Hugh McCully's 'mogie'

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Mōkihi (raupō canoes) were traditional Māori water craft used on navigable South Island rivers, lakes and lagoons by Māori and early European explorers, but their use died out in the late nineteenth century once the basic road-and-bridge network was established. The skills to make them had largely fallen into disuse by 1950 and because they were made of biodegradable raupō (bullrush) and harakeke (flax), nineteenth century mōkihi had rotted away. In 1950, our grandfather Hugh Simms McCully commenced making a mōkihi (E151.209) and was joined by Pita Paipeta (Peter Piper) in this endeavour. A separate model cross-section (E151.210) was made for people to study closely. Both objects were donated to Canterbury Museum in January 1951 to celebrate the Centennial of Canterbury. This is the story of the construction of the mōkihi now in Canterbury Museum and of its accompanying model.

Keywords: anchor stones, Centennial of Canterbury, experimental archaeology, Hugh McCully, mōkihi, Pita Paipeta, raupō canoe, Waitaki early Māori site

Introduction

"Moki" was the shortened form of the word mōkihi used by Southern Māori in their dialect (Fyfe 2012: 21) and was pronounced 'mogie', with a phonetically hard [g], by pioneers like Hugh McCully. The current story is that the mōkihi (Fig. 1) was "made and presented by Pita Paipeta, assisted by Hugh McCully, as a Centennial gift to Canterbury Museum" (Fyfe 2012: 36). Archaeopedia New Zealand (Archaeopedia contributors 2019) states it was "made at Temuka in 1950 by Pita Paipeta of Arowhenua, assisted by Hugh McCully" and the *Community High Country Herald* (24 March 2004: 5), reporting on the new Transport Gallery in Canterbury Museum, makes the same claim and labels it the "Arowhenua mōkihi". These three statements contradict the facts of its construction recorded in the newspapers of the day and in photographs.

The mōkihi and cross-section were made in our grandfather's backyard in Luxmoore Road, Timaru, in autumn 1950 outside Marion Seymour's former bedroom window. It was not made at Temuka or Arowhenua. In an article reporting the presentation of the mōkihi to Canterbury Museum, the *Press* (24 January 1951: 7) noted who lead the endeavour:

> *The initiative in the building of the canoe was taken by Mr McCully of Timaru, and formerly of Peel Forest. Mr McCully has taken a great interest in the Maori history of South Canterbury and has been specially interested in the use of the mokihi for crossing and travelling down shingle rivers.*

Who was Hugh McCully? He was one of New Zealand's foundation archaeologists. From 1904, long before the term experimental archaeology was coined, McCully was engaged in it while concurrently inventing 11 farm machines, six of which won medals. It made complete sense to him to make an early Māori Neolithic toolkit alongside Industrial Age agricultural machinery

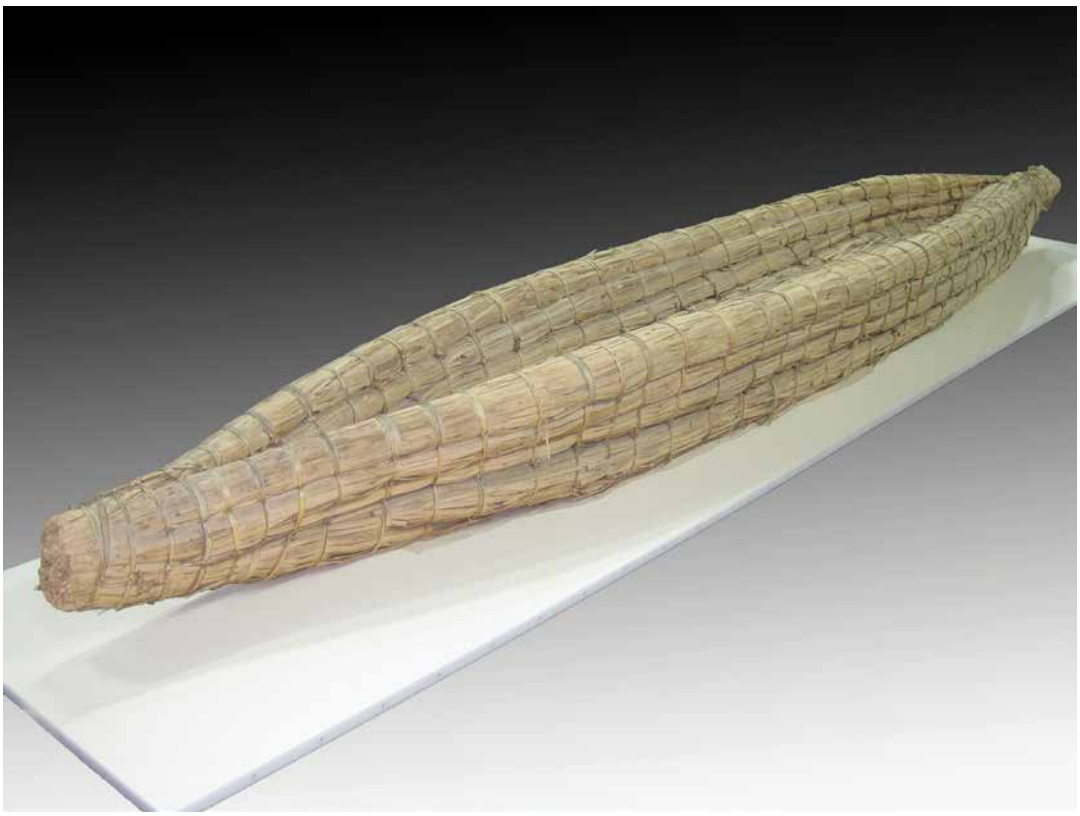

Figure 1. Mōkihi made by Hugh McCully and Pita Paipeta in autumn 1950. Canterbury Museum E151.209

because both toolkits exploited the South Canterbury landscape. He applied his knowledge of physics and mechanics to the manufacture of both toolkits and wrote nine papers on stone tools from the viewpoint of a mechanic. The majority were published in the *Journal of the Polynesian Society* in the 1940s. *The Evening Star* (19 July 1933: 11) summarised McCully's then revolutionary view on the technological similarities between the two toolkits:

> *Some kinds of cutting edge were so fundamental … that they had been hit upon by the men who used Acheulean tools in the Ice Age of Western Europe … some of the humbler implements used by Neanderthal men were identical with some of the humbler tools made by the Maori … [and] some of these features had been carried on into the specialised tools of the present day.*

Before others took up the cause, McCully was deeply committed to preserving the Māori rock art of South Canterbury and North Otago, declaring it should be made tapu to all to prevent vandalism (*Timaru Herald*, 10 July 1917: 3). He included archaeologists among those who should be banned. This view annoyed Roger Duff who believed only archaeologists should have access to sites. McCully fossicked from Cape Campbell (Marlborough) to Greenhills (Southland) and collected moa bones as well as the skeletal remains of bats, cats, dogs and extinct geese. He donated objects to Otago Museum, Canterbury Museum, Auckland War Memorial Museum and the Dominion Museum (Museum of New Zealand Te Papa Tongarewa). His nephew-Executor sold his final collection to the Evans family who donated it to the South Canterbury Museum where it is now part of the Evans Collection. Items rejected by the Evans family remain in the possession of Hugh

McCully's granddaughters.

With his Box Brownie, McCully took photographs of the Waitaki River mouth early Māori site from 1926 onwards, of river flats upstream strewn with moa bones and ovens, of precisely arranged sets of 20–40 toki and 50–100 flakes in his collection(s), and of other foundation archaeologists in the field. His century-old scroll of the Craigmore moa, drawn when they were first discovered in 1921, has survived. He was our grandfather and we remember him catching weka with snares, showing us how to make fire with fire sticks, and his collection of Māori artefacts in the 'whare' in his backyard. Making a mōkihi was a natural development of his interests.

Anchor stones and moa-on-mōkihi

The story of the mōkihi in Canterbury Museum is linked to the presence of anchor stones at the Waitaki River mouth. In 1926, J B Chapman ploughed what has become known as "No. 1 Terrace" at the Waitaki "moa-hunter" site (Teviotdale 1939: 168). His plough turned up moa bones, middens, adzes and flakes. Hugh McCully's gossip network alerted him to Chapman's finds and within a fortnight he visited the site with Raniera Martene (Daniel Martin) who told Hugh McCully they were cattle bones. Hugh McCully and his extended family farmed and slaughtered cattle and Hugh could not imagine what catastrophe could have produced that number of cattle bones. He picked one up and immediately realised what lay before him was a "great necropolis" of moa bones (Buick 1937: 164) covering about 150 acres (60.7 hectares). No. 1 Terrace lay within the 198 hectare Korotuaheka Reserve set aside by Judge Fenton of the Māori Land Court in 1868 for Ngāi Tahu. By 1879, the sea had scoured away about 81 hectares (Taylor 1952: 102). Chapman said the sea had eroded a further half-chain (10 metres) in the 11 years he had owned the property (Teviotdale 1939: 167) and by the time Knight and Gathercole (1961: 133) visited it with Hugh McCully in 1961, it measured 50.5 hectares.

Our grandfather told us that when he first saw the site in 1926, the "ground was white with bones" because the thin topsoil had been swept away by a gale that blew in just after Chapman did his spring ploughing and exposed them. The gale may have been the rain, hail, snow showers and strong southwest winds of 17 September 1926, which were followed by more strong and squally southwest winds the next day (*Otago Daily Times*, 18 September 1926: 12).

McCully advised Otago and Canterbury Museums of Chapman's finds. It was 5 years later, in March 1931, that David Teviotdale of Otago Museum visited the site with Arthur George Hornsey and Hugh McCully and the trio excavated for 4 days. Between 1926 and 1931, Hornsey, McCully and others picked over the site and weathering caused some deterioration of bones and middens. The site continued to deteriorate until December 1936 when Teviotdale (1939: 168) began a 4-month excavation and "expected that this site would prove the richest moa-hunter [early Māori] site ever investigated … the high hopes formed were disappointed, but, nevertheless, the site proved interesting".

While fossicking between 1926 and 1931, Hugh McCully became familiar with the palaeochannels that wove through the site and discovered anchor stones strewn above the high-water mark of the former channels. In March 1931, he showed some of the anchor stones, in situ, to David Teviotdale who recorded in his diary 18–25 March 1931:

> *At one time the back water of the river reached near here and Mr McCully showed me a number of large stones he called anchor stones lying on a level piece of ground. One was broken but had a rough groove on one side. No other stones were near & these have evidently been carried here.*

These anchor stones, and the existence of early Māori camps at Te Akatarawa and Waitangi up the Waitaki River, inspired Hugh McCully to formulate his theory that it became necessary to push back into the hinterland to

hunt moa in order to procure sufficient supplies of moa meat to meet trade demand from the North Island. There were killing sites upstream and butchery sites such as those at the Waitaki River mouth. At killing sites, moa were either slaughtered or incapacitated by having their legs broken to stop them wandering away and to preserve the freshness of their flesh. As children, we shuddered as our grandfather imparted this information about alive-but-immobilised moa. Carcases and trussed live moa were transported downstream on mōkihi to the butchery site to be potted, preserved and exchanged for North Island goods. Hugh McCully was initially derided for his moa-on-mōkihi transportation theory but Buick (1937: 191) enthusiastically adopted it:

> *It is therefore a reasonable assumption that in times past it was not an unusual sight to see fleets of mokihi speeding down the river laden with the bodies of dead Moas destined for polite traffic per medium of gifts and counter-gifts to friendly tribes of the North Island.*

Teviotdale's diary entry for 18–25 March 1931 reveals his qualified support for Hugh McCully's moa-on-mōkihi theory. Teviotdale, Hornsey and Hugh McCully obviously talked about "mogies" rather than mōkihi when discussing the theory:

> *He* [McCully] *holds the idea that the moas were killed near the upper reaches of the river and conveyed in "Mogis" to the camp. This is quite probable but does not account for all the bones nor the great extent of the camp and I think a larger number would be driven in by bands of men and killed on the ground. Mr McCully also suggests that the moa flesh was preserved much as the mutton birds are preserved and taken to other districts to be consumed.*

Roger Duff (1977) was a supporter of the moa-on-mōkihi theory, and tapped into the implied seasonality of hunting moa in McCully's suggestion they were preserved like mutton birds, and commented:

> *Spectacular and romantic as it seems, this theory accords well with the normal seasonal Maori fishing and fowling routine. For each type of fish and fowl, whitebait and eels of the former, and mutton birds of the latter, there was one season in which they could be taken in enormous quantities, so that special means of preservation by drying and potting in fat were regularly employed for seasons of scarcity* (Duff 1977: 68).

Today Hugh McCully's moa-on-mōkihi idea is orthodoxy.

The peak of moa-hunting in the South Island was from 1280 to 1445 (Latham et al. 2019). All stages of the moa life-cycle were over-hunted – eggs, chicks and adults. Spatial sympatry occurred among the nine species; between four and seven moa species could share the same habitat. On the Canterbury Plains, four species were generally available to hunters; up the Waitaki River and in the southern lakes belt six or seven species were available (Latham et al. 2019: fig. 2(A)). Depending on where they hunted, between four and seven moa were available per km^2 to the hunting party (Latham et al. 2019: fig. 2(B)). Moa had not evolved a fear of humans and so, regardless of whether the founding population of early Māori was 100, 200 or 500 people, moa were easy to eradicate within 200 years of the arrival of people in an isolated insular ecosystem (Latham et al. 2019: 9).

Hugh McCully also thought foodstuffs other than moa were transported on mōkihi. He believed that the trunks of tī kōuka (cabbage tree, *Cordyline australis*) were transported on mōkihi along the Ōpihi River to the umu kaha (strong ovens) at Temuka.

Raupō, harakeke bindings and drains

The killing and trussing of moa and construction of a mōkihi in the upper reaches of the Waitaki River presented early Māori with a few logistical issues to solve. The first issue was completing the construction of a mōkihi before the dead moa deteriorated. A mōkihi could take several men three days to construct. Explorer Edward Shortland (1851: 200) describes the construction of an 18 ft by 2 ft (5.5 metre by 0.6 metre) mōkihi

from 11 to 13 January 1844 by Te Huruhuru's men. Raupō (bullrush) was cut with tomahawks on 11 and 12 January and left to dry out on the ground for 12–24 hours before construction commenced in the afternoon of 12 January and was completed on 13 January. The semi-dried raupō leaves were tied in bundles with harakeke (flax) bindings. How many mōkihi the moa hunters made at a killing site, or embarkation site, and whether they were 5 metres or 10 metres long would depend on how many whole carcases or haunches or trussed moa had to be transported. Was raupō pre-cut and left to dry for 24 hours before the hunt commenced? Did one group stay behind and make the mōkihi while others hunted? The sequence of events is unknown.

Sourcing raupō was not an issue but finding harakeke to make the bindings could be an issue depending on where the killing, or embarkation, site was located. If bindings were to be made on the spot then it was a third task the moa hunters had to complete. Hugh McCully knew where harakeke and raupō grew up the Waitaki River and commented that mōkihi were made wherever raupō was available but if they were to be made above the point where "the Otematata Creek joins the river, flax for binding had to be carried, as past this point it was not obtainable" (*Christchurch Star-Sun*, 25 January 1951: 2). Stevenson (1943: 191) also makes this point about the non-availability of harakeke upstream. Hugh McCully made the harakeke bindings before starting work on the mōkihi.

There is a family story that some of the raupō to make the mōkihi was collected by McCully and Paipeta from the Orakipaoa-Milford-Temuka area and some was also collected from the Boyd Road drain (Fig. 2), which used to get choked by harakeke and raupō. The cut raupō was put in the three-bay shed in Hugh McCully's backyard while it semi-dried out.

The wider McCully family were obsessed with drains. They were farming people from Loughries, County Down, Northern Ireland, where drains kept the swampy land bordering Strangford Lough fertile and free from water-

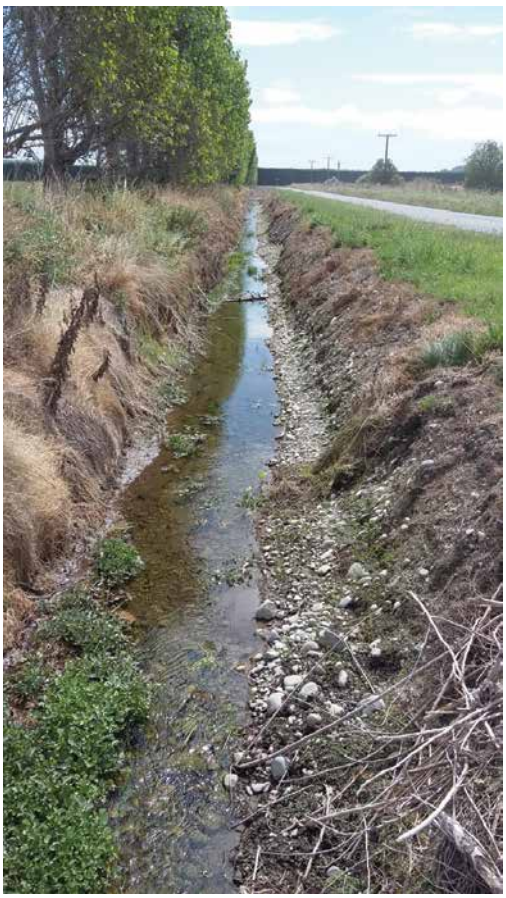

Figure 2. Boyd Road drain. March 2019. McEvedy collection

logging. On taking up their farms from the Rangitata River to Seadown, they viewed the mahinga kai (food gathering) areas as flax-covered, raupō-infested swamps and set about draining them to turn them into rich farm land. On being confronted by a drained pond where harakeke had once been cut, a Ngāi Tahu elder told Herries Beattie in the 1920s that his self had been erased – the removal of the pond from the landscape erased his image and him (Tau 2001: 149).

Express delivery

Hugh McCully wrote that a journey on foot up the Waitaki River took several days to complete:

When travelling to the interior on foot a

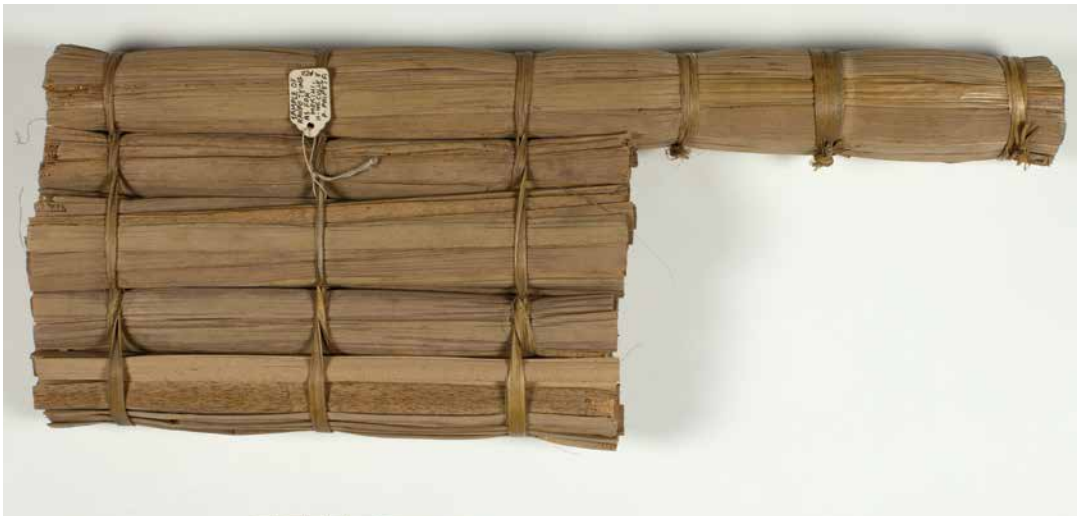

Figure 3. The 'scientific' model cross-section to demonstrate how water tightness relied on correctly tied and knotted bundles of raupō. Canterbury Museum E151.210

> *distance of about 10 miles [16 km] a day was covered as indicated by stopping places up the river and far inland. Compared with "swagging" a load, the rate and ease of travel by mokihi can be appreciated. To the moa-hunter it was express delivery* (Christchurch Star-Sun, 25 January 1951: 2).

Hugh McCully was puzzled why early Māori had occupied the river terrace given it was so exposed and bleak but was told by Māori friends that the river terraces could be seen 60 miles (96.5 km) upstream at the Māori Swamp. This is quite a distance – further than from Christchurch to Ashburton – and we wondered if McCully's Māori informants got the distance wrong, but we calculated that if an early Māori stood on ground that was 710 metres above sea level, had a clear line-of-sight to Korotuaheka and possessed good long-distance eyesight, the terrace could be seen. Hugh McCully thought that those hunting upstream could have exchanged smoke signals with those downstream and the ovens be fully prepared by the time the moa cargo arrived. Travelling down the Waitaki River at around 6 mph (10 kph), as Shortland did in 1844, 10 hours was ample time in which to get ovens ready. Beattie (1939: 44) says smoke signalling was called "whakapua" and was used "to a fair extent to let parties indicate their whereabouts to keep in touch with each other".

Hugh McCully viewed the disappearance of mōkihi as another loss. The absence of mōkihi in the landscape bothered him because they had been so important in keeping the supply-chain of moa meat functioning and he told his daughter, Lilian Mahon, and her daughter, Marion Seymour, that he resolved to make one for the centennial.

He was not alone in this intention. What is not generally known is that around 1950, mōkihi-making was a mini-craze among the 'Timaru Four' archaeologists (Arthur George Hornsey, James Robert Irvine, Gordon Griffiths and Hugh McCully). We have a photo of Arthur Hornsey posing with his mōkihi outside the tin sheds in Timaru where he kept his artefact collection. The news of their mōkihi-making spread to Pita Paipeta.

Hugh McCully was an old style pro-British Empire patriot and wanted to do something to mark the centennial of the colonisation of Canterbury. Why not make a mōkihi? He decided to make one and give it to Canterbury Museum. He had already embarked upon the

Figure 4. Cut ends of raupō bundle on model exposing how the internal structure of raupō leaves aided buoyancy. Canterbury Museum E151.210

task when Pita Paipeta heard about it and asked if he could join the project. Hugh agreed and Pita Paipeta travelled between Temuka and Timaru for quite a while.

Pita Paipeta was also known as Peter Piper. Although he spent his childhood at Rāpaki, he had moved south to Arowhenua Marae by 1902 where he was appointed Chair of the Arowhenua Māori Council at its inaugural meeting (*Temuka Leader*, 21 October 1902: 1). In 1905, under the name of Peter Piper, he read in English the welcome address to officials and locals who attended the opening of the new meeting house called Te Hapa o Niu Tireni at Arowhenua. Its name was to "stand as a constant reminder of the shortcomings of our Government in respect to … the Native Land question" (*Otago Daily Times*, 16 June 1905: 3). Paipeta was active in revitalising traditional Māori crafts and skills and was involved in the building of a model Māori village behind the Rātana Gate at Arowhenua Marae (*Otago Daily Times*, 28 January 1938: 16). We visited it a few times as children but it is no longer there. He was married to Wikitoria Kahu Paipeta, the granddaughter of Te Maiharoa who, in 1877, established a new settlement called Te Ao Marama in protest against the Government's inaction on, and indifference to, Ngāi Tahu requests for redress on land matters. Paipeta was prominently involved at Arowhenua Marae when marae representatives threatened to boycott the centennial of the Treaty of Waitangi because of unresolved land claims (*Press*, 17 July 1939: 10; *Gisborne Herald*, 24 July 1939: 7). It is understandable that some would assume that he would be the instigator of the mōkihi-making activity because of his involvement in reviving traditional crafts but he was not. A man with his marriage-ties and history of protest would hardly initiate an activity to celebrate 100 years of colonisation and land loss.

Both men are likely to have had a different motivation. Hugh McCully wanted to be "scientific" in the pursuit of his task. He decided to make an additional model cross-section (Figs 3, 4), which would reveal to anyone interested in hands-on study the internal structure of raupō stalks and the technicalities of tying the bundles of raupō together. It was made after the mōkihi had been completed. The scientific objective is an integral and important part of the overall mōkihi story but the cross-section model is too easily overlooked. Pita Paipeta's motivation might have been to make sure the construction adhered to traditional conventions.

In autumn 1950, Pita Paipeta and Hugh McCully made the mōkihi together (Fig. 5). McCully family photographs record changes in their clothing and indicate they worked for a considerable time on it. The autumnal weather and keeping up supplies of dried raupō had to be factored in. The mōkihi was put in the three-bay shed at Luxmoore Road after each working session and they were under no pressure to finish within 3 days. Photos show other people visited the backyard to watch it being made. The house and the whare where Hugh McCully kept his collection of artefacts are still there in Luxmoore Road.

Before the ends of the mōkihi were finished off, Hugh McCully himself photographed it resting on saw horses in his backyard (Fig. 6). Hugh McCully included this photograph in his four-column article in the *Christchurch Star-Sun*

Figure 5. Hugh McCully (sitting in the mōkihi) and Pita Paipeta (standing) jointly tying off flax bindings. Photographed by Lilian Mahon, Hugh McCully's daughter, in autumn 1950. Seymour collection

(25 January 1951: 2), published to coincide with the presentation of the mōkihi to Canterbury Museum on 24 January 1951.

When they made the mōkihi, Hugh McCully was 72 and Pita Paipeta was 83. We think the mōkihi was not a bad effort from two elderly men.

Conclusion

Hugh McCully initiated the mōkihi to celebrate 100 years of British colonial settlement in Canterbury and to honour a water craft that had disappeared from the landscape. It was made in his backyard in Timaru. Whether Pita

Figure 6. The almost completed mōkihi in Hugh McCully's backyard. McEvedy collection

Paipeta held a similar positive attitude towards colonisation is highly debatable but he was certainly interested in preserving ancient skills and a willing contributor to making it.

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