

Tangiwai at Piopiotahi: An Account of its History and Use

Julia Bradshaw

Canterbury Museum, 11 Rolleston Avenue, Christchurch 8013, New Zealand

Email: jbradshaw@canterburymuseum.com

Both nephrite and tangiwai (tangiwaite or bowenite) are included in the term pounamu, which in the past was often referred to as greenstone by Europeans. Nephrite is tougher and more durable than tangiwai, a stunning and rare variety of antigorite serpentine. The best quality tangiwai is found in a very remote part of the southwest coast of Te Wai Pounamu (the South Island), Aotearoa New Zealand. Its exquisite beauty and the challenges involved in retrieving tangiwai meant that it was highly prized and eagerly sought after by Māori.

This article provides details of the physical properties of tangiwai, summarises details of its recovery and examines its availability, particularly during the post-contact period. The exploits of the Milford Sound Greenstone Company are detailed.

The challenges associated with retrieving tangiwai from its isolated source means that it was always scarce and typically there are few tangiwai taonga (treasures) in museum collections where it is heavily outnumbered by taonga made from nephrite. Illustrations of Canterbury Museum's modest collection of tangiwai taonga are provided in a brief catalogue.

Keywords: Anita Bay, bowenite, Milford Sound, pounamu, takiwai, tangiwai

What is Tangiwai?

Tangiwai is part of a group of rocks known as pounamu, a term which encompasses nephrite and tangiwai, both of which were important to Māori and which they recognised as geologically and functionally different. Nephrite is incredibly tough and can hold a very sharp edge, making it extremely useful for tools and weapons. Nephrite is found in at least 22 countries but that found in Aotearoa is known for its quality and translucence. The discovery of a goldfield in Central Westland in the mid-1860s led to an influx of Europeans and subsequently to the commercial exploitation of nephrite from the district. This led to the development of products made from the nephrite variety

of pounamu, often jewellery, which continues to this day.

Tangiwai (also known as bowenite) is a variety of antigorite serpentine. It is softer and more easily fractured than nephrite so is not as useful for tools, but its beauty made it very popular for personal adornment. Tangiwai is stunningly translucent to transparent but can also be fibrous and flaky (Beck et al. 2010: 191) with the asbestos-like fibres sometimes being quite noticeable (Fig. 1). Tangiwai varies in colour with hues of green, blue, brown and grey as can be seen in Figures 2, 3 and 4 and in the catalogue.



Figure 1. A long piece of unpolished tangiwai that shows its tendency to fracture and flake. Canterbury Museum ZM1197



Figure 2. Backlit 7 mm thick slice of tangiwai, showing browns, greys and a tinge of blue. Canterbury Museum ZM1409



Figure 3. A backlit view of the reverse of a tangiwai hei tiki (pendant in human form) showing high translucency and some flakiness. Canterbury Museum E161.68

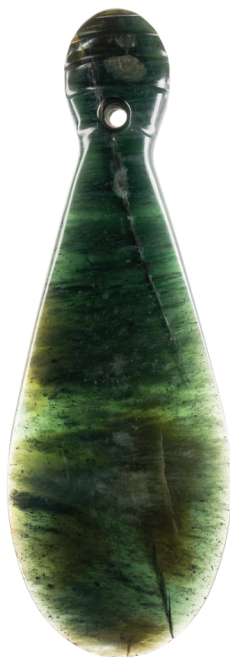


Figure 4. A backlit view of a mere made from tangiwai showing shades of green, blue and brown. Canterbury Museum E141.185

In Aotearoa nephrite and bowenite are found only in the South Island at the localities shown in Figure 5. The best quality tangiwai is found in a narrow band of ultramafic rocks near Piopiotahi (Milford Sound) that runs south from Anita Bay (Fig. 6) to Poison Bay, but less transparent stone can also be found in Westland and Nelson (Beck et al. 2010: 38).

Piopiotahi, the Māori name for Milford Sound, is reported to be an ancient name. Ethnologist Herries Beattie was told that Piopiotahi received its name from a canoe that came from Hawaiki to get pounamu (Beattie 1945: 101, 143). “Mohi”, of Rakiura, told his people that Piopiotahi was named after a pet bird owned by Māui (Beattie 1945: 118). Both pieces of information give a hint of the antiquity of tangiwai recovery. It is important to note that several other *whare pūrākau* (schools of learning) have slightly different accounts of the origin of the *ingoa wāhi* (placename) Piopiotahi.¹

Tangiwai translates literally as tear water and two accounts of its origin were collected by Beattie. He was told that the three wives of Tama-ki-te-rangi (Captain of the Tairea canoe) deserted him and that he searched the West Coast of the South Island for them. At Piopiotahi he found one of his wives, but she had turned into pounamu. As Tama wept over her his tears penetrated the rock creating tangiwai – the tears of Tama-ke-te-rangi (Beattie 1920: 46).



Figure 5. Map showing sources of nephrite and tangiwai (bowenite) in Te Wai Pounamu (South Island), Aotearoa. Source: Te Ara The Encyclopedia based on Beck, Mason 2002: 26, <https://teara.govt.nz/en/map/7649/new-zealands-pounamu-deposits> [accessed 13 April 2022]

Herries Beattie was also told that Koko-tangiwai and her children left the Tairea canoe at Piopiotahi and were turned into the kinds of pounamu found at Anita Bay. Koko-tangiwai stayed near the sea while her children wandered further inland (Beattie 1945 :143–144).

Māori have specific names for each kind of nephrite (see Beck et al. 2010: 19–20) and the different appearances of tangiwai. Writing from Marton in 1904, Te Heuheu Tukino and five other kaumātua (elders) shared the names of four types of tangiwai. The first was koko tangiwai which resembled the feathers on the neck of a tūi, another was koko makurukuru which resembled the feathers on the tūi when it sang, tangiwai makuku was clear and semi-transparent while the fourth, tangiwai kawakawa inanga, looked like the leaf of a kawakawa tree but with white cloudy patches (Milford Sound Greenstone Company 1906: 4).

Initially Europeans described tangiwai as “noble serpentine” to distinguish it from “common Serpentine” (Hector and Skey 1866: 412). The term bowenite was introduced as a geological name for tangiwai in 1880 by Friedrich Berwerth who was analysing samples sent to Austrian geologist Ferdinand von Hochstetter (Grapes and Nolden 2021: 222).

Until the early 1900s most Pākehā (non-Māori New Zealanders) referred to both tangiwai and nephrite as greenstone. European use of the term tangiwai was



Figure 6. Detail from a 1903 Department of Tourist and Health Resorts map showing Anita Bay, near the entrance of Piopiotahi (Milford Sound). Canterbury Museum 2007.105.13

almost non-existent until it was popularised in the early 1900s by the Milford Sound Greenstone Company.

In New Zealand the term bowenite was first used to describe Anita Bay tangiwai by Patrick Marshall in 1904 (Marshall 1904: 482). Grapes and Nolden (2021: 224) have pointed out that while tangiwai and bowenite found elsewhere in the world share similar physical properties their modes of origin and appearance are completely different. They suggest that the more culturally appropriate petrographic name of tangiwaite should be used for the rare variety of antigorite serpentine found in New Zealand.

In southern Aotearoa, where the stone is found, it is takiwai but for the purpose of consistency, I have used the term tangiwai.

Māori Recovery and Use

It is apparent from the artefacts and raw stone found throughout Aotearoa that the recovery and use of tangiwai is of long standing. Tangiwai has been found in early sites at Heaphy River, Wairau Bar and Papatowai (Coultts 1971: 62). Canterbury Museum also holds raw tangiwai found in historic contexts at Redcliffs (Fig. 7) and Moeraki (Fig. 8) giving some indication of the journeys of tangiwai.

The original name for what is now known as Anita Bay appears to have been lost but it has been called Hupokeka



Figure 7. Water worn tangiwai found at Redcliffs Flat, near Moa Bone Point Cave during excavations in 1957. Canterbury Museum E158.435

since a chief of that name and his whānau (family) were shot there by sealers in 1824.² Having had a fight with Māori further north, sealers came to Anita Bay and Hupokeka, not knowing of events further north, was standing on a rock to welcome them when he was shot. The sealers killed everyone at the kāinga (village) and put the bodies in a canoe which they set alight and pushed out to sea (Beattie 1945: 110).

Ethnologist Herries Beattie recorded the following names relating to Anita Bay (1949: 43-44). The landing place is Te Tauraka-o-hupokeka (the anchorage of Hupokeka). The hills immediately behind the bay were named Kokotakiwai after a celebrated woman who left the Tairea canoe there. The cliff where tangiwai was found was known as Te Horo (the landslip). Greenstone Creek was called Awatakiwai and the whole locality was known as Te Wahitakiwai (the place of takiwai or tangiwai). Mariner Tohi Te Marama (c.1829-1918) told James Cowan about the old kāinga “on the gentle slopes above the seaward side of Anita Bay” and in 1906 the difference in vegetation could still be seen (*Lyttelton Times*, 26 April 1913: 8).

The recovery of tangiwai involved long journeys which meant that it was always relatively scarce. This together with its beauty meant that it was highly valued. Kaumātua at Makaawhio in South Westland recalled that “a small piece of tangiwai was worth a large piece of pounamu”.³

Māori made exquisite taonga (treasures) from tangiwai as can be seen in the catalogue accompanying this article and in other museum collections. A particularly magnificent



Figure 8. A fragment of tangiwai found at Moeraki, Otago, date unknown but prior to 1944. Canterbury Museum E144.121.1

tangiwai hei tiki (Fig. 9) cared for by Canterbury Museum is believed to have been crafted during the 1840s or 1850s. Many taonga are much older than this. A perusal of online catalogues indicates that the most common items to be made were neck and ear pendants which tend to be long and thin, maximising the transparency of the stone. Collections also include pekapeka (a representation of the native bat), kaka poria (legs rings to hold captive kaka) and fish lure shanks.

Māori from southern New Zealand continued to regularly collect tangiwai for many years, both by sea and overland. A route from Piopiotahi to Lake Te Anau over Omanui (now known as Mackinnon Pass on the Milford Track) was used to transport stone. From Te Anau the stone was taken down the Waiau River on mōkihi (canoe made from bullrushes and flax) to the southern coast (*Otago Witness*, 11 July 1857: 4; Beattie 1949: 62-63). In about 1838 there was an accident in which three women handling one of a flotilla of heavily laden mōkihi drowned along with their infants and after this tragedy the route was not used (*Otago Witness*, 4 March 1903: 12).

In 1897 kaumātua at Makaawhio in South Westland remembered that they went in waka (timber canoe) from Maitahi (Bruce Bay) to Piopiotahi for tangiwai, about once every 20 or 30 years and that Ngāti Waewae from further north also went to collect tangiwai (Skinner 1912: 145). They further remembered that two double canoes went from Piopiotahi to Waimate and another two went to Kaiapoi, all loaded with tangiwai (Skinner 1912: 146). Tohi Te Marama recalled long cruises around the sounds

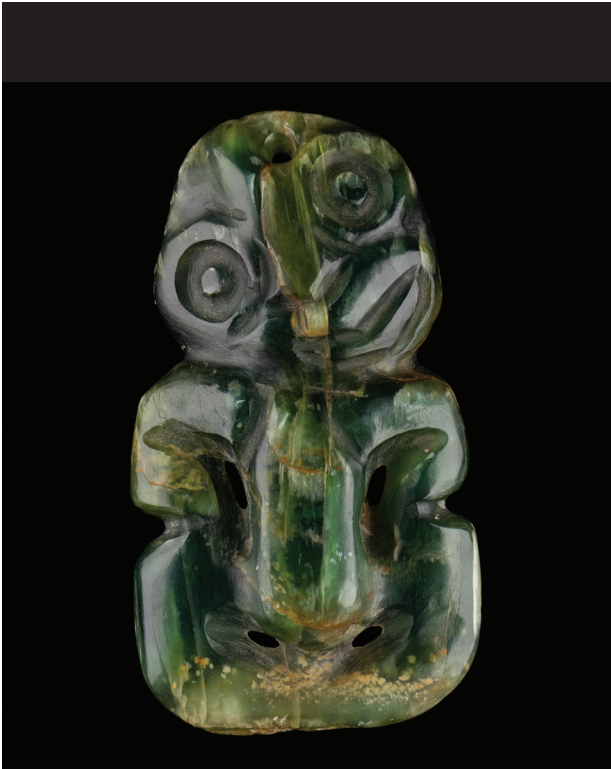


Figure 9. Tangiwai hei tiki. Canterbury Museum E177.275

during the 1870s for fur seals but also to collect tangiwai (*Evening Post*, 15 March 1930: 9). In 1904 “Miner” who had been at Piopiotahi in 1876 remembered that Māori from Maitahi arrived in two open boats and collected tangiwai, taking away about 70 kg (*Otago Witness*, 16 November 1904: 4).

Hori Kerei Taiaroa (1830s–1905) argued for many years that the Government should honour a promise made to his father, that if he signed the 1853 deed of cession of Murihiku, 100 acres of land at Anita Bay would be reserved for his whānau (extended family) so that tangiwai could be collected.⁴ Taiaroa’s claim was discussed in parliament several times but was unfortunately not resolved before William Bertram obtained a mining lease from the Government in 1903 (Evison 1993: 495).⁵

Within Ngāi Tahu, many oral and whānau histories along with unpublished material are important sources of further information about longstanding customary recovery and use of tangiwai.⁶ Ownership and management of tangiwai was returned to Ngāi Tahu in the 1997 Ngai Tahu (Pounamu Vesting) Act which returned the rights and control of all pounamu to the iwi (tribe).

Māori-Pākehā Exploitation

The author has previously detailed the collection of tangiwai and later nephrite from South Westland during the 1840s (Bradshaw 2021). This speculation was funded by merchants based in Sydney and facilitated by locally

based Pākehā mariner Captain William Anglem and his wife Maria Te Anau. In 1842 perhaps four tons of tangiwai from Hupokeka was collected for the Chinese market. The vessel used to transport the stone was the clipper schooner *Anita* and this gave rise to the English name for the bay where tangiwai was obtained (Bradshaw 2021: 183). There is no information about what happened to this shipment of tangiwai other than that it was sold in China. It is believed that this is the first large-scale export of unworked pounamu from Aotearoa and it is probably the first sizeable export by Europeans of any New Zealand mineral.

Several sources give hints of another retrieval of tangiwai, this time by Captain John Howell who was based at Riverton. Howell had married Kohi Kohi in the mid-1830s and was familiar with Piopiotahi, reporting that he first saw the self-introduced bird tauhou (silver eye) there in 1832 (*Otago Witness*, 13 September 1916: 53). His descendants recall that he collected a shipment of “greenstone” from there (Wilson 1976: 5, 10). This probably occurred in 1865 when Howell had a short-lived whaling station at Anita Bay (*Nelson Examiner*, 13 July 1865: 3). If the shipment did occur there is no evidence about where it went, but it is possible that it went to Dunedin where lapidarists were in business by the 1860s (Conly 1948: 57).

Pākehā Interest

European visits to Piopiotahi gradually increased. In 1863, geologist Dr James Hector was the first to officially note Anita Bay as a source of tangiwai. Hector didn’t differentiate it from nephrite, commenting that this was the beach from which Māori sourced “the jade or greenstone for the manufacture of their ornaments and weapons” (*Otago Daily Times*, 11 November 1863: 9). The tangiwai collected by Hector was exhibited at the University of Otago as “noble serpentine” during the 1865 New Zealand Exhibition and included water worn boulders and smaller “very attractive” pieces that had been cut and polished (Hector and Skey 1866: 412).

As visits by Pākehā increased so did the amount of fossicking. Recorded occurrences indicate that collecting was enthusiastic. When the schooner *Fawn* called at Anita Bay in December 1863 about 27 kg of tangiwai was collected by those on board, some of which was sold at Lyttelton (*Otago Daily Times*, 1 April 1864: 5).

In May 1867, an official visit to South Westland by a group which included Dr Hector, brought back several “large and beautiful specimens” of “greenstone” from Milford Sound (*Waikato Independent*, 11 May 1867: 4). In the same year passengers on an expedition to Martins Bay made an “eager rush onshore” to collect specimens (*Otago Daily Times*, 26 December 1867: 4).



Figure 10. A waterworn tangiwai pebble, typical of those picked up on the beach at Anita Bay. Canterbury Museum E166.515

For some, their first foot on New Zealand shores was at Anita Bay. In February 1874 passengers on board the *Alhambra* which was sailing from Melbourne to Dunedin called at Piopiotahi where passengers spent an hour or so picking up tangiwai pebbles (Fig. 10) and returned on board “loaded with specimens” (*Otago Witness*, 21 February 1874: 12).

Just a month later the *Luna* visited, with many on board going ashore specifically to find tangiwai, some equipped with hammers. Slabs and lumps were broken off larger rocks and a good number of pebbles were collected. Geologist Captain Frederick Wollaston Hutton, who was on board, disappointed many by pronouncing that the stone was serpentine and “not the greenstone of the Maori” (*New Zealand Mail*, 28 March 1874: 8). Later Hutton and Ulrich (1875: 28) would refer to tangiwai as “inferior greenstone” further damaging its reputation.

Collecting specimens or mementoes continued for many years. The photograph in Figure 11 showing tourists returning from Anita Bay to their ship in the early 1900s has the following written on the back “Returning from Greenstone Gully with many nice trophies”.



Figure 11. Tourists returning to their ship from the beach at Anita Bay with their pockets full of tangiwai. National Library PAColl-10563-081-51

European Mining

After the discovery of gold in Otago and on the West Coast during the 1860s, prospectors scoured the countryside looking for gold or other minerals. Some of the hardier ones searched in Fiordland. One of these was Donald Sutherland who, in 1880, reported that he and his mate McKay (sometimes MacKay) had found “a solid reef of greenstone” near Milford Sound (*Otago Witness*, 17 July 1880: 21).

Along with tangiwai, Sutherland and McKay also sent copper and asbestos to Dunedin for testing, and it was the asbestos that a mining lease was granted for at Anita Bay in January 1882 (*Oamaru Mail*, 16 Feb 1882: 2). Artist Samuel Moreton who was frequently at Piopiotahi later recalled that a fair amount of tangiwai and asbestos was recovered but that the venture foundered when Sutherland would not let his partners use his boat without paying.⁷

The reef of tangiwai was later covered by a landslide (*Otago Daily Times*, 26 February 1889: 3). Amazingly, in this seldom visited part of the country, the landslide was heard by gentleman farmer Robert Paulin who, in 1886, was on a prospecting trip on the cutter *Rosa*. After two days of heavy rain those on board the *Rosa*, anchored at Anita Bay, were startled by “a tremendous report” followed by a sound like heavy thunder which lasted for about 10 seconds. At daylight they found that an enormous slip more than three kilometres wide had covered much of the land behind Anita Bay (Paulin 1889: 105).



Figure 12. John William Alexander Bertram (1875–1919).
Courtesy of Geoff Bertram

The instigator of the next Pākehā extraction of tangiwai was Foxton-born John William Alexander Bertram (Fig. 12) who had married in Dannevirke in 1899 just before moving to the mining district of Kyeburn near Naseby in Otago. Here he worked as a miner and at some point, became acquainted with long-time Fiordland prospector and Sutherland’s old mate John McKay.

In April 1903 Bertram applied for a 3-year licence to prospect for “greenstone” over 200 acres of land at Anita Bay and this was granted for the rental of 20 shillings per year (*Mount Ida Chronicle*, 24 April 1903: 3). Soon afterwards Bertram and McKay went to Milford Sound to find tangiwai. Bertram says he was guided by Māori tradition (Milford Sound Greenstone Company 1906: 2)



Figure 13. A photo of Anita Bay taken in March 1904 by Guy Morris. The schooner *Emma Sims* in on the right, anchored near the Milford Sound Greenstone Company’s schooner *Belle*. *Auckland Weekly News*. Auckland City Library AWNS-19071024-1-2

but it is much more likely that McKay, who had previously been at Anita Bay with Sutherland, knew where to look.

Having located the reef, Bertram returned to Dunedin to raise funds and create the Milford Sound Greenstone Company. By September 1903 he was back at Anita Bay with a group of experienced miners and 5 months' provisions (*Otago Daily Times*, 8 September 1903: 6). Many months were spent at the mine and at least one tunnel was driven into the reef. In May 1904 nearly two tons of tangiwai of "remarkable quality" was taken to Dunedin (*Otago Daily Times*, 24 May 1904: 3). The stone was described as "jointy" with the pieces varying in size from one kg to 50 kg (*Otago Daily Times*, 25 May 1904: 8).

While he was at the mine Bertram had been visited by University of Otago geologist Dr Patrick Marshall who was travelling on the schooner *Emma Sims* (Fig. 13) (*Otago Daily Times*, 22 February 1904: 4). Marshall visited the work site and collected specimens (*Otago Daily Times*, 18 March 1904: 7; *Evening Star*, 15 Sept 1904: 7) one of which he later donated to Canterbury Museum (Fig. 14). Marshall must have been impressed because he gave a favourable professional opinion on the "unequalled quality" of the stone (Milford Sound Greenstone Company 1906: 8) and, in 1907, purchased shares in the company.⁸

On his return to Dunedin, Bertram talked up the "extensive reef of greenstone" and said there was a market for it in Great Britain, Europe and America (*Auckland*

Star, 6 May 1904: 4). He said that stone could be mined and delivered to Dunedin at a cost of just half a pound per kilogramme of stone (*Otago Daily Times*, 24 May 1904: 3) but when dressed and cut for jewellery its value was from £20 to £80 per kilogram wholesale (*Otago Witness*, 27 April 1904: 28). Bertram was certainly making the venture sound attractive to investors.

A letter writer, "West Coaster", was incredulous and asked whether the stone from Piopiotahi was even greenstone, pointing out that samples from Anita Bay were obviously different from "true greenstone". "West Coaster" also said that prices offered for greenstone to Greymouth dealers by Dunedin and Auckland buyers was from a shilling to £1 per kilogram and that there was very little demand for it (*Otago Witness*, 22 June 1904: 26).

In rebuttal, Arthur A Adams, accountant for the Milford Sound Greenstone Company and a minor shareholder, invited anyone who thought "ordinary greenstone" was the only proper greenstone to view the quality of the stone which, he said, was "of much greater value than the West Coast or pounamu stone" (*Otago Daily Times*, 23 June 1904: 9).

The company was keen to differentiate their product from nephrite or "true greenstone" and began using the word tangiwai which they described as the "Queen of Greenstones" (Milford Sound Greenstone Company 1906: 1). Bertram went to Anita Bay again in June 1907 and returned to Dunedin with another load of stone,



Figure 14. A block of tangiwai collected from Anita Bay by Patrick Marshall in 1904. Canterbury Museum ZM832

this time leaving no-one at the mine.⁹ In April 1908 the mine was described as abandoned (*Southern Cross*, 11 April 1908: 2) and the company went into liquidation in December 1908.¹⁰

By late 1910 the mining lease at Anita Bay had been transferred to a new company, the Auckland-based Milford Sound Tangiwai Company (*Southland Times*, 16 January 1911: 4). Bertram continued his association with tangiwai and in February 1911 sailed with a party of miners to Anita Bay for the new company (*Otago Daily Times*, 24 February 1911: 8). The trip was reported as very successful with the quantity retrieved “exceeding expectations”. Oddly though, in a locality that is rarely affected by it, work on the lease was being suspended for the winter due to snow (*New Zealand Herald*, 26 May 1911: 6). By the following winter the company was in liquidation (*The Dominion*, 29 July 1912: 1).

The Milford Sound Greenstone Company reported retrieving two tons and then another load presumably of a similar size and even the short-lived Auckland-based company had four tons of rough stone and finished goods worth over £800 when they went into liquidation (*The Dominion*, 29 July 1912: 1). Altogether at least eight tons of tangiwai was recovered from Anita Bay from 1904 to 1911. There is some mystery about what happened to it all.

Tangiwai Treasures

Before the recovery of tons of tangiwai from Piopiotahi in the early 1900s only relatively small quantities had been available but it is evident that some did find its way to lapidarists and jewellers. For example, Christchurch jewellers M Sandstein & Son were advertising products made from tangiwai for three months during 1902 (*Lyttelton Times*, 19 Feb 1902: 7 – 28 May 1902: 9).

But tangiwai was difficult to work, especially if you expected to carve it like nephrite. According to Master Carver Fayne Robinson, tangiwai is easy to work with soft tools but shatters under the pressure of modern tools.¹¹ Letter writer “Miner” described tangiwai as “worthless” and said that lapidaries in Dunedin slung it out in the back yard because they “could not work it into anything” (*Otago Witness*, 16 November 1904: 4).

The fact that Māori had a very high regard for tangiwai was recognised by the Milford Sound Greenstone Company who saw Māori as important customers (*New Zealand Herald*, 16 January 1909: 10). It is likely that the company’s focus was on simple pieces that were similar in style to traditional neck and ear pendants. The pendants may have been shaped and polished locally or in Europe (as was common for nephrite) and sent back to New Zealand where local jewellers added their own gold embellishments as in Figure 15. No advertisements have been found on Papers Past for tangiwai products but Fritz Larsen of Auckland, who was said to have the largest

lapidary works in New Zealand, had 100 “eardrops” stolen in 1911, many of which were made from tangiwai (*Poverty Bay Herald*, 26 April 1911: 5; *Taranaki Herald*, 10 June 1914: 2).

In 1906, the Milford Sound Greenstone Company was reported to have seven men employed working greenstone in their Dunedin workshop (*Wairarapa Daily Times*, 9 April 1906: 5). The men may have been making hei tiki as in the same year Augustus Hamilton, Director of the Dominion Museum, wrote that the “large number of hei tikis” available at the time were “nearly all made from the newly opened Tangiwai deposits at Milford sound” (Hamilton, 30 August 1906, quoted by Austin 2019: 52).

It is possible that some tangiwai was sent to England. In an undated letter written in about 1906, John Grey Taiaroa, continuing with his father’s battle to have the family’s claim to Anita Bay recognised, said that “the Government has acquired Piopiotahi and have allowed it [tangiwai] to be bodily removed to London where pieces can be bought at ‘retail price’ equal to £300 per square yard, unimproved value”.¹² From about 1904 there was a craze in England for small pounamu hei tiki and some of these could have been made from tangiwai (*Illustrated London News*, 30 July 1904: 168).

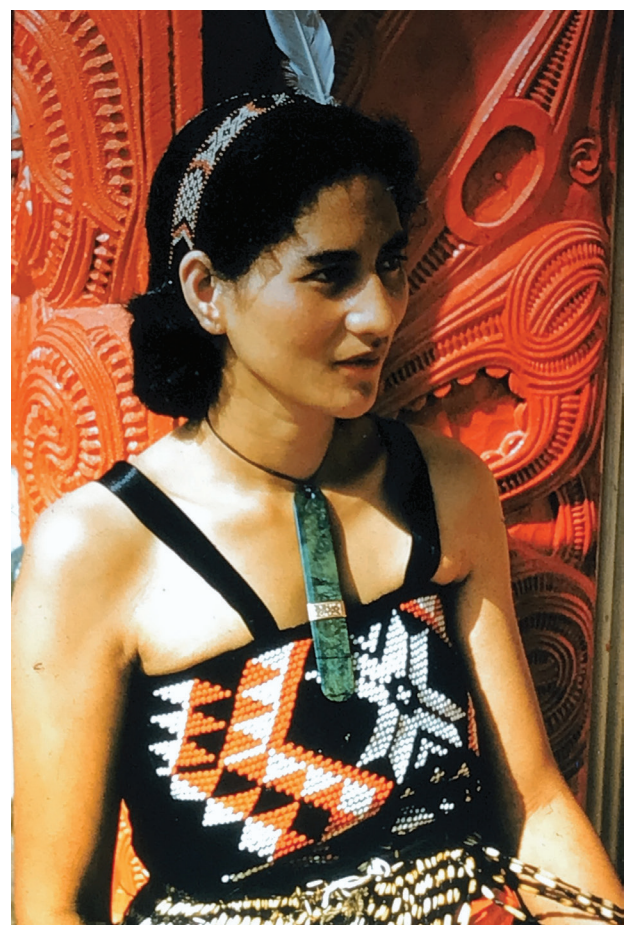


Figure 15. A photograph taken by Neville Hatwell in the 1960s of a young woman wearing a spatulate shaped tangiwai pendant with an engraved gold band. Courtesy of Steve Mahuika

A few mentions of items made with tangiwai appear in New Zealand newspapers. These include a pendant of “transparent greenstone” and pearls (*Otago Witness*, 29 April 1908: 73), a tangiwai and gold brooch (*Evening Post*, 30 December 1909: 1) and a tangiwai hei tiki (*Auckland Star*, 14 June 1916: 2). Tangiwai pendants seem to have been referred to simply as “a tangiwai”. Mrs Jennings, headmistress of the Native School at Ōtaki, was presented with a greenstone brooch and “a tangiwai” 125 mm long and of excellent quality (*Manawatu Standard*, 2 October 1909: 5). Visiting Australian tennis players were each given a tangiwai pendant as a memento of their visit (*New Zealand Herald*, 20 January 1912: 9) as was Captain Halsey of the HMS *New Zealand* (*Rangitikei Advocate and Manawatu Argus*, 22 April 1913: 4).

Tangiwai Taonga at Canterbury Museum

Peter Coutts, who undertook archaeological work at Anita Bay, observed that tangiwai is rare in museum collections in comparison to other materials (Coutts 1971: 62) and this is certainly the case at Canterbury Museum. Canterbury Museum cares for more than 2,500 worked pounamu taonga but only 33 of these are tangiwai. Illustrations of Canterbury Museum’s modest collection of tangiwai taonga are provided in a brief catalogue which follows this article.

Previously some taonga had simply been identified as greenstone in catalogue records and not all tangiwai had been correctly identified. Mineralogists can quickly tell the difference between tangiwai and nephrite because tangiwai can be scratched by a knife whereas nephrite cannot. Obviously, this is not an option for museums. Fortunately, the transparency and colours of tangiwai make it possible to identify taonga reasonably securely although it is sometimes necessary to hold the taonga to gauge its weight and feel, which is a much more subtle process.

More complicated has been establishing when a taonga might have been made. European lapidaries using tangiwai appealed to Māori customers by mimicking traditional designs. In addition, because tangiwai is easier to drill than nephrite it is harder to distinguish with certainty between drill holes made using traditional methods as opposed to those made with metal tools.

Even though at least some of the tangiwai recovered during the early 1900s was made into contemporary jewellery, such as pendants and brooches, no examples of these are held within Canterbury Museum’s small collection of pounamu jewellery. It may be that holders of both traditional taonga and those made more recently value them so highly that they are passed down through families rather than finding their way to museums or auction houses.

Summary

Tangiwai is a special and rare mineral with a distinct beauty that has been valued since the settlement of Aotearoa New Zealand. The source of high quality tangiwai is in a remote and physically challenging location yet it is found in some of the country’s oldest archaeological sites.

Not as tough as nephrite, but with its own special beauty, tangiwai was mostly made into items of personal adornment.

Tangiwai was recognised as a commodity by newly resident Pākehā mariners and their Māori families and this resulted in a shipment of stone being sent to China in 1843 and another shipment being collected in 1865, which may have gone to Dunedin.

Europeans also recognised the beauty of tangiwai and collected it enthusiastically from at least the 1860s. Specific mining by Pākehā occurred in the early 1880s and from 1904 to 1911 and it is estimated that at least eight tons of tangiwai was collected during this time. There are unanswered questions about where it went and what it was made into, but indications are that at least some of it was made into hei tiki and pendants.

Tangiwai deserves to be more widely recognised in museum collections as a unique and special taonga. It has never been common and as well as being valued for its beauty and rarity, its retrieval also tells the story of courage and stamina, of trading networks and in the case of Hupokeka and his people, of murder. Tangiwai, the stone of tears.

Acknowledgements

For advice and suggestions, I would like to thank Dougal Austin, Paul Madgwick, Rodney Grapes and Muriel Johnstone. I am also grateful to Fayne Robinson and Riki Manuel for providing their expertise on the tangiwai taonga at Canterbury Museum and to the Trustees of the Taiaroa Collection. The photography work by Chris Hoopman is very much appreciated.

Endnotes

- 1 Muriel Johnstone of Murihiku Pounamu Management Committee, personal communication, 21 May 2022.
- 2 Information from a hand-drawn map titled *Part of the West Coast of the Middle Island* in Admiral John Lort Stokes papers at Royal Museums Greenwich, reference STK/74/2.
- 3 Nomenclature, legends etc as supplied by Māori in South Westland, compiled by W Wilson, in Anderson, Johannes Carl Papers, MS-Papers-0148, p86. Alexander Turnbull Library, Wellington.
- 4 HK Taiaroa to Native Minister 15 October 1896, Canterbury Museum, 6/46, Box 24, folder 158, item 210.
- 5 The Taiaroa whānau was eventually awarded £53 several years after Taiaroa's death.
- 6 Muriel Johnstone of Murihiku Pounamu Management Committee, personal communication, 21 May 2022.
- 7 Samuel H Moreton to Wynand Boers, 6 February 1915, in Moreton, Samuel H: Correspondence between Samuel H Moreton (artist) and W Boers concerning Hector's expedition, Otago, MS-1386, Alexander Turnbull Library, Wellington.
- 8 List of shareholders of Milford Sound Greenstone Company, dated 14 June 1907 in The Milford Sound Greenstone Company Limited 1906–1912, Archives New Zealand, Dunedin, R977127.
- 9 Inspector of Mines, 10 June 1907 in Greenstone Mine Naita Bay (sic) R23533941), Archives NZ, Dunedin.
- 10 25 November 1908. Milford Sound Greenstone Company file, Archives NZ Dunedin. R977127.
- 11 Personal communication with author, 12 April 2022.
- 12 Undated letter written c.1906 by J G Taiaroa, Canterbury Museum, 6/46, Box23, folder 149, item 11.

References

- Austin D. 2019. *Te Hei Tiki: An enduring treasure in a cultural continuum*. Wellington: Te Papa Press.
- Beattie H. 1920. The Southern Maori and Greenstone. *Transactions and Proceedings of the Royal Society of New Zealand* 52: 45-52.
- Beattie H. 1945. *Maori Lore of Lake, Alp and Fiord*. Dunedin: Otago Daily Times and Witness Newspapers Co. Ltd.
- Beattie H. 1949. *The Maoris and Fiordland*. Dunedin: Otago Daily Times and Witness Newspapers Co. Ltd.
- Beck R, Mason M. 2002. *Mana Pounamu: New Zealand Jade*. Auckland: Reed Books.
- Beck R, Mason M, Apse A, Te Rūnanga o Ngāi Tahu. 2010. *Pounamu: The jade of New Zealand*. Auckland: Penguin/Viking.
- Bradshaw J. 2021. Pounamu Speculation in 1840s New Zealand. *Records of the Canterbury Museum* 35: 177–198.
- Conly T. 1948. Greenstone in Otago in Post-Maori Times: Notes on Lapidaries Working in Dunedin. *The Journal of the Polynesian Society* 57 (1): 57–63.
- Coutts PJF. 1971. Greenstone: The Prehistoric Exploitation of Bowenite from Anita Bay, Milford Sound. *The Journal of the Polynesian Society* 80 (1): 42-73.
- Evison HC. 1993. Taiaroa, Hori Kerei. *Dictionary of New Zealand Biography*, Volume 2 1870–1900. Wellington: Bridget Williams Books.
- Grapes R, Nolden S. 2021. Descriptions and analyses of New Zealand nephrite and tangiwaite jade (pounamu) by Ferdinand von Hochstetter (1864) and Friedrich Berwerth (1880): a scholarly annotated English translation. *Jarhbuch Der Geologischen Bundesanstalt* 161 (1, 4): 197–230.
- Hector J, Skey W. 1866. Supplementary report on Class 1: Coals, building stones, basaltic rocks, limestones, freestones, metals and metallic ores, magnesian rocks, graphite, clays, cements, economic minerals, bitumen, resin. Appendix A in N.Z. Exhibition, 1865: *Reports and Awards of the Jurors*. Dunedin: Mills, Dick & Co; pp371–452.
- Hutton FW, Ulrich GHF. 1875. *Report on the Geology and Goldfields of Otago*. Dunedin: Mills, Dick & Co.
- Marshall P. 1904. Magnesian Rocks at Milford Sound. *Transactions of the New Zealand Institute* 37: 481–484.
- Milford Sound Greenstone Company. 1906. *Tangiwai*. Dunedin: J Wilkie & Co.
- Paulin R. 1889. *The Wild West Coast of New Zealand; A Summer Cruise in the "Rosa"*. London: Thorburn & Co.
- Skinner HD. 1912. Maori Life on the Poutini Coast together with some traditions of the natives. *The Journal of Polynesian Society* 21 (4): 141–151.
- Wilson E. 1976. *Hakoro Ki Te Iwi; The Story of Captain Howell and his Family*. Invercargill: Times Printing Service.

Catalogue

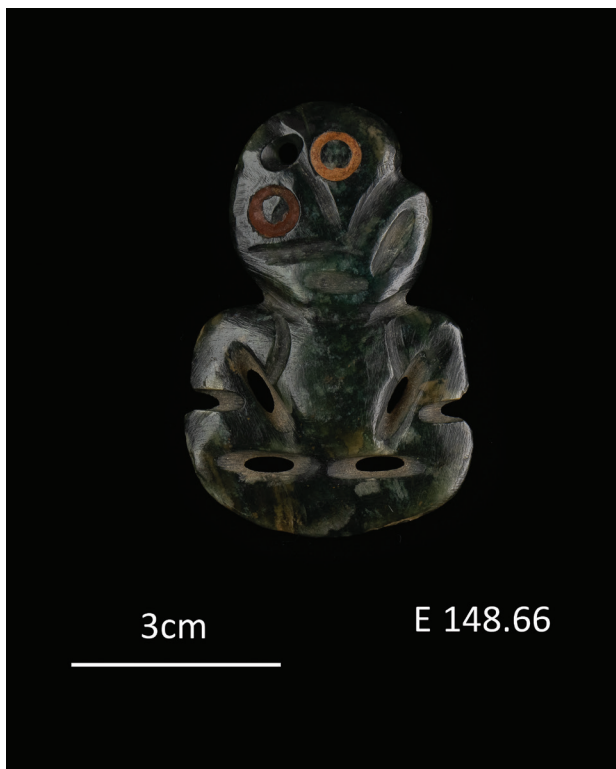


Hei tiki (pendant in human form) Taranaki

H: 175mm. W: 42mm. D: 5mm

Canterbury Museum E138.130

Hei tiki shows flaking and fracturing, including the loss of part of the legs. Found in the Museum collection during a 1938 inventory



Hei tiki (pendant in human form) location unknown

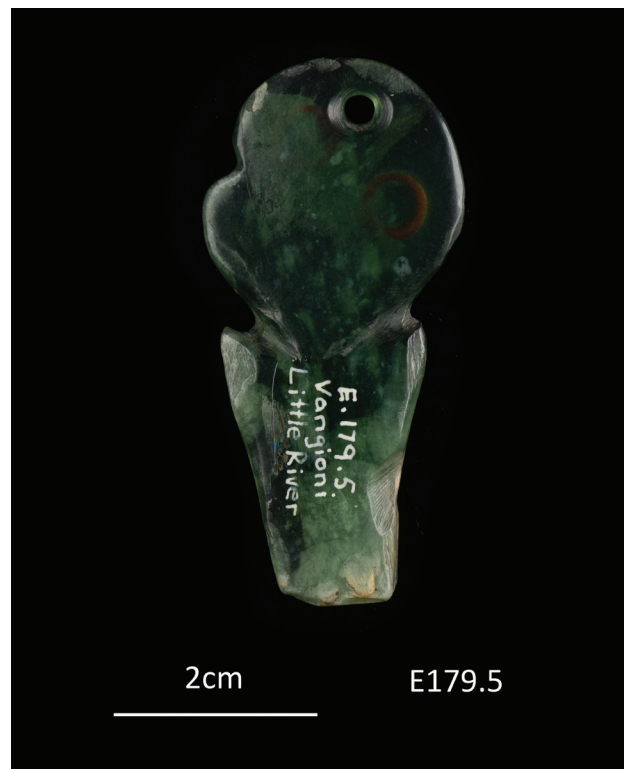
H: 61mm. W: 41mm. D: 6mm.

Canterbury Museum 1948.70.6

Manufactured using metal tools prior to 1948



Hei tiki (pendant in human form) location unknown
H: 64mm. W: 40mm. D: 7mm.
Canterbury Museum E161.68
Crudely made using metal tools. Purchased in an antiques shop near Oxford, England before 1961



Hei tiki (pendant in human form) Little River, Banks Peninsula
H: 53mm. W: 26mm. D: 3mm.
Canterbury Museum E179.5
Found in 1934. A fracture has led to the pendant splitting



3cm

E177.275

Hei tiki (pendant in human form) location unknown (front)

H: 116mm. W: 63. D: 20mm.

Canterbury Museum E177.275

Thought to have been made by Māori during the contact period, possibly 1840–1850



3cm

E177.275

Hei tiki (pendant in human form) location unknown (back)

H: 116mm. W: 63. D: 20mm.

Canterbury Museum E177.275

Thought to have been made by Māori during the contact period, possibly 1840–1850



3cm

E192.11

Kuru (pendant) location unknown
H: 96mm W: 16mm D: 9mm
Canterbury Museum E192.11



3cm

E192.10

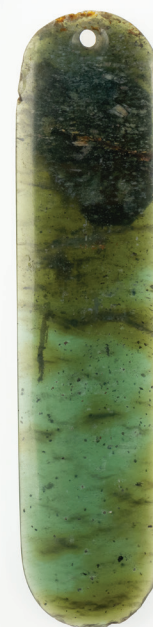
Kuru (pendant) location unknown
H: 76mm. W: 13mm. D: 5mm.
Canterbury Museum E192.10



4cm

E122.21.23

Kuru (pendant) Whakamoia Bay, Banks Peninsula
H: 130mm. W: 30mm. D: 5mm.
Canterbury Museum E122.21.23
Found before 1922. Broken and glued before arrival at Museum



5cm

E153.402

Kuru (pendant) location unknown
H: 159mm. W: 38mm. D: 5mm.
Canterbury Museum E153.402
Collected by Thomas Cornelius Prichard of Spring Creek,
Blenheim



Kuru (pendant) Houhoupounamu, Canterbury
H: 84mm. W: 13mm. D: 4mm.
Canterbury Museum E138.1136
Found before 1938. Very small drill hole



Kuru (pendant) Tuahiwi, Canterbury
H: 47mm. W: 4mm. D: 3mm.
Canterbury Museum 1952.30.1287
Found in 1894



Kuru (pendant) Eastern Bays, Banks Peninsula
H: 78mm. W: 12mm. D: 5mm.
Canterbury Museum E149.594



Kuru (pendant) location unknown
H: 107mm. W: 16mm. D: 3mm.
Canterbury Museum E153.403
Collected by Thomas Cornelius Prichard of Spring Creek,
Blenheim



Kuru (pendant) location unknown
H: 73mm. W: 16mm. D: 4mm.
Canterbury Museum E167.356
Suspension hole has broken open



Kuru (pendant) location unknown
H: 81mm. W: 12mm. D: 7mm.
Canterbury Museum E167.357
Possibly made with metal tools



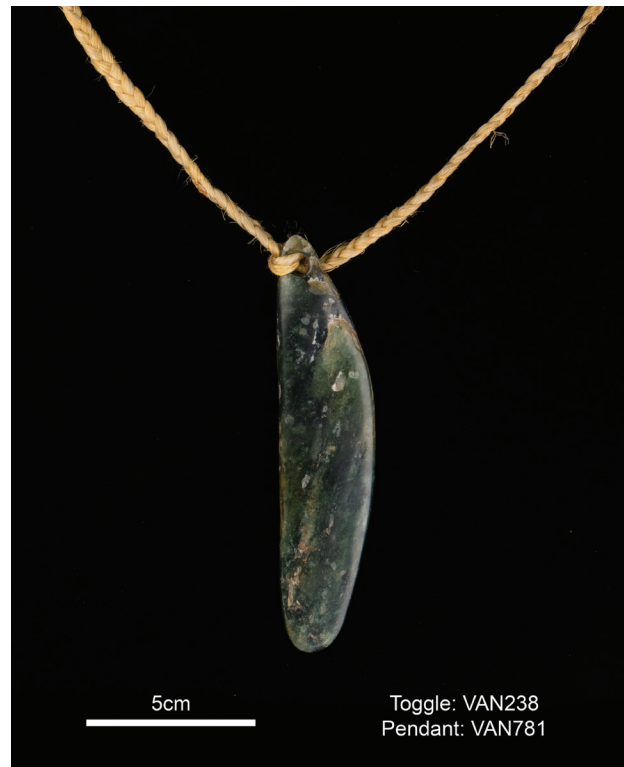
Kuru (pendant) Edgecombe south of Clarence River,
Marlborough
H: 61mm. w: 13mm. D: 5mm.
Canterbury Museum 1939.38.17



Kuru (pendant) location unknown
H: 80mm. W: 18mm. D: 12mm.
Canterbury Museum E139.62
Collected by Selwyn Bruce



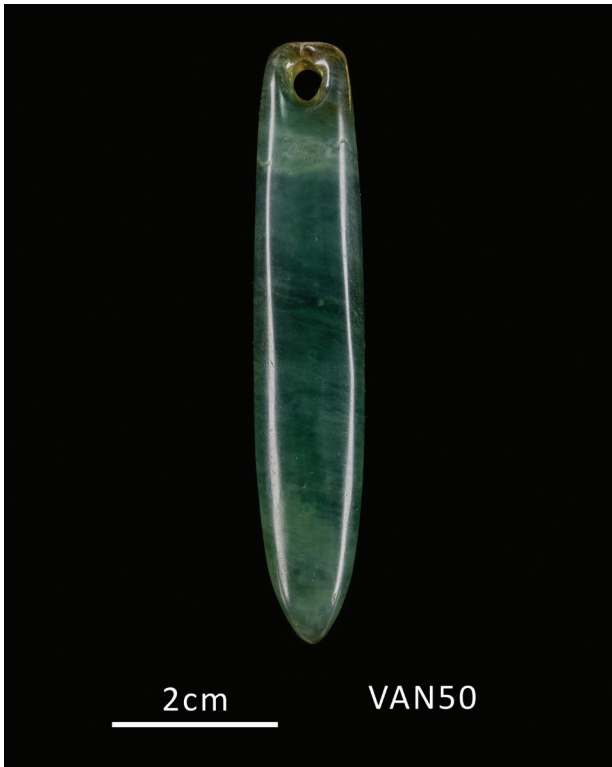
Kuru (pendant), part of, location unknown
H: 111mm. W: 15mm. D: 12mm.
Canterbury Museum E166.667
From the estate of Rev William Baumber (1852–1932).
Fractured through the middle and broken across the top. The
marks from the process of grinding and snapping to make it are
still apparent



Kuru (pendant) Goughs Bay, Banks Peninsula
H: 124mm. W: 27mm. D: 4mm.
Louis Vangioni Collection, Canterbury Museum 1952.30.521
Found in 1937 without cord



Kuru (pendant) location unknown
H: 147mm. W: 14mm. D: 12mm.
Canterbury Museum E150.526
A gift to Anglican Missionary James Stack (1835–1919) a resident of Tuahiwi, Canterbury



Kuru (pendant) Flea Bay, Banks Peninsula
H: 72mm. W: 13mm. D: 11mm.
Louis Vangioni Collection, Canterbury Museum 1952.30.654
Found in 1896



Kuru (pendant) location unknown
H: 56mm. W: 20mm. D: 18mm.
Canterbury Museum 2002.7.4



Kuru (pendant) Tumbledown Bay, Banks Peninsula
H: 48mm. W: 15mm. D: 10mm.
Louis Vangioni Collection, Canterbury Museum 1952.30.656
Found in 1897



Kuru (pendant) location unknown
H: 81mm. W: 15mm. D: 9mm.
Canterbury Museum AR2000.31
Found in collection in 2000



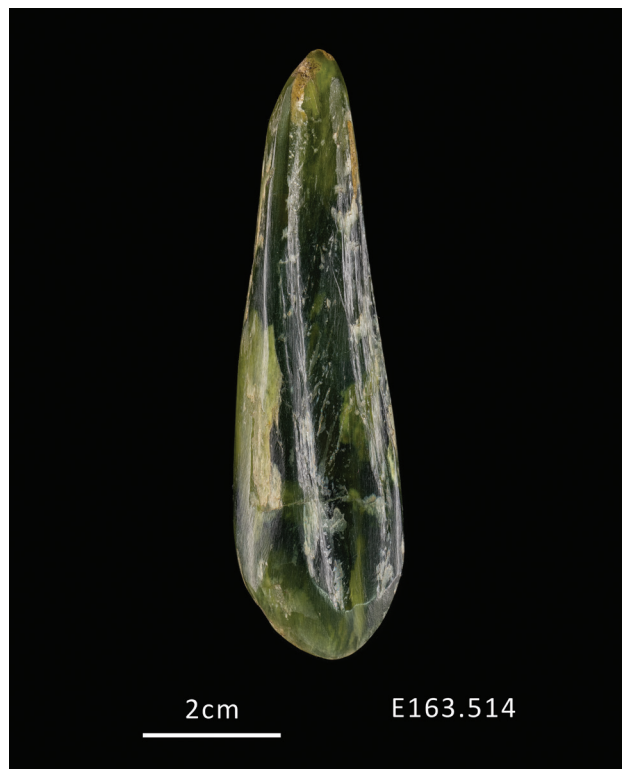
Kuru (pendant) Little River, Banks Peninsula
H: 105mm. W: 15mm. D: 7mm.
Canterbury Museum E177.251



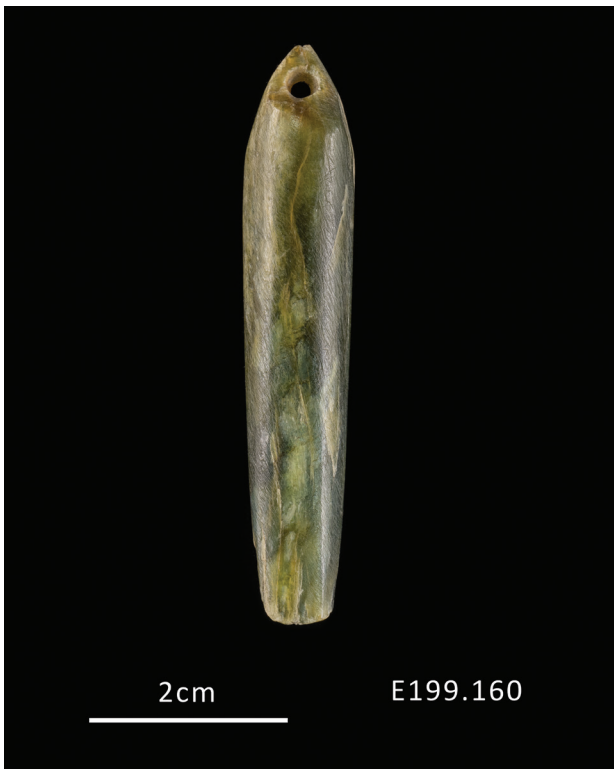
Kapeu (ear pendant) location unknown
H: 115mm. W: 10mm. D: 5mm.
Canterbury Museum 1939.53.2



Hei tiki (pendant in human form) location unknown
H: 30mm. W: 16mm. D: 5mm.
Canterbury Museum E183.155
Crudely made with the drill hole in part of the mouth, described
as being of recent manufacture when it was donated in 1983



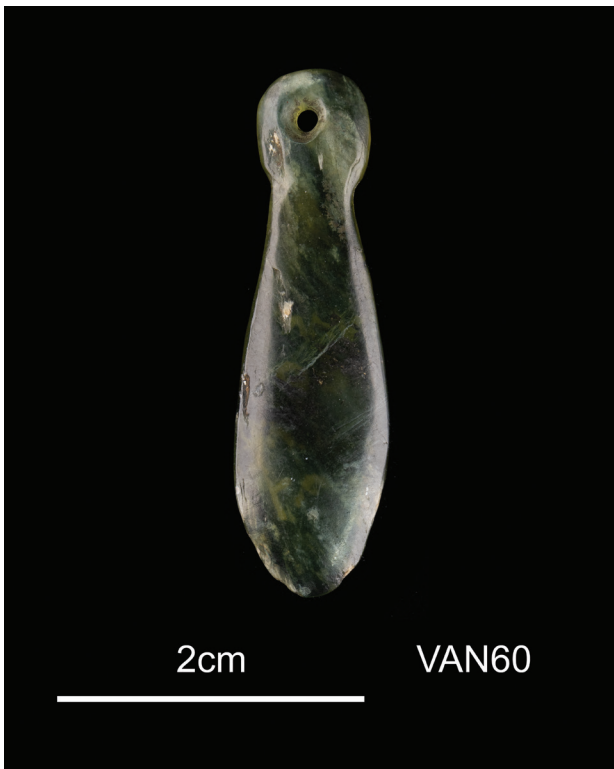
Unfinished kuru (pendant) Wairau Bar
H: 90mm. W: 25mm. D: 10mm.
Canterbury Museum E163.514



Lure shank Wairau Bar
H: 62mm. W: 12mm. D: 8mm.
Canterbury Museum E199.160
Very neat hole, low polish



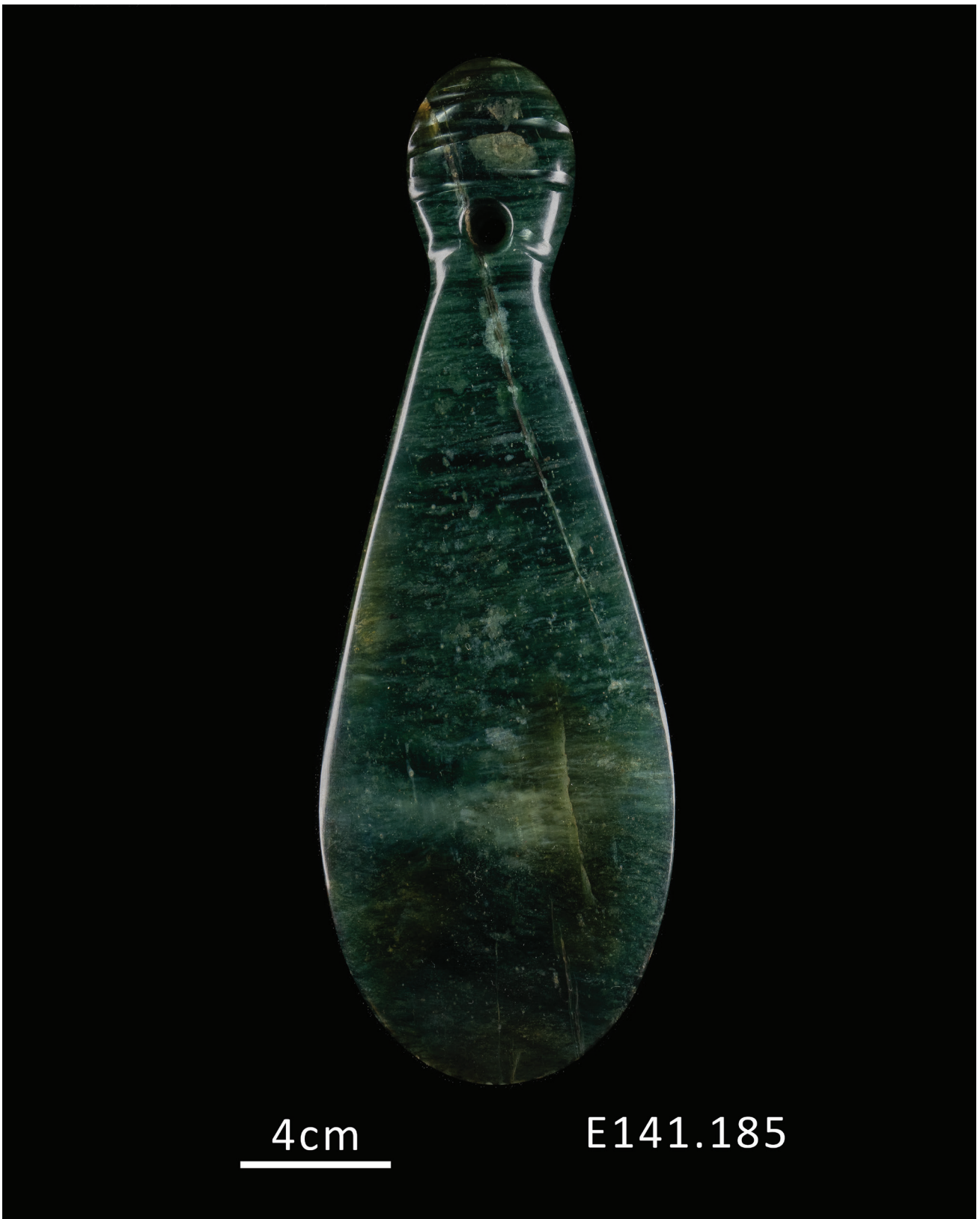
Pōria kākā location unknown
H: 28mm. W: 25mm. D: 1mm.
Canterbury Museum E138.474
Leg ring for captive kaka showing signs of flaking. Found in the
Museum collection during a 1938 inventory



Kuru (pendant) Tikao Bay
H: 34mm. W: 10mm. D: 2mm.
Louis Vangioni Collection, Canterbury Museum 1952.30.664
Found in 1925



Broken point Fishermans Bay, Banks Peninsula
H: 40mm. W: 5mm. D: 2mm
Canterbury Museum E149.491



Mere tangiwai location unknown

H: 270mm. W: 96mm. D: 18mm.

Canterbury Museum E141.85

Expertly made to maximise the beauty of the stone, it has a beautiful edge