

MR COCKER'S BENDER BURN DISCOVERIES:
A TUSSOCK RAIN CAPE FROM CENTRAL OTAGO,
NEW ZEALAND, RE-EXAMINED

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When Te Rangi Hiroa published "The evolution of Māori clothing Part IX" in the *Journal of the Polynesian Society*, he wrote of a then recent visit to the Otago Museum (1926a: 111):

... the author had the good fortune to examine a unique garment in the Otago University Museum. It was a very old South Island rain cape with tags of tussock grass, *Poa caespitosa*.

There were two rain-apes in the Otago University Museum with old labels stating that they were made of tussock grass. On examining the first, it was obvious that tussock had not been used for the rain tags.... It was therefore with feelings of suspicion that the second cape was examined. Here, however, all doubt was happily dispelled, for whilst the warps and wefts were of dressed flax-fibre, the rain tags throughout were of tussock.... The garment was found in a cave on Mount Bender in Central Otago.

Recent re-examination of this rain cape (Fig. 1) has confirmed Te Rangi Hiroa's identification of the "tags" (the elements attached to the outside of the cape to deflect the rain) as tussock, but has shown that he mis-identified the species. This article reviews the significance Te Rangi Hiroa attributed to the cape and considers possible implications of the new botanical identification.

HISTORY OF THE CAPE

Between the townships of Ettrick (in the location previously known as Bender Burn) and Roxburgh in Central Otago, South Island, New Zealand, Mt Bender rises from Moa Flat. It is in this area that the cape was found. The donor attribution in the Museum Register is given only as "Cocker". Two separate reports of a Mr Cocker's interest in the prehistory of the area near Mt Bender were published in a local newspaper in 1875. In July there was news that "large discoveries of Maori relics continue to be made at Bender Burn" and that these had been placed in the care of Mr Kitching of Moa Flat Farm "previous to being forwarded to the Dunedin museum" (*Tuapeka Times*,

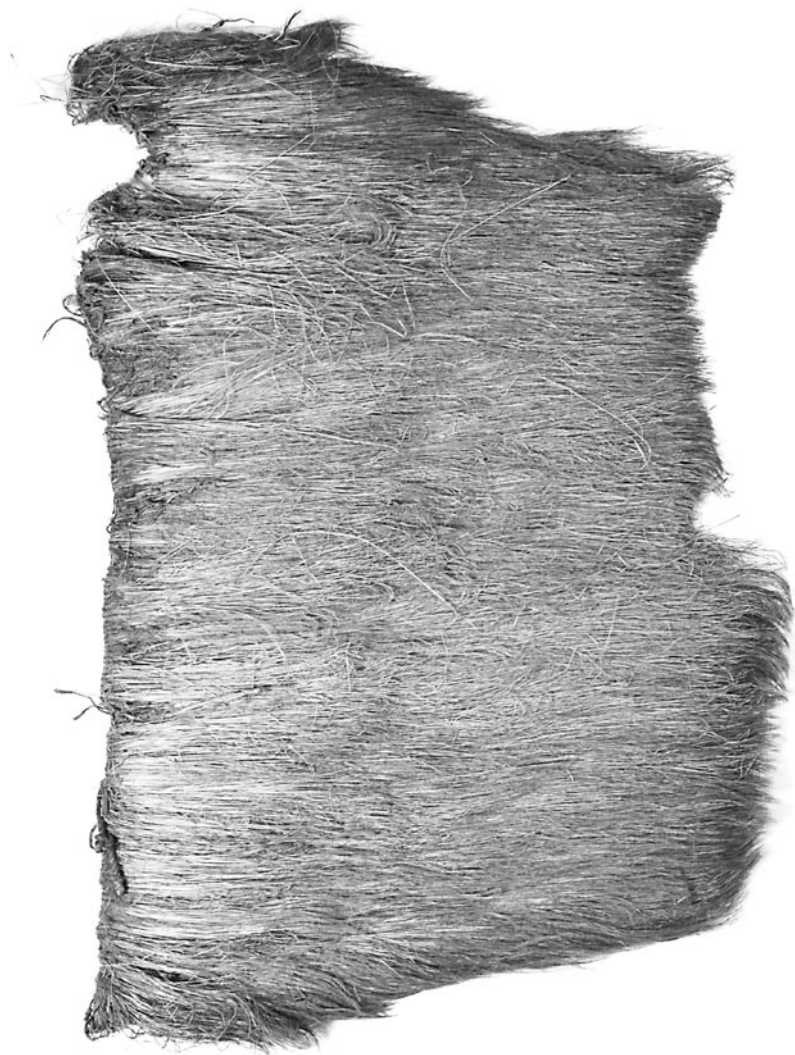


Figure 1: D31.1339. Otago Museum, Dunedin, New Zealand.

7 July 1875: 2). Another report a few months later told readers: “Interesting Maori relics continue to be found by Mr. Cocker near to the Ettrick township.” It described them as “relics of the once powerful Middle Island natives” and noted that Mr Cocker was “in hopes of finding the skeleton of some of the original owners of the property discovered, and is prosecuting his researches vigorously” (*Tuapeka Times*, 30 October 1875: 2).

A *Southland Times* account of the first group of finds (27 July 1875: 2) mentioned “clothing” and “feathers of birds that are now extinct”. The second report in the *Tuapeka Times* (30 October 1875: 2) noted that among artefacts

... lately unearthed there is a greenstone adze of rather a curious shape. Wearing apparel, manufactured from flax, feathers, and grass combined, has also been found in various stages of preservation. We were shown cloaks that would reach from the shoulders to the heels of any ordinary sized individual, also fragments of other garments manufactured in a most ingenious manner, and ornamented with feathers of birds now supposed to be extinct.

Although these reports of Cocker’s investigations lack sufficient detail for individual object identification, and none specifically mentions the tussock cape, one can easily imagine it being included among the general mention of “clothing”, “garments” or “wearing apparel”, particularly any that combined flax and grass.

The cape probably made its way to Dunedin within a year of its discovery. Frederick Wollaston Hutton reported to an Otago Institute meeting on 7 August 1877: “Last June the Museum received from Mr. Cocker a dried specimen of a rat found by him in a cave, along with some old Maori mats, etc., on Mount Benger” (Hutton 1877: 288). According to the press, this material was also on display:

Professor Hutton then gave some very interesting remarks on the “Maori Rat,” A specimen, dried to a mummy, which was found in a cave at Mount Benger, along with some matting, &c., was exhibited to the meeting. (*Otago Daily Times*, 8 August 1877: 2)

The cape was described in more detail by Augustus Hamilton two decades later:

In Central Otago shoulder capes were sometimes made by fastening on tussock grass in small tufts, as pulled up (the roots being cut off), to a flax foundation, the root end of the grass being uppermost. There is a specimen of this kind in the Otago Museum. (Hamilton 1899: 281)

In 1920, H.D. Skinner, then Assistant Curator at the Otago Museum, displayed it as part of a lecture at the Dominion Museum, Wellington.

Mr H. D. Skinner gave a lecture on anthropology at the Dominion Museum recently, taking as his theme the subject of personal decoration among the Maoris.... He illustrated first of all the characteristics of Maori dress.... He showed several beautiful examples of Maori mats.... There was... a substantial tussock mat of a kind known only in Otago. (*Hawera & Normanby Star*, 31 August 1920: 8)

Associated individuals

Although neither the Museum Register nor the original reports give a first name for Mr Cocker, five years later the *Tuapeka Times* (7 January 1880: 3) offered more specific identification:

In a cave in the mountain which overhangs the township of Ettrick Mr Richard Cocker, an old and respected resident of that place, discovered a number of articles wrought in flax and other material in a good state of preservation, showing that not many years ago the Natives had inhabited that region....

Richard Parks Cocker lived in the area from at least 1867 although he moved to Dunedin near the end of his life. The *Tuapeka Times* (24 January 1885: 3) described him as having “lived at the Benger Burn for a great many years, and followed the business of ginger-beer and lemonade maker”.

John Fry Kitching, in whose care Mr Cocker's discoveries were said to have been temporarily left, was appointed manager of Moa Flat Station by the Australian grazier and land owner, William John Turner Clarke (widely known as “Big” Clarke or “Moneyed” Clarke) in 1868 (Kiddle 1983: 277). When Clarke died in 1874, his youngest son Joseph's inheritance included 50,000 acres (20,235 ha) in New Zealand (H. Anderson, n.d.). At this time or soon after Kitching was able to lease the property himself for some years (Webster 1948: 18-19). He left Moa Flat Station in the early 1880s and died at Roxburgh in 1898.

Wider context

Despite the quantity of material referred to in the newspaper reports, only one item in the Museum collection is linked to the name Cocker. There are no objects linked to the name Kitching, and the only artefact with a record referencing Moa Flat Station is a godstick. Two adzes from Moa Flat (D46.27 and D46.28) were donated to the Museum in 1946, but no history was given with them. The oft-named Moa Flat godstick, D24.1260, was donated to the Otago Museum with a note that it was one of two found in a cave with

some Māori baskets by a station-boy, who gave them to Mrs Langmuir on Moa Flat Station in the 1880s. H.D. Skinner (1952: 135) also described a wooden bowl he had been shown in the early 1920s, “now lost, which was circular in cross-section and about 9 inches in diameter... found on Mt. Benger, Central Otago”.

That there was general knowledge of Māori archaeological sites in the area, however, seems evident. James Hector (1871:115) wrote:

Under some overhanging rocks in the neighbourhood of the Clutha river, at a place named by the first explorers “Moa Flat,” from the abundance of bones which lay strewn on the surface, rude stone flakes of a kind of stone not occurring in that district, were found by me in 1862 associated with heaps of moa bones.

One report of Richard Cocker’s activities (*Tuapeka Times*, 30 October 1875: 2) said:

It is evident from the appearance of the Maori camp that a large number of people were once congregated there, as the ovens used by them are of the largest description, and there are numerous places in the vicinity, extending to the banks of the Molyneux, which show signs of having been at one time frequented by the now almost extinct Middle Island native.

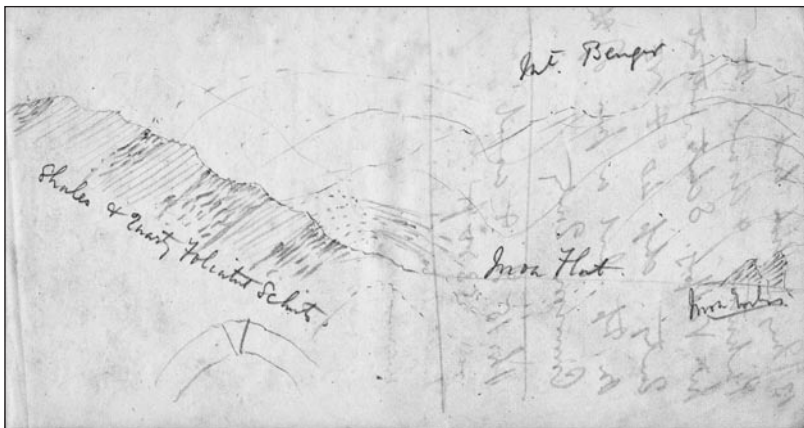


Figure 2: Sketched landscape showing Moa Flat and Mt Benger, 1862. ‘Otago Geological Survey I’, Sir James Hector’s Notebooks, 1862-1863 [MS-00443-1/020 Hocken Collections, Uare Taoka o Hakena, University of Otago]

Beattie (1997:31) quoted "Otago old settler" Jas. Robertson writing in 1904 of having sighted large numbers of moa bones and nearby ovens in the 1850s; and the *Tuapeka Times* (7 January 1880: 3) also characterised Moa Flat as well-named since "a large number of Moa bones and what are termed Maori ovens have been found in its vicinity".

The New Zealand Archaeological Association Filekeeper for Central Otago has noted that no records have been filed with the NZAA Site Recording Scheme for the ovens in the Ettrick area (Jill Hamel, pers. comm. 9 December 2011) but suggests they are most likely to be *umu-tī* 'large earth ovens' for the preparation of *kāuru* "the edible stem and rhizome of *tī kōuka* (cabbage trees, *Cordyline australis*)" (Anderson 1998: 145, Beattie 1994: 297, Fankhauser 1987, Hamel 2001: 42-48).

MĀORI USE OF TUSSOCK

Tussock has most often been described in the literature as used by Māori for padding or roofing material. Sinclair (1940: 138-39), for example, interpreted it as bedding material at Wickliffe Bay, as did Duff (1952: 93) in the rock shelter at Notornis Valley. Alexander Don (1936: 54) quoted Alexander Petrie describing tussock-roofed round huts in the Maniototo in 1858, and Beattie (1994: 175) described temporary camp-shelters made of tussock and grass plaited over sticks by Otago Peninsula Māori travelling inland to hunt *weka* (*Gallirallus australis*) in the winter months. Some mention, however, was made of its use in clothing. Skinner (1912: 144) described "socks or leggings made of different materials" being worn on the west coast of the South Island. He said they "were generally made of tussock-grass or of the native grass off the hilltops". Beattie (1994: 237) also suggested that in the South Island, among other materials, tussock would probably have been used to make leggings (*taupa*). Te Rangi Hiroa (1924: 307) compiled a list of Māori garments, then added: "There are other sub-varieties and local differences such as in those of the South Island where tussock grass has been used as thatch and strips of birdskin used for adornment." Beattie (1994: 43) defined "patiti" as white tussock and gave the name "pokeka-patiti" to a form of rain cape (1994: 47): "[A] waterproof cloak of whitau laid over with layers of tussock (patiti)." Beattie wrote: "Patiti (tussock) was a fine thing to put in the paraerae [sandals] to keep the feet warm and if one was wading it was warmer with patiti round the feet than without it" (1994: 236). Its insulating properties may have been relevant to its use in the cape, D31.1339.

Williams did not mention tussock in his recent analysis of 19th century South Island lists of *mahika kai* 'places at which resources—particularly but not only food—were collected or harvested'. He does (2010: 176) refer

to one set that includes two vegetable resources that are not foods (*taramea* ‘speargrass *Aciphylla* spp’ and *tikumu* ‘mountain daisy, *Celmisia*’) and to a second set that includes some non-food resources, although he suggests they are included because there is food in their vicinity—the primary focus. The absence of tussock does not therefore prove that it was a plant of no value to Kāi Tahu. Nevertheless, given the possible link between the cape and the nearby ovens, it might imply that tussock was not a material sought on a regular basis, even when people were travelling to a location for some other, primarily food gathering, purpose.

CENTRAL OTAGO

Late 20th and early 21st century scholarship has offered us a clearer and more detailed picture of Māori use of the Otago interior than Mr Cocker is likely to have understood. Hamel (2001: 89) summarised inland Otago archaeological sites within the period AD 1150-1550 as including many moa hunting sites; other less specialised sites where both *tī kōuka* and moa were cooked; and still others that evidence use of rock sources. Later, when moa became rare or extinct and seal numbers dwindled, the pattern changes. Mobility, exploitation of “smaller” seasonal resources, such as eels, lamprey, *weka* and *aruhe* ‘edible fern root (*Pteridium aquilinum* var. *Esculentum*)’, preservation and food exchange became more important. The production of *kāuru* seems to have occurred in this phase as well and Williams (2010: 158) noted that *kāuru* and *aruhe* are often mentioned together in the *mahika kai* lists compiled from information given by Kāi Tahu elders in the late 19th century.

Anderson (1982: 72) wrote of the late prehistoric period: “it seems quite clear that Waitaha and Ngatimamoe had abandoned the interior as far south as Wakatipu by about 1780... [then] there is a gap of more than 50 years before glimpses of settlement history reappear in the recollected information.” He noted (1998: 176) that historical observations concerning Māori occupation of the interior are comparatively late; and that although it was difficult to tell “when Ngaitahu first began to occupy the interior.... It... may not have begun much before the 1830s...” (Anderson 1982: 73). Further, the lack of Māori in the interior, when runholders and gold prospectors spread through it in the 1850s and 1860s, did not provide an accurate reflection of its place in early 19th century Ngāi Tahu settlement and subsistence patterns (Anderson 1998: 178). The archaeological record for the later period comprises a number of rock shelters and clefts with material remains concentrated in the Strath Taieri and Maniototo area but also “scattered sites all along the Clutha from Beaumont west to around the western lakes” (Hamel 2001: 80).

NEW INFORMATION

Botanical identification

Te Rangi Hiroa identified the grass attached to the outer surface of the cape as *Poa caespitosa* (*P. cita*) which is widespread throughout the low to mid altitude South Island mainly in moister fertile areas. At that time his was the most specific identification made, other writers having described it merely as grass or tussock. This grass was examined in 2011 by Dr Janice Lord and identified as *Festuca matthewsii* subsp. *latifundii* (Fig. 3), not *Poa caespitosa* (syn. *P. cita*) as Te Rangi Hiroa had suggested.

The leaf blades of *Festuca matthewsii* subsp. *latifundii* are approx 80 -300 mm in length and the undersides have short antrorse prickly-teeth (Fig. 4) on the ribs, upper surface and margins. Another distinguishing feature is a characteristic ligule (Edgar and Connor 2000) found at the inner base of the leaf, between where the leaf attaches to the main stem and the stem itself (Fig. 5).

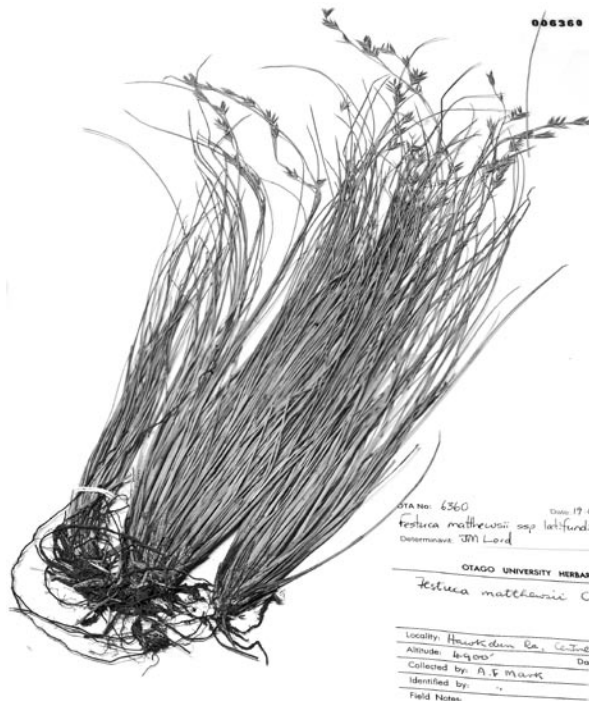


Figure 3. Otago University Herbarium sample of *Festuca matthewsii* subsp. *latifundii*.

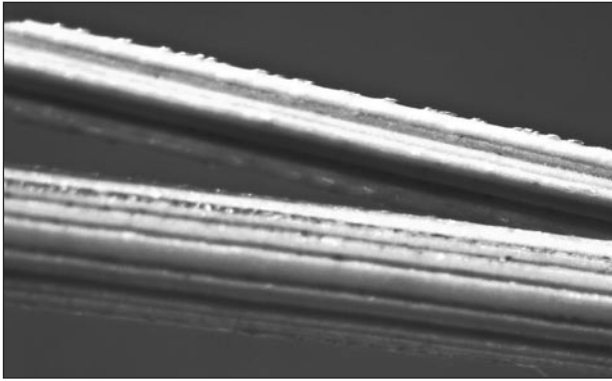


Figure 4. Leaf blade from D31.1339 showing prickly teeth
closeup grass from cape.



Figure 5. Leaf blade from D31.1339 showing characteristic ligule.

Festuca matthewsii subsp. *latifundii* has a very much more restricted habitat than *Poa cita*. It is endemic to the Waitaki Basin and Central Otago, excluding the Dunstan, Pisa and Old Man Ranges, growing in sub-alpine to alpine areas and in inter-montane basins (NZ Plant Conservation Network website). This amended botanical identification has clear implications for the cape's provenance, greatly increasing the likelihood that at least some of the materials from which it was constructed were collected locally, and that it was made near the place where it was found.

C14 dating results

A detached sample from one of the tags was submitted to the commercial provider DirectAMS at the Accium BioSciences Accelerator Mass Spectrometry Laboratory in Seattle, Washington. The results indicate an early 19th century date for the cape is most probable (Hugo Zopi, pers. comm. 16 June 2012).

Table 1. AMS dating results

Lab. No.	$\Delta 13$ per mil.	Fraction of modern		Radiocarbon age	
		pMC	1 σ error	BP	1 σ error
D-AMS 1217-225	-18.8	98.12	0.30	152	25

The calibrated AMS results indicate that at two sigma there is a 0.754 probability that the cape dates to sometime between AD 1803 and 1951, but it could be as early as AD 1683. Other evidence (date of find, dates of the finder's residence in the area in which the cape was found and historic records of traditional subsistence patterns) helps narrow the age to the late 18th or, more probably, early 19th century. Overall the result allows a confident identification of the cape as late prehistoric to early historic in age.

TE RANGI HIROA AND THE TUSSOCK CAPE

When he examined the cape at the Otago Museum, Te Rangi Hiroa's expertise in Māori textiles was well-established. G.S. Roydhouse (1951: 249) summarised this early interest in a tribute recollection and essay:

Peter was conscious of the great and important need for the recording of Maori culture... The *Journal of the Polynesian Society*... published his *Evolution of Maori Clothing* (1926a) as a memoir. This study was an elaboration of a paper read... in Wellington in 1923. The foundations for the study were laid in 1908 when he wrote his first ethnological paper, "The Maori Art of Weaving" (*Dominion Museum Bulletin No. 3*).... "We thought things over affecting our Maori people, their historical traditions and their culture," said Peter "...I started off on the arts and crafts. It was a field that was neglected.... I began with the process of weaving that I learned from Tira Hori, one of the Whanganui women who was a skilful weaver...."

In the 1920s he had a broad knowledge of other museum collections and of technical matters. While noting that at first sight it appeared much as other rain capes made from *harakeke* '*Phormium tenax*', or *kiekie* '*Freyxinetia banksii*', he selected some aspects of the tussock cape's construction for particular comment (Hiroa 1926a: 116):

The commencement or setting up of the warps by doubling them over two horizontal cords is unlike any method seen in the developed craft of the North Island.... The finish at the neck border is about as simple as it could possibly be, and again finds no resemblance in the technique of the North Island.... The method of attaching a separate neck fringe by a knotted cord is somewhat crude and primitive. The absence of any attempt at an insert also adds to the more primitive nature of the technique of the garment....

He asked: "The question to decide is whether the more primitive characteristics of technique enumerated above are really old or whether they are due to the work of an unskilled and inexperienced craftswoman" (Hiroa, 1926a: 116). Despite acknowledging that some features would mark contemporary work as unskilled (particularly the lack of inserts and poor finish about the neck band), he nevertheless concluded, "the preparation of the warps, the regularity of the weft rows, and the neat fixation of the tags, show that the garment was carefully made by an experienced craftswoman and could not have been the amateur attempt of a modern tyro" (Hiroa, 1926a: 116-17). Analysis of textile fragments from archaeological excavations in recent decades has documented detached neckline fragments from other sites with 19th century dates elsewhere in New Zealand (Lander 1992: 14, Lawrence 1989: 106). Nor was shaping always employed.

Te Rangi Hiroa recognised the apparently unique use of tussock for the tags but said (1926a: 116) this was "the least important feature of the cape" and that the "unique features are the commencement, the finish, and the neck fringe". Based on these features, he assessed the construction technique as simple. He noted that the cape's primary purpose was protection from the elements, and cited these two points in support of his suggestion that it demonstrated an early style of New Zealand cloak manufacture. He offered three general principles (1926a: 147-48):

Firstly, the simplest technique is found in the simplest garments.... Secondly the order of complexity in technique coincides with what we regard as the order in which the need for the various garments occurred during the period that the Māori was perfecting the clothing craft.... Lastly, the use for particular garments did not cease when a superior garment with an improved technique was evolved.

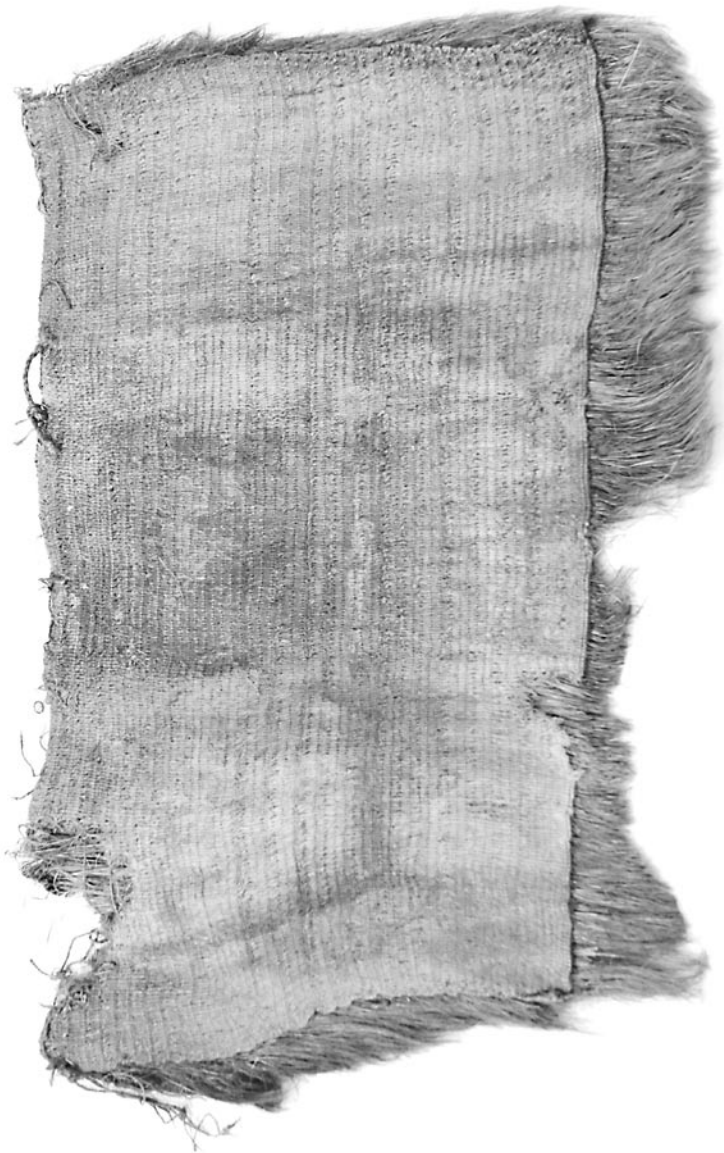


Figure 6: Reverse of D31.1339 showing weft rows and neck details. Otago Museum, Dunedin.

Te Rangi Hiroa outlined an essentially age-area hypothesis of South Island settlement in which successive northern populations moved south, and the existing southern populations moved to more remote areas in the face of these later incursions. As he described it (1926a: 117):

Each wave has pushed the previous one further south.... The Ngaitahu tribe, which formed the last wave, permanently occupied the east and south coasts of Otago and must have pushed the surviving remnants of their predecessors into Central Otago and the fastnesses of the west.

Te Rangi Hiroa obviously considered Mt Benger to be within the area to which these earlier South Island populations had retreated, and his hypothesis meant he assumed the cape was therefore associated with pre-Kāi Tahu *iwi* ‘tribes’. This link both reinforced and was reinforced by positioning the cape early in his evolutionary sequence of textile development. He summarised it thus,

We must therefore regard the tussock cape found in Central Otago as an important link with the past. Its peculiarities in technique are thus due, not to degeneration or defective craftsmanship, but rather to retention of methods marking the earlier stages in the evolution of clothing technique. (Te Rangi Hiroa 1926a: 118)

He also referenced H.D. Skinner’s (1923) work in which “the material culture of the Moriori of Chatham Islands has been shown... to have affinity with that of the southern portion of the South Island of New Zealand” (Te Rangi Hiroa 1926a: 117). It is unclear whether he had seen Alfred Martin’s 1877 photographs of Moriori. He continued (1926a: 118):

Regarding the Chathams as a remote area, we would expect Moriori clothing to shed some light on the technique used in New Zealand before the coming of the Hawaiians. Unfortunately exact details are lacking... there seems little prospect of learning what the original Moriori technique was.

When *The Coming of the Maori* (1949) was published just over two decades later, he had access to new information. His principal example of early forms of Māori garments then was not the tussock cape in the Otago Museum, but a rain cape in the Canterbury Museum collection (E109.7, Roger Fyfe, pers. comm. 23 November 2011). Single pair twining had become stage three of a sequence in which plaiting was stage two, following the introduction of bark cloth. The logic for his assessment of its place in the sequence, however, was similar. If the garment was Moriori, and if one assumes Moriori retreated to the Chatham Islands owing to northern Māori arrivals in the South Island, then a Moriori garment could be claimed to represent, or stand in for, an early Māori form:

It is probable, therefore, that the early rain capes were made of undressed flax by the current technique of plaiting. Here again, we have supporting evidence from the isolated Moriori who, according to early visitors to the Chatham Islands, wore shoulder mats made of flax with the ends hanging down on the outer side to shed the rain. No indication is given as to technique but fortunately a rain cape in the Canterbury Museum was identified from the Museum records as probably Moriori. From the description and photographs sent to me by Roger Duff, the cape shows a more primitive technique than any of the known types of Maori rain capes. Instead of being woven with a body of dressed flax fibre, it is plaited in twilled-tuos with wefts of unscutched flax.... This form of plaited rain cape could well conform to the original type of rain cape referred to by Turaukawa as the *pake* of the early settlers. (Hiroa 1949: 161)

Interestingly, Te Papa Tongarewa has in its collection a black-dyed, plaited *kākahu* 'cloak', (registration number ME001685) described as a *kahu raranga pūputu* 'closely plaited cape' or *kōnunu* 'black flax cloak', for which the main pattern is *tōrua whakatakoto* 'an over-two under-two horizontal twill'. It was deposited in the then Colonial Museum by Augustus Hamilton around 1905. There is no associated provenance but a date of AD 1800-50 has recently been suggested (Tamarapa 2011: 156-57). It seems surprising that Te Rangi Hiroa would not have been aware of this garment, given his acknowledgment of the "kindly encouragement of the late Augustus Hamilton" in his work (Hiroa 1926b: xvii) and his association with the Dominion Museum. It does not, however, appear to have been published by Hamilton, although that might mean only that he acquired it after "The dress and clothing of the Maori" (Hamilton 1899) appeared in print.

In both 1926 and 1949 Te Rangi Hiroa acknowledged the importance of considering material culture adaptation to local environments. In his 1926 paper he noted, "we have concluded that the use of the spaced single-pair twine was brought to New Zealand from Eastern Polynesia. Its more extended use in the rain-cape and rain-cloak and in close twined work was stimulated by local conditions" (1926a: 148). Skinner (1924: 232) quoted Te Rangi Hiroa on the subject: "Dr Buck has shown that environment was actually responsible for new developments in clothing, as seen in warm garments of dogs skin and flax, and the evolution of a technique whereby the latter material was effectively utilised." The main point of interest, however, seemed to be at a level that differentiated New Zealand from warmer Polynesian environments as part of the narrative of first settlement of Aotearoa not, despite Skinner's culture area work (Skinner 1921), climate variations within New Zealand.

Te Rangi Hiroa and David Simmons (1968) both proposed models for a developmental sequence of Māori clothing in which single-pair twining used in rain capes was somewhere near the beginning. Jacomb *et al.* (2004)

have recently cast doubt on the models' validity, noting that evidence for the antiquity of the single-pair twine need not also support the notion of an evolutionary sequence trending towards increasingly fine manufacturing methods and artistic sophistication. In addition, the widespread and continuing use of single pair twining for the manufacture of rain capes before and after European contact means it is of little help as a guide to age.

DISCUSSION

Historical reportage makes the identification of Mr Cocker as the finder of the tussock cape in the late 19th century highly probable. His discovery of it was at a time when Māori use of the Otago interior was not highly visible to European settlers. It was examined at the Otago Museum by Te Rangi Hiroa in the 1920s and discussed by him in some detail in "The evolution of Maori clothing" in 1926. The cape has an unusual and unsophisticated construction technique at some points but authoritative assessments recognise its maker as competent (Hiroa 1926a:117, Patricia Wallace, pers. comm. 27 July 2010). Recent expert botanical examination has identified the tags on this garment as *Festuca matthewsii* subsp. *latifundii*, a species of tussock with a very limited distribution but at present one that includes the area of the reported find. Submission of a sample from one of the tussock tags for AMS dating in 2012 indicates there is a high probability that the cape most likely dates to the 19th century.

Attempts to imagine why and how the cape was in the place where Richard Cocker vigorously undertook his investigations, or to understand the ideas of those closest to its discovery and subsequent examinations are all speculative. However, the AMS results mean that we can now effectively rule out the possibility that the cape was associated with the people or activities related to the earlier moa-hunting phase of Central Otago archaeology. In the 19th century it was less easy to discount this possibility. The *Tuapeka Times* reports seem undecided in their estimate of the age of Mr Cocker's finds. In 1875 they were described as "relics of the once powerful Middle Island natives" and later made reference to the "now almost extinct Middle Island native" (*Tuapeka Times*, 30 October 1875:2). The description seems to imply a reference to Kati Mamoe or Waitaha. Five years later, however, the same newspaper described the artefacts as "showing that not many years ago the Natives had inhabited that region" (*Tuapeka Times*, 7 January 1880:3), which could mean they fitted within a Kāi Tahu lifeway and timespan. To Skinner in 1920, with an interest in establishing and delineating the art and material culture traditions of Māori in the southern South Island of New Zealand—Murihiku—and gathering data that could be used in his culture area work (also allied to theories about

the settlement of New Zealand) it offered another example of a point of difference between Otago and other parts of the country.

When he examined the cape, Te Rangi Hiroa's ideas about the prehistory of New Zealand still included the possibility of initial settlement by a non-Polynesian population. The assumptions he made then about the nature and extent of Waitaha, Ngāti Mamoe and Kāi Tahu use of the interior of Otago have also been superseded (e.g., Anderson 1998). He described the tussock cape as very old (although there are very few early rain capes in museum collections for comparison) but even his arguments permit an interpretation that it is of recent date, since he allowed the possibility that an early style of garment (simple and practical) might continue to be made if it still suited its purpose well. Te Rangi Hiroa was perhaps also unaware of the possible association of the cape with a reputed greenstone adze—often seen as an indicator of a later date. There is no record of this adze in the Otago Museum collection management system but knowledge of such an item would not necessarily have influenced Te Rangi Hiroa's interpretation. Moreover, the identification of the adze material as nephrite is not proven; the lack of detail in accounts of Mr Cocker's work means the physical relationship between the two is vague—they might have come from separate sites or chronological layers. And, even if they were scarce until the late period of prehistory, nephrite implements occasionally occur in early New Zealand sites (Anderson 1998: 208).

One of the *Tuapeka Times* articles (30 October 1875: 2) also made particular reference to the large size of the garments. This might indicate that the finds included cloaks, as well as shorter capes; it might be exaggeration; or—highly suppositional—it might be a faint allusion to myths of the *Kahuitipua* 'first and giant occupants of the South Island' (see White 1887: 189). John White's official collection of Māori myths was not published until the late 1880s but there were earlier versions and this aspect of the legends was probably well-known.

The *muka* 'prepared *harakeke* fibre', used for the body of the cape, could have been produced in Central Otago or elsewhere and prepared at the time of the cape's construction or at some slightly earlier date. Neither its manufacture nor that of the cape could have occurred at short notice for an immediate need. From what we know of Kāi Tahu's use of Central Otago in the 19th century one might postulate that this fits with the harvesting and/or preparation of some time-consuming seasonal resource. Anderson (1998: 145) noted, for example, that the *kāuru* season ran from October through December, while a second cutting occurred in the autumn. Hamel (2001) noted the winter hunting of *weka*. *Festuca matthewsii* subsp. *latifundii* flowers from October and the seed heads are normally conspicuously present from December to March,

and can persist longer. No seed heads have been observed on the cape but their absence cannot be seen as proof of collection in the intervening months since, even if present when gathered, they might have been broken off during construction or later handling of the cape.

* * *

Te Rangi Hiroa assessed the significance of this garment in terms of its possible contribution to an outline for the evolution of Māori textile working and a narrative of the settlement of New Zealand. He emphasised the implications of its unusual construction over a consideration of the materials used. His conclusion about its significance was then amplified by interpreting the location where it was found within a scenario that supposed Central Otago could best be understood as an area to which pre-Kāi Tahu South Island *īwi* had retreated, and which allowed for the peripheral survival of older forms of artefacts.

The results of recent botanical examination and C¹⁴ dating point to weaknesses in both Te Rangi Hiroa's choice of analytical priorities and his interpretation. The restricted area in which the species of tussock used for the cape's tags grows means that by deciding to emphasise construction technique over material identification he missed an opportunity to gain information of consequence. In addition, the C¹⁴ date probably links the cape to a period of Central Otago's history when it was part of Kāi Tahu's seasonal subsistence pattern, but this was not included in the narrative on which Te Rangi Hiroa drew.

From the perspective of this investigation the distinctive feature of the cape is the apparently unique use of one particular species of tussock in a Māori garment. The implications of the revised botanical identification, allied to the AMS dating result, raises a number of questions about earlier interpretations of the cape's significance. The context for Te Rangi Hiroa's initial evaluation of the cape's importance, and his apparent modification of that standing some years later, are of interest in charting the changing ideas of a significant early scholar working with Māori textiles. The cape's neckline and neck attachment are unusual and may represent a personal choice by the maker but do not indicate antiquity in light of our radiocarbon results. A broader scenario in which a group of coast-based Otago Kāi Tahu had travelled to the Ettrick area in the early 19th century for the harvesting or production of food items such as *weka* or *kāuru*, or some other purpose; stayed for a period of time; and included among their number a weaver who while there used a locally available tussock in the construction of a rain cape, is suggested as one of the possible alternative hypotheses.

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ABSTRACT

The recent botanical examination and dating of a tag from a South Island rain cape in the Otago Museum collection has lead to an examination of the circumstances surrounding its discovery, and an analysis of the significance accorded it by early researchers.

Keywords: Tussock, Otago Museum, Te Rangi Hiroa, rain cape