is still owned by Ngāti Koata. Not  
377 many people live there now but there are a lot of owners...you could class that as part of D’Urville  
378 Island [Rangitoto]” (Figure 1). The same informant emphasised that these places were not regarded  
379 as separate by the people living in these areas and that any attempts to locate places referred to in  
380 the story need to understand that the sea connected all the islands and the mainland as well as the  
381 settlements situated along their coasts. The informant added “there is another place on D’Urville  
382 Island which is in the Manuhakapakapa Bay. The water there and particularly Opitiki Bay was heavily  
383 populated pre-Ngāti Koata and probably even Ngāti Kuia...and the water there is shallow”. In addition,  
384 specific reference to the “river” at Motu led some informants to contemplate the absence of rivers on  
385 the Island as well as the neighbouring mainland. While this was inexplicable for some, informants  
386 from both Ngāti Koata and Kuia recounted that the extensive use of geomorphic names such as  
387 ‘sounds’ and ‘arms’ across the northern South Island today refer to locations that were traditionally  
388 referred to as *awa* [river]. For example, “Te Hoiere – is a good example of that. Today we talk about  
389 the Pelorus River and Pelorus Sound, as opposed to Te Hoiere being one big entity into the Cook  
390 Strait. Even some of the place names through the sounds Awaiti and Awanui, they were calling arms  
391 at the time also, so even if we were thinking about D’Urville Island and Port Hardy and Greville  
392 Harbour and all of those places, there are lots and lots of little arms all over the place [that would  
393 have had names]” (Figure 1). Such contextual nomenclature may thereby explain the use of the term  
394 ‘river’ in the story.



395 Ancestral protagonists were another common element discussed by all informants. However, it is  
 396 important to qualify that most key informants from Ngāti Koata either declared no knowledge of the  
 397 names or that the names (or at least some) pre-dated the arrival of Ngāti Koata people to the region.  
 398 In contrast, most of the key informants from Ngāti Kuia recognised the names of the central  
 399 protagonists, and quickly confirmed linkages, citing genealogical books and historical transcripts (e.g.  
 400 Meihana Whakapapa Book, no date; Hemi Whakapapa Book, no date), and the ongoing use of such  
 401 names today. As one respondent declared, “Rongomai, Te Pou and Titipa - I know all those names”  
 402 and another stated “Te Pou - yep that’s my father’s middle name. Te Pou is a very common name for  
 403 Ngāti Kuia. Every Peter is a Pou ... so that name’s a common one”. Another said, “Te Pou and  
 404 Rongomai have been commemorated down to the present day by the repeated use of their names in  
 405 the lines of Ngāti Kuia *whānau* [families]”. The sacred fishing hook ‘Huakai’ used by Rongomai was  
 406 recognised by another Ngāti Kuia informant as a term used by recent generations of Ngāti Kuia. It was  
 407 also noted that the ancestors named in the story also derived from quite different periods of time.  
 408 Thereby, any attempts to historicise elements within the story based on genealogy would more likely  
 409 than not result in looking for detail that is not there. Two commentaries summarise these sentiments:  
 410 “Such stories were not necessary told in a linear fashion” and “The stories don’t follow linear ways of  
 411 telling a story and that is important because you can have different ancestors from different times to  
 412 celebrate those people, to remember them, to remember a lesson... so they are not forgotten”. In  
 413 this way, it is the protagonists rather than chronological dimensions of time that are of most  
 414 relevance.

415 Other contextual aspects in the story considered highly relevant to locating the narrative included  
 416 familiarity with large sharks and *kahawai* (salmon) in the area, particularly at Manuhakapakapa  
 417 Harbour (Figure 1). For example, multiple references to *kahawai* were made by Ngāti Koata  
 418 informants who grew up on Rangitoto Island: “*Kahawai* is everywhere [around Motuiti Island] ...we  
 419 catch *kahawai*, we get it quite easy...”, “*Kahawai* were plentiful around the Island [Rangitoto]... like at  
 420 Kape [Manuhakapakapa Bay] ... there was a big *kāinga* [settlement] here”. And, “I can tell you a story.



421 We had my dad's uncle, and he was Ngāti Kuia. He was brought to live with us on the Island  
 422 [Rangitoto], and he didn't like the people he was staying with. This was at Ohana. So, he left for two  
 423 or three days and there was no sign of him. So, they sent back to his people in Okoha (in the Pelorus  
 424 Sound), and they asked are any fish there? Our people responded yes there is a lot of *kahawai* on the  
 425 Puna (Te Puna Bay) side of Ohana. They said that's where you will find him. What he used to do is dive  
 426 under the water and put his thumb and fingers into the gills of the *kahawai* and that's what he lived  
 427 on until they found him". Upon querying informants about which bay might represent the traditional  
 428 settlement of Motu named in the story, some considered the Manuhakapakapa Harbour as a possible  
 429 analogue, while others pointed out that Whangarae, Otu Bay as well as Skull Bay in Port Hardy are  
 430 equally possible given the significant settlements at all of these neighbouring places in the past.  
 431 Notwithstanding these reflections, many informants considered these contextual aspects in the story  
 432 highly relevant for connecting the story to the area. For example, one of the informants from Ngāti  
 433 Kuia stated: "It is not only the descriptive language of catastrophic waves being called ashore, but the  
 434 other details, that make us believe we are in the place".

435 References to the power of prayer and incantation [*karakia*] as well as shapeshifting [*turehu*] in the  
 436 story were also identified as highly relevant to any claims of the narrative coming from the northern  
 437 South Island. Ngāti Kuia informants emphasised not only this power, but also the reputation held by  
 438 the "tōhunga" [priest; expert in traditional lore; person skilled in specific activity; healer] of Ngāti Kuia  
 439 to modify the elements. For example, "We were known as *te iwi karakia* [the necromancing people]  
 440 ...but not the kind that do *makutu* [dark incantations]. Our *karakia* were very much a demand, that  
 441 was the *mana* [authority, control, influence, prestige] and power of the *tōhunga* [priest; expert in  
 442 traditional lore; person skilled in specific activity; healer]. We are connected to all of our *Atua* [Gods,  
 443 deity] and we are made of our *Atua*". These discussions also led one of the informants from Ngāti Kuia  
 444 to reflect specifically on the significance of the incantation used in the story and whether the  
 445 description of destructive waves was due to a tsunami or a phenomenon manifest through  
 446 metaphysical forces. In response, the informant answered: "what I do know is that our people were



447 recognised as very strong *kaikarakia* [necromancers]”. Mitchell and Mitchell (2004) have also pointed  
 448 out that Ngāti Kuia have long been recognised for their powers in this regard and historical transcripts  
 449 are known to contain *karakia* about how to control the sea and the waves, with many references to  
 450 Rangitoto (Smith, 1889). The story also incorporates multiple references to Te Pou and Rongomai  
 451 ‘shapeshifting’ or transforming themselves into various life-forms from the sea, from whale and shark,  
 452 to porpoise and kahawai. Again, several informants from Ngāti Kuia affirmed a deep familiarity with  
 453 such details, including acceptance of the supernatural and the metaphysical world. For example,  
 454 “Shapeshifting, that is acceptable to me. I grew up with that *korero* [story]” and “Kaikaiawaro is our  
 455 *kaitiaki* [person, group, being that acts as a carer, guardian, protector and conservator] and he takes the  
 456 form of a dolphin”. Further still, the familiarity with these elements in the story extended to  
 457 recognition among many of the Ngāti Kuia informants that they were descendants of Kaikaiawaro,  
 458 and that he is present in their genealogy as an ancestor rather than an Atua. As an informant  
 459 declared, “Yes...when I was reading this Te Pou goes to visit Tangaroa and when he transforms himself  
 460 it was like we know that because Kaikaiawaro who is in our *whakapapa* as a person who could  
 461 manifest himself as a dolphin... We are the descendants of Kaikaiawaro”.

### 462 **6.3 Memorials and analogue stories**

463 Reflecting upon the specific narrative of Te Pou [the principal protagonist in the Rival Wizards story]  
 464 calling forth catastrophic waves, many informants from Ngāti Koata and Ngāti Kuia regarded this  
 465 account as most likely referencing direct experience with past tsunami inundation. Although, almost  
 466 all of these informants were quick to point out that they did not know where this story occurred  
 467 and/or when it happened, and that the narrative was being told within a framework of deities and  
 468 super-natural humans with influence over the elements. Consideration of the narrative as a tsunami  
 469 tradition also led several of the informants to note similarities with the destructive waves described in  
 470 another story from Moawhitu [Greville Harbour] on the western side of Rangitoto (Figure 1).  
 471 According to these commentaries a tsunami, possibly occurring in the 1400s or 1500s, drowned  
 472 nearly all people living around Greville Harbour, and their bodies now lie in the surrounding sand



473 dunes. For example, “Yes, there was a great big tidal wave. I heard it when I was a kid. My  
 474 grandmother told me when I was a child. This story is *tuturu tika* [genuinely truthful]. I don’t question  
 475 it”. The story of Moawhitu was also recounted by Karepa Te Whetu to Elsdon Best and published in  
 476 the Journal of the Polynesian Society in 1893 (Te Whetu, 1893). It describes the people of Ngai-  
 477 Tarapounamu who settled Rangitoto Island and a breach of *tapu* [sacrosanct, forbidden, inviolable] by  
 478 a local woman which led to the gods stirring up the deep ocean and causing great waves to sweep  
 479 away people where the woman was living. Phillipson (1995) purports that the “tidal wave” occurred  
 480 some-time in the sixteenth century, while Cope (2011), Chagué-Goff and Goff (2012a, 2012b) and  
 481 Cope et al., (2012) indicate the previous century as more likely based upon the inferred timing of a  
 482 Māori occupation layer beneath marine gravels at Moawhitu as well as palaeotsunami evidence from  
 483 neighbouring sites across region. Meanwhile, Mitchell and Mitchell (2004) referred to the “tidal  
 484 wave” as *Tapu-arero-utuutu* [vengeance for the breaking of strict food preparation practice] and  
 485 postulated that the people already living on the Island prior to the arrival of the kin-group Ngai-  
 486 Tarapounamu may have been from the ancient Waitaha peoples and/or early Ngāti Kuia lines. It is  
 487 also noteworthy that one informant familiar with the name *Tapu-arero-utuutu* identified a stand of  
 488 offshore rocks to the south west of Rangitoto by the same name (Figure 1). The association of this  
 489 name with tsunamis and its close location to Rangitoto however were not mentioned.

490 More than one informant questioned whether the Rival Wizards narrative might be a retelling of the  
 491 Moawhitu tradition. One informant questioned where knowledge of the Moawhitu tradition had  
 492 actually come from. For example, “I have heard the *korero* about Moawhitu and the tsunami there,  
 493 but I was told by my uncle (and he is passed away now) that the people were labouring men but also  
 494 avid readers so I cannot say whether that story was one that we had or what he had read and then  
 495 became ours”. Meanwhile another informant reflected that the [Rival Wizards] story might not  
 496 necessarily be referring to Moawhitu, but rather the Manuhakapakapa area due to the strong  
 497 references to kahawai and the abundance of people in the area: “This certainly could have been a  
 498 place where that *korero* might have been had”. In contrast, Otu Bay and Skull Bay were also identified



499 by other informants as equally likely sites referenced in the story. As noted earlier, one Ngāti Koata  
 500 informant reflected that the name motu might have not only been used in a general sense but also to  
 501 reflect that there are many places here that were likely affected by the extraordinary waves described  
 502 in the story and so a generic settlement name was used to capture this. Whatever the case may be, in  
 503 considering the specific sites and sources for the Rival Wizards story there was widespread agreement  
 504 (although not total) that the story and its elements derived from Rangitoto and the connected places  
 505 and peoples that surround the northern South Island. As one respondent noted, “It’s definitely got  
 506 the feel that it comes from this place”.

## 507 7. MAORI ORAL HISTORIES AND NATURAL HAZARDS SCIENCE

### 508 7.1 Lessons and opportunities

509 By engaging directly with informants from Ngāti Koata and Ngāti Kuia it is evident that there is a deep  
 510 familiarity with the different elements contained in the Rival Wizards story. This includes knowledge  
 511 of past tsunami impacts on, and surrounding, the island of Rangitoto. Dialogue may not have included  
 512 familiarity with the specific story itself, but ancestral relationships were confirmed between  
 513 informants of Ngāti Koata descent and the original informant of the story Karepa Te Whetu as well as  
 514 those informants of Ngāti Kuia descent and the leading protagonists in the story. Many other aspects  
 515 of the story are also deeply rooted in the enduring knowledge of Māori histories across the northern  
 516 South Island. And, while the exact location of catastrophic waves could not be confirmed, most of the  
 517 informants (from both Ngāti Koata and Ngāti Kuia) regarded the story as incorporating direct  
 518 experience with past tsunami inundation(s) on Rangitoto Island and the neighbouring coastal  
 519 surrounds.

520 More broadly, this work confirms that Māori oral histories are dynamic, even when committed to  
 521 writing in an ethnographical text. The Rival Wizards story holds multiple purposes comprising  
 522 elements of culture, place, identity, lineage, history and in this case, environmental risk. It is also clear  
 523 that ancestral and kinship linkages to people and place (i.e. *whakapapa*) are central to the



524 construction and ongoing retelling of Māori histories. Royal (1992: 21) affirmed this notion stating  
 525 that *whakapapa* is “the fabric upon which tribal histories sit” generating meaning for human  
 526 behaviours and understanding in the Māori tribal world. Further, Roberts (2012) explained that  
 527 *whakapapa* is used in story-telling as a construct for mapping the natural world and its phenomena;  
 528 thereby acting as a “mental map” of place. And most recently, Kelly (2016) has reflected that Māori  
 529 knowledge was stored layer by layer, referencing places, ancestors and the actions of protagonists  
 530 as ‘memory cues’ to retain vitally important information. The specific layering of contextual detail  
 531 in the Rival Wizards story affirms these connections and relationships between the natural and  
 532 metaphysical worlds, including the narrative structures critical to cultural endurance and memory.

533 Our working with informants from Ngāti Koata and Ngāti Kuia also highlights that Māori oral histories  
 534 can complicate scientific definitions of what constitutes events. That is, the earth sciences typically  
 535 treat events as discrete and bounded but in the case of the Rival Wizards a different paradigm with  
 536 non-linear contextual details is used to establish layers of meaning with ancestral protagonists from  
 537 different epochs of genealogical time. Tau (1999) reflects that events in the Māori world are often  
 538 recalled relative to known ancestors rather than fixed at some objective point in time. Further he  
 539 points out that trying to apply chronology to genealogical time is akin to historicising a past that was  
 540 not intended to constitute a linear history. In short, Mātauranga Māori orders itself differently, and  
 541 thereby the risk of misinterpretation is high when stories and their elements are not understood  
 542 within the context of ancestry and cultural experience (Roberts et al., 1995; Berkes, 1998; King and  
 543 Goff, 2010).

544 The methodology underpinning this research provides an example of how the earth system sciences  
 545 as well as the knowledge-practice-belief complex of Mātauranga Māori can benefit from engaging  
 546 collaboratively with one another. Confirmation of deep connections to the Rival Wizards story and  
 547 subsequent affirmation of ancestral experience with past tsunami(s) across the northern South Island,  
 548 casts off earlier assumptions that the story might derive from the eastern Bay of Plenty (King and  
 549 Goff, 2010). Further, this study emphasizes the value of such engagements, particularly for scientific



550 researchers who seek to learn from the historical experience captured in Māori oral histories. From  
 551 this epistemological position, we agree with Styres (2008) who argued that the challenge for  
 552 researchers from the academy of science is to go beyond traditional methodological approaches and  
 553 assumptions about research which select and frame stories from the point of view of the dominant  
 554 culture. Further, we concur with Johnson et al. (2016: 3) that a reframing of science is needed  
 555 whereby “one is drawn to the wider value of a dialogue across knowledge systems that is humble,  
 556 respectful and hopeful; which recognizes not only the need to acquire knowledge, but also the need  
 557 to transform and respond to different knowledges, understandings, meanings, and opportunity”.

558 Although, we simultaneously acknowledge that this is deeply challenging because the research  
 559 structures around us constantly push and pull us to neglect and compromise these values, ethics and  
 560 practices. Further, we recognise that research framing will not solve all the problems associated with  
 561 the hierarchies of power and knowledge production (Mustonen, 2014).

562 Notwithstanding these ongoing tensions, engaging in this work can help to promote “plural spaces” of  
 563 learning that contribute to the reclaiming of stories and culture as well as the development of new  
 564 knowledge and new questions (Howitt and Suchet-Pearson, 2003; Zanotti and Palomino-Schalsha,  
 565 2006). For example, the work undertaken in this study contributes to a number of projects currently  
 566 being undertaken by Ngāti Koata and Ngāti Kuia by adding to their existing stores of knowledge. This  
 567 research space also provides an opportunity for the knowledge-practice-belief complex of  
 568 Mātauranga Māori to engage with the academy of science about tsunami disturbance, recurrence  
 569 and risk. And, as already articulated, there remain many unrealised opportunities for Mātauranga  
 570 Māori to inform the earth system sciences about extreme hazard episodes and risk along the A/NZ  
 571 coastline over the past 1000 years (King and Goff, 2010; King, 2015; King et al., 2017). Such work  
 572 however will require greater attentiveness to relationships among people involved in the research,  
 573 including the need to be aware of contemporary developments political, epistemological and  
 574 methodological practice.

## 575 8. CONCLUSIONS



576 This work confirms northern South Island Māori links to ‘The Rival Wizards’ narrative, including  
577 knowledge of ancestral experience with a past tsunami, possibly even multiple events, on, and  
578 surrounding, Rangitoto (D’Urville Island). While we cannot confirm the exact location of the story, it is  
579 evident from the multiple exchanges with key informants from Ngāti Koata and Ngāti Kuia, that the  
580 narrative comprises multiple layers of history and meaning. However, notwithstanding these  
581 confirmations, to engage with oral histories (and the people who link genealogically to such stories)  
582 requires close attention to a politics of representation, which includes considerations about how  
583 knowledge is constructed, applied and legitimised. It also demands sensitivities to the production of  
584 ‘new’ and ‘plural’ knowledge itself. Individuals and families from Ngāti Koata and Ngāti Kuia have  
585 permitted us to record some of their history, because they share the view that there are multiple  
586 benefits to be gained by learning from differences in knowledge, practice and belief. Further still, the  
587 ‘retelling’ of this narrative offers an opportunity to relive ancestral experience across different epochs  
588 of genealogical time. The account offered in this paper makes these narratives available to a new  
589 audience (including those families who no longer have access) and recites these in ways that might  
590 encourage those more intimately connected to know and transmit these oral histories differently.



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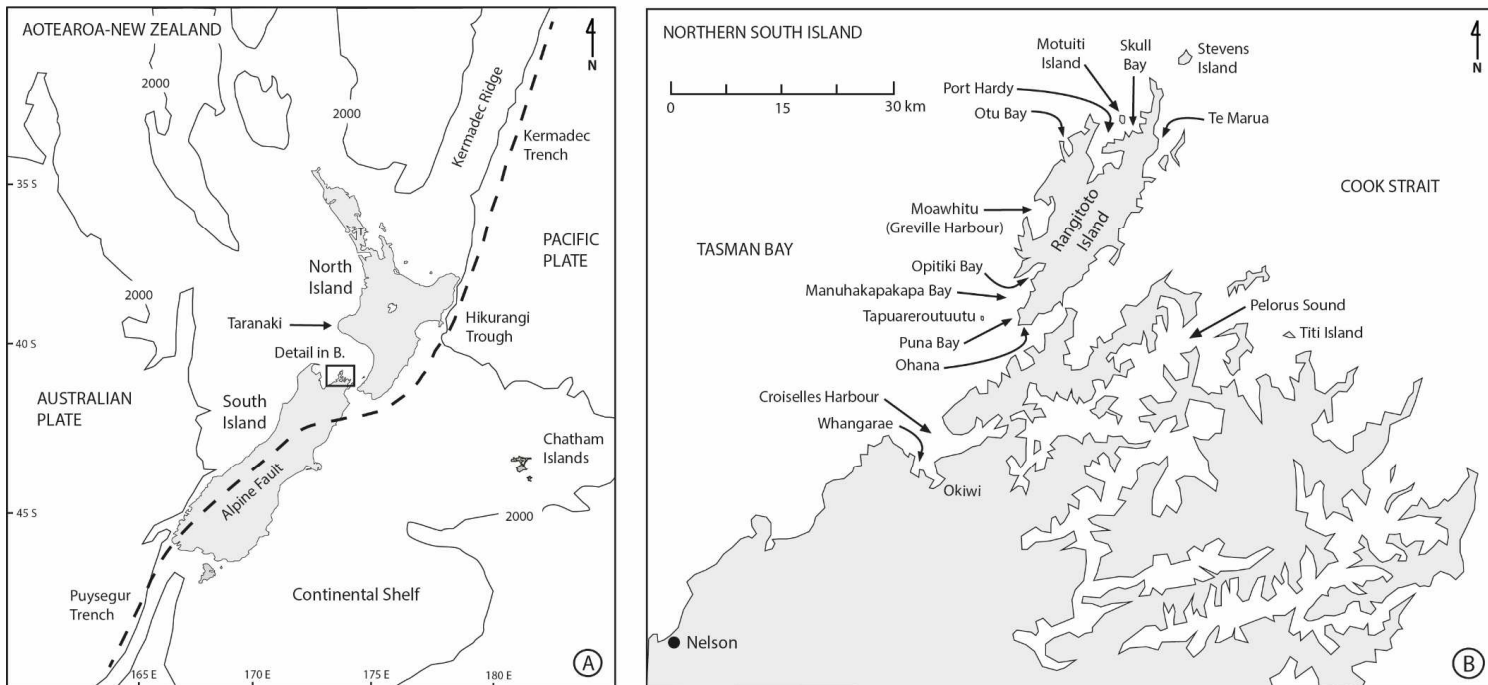


Figure 1: **(A)** Aotearoa-New Zealand's tectonic location in the South Pacific showing the Australian-Pacific plate boundary as a dashed line. The submerged continental shelf boundary is loosely defined by the 2000 m isobaths (adapted from Carter et al. (1988)). **(B)** Rangitoto Island (D'Urville Island) and surrounding locations mentioned in the text.