14 · Māori Cartography and the European Encounter

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New Zealand (Aotearoa) was discovered and settled by migrants from eastern Polynesia about one thousand years ago. Their descendants are known as Māori.[1] As by far the largest landmass within Polynesia, the new environment must have presented many challenges, requiring the Polynesian discoverers to adapt their culture and economy to conditions different from those of their small-island tropical homelands.[2]

The quick exploration of New Zealand's North and South Islands was essential for survival. The immigrants required food, timber for building *waka* (canoes) and *whare* (houses), and rocks suitable for making tools and weapons. Argillite, chert, *matā* or *kiripaka* (flint), *matā* or *mātara* or *tūhua* (obsidian), *pounamu* (nephrite or greenstone–a form of jade), and serpentine were widely used. Their sources were often in remote or mountainous areas, but by the twelfth century A.D. most of the rock sources in New Zealand had been discovered.[3]

As the Māori became familiar with the terrain, significant features such as mountains, rivers, streams, lakes, harbors, bays, headlands, and islands were given toponyms that denoted their appearance or commemorated an associated event. Māori occupation sites such as *pā* (forts) and *kāinga* (villages) were also named. The knowledge gained through repeated travel and the reiteration of toponyms enabled the Māori to visualize the land in the form of a map. For example, in 1793 Tuki was able to draw a map of the whole of New Zealand (except Stewart Island and other large offshore islands), apparently from his visual image of it (see below, pp. 506–9).

The extent to which geographical knowledge was shared among Māori is not known. Because of its strategic importance in the frequent wars and skirmishes between *iwi* (nations or peoples) before 1840, especially in the North Island, such knowledge may have been restricted to tribal experts (*iwi tohunga*). At the time of organized European settlement in New Zealand in 1840, the North Island (Te Ika a Māui) had a much larger Māori population than the South Island (Te Wai Pounamu). The warmer climate made it much more suitable than the southern two-thirds of the South Island for growing traditional crops. In the latter area agriculture was limited, and the Māori had to adopt a seminomadic, subsistence strategy. The land east of the Southern Alps and south of the Kaikoura Peninsula south to Foveaux Strait was much less heavily forested than the western part of the South Island and also of the North Island, making travel easier. Frequent journeys gave the Māori of the South Island an intimate knowledge of its geography, reflected in the quality of geographical information and maps they provided for Europeans.[4]

The information on Māori mapping collected and dis-

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1. Janet Davidson, *The Prehistory of New Zealand* (Auckland: Longman Paul, 1984), 1–29, and Geoffrey Irwin, *The Prehistoric Exploration and Colonisation of the Pacific* (Cambridge: Cambridge University Press, 1992), 105–10.

Aotearoa is the Māori name for New Zealand; some Māori placenames have been provided in this chapter in parentheses following the modern place-names. See also Malcolm McKinnon, ed., *New Zealand Historical Atlas, Ko Papatuanuku e Takoto Nei* (Albany, Auckland, N.Z.: Bateman, 1997). For the meanings of place-names, see A. W. Reed, *Place Names of New Zealand* (Wellington: A. H. and A. W. Reed, 1975).

2. For example, navigational skills had to be adapted for coastal and land exploration. For more on Oceanic navigation, see chapter 13.

3. Davidson, *Prehistory of New Zealand,* 195 (note 1). The highly valued *pounamu* was the best rock for making cutting tools before European contact, but it was hazardous to obtain and difficult to work.

4. At least one nineteenth-century observer found the Māori to be inveterate travelers; see J. S. Polack, *Manners and Customs of the New Zealanders, with Notes Corroborative of Their Habits, Usages, Etc.,* 2 vols. (1840; reprinted Christchurch: Capper Press, 1976), 2:147.

TABLE 14.1 Māori Words with Possible Cartographic Connotations

	Dictionary			
	Kendall, 1815	Kendall, 1820	Williams, 1844	Williams, 1852
Wenua	(n) land, country	(n) land, country	(n) the earth, soil	
Whenua				(n) land, country
Hua			(n) division of land	(n) division of land
Tuhituhi			(vt) to write	(vt) to write
Tuhi				
Hoa, Hoahoa				
Huahua				
Mahere				

Abbreviations: n, noun; vi, verb intransitive; vt, verb transitive.

Sources: Thomas Kendall, *A Korao no New Zealand; or, The New Zealander's First Book, Being an Attempt to Compose Some Lessons for the Instructions of the Natives* (Sydney, 1815; reprinted Auckland, Auckland Institute and Museum, 1957); Thomas Kendall, *A Grammar and Vocabulary of the Language of New Zealand,* ed. Samuel Lee (London: Church Missionary Society, 1820); William Williams, *A Dictionary of the New-Zealand Language, and a Concise Grammar to Which Are Added a Selection of Colloquial Sentences* (Paihia, 1844); 2d ed. (London: Williams and Norgate, 1852); 3d ed. (London:

cussed here has never before been described in a synthesis. This chapter began as a paper I presented and published in 1978 and then revised, expanded, and published again in 1980.[5] Before that, one could find only short descriptions and illustrations of some of the best-known maps in books and articles on other topics. For example, Johannes Carl Andersen's *Jubilee History of South Canterbury* (1916) illustrates and briefly discusses part of the Māori map of the South Island made for Edmund Storr Halswell in 1841 and some of the map segments (as a composite map) Te Ware Korari made for Walter Baldock Durrant Mantell in 1848.[6] About 1940, work commenced on the *Historical Atlas of New Zealand* as part of the commemoration of European settlement in the country from 1840 to 1940, but that atlas was never completed or published. A specially and accurately redrawn version of Tuki's map and the two versions of the map made for Halswell were prepared for the atlas.[7] Robert Roy Douglas Milligan made an extensive study of Tuki's map in 1964.[8] Milligan died before his book was complete, and although there are problems with the published account, it is nevertheless a landmark in the study of

5. The original 1978 paper was Phillip Lionel Barton, "Maori Geographical Knowledge and Maps of New Zealand," in *Papers from the 45th Conference [New Zealand Library Association], Hamilton, 6–10 February 1978,* comp. A. P. U. Millett (Wellington: New Zealand Library Association, 1978), 181–89. The revised and expanded version was published as "Maori Geographical Knowledge and Mapping: A Synopsis," *Turnbull Library Record* 13 (1980): 5–25. Much new information has been located and incorporated in the intervening eighteen years.

6. Johannes Carl Andersen, *Jubilee History of South Canterbury* (Auckland: Whitcombe and Tombs, 1916), 38–39.

7. The maps and correspondence relating to the atlas are held by the Cartographic Collection and the Manuscripts Collection, Alexander Turnbull Library, Wellington. The version of Tuki's map redrawn for the atlas is fifty-eight by forty-three centimeters, oriented with north at the top, and prepared from the published map in David Collins, *An Account of the English Colony in New South Wales,* 2 vols., ed. Brian H. Fletcher (1798–1802; Sydney: A. H. and A. W. Reed, 1975), 1:434–35. The two versions of the map made for Halswell were prepared from the manuscript copy and the published lithographic copy (see below); sizes are sixty-one by forty-eight and sixty-two by thirty-four centimeters, respectively, and in both cases the South Island has been realigned roughly northeast-southwest to coincide with the actual alignment of the island.

Tuki's map and the lithographed version of the map of the South Island made for Halswell also appear in Peter Bromley Maling's *Early Charts of New Zealand, 1542–1851* (Wellington: A. H. and A. W. Reed, 1969), 126–29, with brief discussion, and in Maling's latest work, *Historic Charts and Maps of New Zealand: 1642–1875* (Birkenhead, Auckland: Reed Books, 1996), 128–32.

8. Robert Roy Douglas Milligan, *The Map Drawn by the Chief Tuki-Tahua in 1793,* ed. John Dunmore (Mangonui, 1964).

Dictionary				
Williams, 1871	Williams, 1892	Williams, 1915	Williams, 1917	Williams, 1957
(n) land, country	(n) land, country	(n) land, country	(n) land, country	(n) land, country
(n) section of land	(n) section of land	(n) section of land	(n) section of land, outline, leading lines of a carving leading lines of a carving	(n) section of land, outline, leading lines of a pattern in carving
(vt) write	(vt) to write	(vt) write	(vt) draw	(vt) draw, write
(vt) delineate, draw	(vt) delineate, draw, adorn with painting	(vt) delineate, draw, write, adorn with painting	(vt) delineate, draw, write, adorn with painting	(vt) delineate, draw, write, adorn with painting
			(vt) lay out, plan, arrange, (n) plan of a house	(vt) lay out, draw, (n) plan of a house
			(vt) sketch out a pattern before carving	(vt) sketch out a pattern before carving
				(vi)/(n) plan, portion, division, section**

Williams and Norgate, 1871); 4th ed. (Auckland: Upton, 1892); 4th rev. ed. (Wellington: Whitcombe and Tombs, 1915); Herbert William Williams, *A Dictionary of the Māori Language*, ed. under the auspices of the Polynesian Society, 5th ed. (Wellington: Marcus F. Marks, Government Printer, 1917); 6th rev. ed. (Wellington: R. E. Owen, Government Printer,1957).

**Note Hawaiian *Mahele* (n), portion, division, section.

Māori cartography and a valuable starting point for an exhaustive assessment of that map. In the early 1990s Anne Salmond briefly discussed Tuki's map, and in another publication she refers to the map drawn by Toiawa for James Cook.[9]

Cultural Attributes with Affinities to Mapping

Māori language concepts for map

Word lists compiled in 1815 and 1820 and seven authoritative editions of Williams's dictionaries published between 1844 and 1957 contain no record of an indigenous Māori word for map (see table 14.1). This may have been because the right questions were not asked. Also, the ability to draw a map might have been regarded as more important than the map itself, and certainly the ephemeral maps that we know were drawn left no artifacts. Indeed, there were and are Māori words for lay out, plan, arrange, outline, delineate, draw, write, section of land, and country, all with affinities to mapping. The Māori words *hoa* (lay out, plan) and *hua* (section of land, outline) seem to refer to the process of making a drawing or map, as do the words *tuhi* (delineate, draw) and *tuhituhi* (draw). The word *mahere* (plan, portion, division, section) does not appear in Williams's dictionary until the sixth edition of 1957, but it is currently used together with *whenua* to mean map. The Māori version of the English word "map" (*mapi*) does not appear until Williams's fourth edition (1892), and then only in the English-to-Māori section. The earliest recorded uses of *mapi* were in the South Island purchase deeds of 1859 and 1860.[10]

Linear measurement

The Māori did not have units of measure for recording long distances. Edward Shortland found that the sketches made by the Māori *ariki* (chief) Hone Tūhawaiki were informative, although "in cases where it was more necessary to obtain an accurate knowledge of a distance, I was

9. Anne Salmond, "Kidnapped: Tuki and Huri's Involuntary Visit to Norfolk Island in 1793," in *From Maps to Metaphors: The Pacific World of George Vancouver*, ed. Robin Fisher and Hugh Johnston (Vancouver: UBC Press, 1993), 191–226, and idem, *Two Worlds: First Meetings between Maori and Europeans, 1642–1772* (Auckland: Viking, 1991), 191–207, esp. 207.

10. Harry C. Evison, *Te Wai Pounamu, the Greenstone Island: A History of the Southern Maori during the European Colonization of New Zealand* (Christchurch: Aoraki Press, 1993), 313–14, n. 100, which also lists some additional Māori terms for "map" in the deeds of the period.

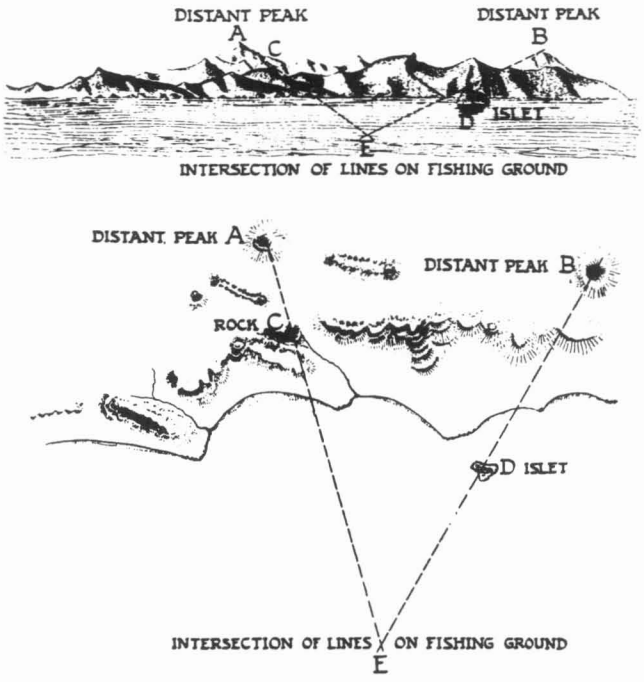

FIG. 14.1. DIAGRAM SHOWING HOW UNMARKED FISHING GROUNDS ARE LOCATED AT SEA. In the diagram, line ACE connects a prominent rock on a hilltop and a more distant hill peak, while line EDB connects a distant hill peak and an offshore island. When both sets of features are lined up, the boat is at the fishing grounds (the intersection of the two lines).
Size of the original: 12 × 11.5 cm. From Elsdon Best, *Fishing Methods and Devices of the Maori* (1929; New York: AMS Press, 1979), 5.

obliged to make him compare it with the distances of objects we could see, in order that I might reduce it to our standard. This is, in fact, the only way by which natives can describe long distances, as they have no fixed unit of measurement corresponding with a mile or league."[11] Ernst Dieffenbach reported that "distances are often reckoned by nights (po), that is, how many nights they have to encamp before reaching a place. One 'po' means rarely more than from twelve to fifteen miles; often less."[12]

Māori body-based measurements were the *mārō* (roughly 6 ft. or 1.83 m), the average measure of outstretched arms, and the *kumi*, comprising ten *mārō*.[13] These measures were adequate for constructing *pā*, *whare*, and *waka*.

GEOGRAPHICAL ORIENTATION

William Henry Skinner, in an account of a survey in the North Island north of present-day Stratford, noted a striking case of Māori sense of direction that occurred in 1874. It was related by his brother, T. K. Skinner, while engaged on the survey of the eastern boundary of the Patea-Waipuku Block, preliminary to government purchase from the Māori.

> The chief, Te Peneha Mangu, was director, or guide, as to the boundaries of the Block. The line in question was to run straight from a definite point on the Waipuku River to a sub-tribal boundary mark, a kopua, a large deep pool in a bend of the Patea River, called Kopua-tama. . . .
>
> After directing the surveyor to set up his instrument on the south bank of the Waipuku, the old tohunga recited an ancient karakia (incantation) calling on the atua [god], the spirits of the forest, to guide him aright in directing the line. This ceremony concluded, he stood by the surveyor and directed the clearing of the undergrowth in the general direction desired, and finally, after careful consideration, had a stake placed ahead of the instrument on the true line to Kopuatama. The line was duly cut and run from this origin and after going straight across 8½ miles of dense unbroken forest growth the party finally came out on the western rim, a few yards off centre, of the pool Kopuatama–a striking proof of the chief's keen sense of direction. The old Maori himself was fully assured that his success was principally due to the powers of his atua.[14]

Charles Heaphy reported that the Māori E Kehu had a remarkable sense of direction.

> [E Kehu] appears to have an instinctive sense, beyond our comprehension, which enables him to find his way through the forest when neither sun nor distant object is visible, amidst gullies, brakes, and ravines in confused disorder, still onward he goes, following the same bearing, or diverging from it but so much as is necessary for the avoidance of impediments, until at length he points out to you the notch in some tree or the foot-print in the moss, which assures you that he has fallen upon a track.[15]

11. Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851; reprinted Christchurch: Capper Press, 1974), 82.

12. Ernst Dieffenbach, *Travels in New Zealand: With Contributions to the Geography, Geology, Botany and Natural History of That Country*, 2 vols. (London: John Murray, 1843; reprinted Christchurch: Capper Press, 1974), 2:121.

13. Elsdon Best, "The Maori System of Measurement," *New Zealand Journal of Science and Technology* 1 (1918): 26–32.

14. William Henry Skinner, "The Old-Time Maori," N.Z. *Surveyor: The Journal of the New Zealand Institute of Surveyors* 18, no. 2 (1942): 6–9, esp. 8–9. Reference to a modern map shows the distance to be closer to 6.5 miles (10.46 km) than the 8.5 miles (13.67 km) quoted.

15. Charles Heaphy, "Account of an Exploring Expedition to the South-west of Nelson," in *Early Travellers in New Zealand*, ed. Nancy M. Taylor (Oxford: Clarendon Press, 1959), 188–203, esp. 192, by permission of Oxford University Press. Thomas Brunner, William Fox, Charles Heaphy, and E Kehu formed the party that explored the

Accurate locating of fishing grounds at sea was essential, since these were sometimes a considerable distance from the land. Great care had to be taken not to trespass on the traditional fishing grounds of other *hapū* (section of *iwi*, subtribe). Best described the method used to locate a fishing ground (see fig. 14.1):

> All fishing grounds, banks, and rocks had special names assigned to them. . . . Inasmuch as many fishing-grounds had no rock or part of their surface above water, it behoved the Maori fisherman to be careful in locating the *tohu*, or signs (landmarks), by means of which he located such grounds. He did so by lining [aligning] prominent objects on shore, such as hill-peaks, capes, prominent rocks, trees, &c. The *taunga ika*, or fishing ground, on the East Coast [of the North Island] known as Kapuarangi was named after a prominent hill that served as one of the lining-in objects. This ground was located by observing four hills, two in one direction and two in another; when the two series were in line, then the ground was reached.[16]

This account of locating by the intersection of alignments is not unique.[17] There is no evidence, however, that Māori used alignment or intersection when making maps.

East Polynesians probably brought with them to New Zealand the concept of a sun-wind compass, although it is not known whether this was incorporated in artifacts made for instructional purposes.[18] In the eighteenth and nineteenth centuries, Europeans certainly found the concept among the Pacific Island navigators. Unfortunately, however, accounts are few, are probably Eurocentric, and omit critical details that might have made it possible to reach reliable conclusions. In particular, they do not distinguish between sun, star, and wind referents or indicate how allowances were made for seasonal variations in them. One of the earliest accounts was reasonably explicit in stating that Tahitians had "no mariner's compass," presumably meaning they had no equivalent of the European navigator's magnetic compass. "[They] divide the horizon into sixteen parts, taking for the cardinal points those at which the sun rises and sets. . . . When setting out from port the helmsman reckons with the horizon thus partitioned counting from E, or the point where the sun rises."[19] The sixteen points were each named, and about half have been shown to be "the names of winds, according to the direction they blow from, and their force."[20] With reference to this late eighteenth-century account, Lewis concluded that "the link between sun and wind compass is obvious."[21] Best illustrates a Ngāti Porou wind compass with a north-south orientation, probably a result of European acculturation (fig. 14.2).

East had religious significance for the Māori for centuries after first settlement, a custom probably derived from Polynesia. Archaeological excavations at Wairau

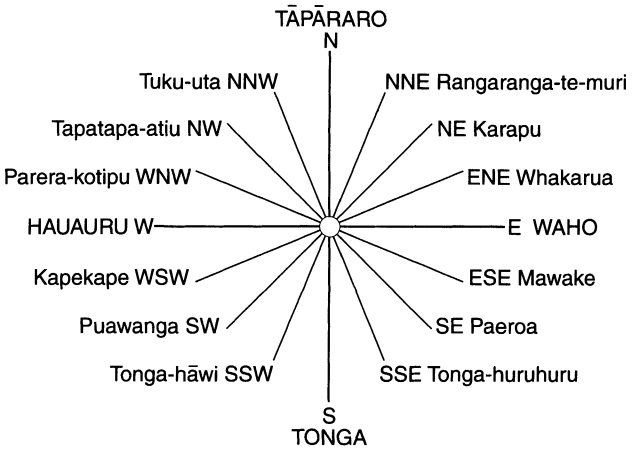

FIG. 14.2. NAMES OF THE COMPASS POINTS. These are the names given by Mohi Turei of the Ngāti Porou people of the east coast of the North Island. Best states that the Māori had specific names for the four cardinal directions (*raki*, north; *rāwhiti*, east; *tonga*, south; *uru*, west), which do not completely agree with Mohi Turei's names. Other names for the directions from which winds blow differ depending on the *iwi* and area.
Size of the original: 7 × 12 cm. After Elsdon Best, *The Astronomical Knowledge of the Maori* (Wellington: Government Printer, 1922; reprinted 1978), 38.

Bar, South Island, have revealed burials in which bodies, most likely males of rank, were laid roughly east-west, and similarly aligned burials were reported in the Society Islands, eastern Polynesia.[22] Māori believe that after death the *wairua* (spirit) descends into Rarohēnga (the Underworld), in the Great Ocean of Kiwa in the West.[23] But

area covering Lakes Rotoiti and Rotoroa and the upper Buller (Kawatiri) River between 2 February and 1 March, 1846.

16. Elsdon Best, *Fishing Methods and Devices of the Maori* (1929; New York: AMS Press, 1979), 4.

17. Skinner, "Old-Time Maori," 8 (note 14); Tamati Rihara Poata, *The Maori as a Fisherman and His Methods* (Opotiki: W. B. Scott and Sons, 1919; reprinted Papakura: Southern Reprints, ca. 1992), 9.

18. See chapter 13.

19. Bolton Glanvill Corney, ed. and trans., *The Quest and Occupation of Tahiti by Emissaries of Spain during the Years 1772–1776*, 3 vols., Hakluyt Society Publications, ser. 2, nos. 32, 36, 43 (London: Hakluyt Society, 1913–18), 2:284–85, from the journal of Spaniard Don José Andía y Varela.

20. Corney, *Quest and Occupation of Tahiti*, 2:285 n. 1.

21. David Lewis, *We, the Navigators: The Ancient Art of Landfinding in the Pacific*, 2d ed., ed. Derek Oulton (Honolulu: University of Hawai'i Press, 1994), 115.

22. Heads were to the east, facing toward the setting sun; Roger Duff, *The Moa-Hunter Period of Maori Culture*, 3d ed. (Wellington: Government Printer, 1977), 58–59. In the same work, Michael Malthus Trotter carbon dates the excavations to A.D. 1015 ± 110 to 1360 ± 60 years (see the chapter "Moa-Hunter Research since 1956," 348–78, esp. 354). On the Society Island burials, see Kenneth Pike Emory and Yosihiko H. Sinoto, "Eastern Polynesian Burials at Maupiti," *Journal of the Polynesian Society* 73 (1964): 143–60.

23. Elsdon Best, *The Maori as He Was: A Brief Account of Maori Life*

there is no evidence that this favoring of an east-west axis had any relevance to the structure of Māori maps.

TOPONYMS

There was no written Māori language or orthography before 1820.[24] Hence information was communicated orally and depended on high-capacity memories aided by mnemonics. The landscape was one important mnemonic. Toward the end of the nineteenth century James West Stack, a missionary in the South Island, wrote: "Every part of the country was owned and named. Not only were the large mountains, rivers, and plains named, but every hillock, streamlet, and valley. These names frequently contained allusions to persons or events, and thus served to perpetuate the memory of them and to preserve the history of the past. Every Maori was required to know by what title the land claimed by his tribe was held, whether by right of original occupation, conquest, purchase, or gift."[25] Toponyms were abundant in areas important to the Māori; in other areas their density was less. Many were aligned along linear features: rivers, coasts, ridge crests, and routes. For example, a plan of land purchased from the Māori in 1860 included as the southern boundary a 7.5 kilometer stretch of the forested Ihuraua River northeast of what is now Masterton. Somewhat surprisingly, this remote stretch contained thirty-eight toponyms (fig. 14.3), and they did not include tributary streams. They may have designated family food-gathering places as distinct from conspicuous or critical topographic features.

Māori place-names also commemorate historical or mythical events. Indeed, a recently published guide to the understanding of Māori toponyms calls them the

> survey pegs of memory, marking the events that happened in a particular place, recording some aspect or feature of the traditions and history of a tribe. If the name was remembered it could release whole parcels of history to a tribal narrator and those listening. The daily use of such place names meant that the history was always present, always available. In this sense living and travelling reinforced the histories of the people.[26]

The use of toponyms without maps often confused Europeans, in part because sets of names sometimes recurred in two or more regions. Sometimes place-names associated with a tribe's history and tradition were of such significance that when a "tribe migrated elsewhere it 'replanted' its history in its new home by naming its new landscape with the names of the place of origin."[27]

The use of Māori toponyms in the absence of maps sometimes led to serious misunderstanding when Europeans purchased land before land surveys. In 1839 William Hirst bought from the Ngai Tahu a block of land on the east coast of the South Island north of what is now Dunedin. He thought he had acquired a block of twenty thousand acres but had failed to understand the Māori toponyms that had been used to define the limits. Hone Tūhawaiki, the paramount *ariki*, knew exactly what land had been sold, and after a hearing in 1843 the land commissioners awarded Hirst less than 2 percent of what he thought he had purchased.[28]

There are a few accounts where Māori have used sequences of toponyms for features and locations to be passed through in the course of journeys. As a boy, Tama Mokau te Rangihaeata of D'Urville Island heard elders recount the journeys of perhaps three hundred kilometers or more down the northwest coast of the South Island. "Feature name after feature name would be mentioned during the recital and so vividly were they described that Mokau himself was able to identify many localities and recall their names when he made his first visit to the land of greenstone as a young man."[29] In 1846 Charles Heaphy and Thomas Brunner traveled along essentially the same coast as Tama Mokau te Rangihaeata. They were accompanied by the Māori E Kehu (known as Hone Mokehakeha or Hone Mokekehu), who had supplied them in advance with a sequence of toponyms of places and features to be seen en route. When he was a boy and a young man, E Kehu had traveled extensively as a prisoner within Nelson Province, particularly on the west coast and in the watersheds of the Buller (Kawatiri) and Grey (Mawhera) Rivers, and he had thus acquired an extensive knowledge of the land.[30] "[E Kehu's] description of the country the party would be required to traverse as

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as It Was in Pre-European Days (1924; Wellington: Government Printer, 1974), 37, 44–45. Tuki's map (below, fig. 14.6) depicts the path of the spirits.

24. Herbert William Williams, *A Dictionary of the Maori Language*, 7th ed. (Wellington: Government Printer, 1971), XXIII.

25. James West Stack, *South Island Maoris: A Sketch of Their History and Legendary Lore* (1898; reprinted Christchurch: Capper Press, 1984), 12. John White, another nineteenth-century Māori scholar, similarly wrote that "there is not one inch of land in the New Zealand Islands which is not claimed by the Maoris . . . not one hill or valley, stream, river, or forest, which has not a name–the index of some point in Maori history"; quoted in W. T. Locke Travers, *The Stirring Times of Te Rauparaha (Chief of the Ngatitoa)* (Christchurch: Whitcombe and Tombs, 1906), 16.

26. Te Aue Davis, Tipene O'Regan, and John Wilson, *Ngā Tohu Pūmahara: The Survey Pegs of the Past* (Wellington: New Zealand Geographic Board, 1990), 5.

27. Davis, O'Regan, and Wilson, *Ngā Tohu Pūmahara*, 5.

28. National Archives of New Zealand, Wellington, Old Land Claims, file 232; K. C. McDonald, *History of North Otago* (Oamaru, 1940), 18–19; and H. Beattie, *Maori Place-Names of Otago* (Dunedin, 1944), 17–18.

29. G. G. M. Mitchell, *Maori Place Names in Buller County* (Wellington: A. H. and A. W. Reed, 1948), 18.

30. Hilary Mitchell and John Mitchell, "Kehu (Hone Mokehakeha):

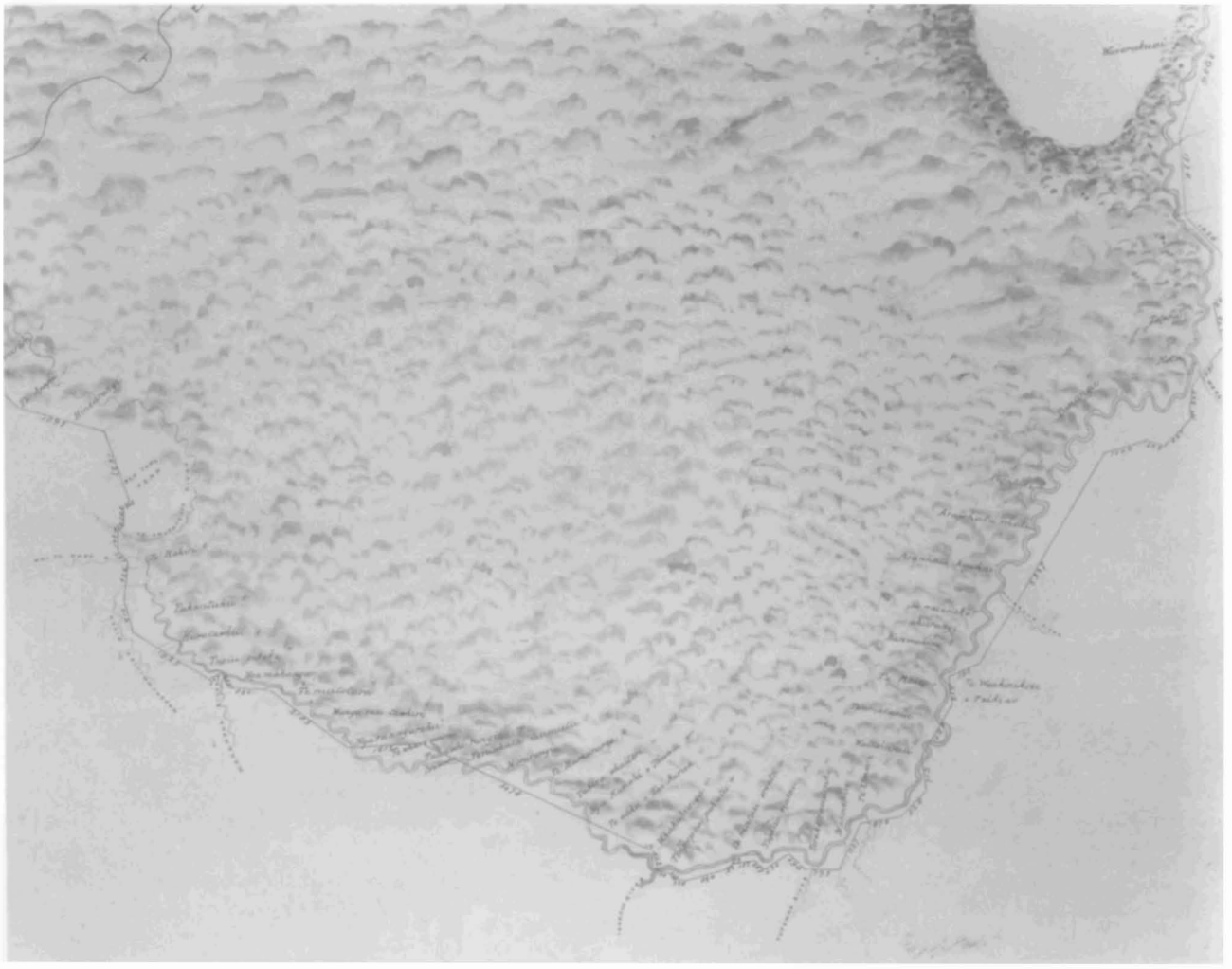

FIG. 14.3. SOUTHERN SECTION OF THE PLAN OF THE IHURAUA BLOCK, 1860? This section shows place-names along the Ihuraua River, which formed the southern boundary of the block. North is at the top of the map. The plan is manuscript, ink on paper with watercolors, linen backed, 1:31,680. Size of the entire original: 90 × 68 cm; size of this section: 30 × 42 cm. Photograph courtesy of the National Archives Head Office, Wellington (AAFV 997, W24).

recited to the two explorers before they set out on their journey, amazed them as they progressed southward and recognized mountains, hills, rivers, streams, headlands and other natural features from Ekehu's prior description."[31] Toponyms were apparently associated with each trail. Presumably they could also be memorized for intersecting trails. In the South Island, especially in the northern part, there were a number of major and many minor intersecting trails.[32] Especially in the northern part of the island they constituted a fairly dense network with many intersections. In the North Island there were numerous major and subsidiary trails because of the density of the population in the numerous *kāinga* and *pā*. A Māori memorizing toponyms for part of this network would have the basic structure from which to draw a map.[33] Yet only one extant Māori map is structured along a linear sequence of toponyms–that of the Waitaki River drawn by Te Ware Korari for Walter Baldock Durrant Mantell in 1848 (see below, figs. 14.28–14.32).

Many Māori place-names have been lost through the deaths of elders and *tohunga* who had memorized this knowledge and did not pass it on. Many toponyms do appear on current large-scale topographic maps of New Zealand, although in some cases those on printed maps

Biographical Notes," *Nelson Historical Society Journal,* 1996, 3–19, esp. 5–6.

31. Mitchell, *Maori Place Names,* 20 (note 29).

32. See the end maps in Barry Brailsford, *Greenstone Trails: The Maori Search for Pounamu* (Wellington: A. H. and A. W. Reed, 1984), and 2d ed., titled *Greenstone Trails: The Maori and Pounamu* (Hamilton: Stoneprint Press, 1996).

33. The map of part of the South Island reported to have been made by two Rangitāne in 1850 (see below, p. 503) could well have been structured in this way.

are incorrectly recorded or applied to the wrong topographic feature. There are many toponyms recorded on manuscript maps, manuscripts, and other unpublished sources that do not appear on any printed maps. Considerable information on toponyms is still held by Māori *iwi*.

European Accounts of Māori Maps and Mapping

Several references in European sources mention the drawing of maps for European explorers, officials, and surveyors–although none of these maps still exist in any form. The earliest such record involves James Cook and the *Endeavour,* which was anchored at Mercury Bay from 4 to 15 November 1769. Te Horeta te Taniwha was a boy of about twelve when he saw a map being drawn on the deck of the ship.[34] In 1852, when he was about ninety-five, he was interviewed by Charles Heaphy, a surveyor, concerning the episode.

> His [James Cook's] officers made charts of the islands about, and to the entrance of Witianga [Whitianga]; and our [Māori] men, at his [Cook's] desire, drew on the deck with charcoal a chart of all the coast: we drew the Thames, and Cape Colville, and Otea [Aotea; Great Barrier Island], and on to the North Cape. Captain Cook copied this on paper; and asked us the names of all the places, and wrote them down, and we told him of the spirits flying from the North Cape, from the cavern of Reinga to the other world.[35]

John White, a nineteenth-century Māori scholar, recorded two accounts from Te Horeta te Taniwha. The dates of White's reports are not known, but they must have been within a few years of Heaphy's because of Te Horeta te Taniwha's age.

> We had not been long on board of the ship before this lord of these goblins [James Cook] made a speech, and took some charcoal and made marks on the deck of the ship, and pointed to the shore and looked at our warriors. One of the aged men [probably Toiawa] said to our people, "He is asking for an outline of this land"; and that old man stood up, took the charcoal, and marked the outline of Ika-a-maui (the North Island of New Zealand). And the old chief spoke to that chief goblin, and explained the chart he had drawn. . . . After some time the chief goblin took out some white stuff [paper], on which he made a copy of what the old chief had made on the deck, and then spoke to the old chief. The old chief explained the situation of the Reinga (lower region, world of spirits) at the North Cape; but, as the goblin chief did not appear to understand, the old chief laid down on the deck as if dead, and then pointed to the Reinga as drawn by him in the plan. But the goblin chief turned and spoke to his companions, and, after they had talked for some time, they all looked at the map which the old chief had drawn on the deck; but the goblins did not appear to understand anything about the world of spirits spoken of by the old chief, so they scattered about the deck of the ship.[36]

The aged man thought to have drawn the map and been mentioned in this first account by White was Toiawa, a Māori *ariki*. He visited the *Endeavour* on 5 November 1769 and several other times.[37] White's second version of Te Horeta te Taniwha's account gives us more information concerning the geographical area covered by the map:

> Some of the great men of that ship made sketches of the land on shore, and also of the islands in the sea of [off] Whitianga, and the great chief [James Cook] commanded our old chiefs to make a drawing of Ao-tea (New Zealand) [here John White has confused the name of Aotearoa (New Zealand) with Aotea (Great Barrier Island)] with charcoal on the deck of the ship. So those old chiefs, as asked, made a sketch on the deck of the vessel with charcoal. This included Hau-raki (Thames), Moe-hau (Cape Colville), and the whole of the Island of Ao-tea (North Island of New Zealand) [Great Barrier Island was meant], and taking in Muri-whenua (North Cape); and the great chief copied this into his book. He asked the names of all the places drawn by them, even to Reinga (North Cape, the exit of spirits).[38]

Even though Cook asked for a map of New Zealand,

34. For more on Te Horeta te Taniwha (later the Ngāti Whanaunga *ariki*), see Angela Ballara, "Te Horeta, ?–1853," in *The People of Many Peaks: The Maori Biographies from "The Dictionary of New Zealand Biography, Volume 1, 1769–1869"* (Wellington: Bridget Williams Books, 1991), 173–75.

35. Charles Heaphy, "Sketches of the Past Generation of Maoris," *Chapman's New Zealand Monthly Magazine: Literary, Scientific and Miscellaneous* 1 (August 1862): 4–7, quotation on 6.

36. John White, *The Ancient History of the Maori, His Mythology and Traditions,* 6 vols. (Wellington: Government Printer, 1887–90), 5:124–25.

37. "One old man whose name was *Torava* [Toiawa] came on board; he seemed to be the cheif [*sic*] both today and yesterday," Joseph Banks, *The Endeavour Journal of Joseph Banks, 1768–1771,* ed. J. C. Beaglehole, 2 vols. (Sydney: Trustees of the Public Library of New South Wales in association with Angus and Robertson, 1962), 1:427. See also John Hawkesworth, *An Account of the Voyages Undertaken by Order of His Present Majesty for Making Discoveries in the Southern Hemisphere,* 3 vols. (London: Printed for W. Strahan and T. Cadell, 1773), 2:332–33, and Salmond, *Two Worlds,* 191–207, esp. 207 (note 9). Other Māori also visited the ship. In communications between Europeans and Māori there was a language barrier, but the Tahitian Tupaia, who was on board the *Endeavour,* would have been of some assistance because the Tahitian and Māori dialects were derived from a proto-Polynesian language. Tupaia had spent three months on the *Endeavour* before it arrived in New Zealand. He had very likely learned some English and the ship's officers some Tahitian, and thus he was able to act in a limited way as an interpreter.

38. White, *Ancient History,* 5:129 (note 36).

the Māori drew a map of the northern part of the North Island, the area he knew well. It is clear from Heaphy's account and White's second account that the map drawn in charcoal was of the Coromandel Peninsula, Great Barrier Island, the Hauraki Gulf (including the Firth of Thames), and the eastern coast of the Auckland Peninsula as far as Cape Rēinga (see fig. 14.4). White's first account says that the map covered the whole of the North Island, and this confusion could have arisen from Te Horeta te Taniwha's great age and possible memory loss or from White's misunderstanding.[39]

All three accounts state that Cook made a copy of the map (which does not appear to have survived), but Cook does not record the incident in his journal.[40] All three accounts also mention Rēinga (Te Rēinga, Cape Rēinga). In White's account, when Cook did not appear to understand, the *ariki* himself became part of the map by pretending death and pointing to the place (Te Rēinga) where the *wairua* (spirit) went en route to the Underworld. The importance of this location is further illustrated below in the map made by Tuki (fig. 14.6), which shows the path the *wairua* follow through the North Island to Cape Rēinga after death.

This was the first contact that the Māori of the area had with Europeans, and it seems very unlikely that they had seen any charts on the *Endeavour.* If they did, they probably did not know their use. Yet when Cook spoke and made marks with charcoal on the deck, they knew that he required an outline of the land and supplied it. The drawing of the map, the understanding of what Cook wanted, and the alacrity in supplying the information are convincing evidence that Māori were familiar with drawing maps and had been doing so before the visit of the *Endeavour.*

We know of two accounts that describe maps of the entire North Island being drawn by Māori. The first is by John Liddiard Nicholas, a settler in New South Wales, Australia, who traveled to New Zealand from November 1814 to March 1815 aboard the *Active.* Most of his time was spent at or near the Bay of Islands, where he met a Māori *ariki* named Korra-korra (Korokoro?) who lived in a village near Cape Brett. On a date and at a location unknown he drew a map for Nicholas. "Yet in a rude sketch of Eaheinomauwe or the Northern Island, which Korra-korra drew for me upon paper, he described between the East Cape and Queen Charlotte's Sound, a high island on the eastern side, which at intervals vomited forth fire and smoke, and from which place I should suppose the above volcanic substances were procured."[41] The volcano referred to must have been White Island (Whakāri) in the Bay of Plenty, which was and still is the only active island volcano. Nicholas must have misunderstood the direction and location of the island–he did not visit the Bay of Plenty.

The other account of a map of the North Island comes from a conversation between Te Heuheu Tukino II, paramount *ariki* of the Ngāti Tūwharetoa *iwi,* and George Augustus Selwyn, Anglican bishop of New Zealand. A party of Europeans (including Selwyn and his chaplain William Cotton) and Māori (including Renata Kawepo Tama ki Hikurangi) were traveling from Waimate North to Wanganui.[42] On the way south the party crossed Lake Taupo (Taupō) by *waka* and stayed at Te Rapa, the principal *pā* of Te Heuheu Tukino II. On or about 5 November 1843, when the rest of the party was present, Selwyn had a brief conversation with Te Heuheu Tukino II that Cotton recorded in his journal. The *ariki* became very vocal.

> He [Te Heuheu Tukino II] is very excited on all questions connected with land, in consequence of the late disturbances at the south [near Wellington]. He said there were enough Pakehas [Europeans] in the country, that no more shd come. That Taupo his rangatiratanga (kingdom) is the toenga (the remnant) of the whole country, and that keep it he would. This he illustrated in a most graphic manner.
>
> He picked up a stick and drew a circle on the ground, about six feet over and sundry other around it. In the middle of the large circle, which he intended to represent Taupo, he set up a fern stick, to stand for Tongariro [active volcanoes], and a smaller one leaning against it for himself. I never saw such a grand figure as Te Heuheu's when bending in silence over his drawing. . . .
>
> He stood for some minutes contemplating his work, and satisfying himself that it was all right.
>
> "This" said he, "is Port Nicholson [Wellington] kua riro ki te Pakeha" it has gone away to the Pakeha. This

39. Heaphy's training as a surveyor and his twelve years' experience in New Zealand (1840–52) would have enabled him to get the basic facts from Te Horeta te Taniwha, whereas White lacked Heaphy's experience. I have examined White's original manuscript, but it is the same as the published accounts.

40. This is odd, because Cook was a meticulous recorder. In addition, the map covered an area of the coast that had not been visited or surveyed by Europeans before, and Cook would naturally have been interested in it and concerned about the safe navigation of the *Endeavour* and supplies of food and water. A careful examination of the charts and coastal views of the area drawn by Cook and his officers does not reveal any of the place-names mentioned in the description of the map: Andrew David, ed., *The Charts & Coastal Views of Captain Cook's Voyages,* vol. 1, *The Voyage of the Endeavour, 1768–1771* (London: Hakluyt Society in association with the Australian Academy of the Humanities, 1988), 205–34.

41. John Liddiard Nicholas, *Narrative of a Voyage to New Zealand,* 2 vols. (London: J. Black, 1817), 2:252. The volcanic substances were likely to be *matā* (obsidian), used for knives, and *tāhoata* (pumice), used for files. *Tāhoata* could be obtained from White Island (Whakāri) and *matā* from Mayor Island (Tūhua), both in the Bay of Plenty.

42. The group left on 4 October 1843, with one part of the party traveling to Wellington, and returned to Waimate North on 1 March 1844.

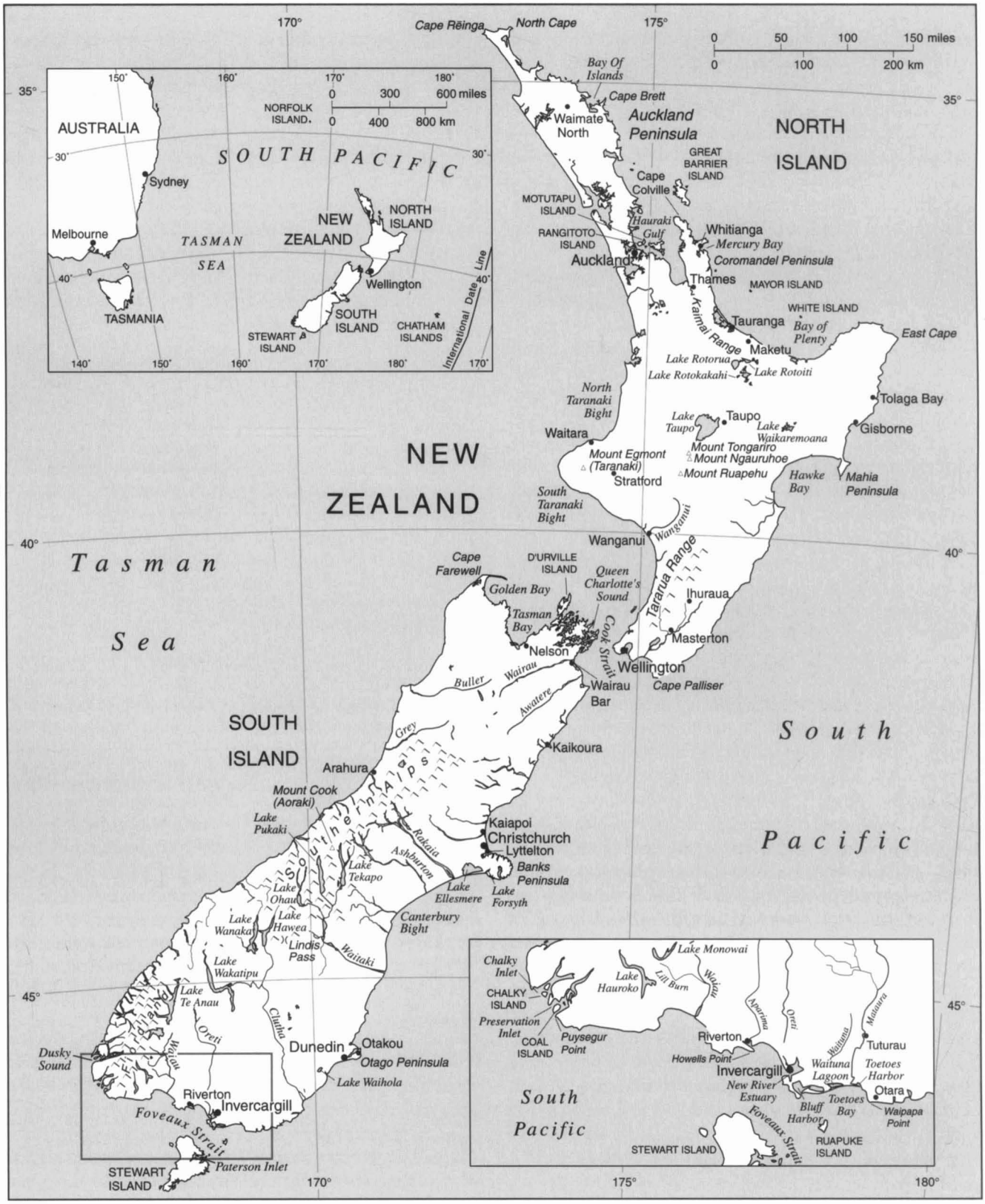

FIG. 14.4. REFERENCE MAP OF NEW ZEALAND. This map shows the locations of most of the place-names mentioned in this chapter.

> is Wanganui–kua riro ki te Pakeha. This is Auckland etc. "This is the Waimate" etc But this pointing to Taupo is mine & mine it shall remain."[43]

Te Heuheu Tukino II did not sign the Treaty of Waitangi in 1840 by which the British gained sovereignty over New Zealand, and he was very opposed to the sale of land to Europeans, as is evident from his comments concerning the map he drew. Te Heuheu Tukino II used the name Tongariro to describe all the present volcanoes in the Tongariro National Park (Mounts Tongariro, Ngauruhoe, and Ruapehu), and he likened his *mana* (influence, prestige, power) to that of three mountains by selecting a fernstick to represent Tongariro and a smaller fernstick to represent himself. He was an *ariki* of great *mana*, as is further shown in the Ngāti Tūwharetoa proverb, "Ko Tongariro te Maunga; ko Taupo te Moana; ko Te Heuheu te Tangata" (Tongariro is the mountain; Taupo is the lake; Te Heuheu is the man).

We have one account of a map of Chatham Island (Rēkohu/Rākohu or Whare Kauri) being drawn. Ernst Dieffenbach, a surgeon and naturalist for the New Zealand Company, came to New Zealand from London in 1839. As part of his duties he made a number of extensive journeys into the interior of the North Island and visited Chatham Island in May–June 1840.[44] There he met a Māori named E Mare, who drew a chart of the island. "E Mare proved, on every occasion, a very intelligent and reasonable man. He had been for some time at Sydney, and had visited nearly the whole coast of New Zealand. He drew for me a chart of the Chatham Island, which exceeds in accuracy all the previous sketches made by Europeans. He was remarkably polished in his behaviour, and took the greatest interest in all my inquiries."[45] The date, the method by which the chart was made, the material on which it was drawn, and particulars about the geographic coverage are not known. Chatham Island had been E Mare's home since 1835, so he was likely to have known the island well. Because he had traveled on sailing vessels, he may have seen and been influenced by hydrographic charts.

Dieffenbach includes a detailed map of the Chatham Islands, including Rangihaute (Rangiauria, or modern Pitt Island), in the same article that mentions E Mare's chart (fig. 14.5). However, E Mare's contribution to the published map cannot be determined, and there is reason to believe that Charles Heaphy, who was at Chatham Island at the same time, was largely responsible for that map.[46]

We have four descriptions of portions of the South Island being drawn in the mid-nineteenth century. The earliest is that of a route on the northeast of the island from Nelson to Port Cooper (modern Lyttelton). The settlers in Nelson and environs wanted to find a route through the complex mountain and river system over which stock could be driven to Port Cooper. John Tinline–clerk of the court, sheriff, Māori interpreter, and part-time surveyor–gave information to the *Nelson Examiner and New Zealand Chronicle* that was published on 6 April 1850.

> The information received by Mr. Tinline, is from two natives of the Ranghitani [Rangitāne] tribe, the original possessors of all the country at the northern end of this island [South Island]. . . . These are the only natives who appear to have any knowledge of the interior of this part of the country, or of the passes through the rugged chains of mountains which intersect it in so many directions. The two natives of whom we have spoken, were members of a party who, about twenty years ago, made a hostile incursion on the tribe then resident in the neighbourhood of Port Cooper [Ngai Tahu?], and, by a plan which they drew in chalk on the floor of the Sheriff's office, they have described circumstantially, and with apparent intimate knowledge of the country, the route which they took.[47]

The article goes on to describe the route in great detail–the terrain and rivers and streams crossed–and makes clear not only the vast extent of the Māori's geographical knowledge but also what may have been demonstrated on the map.[48] Tinline, as the Māori interpreter, would have been able to talk to the Māori and ask them questions, but we cannot know whether or how this may have influenced the map. The two Māori may have been Eopi and Ewi, who were known to have accompanied two British Indian army officers on a journey to explore the route during this same period.[49]

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43. Helen M. Hogan, ed. and trans., *Renata's Journey: Ko te Haerenga o Renata* (Christchurch: Canterbury University Press, 1994), 89–90. This account appears in William Cotton's Journal, vol. 5, which is held in the Dixson Library, State Library of New South Wales, Sydney.

44. Dieffenbach returned to England in 1841, having kept a meticulous record of his journeys; see Dieffenbach, *Travels in New Zealand* (note 12).

45. Ernst Dieffenbach, "An Account of the Chatham Islands," *Journal of the Royal Geographical Society of London* 11 (1841): 195–215, quotation on 213. E Mare (Heikai Pomare) was paramount *ariki* of the Ngāti Mutunga *hapū* of the Te Ati Awa *iwi,* which was the first Māori *iwi* to invade Chatham Island; see Michael King, *Moriori: A People Rediscovered* (Auckland: Viking, 1989), 57–58.

46. See Rhys Richards, *Whaling and Sealing at the Chatham Islands* (Canberra: Roebuck Society, 1982), 55 (first pagination).

47. Editorial, *Nelson Examiner and New Zealand Chronicle* 9, no. 422 (6 April 1850), cols. A and B.

48. The route the Māori *taua* (war party) followed about 1830 was through headwaters of the rivers named in the account (crossing at the headwaters would have been much easier than crossing the rivers near the coast, where they are much larger and swifter).

49. The officers and their companions split into two parties. Atrocious weather conditions, exposure, and dysentery caused the group Eopi and Ewi traveled with to abandon the search; the other group reached Port Cooper in late May 1850, after the incident in which the map was drawn. See W. G. McClymont, *The Exploration of New*

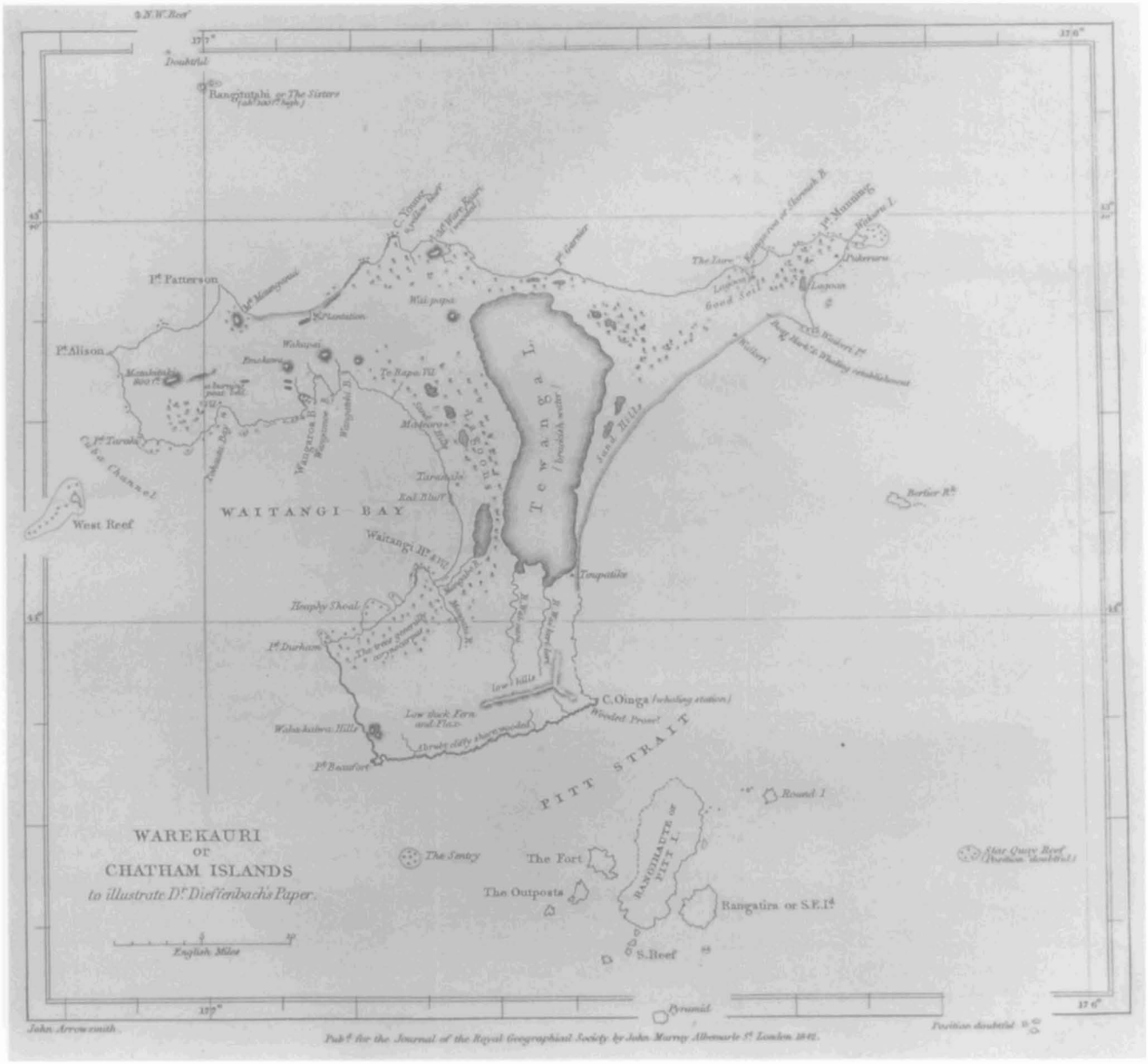


FIG. 14.5. MAP OF CHATHAM ISLANDS, 1841. We do not know what role E Mare played in preparing this map, which was published by Dieffenbach.
Size of the original: 18 × 20 cm. From Ernst Dieffenbach, "An Account of the Chatham Islands," *Journal of the Royal Geographical Society of London* 11 (1841): 195–215, map facing 196. Photograph courtesy of the Royal Geographical Society, London.

It is recorded that two maps of portions of the South Island were drawn by Reko, the Ngai Tahu *ariki* at Tuturau. Reko had detailed knowledge of the southern half of the South Island obtained through extensive travel, but apart from his exploits and geographical knowledge we know very little about him.[50] Sometime in 1856 he met John Chubbin, who was at that time a cattle farmer.[51] Chubbin records:

Zealand, 2d ed. (London: Oxford University Press, 1959), 57.

50. His extensive knowledge of the southern half of the South Island is confirmed by two accounts. Thomas Ballantyne Gillies, a government official, describes Reko as "a very intelligent, though rather unintelligible, old fellow . . . possessed of an extensive knowledge of the country, and a surprising ability of sketching out its natural features," H. Beattie, *Pioneer Recollections: Second Series, Dealing Chiefly with the Early Days of the Mataura Valley* (Gore, New Zealand: Gore Publishing, 1911), 78. John Turnbull Thomson's view of Reko is discussed on p. 505. For information on Reko as a guide and informant, see McClymont, *Exploration of New Zealand,* esp. 60, 68, and 70 (note 49), and Roger Frazer, "Chalmers, Nathanael, 1830–1910," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 76–77.

51. Beattie, *Pioneer Recollections,* 65–67. Chubbin, born on the Isle

> Soon after I arrived at the Mataura Plains I was seized with the ambition to do a bit of "sight seeing" further north amongst the unexplored parts of Otago. Reko, the Maori chief at Tuturau, was very good at describing the interior of the country, and he drew a map of the course of the Mataura for me. He drew it in the sand with a stick, the streams being represented by hollows and the mountains by little mounds of sand. He told me how to get to Wakatipu, a lake which at that time had not been reached by white men.[52]

It is interesting to note how Reko showed topographic and hydrographic features on his map–hollows (grooves) in the sand representing the Mataura River and its tributaries, and little mounds of sand representing the mountains in the upper part of the river basin (the south, Kingston Arm, of Lake Wakatipu is surrounded by mountains that reach 2,301 meters). Later that same year Chubbin, accompanied by others and using information from the map, traveled along the upper valley of the Mataura River to the Kingston Arm of Lake Wakatipu. All members of the party may have seen Reko's map, even though Chubbin's remarks suggest they had not.[53]

Reko also drew a map for John Turnbull Thomson, who, arriving in Auckland in February 1856, was almost immediately offered the position of chief surveyor, Province of Otago, South Island, and was appointed the first surveyor general of New Zealand on 1 May 1876.[54] One of his first tasks as chief surveyor was to carry out a reconnaissance survey of the southern part of the province and to select a site for the proposed town of Invercargill. On this first survey he and his assistant Roderick Macrae stayed several days at Tuturau because the Mataura River was in high flood and could not be crossed. They stayed in Reko's *whare,* and in his journal Thompson gives a lively description of their visit.[55] While they were there, Reko drew a map of the lakes and rivers in the interior of the South Island in the dust on the floor.

> With great alacrity and intelligence, he drew first a long line across the floor, which he denominated the Matau–the Molyneux of Captain Cook, and the Clutha of Captain Cargill–both great men in their own spheres. He then described an irregular circle round the floor, which he denominated the sea shore. At the head of the Matau, he drew three eel-shaped figures [a very apt description], which he called Wakatipu, Wanaka and Hawea. He now drew the Mataura issuing closely from the south end of the Wakatipu. The Oreti river he also drew as coming from near the same source. The Waiau and the Waitaki rivers he described as issuing from large lakes, to which he also gave their present names. . . .
>
> He now showed how he travelled from the Kaipoi (over the Lindis Pass), through the interior till he came to Tuturau.[56]

If Thomson made a sketch of Reko's map, it has not been found.[57] But in December 1857 the chief surveyor traveled up the Waitaki River and over Lindis Pass using the information Reko gave him,[58] and thus Reko made a substantial contribution to the mapping of the South Island.

The last literary account of maps drawn by Māori is also of a small portion of the South Island and is recorded by James McKerrow, a member of the Survey Department, Province of Otago, who made exploratory surveys of the lakes in the west of the province.[59] While making a reconnaissance survey of the area west of the Waiau River between 4 August 1862 and late April 1863, McKerrow and party obtained a pencil sketch of the two lakes to the west of the river from Soloman (probably Horomona Patu).[60]

> When at Riverton I obtained, through the introduction of Mr Daniels, a pencil sketch of the Waiau district from the Maori, Soloman. In that sketch both of these lakes are put down–the Howloko [Hauroko] from the traditions of the tribe, and the Monowai

of Man in 1826, had sought adventure in the United States (on the Mississippi riverboats and in the California goldfields) and Australia (in the goldfields). He left Australia for Auckland in 1855 and in 1856 decided to see the rest of New Zealand.

52. Beattie, *Pioneer Recollections,* 67. A similar incident was said to have occurred during Julius von Haast's exploration of Nelson Province in 1860 when "Tarapuhi, the chief at the Mawhera pah, and his brother, Tainui (Verítas), from Kaipoi [Kaiapoi], made me a sketch in the sand; showing rivers by deep furrows, and the mountains by little hillocks, which I have since found to be perfectly correct. They made it in order to show me the best way to the east coast." See Julius von Haast, *Report of a Topographical and Geological Exploration of the Western Districts of the Nelson Province, New Zealand* (Nelson: Printed by C. and J. Elliott, 1861), 129.

53. Beattie, *Pioneer Recollections,* 67 and 73.

54. John Hall-Jones, "Thomson, John Turnbull, 1821–1884," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 537–38. Thomson left England to survey in Penang (Pinang), off the West Malaysian coast, and was appointed government surveyor and engineer in Singapore, 1841–53.

55. John Hall-Jones, *Mr. Surveyor Thomson: Early Days in Otago and Southland* (Wellington: A. H. and A. W. Reed, 1971), 33–38.

56. Hall-Jones, *Surveyor Thomson,* 36. The references to the alternative names for the Matau come from James Cook's *Endeavour* sailing master, Robert Molyneux, and from William Cargill, resident agent of the New Zealand Company. The Otago Association preferred the name Clutha, which is the Gaelic for Clyde.

57. John Hall-Jones, personal communications, 20 September 1973 and 6 March 1993. Hall-Jones is Thomson's great-grandson.

58. Hall-Jones, *Surveyor Thomson,* 71–74.

59. McKerrow was Scottish and came to New Zealand in 1859. He became surveyor general of New Zealand in 1879. See "McKerrow, James (1834–1919)," in *A Dictionary of New Zealand Biography,* 2 vols., ed. Guy Hardy Scholefield (Wellington: Department of Internal Affairs, 1940), 2:30.

60. Atholl Anderson (Prehistory Department, Research School of Pacific and Asian Studies, Australian National University, Canberra), personal communication, 20 April 1994.

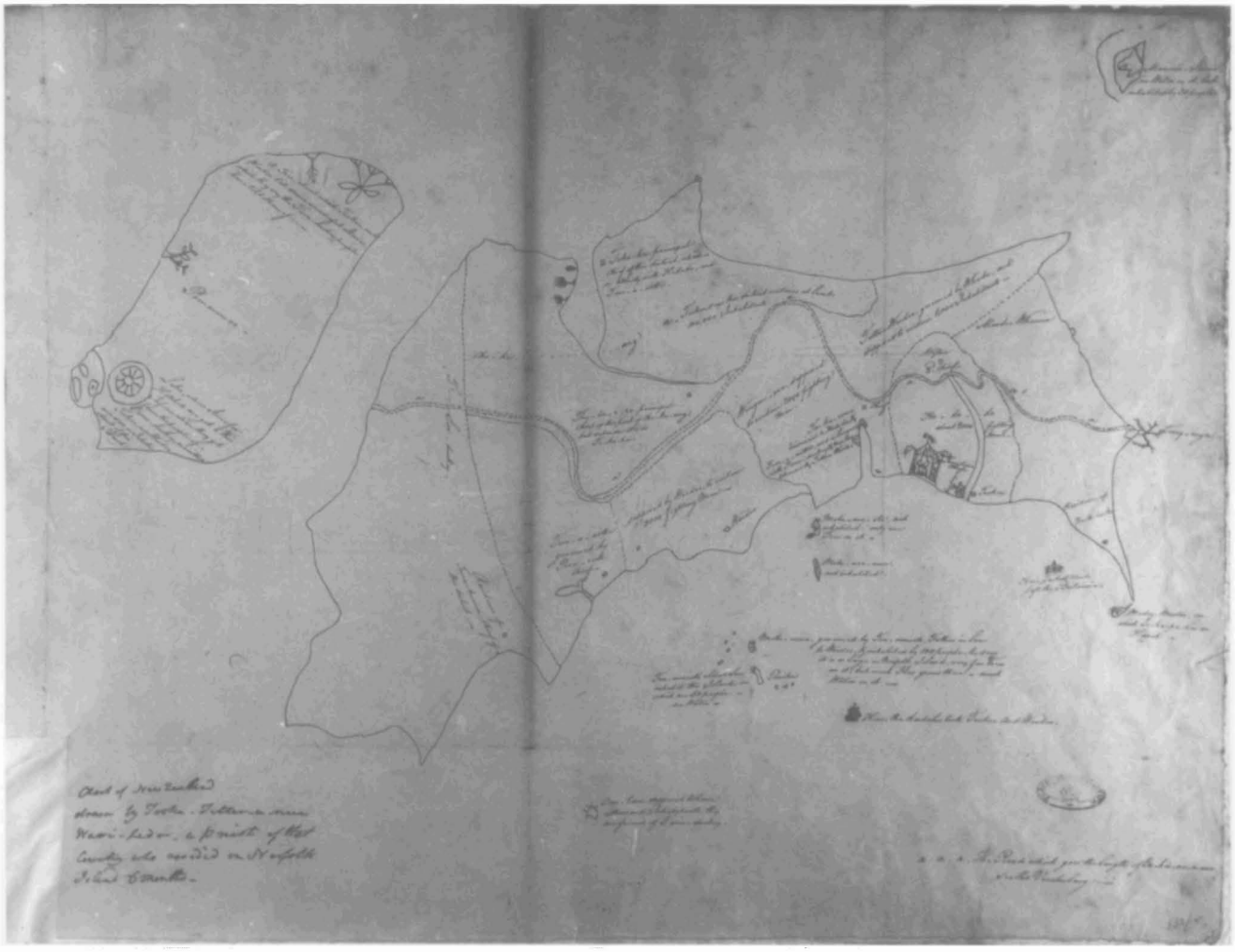


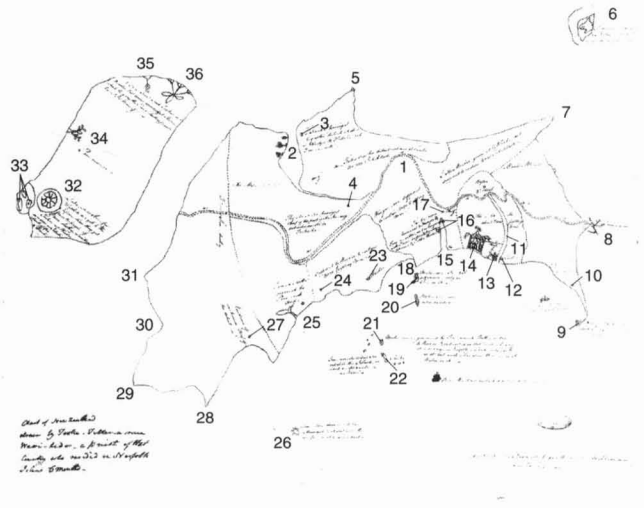
FIG. 14.6. MAP OF NEW ZEALAND DRAWN BY TUKI, 1793. The inscription in the lower left reads: "Chart of New Zealand drawn by Tooke-Titter-a-nui Wari-pedo–a priest of that country who resided on Norfolk Island–6 months." West is roughly at the top of the map. The map is manuscript, black ink on paper, the scale is indeterminable. See also figures 14.7 and 14.8.
Size of the original: 41 × 53 cm. Royal copyright, by permission of the Public Record Office, London (MPG 532/5).

> from actual knowledge. Soloman stated, in his own way, that although neither he nor any of his people had seen the Howloko, yet he fully believed that it was somewhere behind the head of the Lillburn, and that its outlet was to the West Coast [the outlet is the Wairaurahiri River, which is west of the Waiau River and flows into the sea on the south coast of the South Island]; both of which surmises are correct, as was also the general outline of the sketch.[61]

McKerrow was twenty-nine when this account was published. Many years later, when he was seventy-one, another account was published by James Cowan, Māori scholar and journalist, that differed in some respects. In the Cowan account McKerrow says Soloman learned of the two lakes from an old woman, and that Soloman had seen neither. The names of the lakes were discussed, but the drawing of a map was not mentioned.[62] The inconsistencies between the two accounts could stem from the

61. James McKerrow, "Reconnaissance Survey of the Lake District. . . . Report to J. T. Thomson, Chief Surveyor, Otago," *Otago Witness,* no. 597 (9 May 1863): 7, cols. B–D.

62. After meeting Soloman in September 1862, Cowan writes that he (McKerrow) "learned from him that there were two lakes in the bush west of the river [Waiau]. He said that he had never seen them, but an old woman in his *kaika* had seen them when a girl, and that their names were–as I made out from his pronunciation–'Howloko' and 'Monowai.' 'Howloko' has since been corrected to 'Hauroto.' And 'Manokiwai,' which you [Cowan] state is the name by which the lake is known to the Middle [South] Island Natives to-day, may probably be the name that Solomon gave me, although I was unable at the time to come nearer to it than the hybrid 'Monowai,' meaning 'one water.' That designation, as it happens, is not inapt, as the lake is mainly fed by one river." James Cowan, "Maori Place-Names: With Special Reference to the Great Lakes and Mountains of the South Island," *Transactions and Proceedings of the New Zealand Institute* 38 (1905): 113–20, esp. 118n.



1. Double-dotted line represents Te Ara Whānui, mythical pathway of the *wairua* of Māori dead. It ends at Terry-inga (see 8 below).
2. Large inlet Cho-ke-ang-a (Hokianga River); tree-like symbols probably represent large kauri trees that grew there.
3. Small square represents *pā* or *kāinga*, probably of *ariki* Toko-ha.
4. Small square on upper reaches of Hokianga River represents *pā* or *kāinga*, probably of *ariki* Thy-ta-r-ra.
5. Milligan suggests Tauroa Point.
6. Manoui-tavai (Manawatawhi), largest of the Three Kings Islands.
7. Milligan implies Cape Maria van Diemen and Cape Rēinga (which are close together); Salmond suggests Tauroa Point.
8. Terry-inga (Te Rēinga; Cape Rēinga; end of Te Ara Whānui); where traditional sacred tree grew on which the *wairua* descended to Rarohēnga.
9. Modey-Mootoo (Murimotu—a small island) where there was a fortified *kāinga* or *pā* shown as small square.
10. Milligan suggests small square is *kāinga* or *pā* of Ko-te-ko-ka (Te Kaka), *ariki* of Te Aupouri *iwi*.
11. Oruru River inlet, which flows into Doubtless Bay; may also represent river and bay combined.
12. Small square labeled Tookee (Tuki) could be Tuki's *pā* or *kāinga*.
13. Symbol may represent carved whare or *pā* or *kāinga* of Moodeewye (Muriwai), an *ariki*.
14. Elaborate symbol may represent carved whare or *pā* or *kāinga* of Tewy tewi (Te Wai te Wai), an *ariki*.
15. Whangaroa Harbor.
16. Milligan suggests both symbols may represent carved whare.
17. *Pā* or *kāinga*; may have been the place of Tu-ka-rowa (Tukarawa), an *ariki*.
18. Milligan suggests Mahinapua—but it is more likely Hororoa Point near Mahinapua.
19. Motu-aca-ete (Motuakaiti); no people were living on the island, although there is a symbol that may represent a former *pā*.
20. Motu-aca-nue (Motuakanui), now called Flat Island.
21. Motu-cowa (Motukawanui), one of the Cavalli Islands. The *ariki* was Tea-worock, who was related to Huru.
22. Panike (Panāki); Tea-worock's eldest son lived there.
23. *Pā* or *kāinga* of Woodoo (Huru). Salmond says Huru's abode was in a district in the south of the Bay of Islands, but Tuki has placed it some distance from the bay and in the opposite direction.
24. Probably *pā* or *kāinga*.
25. Bay of Islands (Tokerau). Symbol near the bay may represent *kāinga* or *pā* "governed by Pova-reck, Chief."
26. Oou-tore (Hauturu; modern Little Barrier Island); Milligan suggests Oturu, but that is currently a settlement south of Rangaunu Harbor.
27. Probably *pā* or *kāinga* of Toma-hownu, "chief of this district."
28. Milligan suggests East Cape.
29. Milligan suggests Cape Palliser.
30. Milligan suggests South Taranaki Bight.
31. Milligan suggests Cape Egmont.
32. "Lake where Stone for Hatchets are got"—probably Lake Wakatipu where there is *pounamu* of a whitish variety called *īnanga* (Tuki and Huru had heard of this rock, although they had no contact with the people of the South Island).
33. Three symbols situated at approximately Fiordland but appear more like lakes than fiords, as Milligan points out.
34. Two tree-like objects near "Poonammao" probably represent the two rivers where *pounamu* is found—the Taramakau and Arahura.
35. Tree-like object may represent Whanganui Inlet.
36. Symbol probably represents Marlborough Sounds, a complex series of waterways, bays, and peninsulas.

FIG. 14.7. FEATURES AND SYMBOLS ON TUKI'S MAP (FIG. 14.6). This map identifies many of the sites on Tuki's map. The information is derived from Robert Roy Douglas Milligan, *The Map Drawn by the Chief Tuki-Tahua in 1793,* ed. John Dunmore (Mangonui, 1964), and Anne Salmond, "Kidnapped: Tuki and Huri's Involuntary Visit to Norfolk Island in 1793," in *From Maps to Metaphors: The Pacific World of George Vancouver,* ed. Robin Fisher and Hugh Johnston (Vancouver: UBC Press, 1993), 191–226.

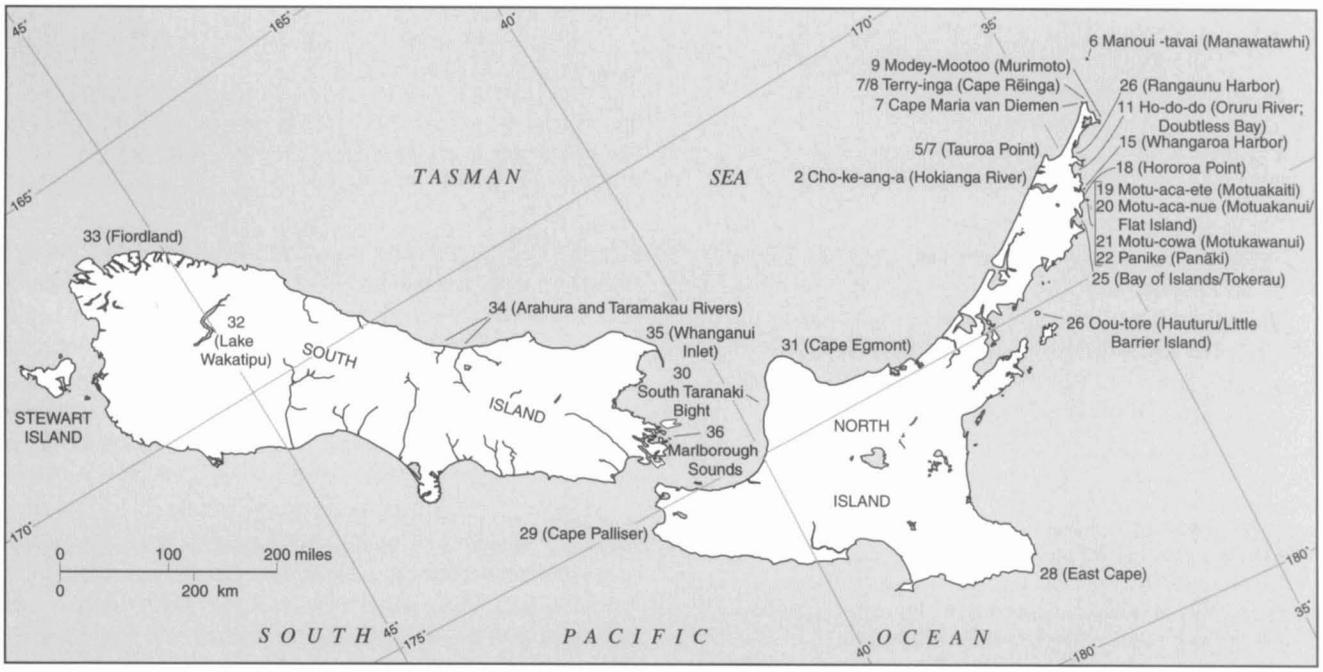


FIG. 14.8. MODERN MAP SHOWING LOCATIONS FROM TUKI'S MAP (FIG. 14.6). Northwest is at the top. Names not in parentheses appear on Tuki's map. The numbers refer to the features and symbols explained in figure 14.7, and as in figure 14.7, the information is based on Milligan and Salmond.

length of time between them, McKerrow's lack of fluency in the Māori language, or Soloman's memory loss. The two lakes are some distance from Riverton and are situated in the eastern part of Fiordland. Considerable archaeological evidence has been found in the fiords indicating that South Island Māori visited in family groups, and they probably explored areas inland from the fiords also, so it is not surprising that one of the women in Soloman's *kaika* (village; South Island version of *kāinga*) had seen the lake(s) when young.

Extant Māori Maps and Derivatives of Māori Maps

Several extant manuscript and printed maps were made by Māori or derived from Māori originals, and they are listed in appendix 14.1. The oldest, possibly the most studied, and the only example that covers all of both the North and South Islands is a map drawn by Tuki. Tuki and Huru, two young Māori men, were kidnapped in 1793 off the Cavalli Islands. They were taken via Port Jackson (Sydney) to Norfolk Island (an extremely isolated island north of New Zealand), arriving about 30 April 1793. At Norfolk Island they were supposed to teach convicts how to dress flax, but neither of them knew very much about it because in their communities women performed this task. The lieutenant governor of Norfolk Island, Philip Gidley King, was kindly disposed toward the two, who were miserable in captivity and feared for the safety of their families. They lodged at King's home, where he showed great interest in their language and culture.[63] At one point King's failure to comprehend caused Tuki to draw a map of New Zealand.

> When they began to understand each other, Too-gee [Tuki] was not only very inquisitive respecting England, etc. (the situation of which, as well as that of New Zealand, Norfolk Island, and Port Jackson, he well knew how to find by means of a coloured general chart);[64] but was also very communicative respecting his own country. Perceiving he was not thoroughly understood, he delineated a sketch of New Zealand with chalk on the floor of a room set apart for that purpose. From a comparison which Governor King made with Captain Cook's plan of those islands, a sufficient similitude to the form of the northern island was discoverable to render this attempt an object of curiosity; and Too-gee was persuaded to describe his delineation on paper. This being done with a pencil, corrections and additions were occasionally made by him, in the course of different conversations; and the names of districts and other remarks were written from his information during the six months he remained there.[65]

Since one can detect faint traces of pencil on the outline of New Zealand traced over with black ink, it is likely that the map illustrated here (fig. 14.6) is the one Tuki drew.[66] The title of the map describes Tuki as a priest: Tuki was the son of a *tohunga,* one meaning of which is priest.

Tuki's home area was the far north of the North Auckland Peninsula, and this occupies a disproportionally large part of his delineation of the North Island. Tuki had heard of the South Island only from others, and it was drawn very small; Stewart Island (Rakiura) is not shown.

Studies of Tuki's map have been made by Milligan and Salmond.[67] Salmond notes that among Māori maps Tuki's is "unique in that it includes social, mythical, and political information written at his dictation. In effect, Tuki's chart is a socio-political description of upper North Island, with some brief comments (and inaccurate coastlines) for southern New Zealand."[68] Tuki and Huru learned some English and King learned some Māori, so they were able to communicate in a limited way. However, their lack of fluency was bound to lead to mistakes, misunderstandings, and errors in spelling names, and the consequences have hindered a detailed and accurate interpretation of Tuki's map. Figure 14.7 is a synthesis of the essentials of Milligan's and Salmond's interpretations of Tuki's map.[69] Figure 14.8 shows the location of many of these places on a modern map.

Tuki's map contains references to the number of inhabitants in some of the *iwi.* In some cases it states the number of fighting men in a particular *iwi* and tells who

63. See Salmond, "Kidnapped" (note 9), which provides a detailed account of the entire episode. Tuki, son of a *tohunga,* was possibly Tuki te Terenui Whare Pirau, and Huru, a young *ariki,* was possibly Huru Kototi Toha Mahue (207 and 208).

64. This chart may have been Henry Roberts, *A General Chart Exhibiting the Discoveries Made by Captn. James Cook in This and His Two Preceding Voyages; with the Tracks of the Ships under His Command* (London, 1784), world map about 1:45,000,000 (Cartographic Collection, Alexander Turnbull Library); colored copies of the first edition are known. If Tuki had seen Roberts's chart he would have seen a reasonable outline of New Zealand.

65. Collins, *English Colony in New South Wales,* 1:431 (note 7). Collins was the judge advocate of New South Wales and probably based his account on conversations he had with King.

66. The map is on thick paper and is number 5 bound into a folder with four other items that relate to Norfolk Island. It was not possible to examine the map for watermarks.

67. Milligan, *Chief Tuki-Tahua* (note 8), and Salmond, "Kidnapped" (note 9). Milligan died before his study and interpretation could be completed, and his manuscript, edited for publication by Dunmore, is prolix, at times speculative, with at least one serious error and no final conclusion. Salmond's study was part of a wider survey of the events that led to the kidnapping of Tuki and Huru.

68. Salmond, "Kidnapped," 216.

69. Commenting on Milligan's study, Salmond notes that although he attempted to identify all the chiefs Tuki mentioned, a more detailed study of northern tribal histories would be necessary to evaluate his claims ("Kidnapped," 218). More intense study of the *iwi* histories might also reveal more positive information on the *pā* and *kāinga* locations, their names, and their boundaries in northern North Island.

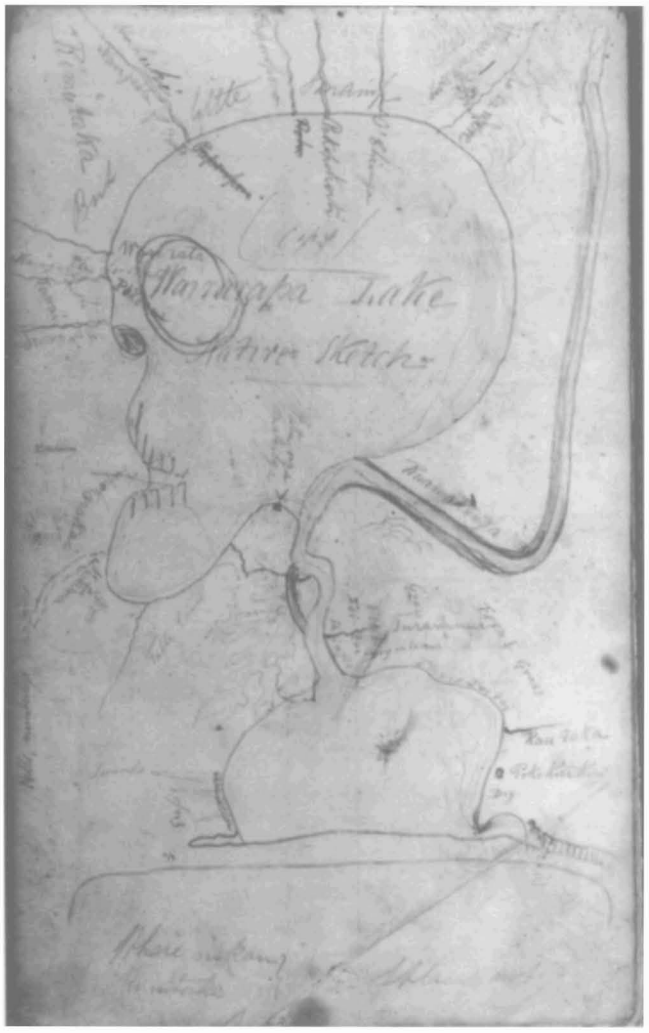


FIG. 14.9. COPY BY HENRY STOKES TIFFEN OF A NATIVE SKETCH OF LAKES WAIRARAPA AND ONOKE, 1843. This map is found in Tiffen's field book; manuscript, pencil on paper, with northeast at the top.
Size of the original: 20 × 12 cm. Henry Stokes Tiffen, Field Book 28, Wainuiomata Level Books A, B, C, D, E, F, p. 3. Photograph courtesy of the Wellington Regional Office, Land Information New Zealand.

the *iwi* was friendly or unfriendly with. Also shown is the approximate position where Tuki and Huru were kidnapped and where they left the ship on their return on 13 November 1793. The double dotted line running across the North Island ends at Cape Rēinga and represents the path the *wairua* follow on their way to the Underworld.[70]

We have examples of four other maps of the North Island (and one related example of Chatham Island). All four depict only a small portion of the island–two focus on lakes, and two relate to the warfare between Te Kooti Arikirangi te Turuki and the New Zealand government along with other Māori *iwi* during the second half of the nineteenth century.

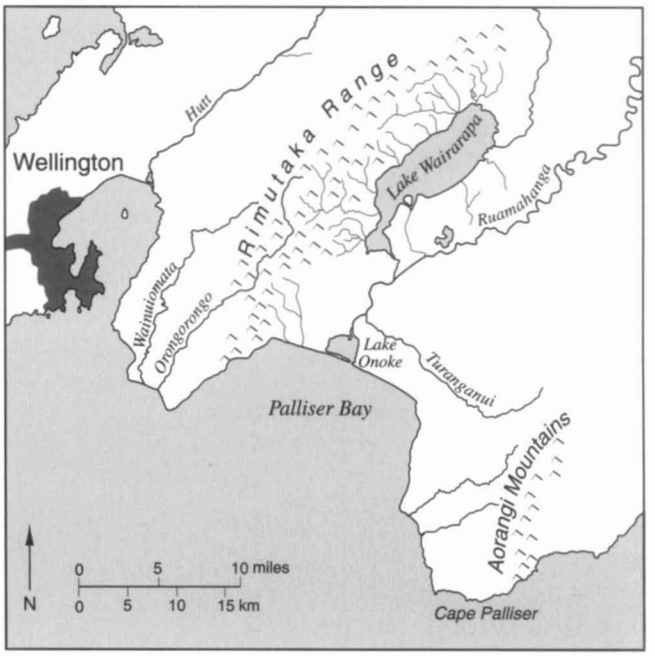


FIG. 14.10. REFERENCE MAP OF LAKE WAIRARAPA AND LAKE ONOKE AREA. Compare figure 14.9.

A map of Lakes Wairarapa and Onoke and the Ruamahanga River appears in the field book of Henry Stokes Tiffen, an assistant surveyor for the New Zealand Company who was engaged in surveying in the Lake Wairarapa area in November–December 1843.[71] An unknown Māori drew the map, and Tiffen made a copy of it (figs. 14.9 and 14.10). The map gives the distinct appearance of a human skull, but the double oval lines, eye socket, and teeth were added by some joker after the copy was made. Lake Wairarapa, with several streams feeding into it, is almost round but has an extension lower left; the Ruamahanga River is a wide channel flowing into the lake (it drains the eastern flanks of the Tararua Range and is fed by several rivers); a wide channel connects Lakes Wairarapa and Onoke; and the channel draining Lake Onoke into Palliser Bay is at the lower right. The present site of this latter channel is to the west of where the chan-

70. See above, p. 497. There is an apparent copy of Tuki's map in the Public Record Office, London (MPG 298). The linework and written information are in black ink on thick paper. The information was written by a different person and is easier to read than the original. This copy has no title, and a careful comparison with the original reveals only two additions and one different name spelling. The additions are, first, at number 10 on fig. 14.7, "Te-ka-pa is now dead/now governed by Ko-to-ko-ko," and second, at number 25 on fig. 14.7 an additional circle symbol with a smaller one inside it. The spelling alteration is at number 27 on fig. 14.7 where "Tama-hownu" appears (rather than Toma-hownu).

71. Ian McGibbon, "Tiffen, Henry Stokes, 1816–1896," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 539–40.

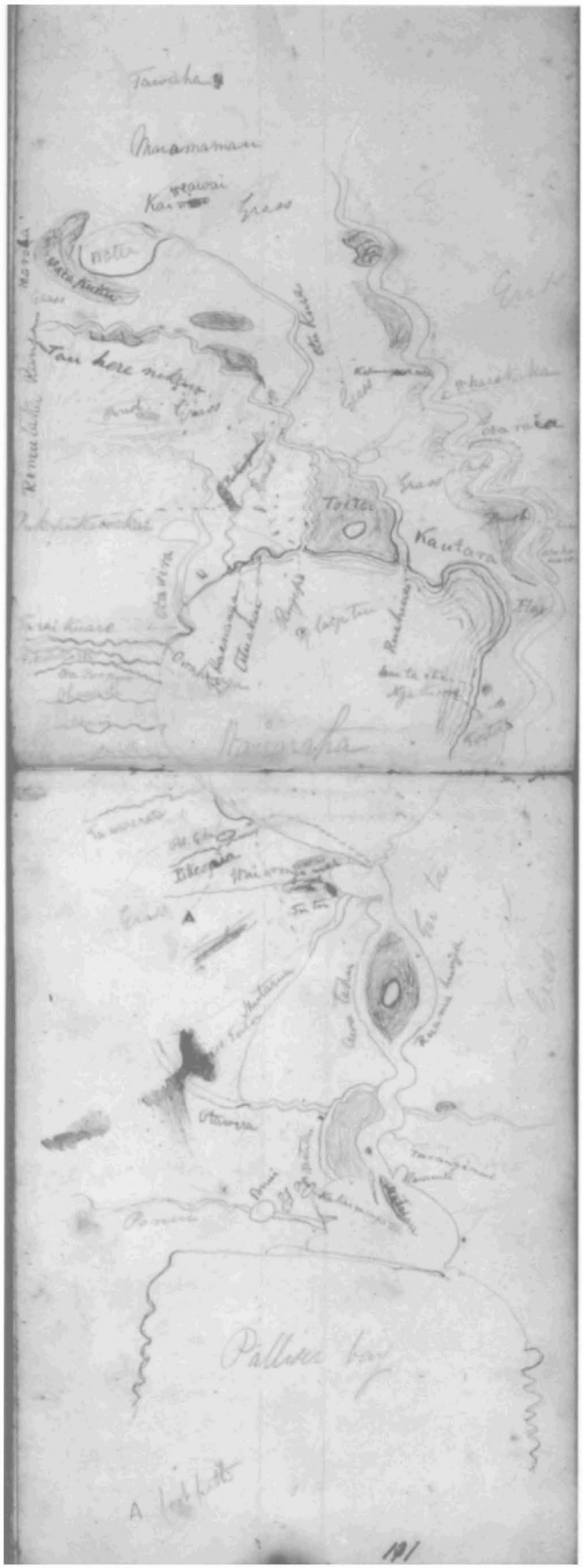


FIG. 14.11. SKETCH MAP OF RUAMAHANGA RIVER, LAKES WAIRARAPA AND ONOKE, AND ENVIRONS, 1843. This manuscript map, pencil on paper, was drawn by Tiffen covering the same geographic region and in the same field book as figure 14.9. North is at the top of the map. Size of the original: 40 × 12 cm. Henry Stokes Tiffen, Field Book 28, Wainuiomata Level Books A, B, C, D, E, F, pp. 110–11. Photograph courtesy of the Wellington Regional Office, Land Information New Zealand.

nel is shown on figure 14.9–the 1855 earthquake may have caused its relocation. Water would have flowed very rapidly into the sea, and this drainage is represented by the short lines drawn at right angles to the channel. Both lakes were important sources of *tuna* (eels), waterfowl, and other food for the Māori of the Ngāti Kahungunu *iwi* who lived in the area.[72] Place-names and other topographic details were added by Tiffen.

On completing the survey Tiffen drew a map of the same region (fig. 14.11), which appears on pages 110–11 of his field book. It shows the lakes, river, considerable topographic detail, and place-names. It is interesting to compare the two maps–one drawn before the survey and titled "Native Sketch" and the other drawn by Tiffen after the survey. The maps were made within weeks of each other.

A third map in the same field book is titled "Native Sketch of Chathams" (fig. 14.12). It was made, as far as can be ascertained, during the period of the Lake Wairarapa survey and was drawn by a Māori who had probably lived on Chatham Island or spent considerable time on and around the island as a crew member of a whaling or trading vessel. The mapmaker had a detailed knowledge of the coast, the interior of the island, and its general shape (fig. 14.13). Richards, who has made an extensive study of the geography and history of the island, comments that "the map is surprisingly accurate for the north coast and decidedly truncated for the south coast."[73] The size of the field book (12 × 20 cm) influenced the shape of the map, which is "squashed" to fit the page. The information on the map was written by Tiffen.

Another portion of the North Island is shown on a map of Lake Rotokakahi drawn by an unknown Māori. Ferdinand von Hochstetter, engaged in an extensive geological survey of the area south of Auckland, visited the Rotorua area and Lake Rotokakahi (also called Green Lake) in May 1859.[74]

72. If the outlet of Lake Onoke to the sea could be kept closed for the greater part of the year, the catches of *tuna* would increase, and the lakes themselves would contain more water and cover a greater area. The lakes today are much smaller owing to the uplift resulting from the 1855 earthquake and reclamation of land from the lakes for farming.

73. Rhys Richards, personal communication, August 1993.

74. Charles Alexander Fleming, "Hochstetter, Christian Gottlieb Fer-

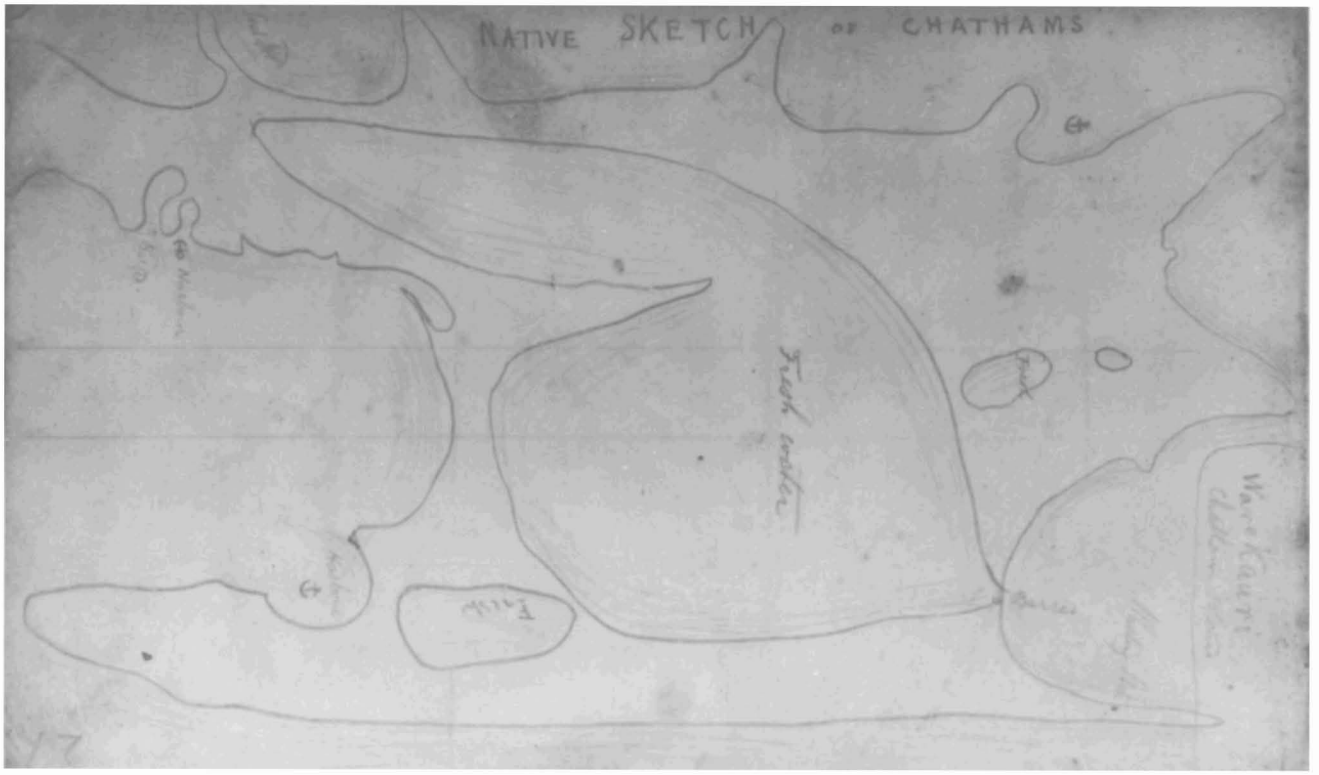


FIG. 14.12. "NATIVE SKETCH OF CHATHAMS," 1843. From Tiffen's field book; north is at the top. The large freshwater (brackish) lake is Te Whanga Lagoon, the two freshwater lakes to the right are Rangitai and Pateriki, and the lake to the lower left is Lake Huro. In the upper left "Seal Isd" refers to two reefs near Cape Pattisson. The anchor at the upper right is Kaingaroa Harbor. The word "Barred" at the lower right refers to the Hikurangi Channel, which is the outlet to the sea for the lagoon. The "Whaling Statn," also lower right, was at Owenga, and the "Harbour" and anchor lower left is at Waitangi Bay. The "Harbour" and anchor upper left is Port Hutt (Whangaroa Harbor), and "Barred" may refer to a reef near the entrance to Waipurua Bay or to reported reefs lying southwest of Point Somes.
Size of the original: 12 × 20 cm. Henry Stokes Tiffen, Field Book 28, Wainuiomata Level Books A, B, C, D, E, F, p. 21. Photograph courtesy of the Wellington Regional Office, Land Information New Zealand.

> From the natives, who received us with a most cordial welcome, I inquired the names of the most noteworthy points on the lake. Their zeal to serve me was so great, that, as a whole crowd were speaking at the same time, there was no possible chance to understand any thing at all, until one of them hit upon the excellent plan of tracing with his knife, after his own fashion, the outlines of the lake upon the sand, and thus to fix the various points of it. Although these outlines did hardly correspond with the real shape of the lake, such as it resulted from my own subsequent observations; yet the primitive sketch at the hands of a man, who had perhaps never in all his life seen a map,

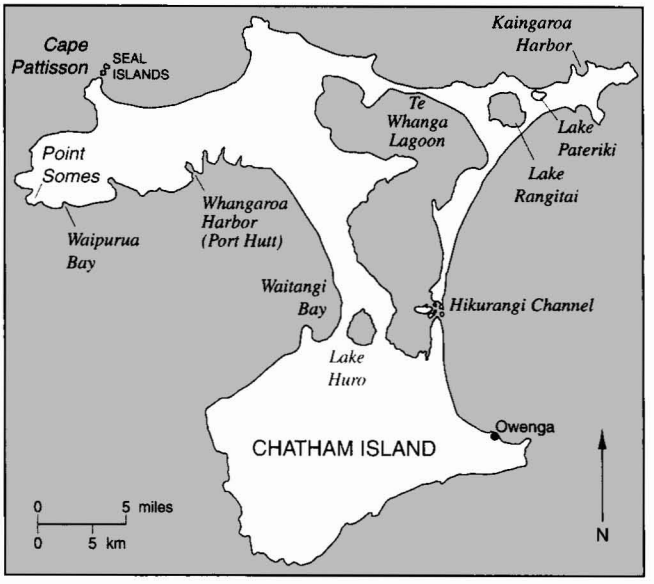


FIG. 14.13. REFERENCE MAP OF CHATHAM ISLAND. Compare figure 14.12.

dinand von, 1829–1884," in *The Dictionary of New Zealand Biography*, vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 199–200. Born in Württemberg, Germany, von Hochstetter studied theology and mineralogy, served in the Austrian geological survey, and was appointed geologist to the scientific expedition of an Austrian naval frigate circumnavigating the world when he arrived in Auckland in December 1858.

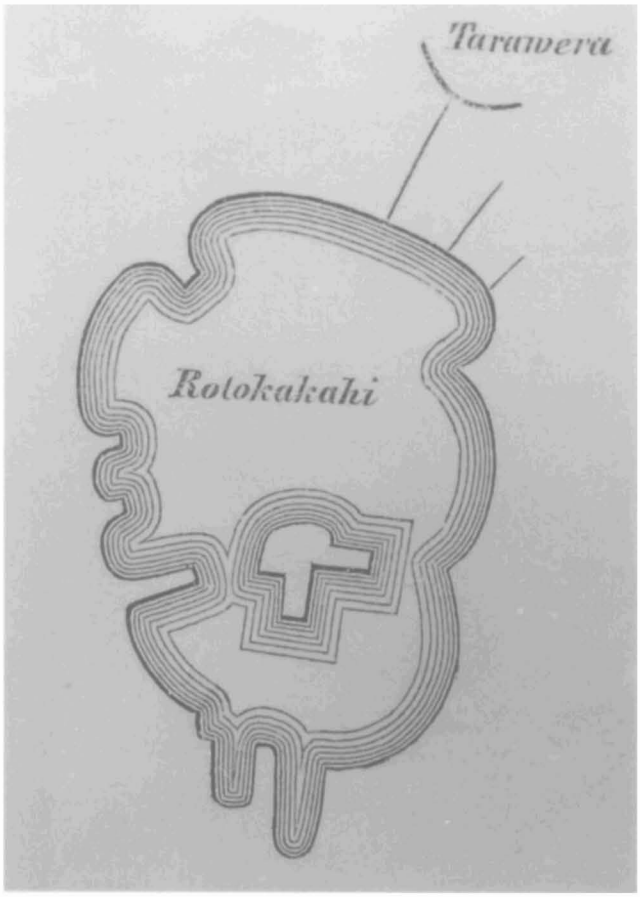


FIG. 14.14. MĀORI SKETCH OF LAKE ROTOKAKAHI, 1859. The map is oriented approximately to the northeast. Lake Rotokakahi is shown much wider and shorter than it is, and the two arms at the bottom are much narrower than the actual arms of the lake. The island shown, Motutawa, is considerably enlarged, but Punaruku Island, which should be in the left arm of the lake, is not shown.
Size of the original: 6 × 3 cm. From the English translation of Ferdinand von Hochstetter's 1863 work *New Zealand, Its Physical Geography, Geology and Natural History with Special Reference to the Results of Government Expeditions in the Provinces of Auckland and Nelson,* trans. Edward Sauter (Stuttgart: J. G. Cotta, 1867), 404. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

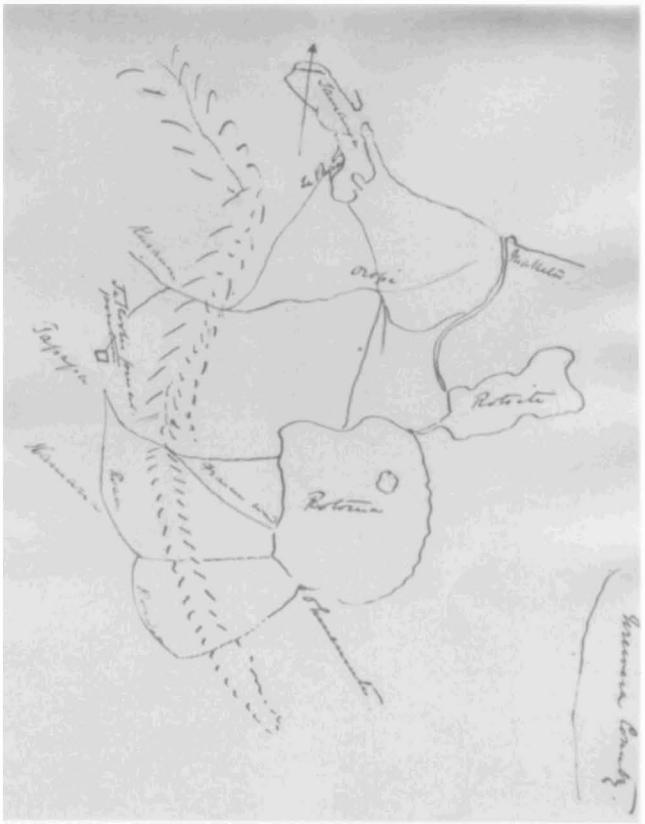


FIG. 14.15. MAP DRAWN BY UNKNOWN TE ARAWA MĀORI, 1870. The map is an attachment to a letter dated 25 January 1870, from Henry T. Clarke, Civil Commissioner, Tauranga, to Donald McLean, Native Minister. Manuscript, black ink on paper; the place-names are written by Clarke. North is at the top. The map shows the Bay of Plenty coastline, Tauranga Harbor and Maketu, Lakes Rotorua and Rotoiti, the Kaimai range, and Mamaku Plateau. The trails across the ranges are shown, as is Te Kooti's position on or about 25 January 1870.
Size of the original: ca. 23 × 19 cm. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (MS papers 0032–0217, Donald McLean, private correspondence with H. T. Clarke [1], 1861–70).

> appeared to me noteworthy enough to copy and present it here.[75]

Von Hochstetter published a version of the map in 1863 (fig. 14.14).

The last two maps of portions of the North Island relate to Te Kooti Arikirangi te Turuki–Rongowhākata leader, military leader, prophet, and founder of the Ringatū Church. He was involved in guerrilla warfare with New Zealand government forces and Māori *iwi* from July 1868 to May 1872. The area of operations was roughly from Lake Taupo north to Tauranga and east to Tūranganui (Gisborne).[76] On 7–8 February 1870, Te Kooti and *taua* (hostile expedition, war party) passed from the western Bay of Plenty via Rotorua to the Urewera country around Lake Waikaremoana. They were pursued by government forces and Te Arawa Māori, but they escaped. Figure 14.15, drawn by an unknown Te Arawa

75. Ferdinand von Hochstetter, *Neu-Seeland* (Stuttgart: Cotta, 1863), 265; English edition, *New Zealand, Its Physical Geography, Geology and Natural History with Special Reference to the Results of Government Expeditions in the Provinces of Auckland and Nelson,* trans. Edward Sauter (Stuttgart: J. G. Cotta, 1867), 404.

76. Judith Binney, "Te Kooti Arikirangi te Turuku, ?–1893," in *The People of Many Peaks: The Maori Biographies from "The Dictionary of New Zealand Biography, Volume 1, 1769–1869"* (Wellington: Bridget Williams Books, 1991), 194–201.

Māori, shows the possible trails that the *taua* could use on their way to the Urewera.[77]

In late July 1870, Te Kooti and *taua* made an unsuccessful attack against the Te Aitanga a Hauiti people at Uawa (Tolaga Bay). On 31 July 1870, during their retreat to the Urewera, the members of the *taua* were ambushed at their camp at Waihapu by government forces including Ngāti Porou, but they escaped to the Urewera. Figure 14.16, showing the area of the ambush, appeared in a report of Ruka te Aratapu, leader of a Ngāti Porou expedition searching for Te Kooti.[78]

The corpus of Māori maps for the South Island is more substantial. There are several maps of small portions of the island and one of the entire island, including Stewart Island. The latter was drawn by unknown Māori for Edmund Storr Halswell and was described in a letter of 11 November 1841 from Halswell to the secretary of the New Zealand Company in London. "I have, at this time, some natives from the South with me, who are at work upon a map of the entire Middle [South] and Southern [Stewart] Islands, giving a minute description of every bay and harbour round the entire coasts, with their native names, which generally convey a correct idea of the headlands, soil, &c."[79] The original or a copy of the map was sent to London on the *Balley,* which left Wellington on 28 November 1841.[80] Henry Samuel Chapman, editor of the *New Zealand Journal,* reports receipt of the map, which was presented to the New Zealand Company, but it cannot now be located.

Either the original or a copy of the map would have been retained in New Zealand–it was usual to make copies of maps sent to the New Zealand Company in London. In 1894 a lithograph of the map was published with the annual report of the Department of Lands and Survey (fig. 14.17).[81] It is thought that two almost identical manuscript copies were made about 1900–1910 by draftsmen of the Department of Lands and Survey from either the original manuscript map or a copy of it. One was presented to the Alexander Turnbull Library in 1931 (fig. 14.18). The other remained in private ownership, and its current whereabouts are unknown.

The map is essentially a mariners' chart recording mainly coastal information relevant for Māori seamen sailing in *waka* or whaling boats, with very little information inland. It shows two deeply indented harbors and a number of less indented ones.[82] The map has two references to visits by the *Endeavour,* recalling the long memory of an event that occurred seventy-one years earlier.[83] On Ruapuke Island is marked "'Bloody Jack's' Place." Bloody Jack was a nickname given by sealers to the paramount *ariki* of Ngai Tahu in southern South Island, Hone Tūhawaiki.

Hone Tūhawaiki is known to have drawn several maps of portions of the South Island and Stewart Island. He traveled extensively in the South Island and visited Port Jackson (Sydney) twice. He had frequent contact with European sealers, whalers, and traders and could speak English.[84] In these contexts he may have seen hydrographic charts or maps.

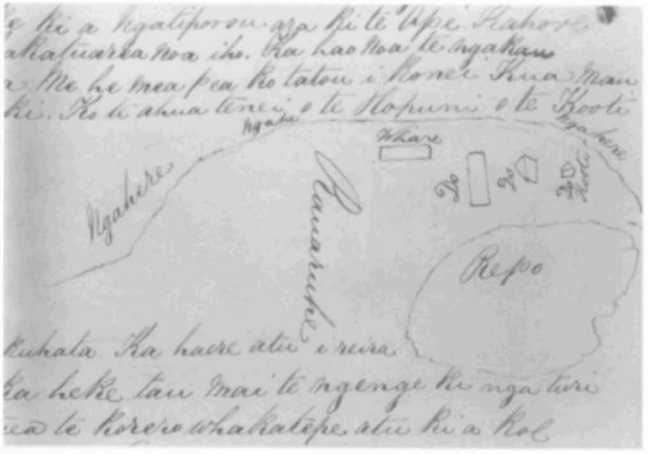


FIG. 14.16. LOCATION OF TE KOOTI AND *TAUA* AMBUSH ON 31 JULY 1870. Map shows the area of the camp at Waihapu where the ambush by government forces, including Māori, took place (the orientation of the map is indeterminable). Also depicted are forest (*ngahere*), fern (*rauaruhe*), swamp (*repo*), and four *whare,* including the one Te Kooti had occupied. Waihapu is about thirty-two kilometers west of Uawa (Tolaga Bay). The map appears on page 2 of a four-page report of the action by Ruka te Aratapu dated 30 August 1870. Ruka te Aratapu was of Ngāti Porou *iwi,* and the report was written at Tūranganui (Gisborne).
Size of the original: ca. 6 × 13 cm. Photograph courtesy of the National Archives Head Office, Wellington (AD1, 1870/3334).

Tūhawaiki's maps were published by Edward Short-

77. Judith Binney, *Redemption Songs: A Life of Te Kooti Arikirangi te Turuki* (Auckland: Auckland University Press, 1995), 205–8.

78. Binney, *Redemption Songs,* 229–34.

79. Edmund Storr Halswell, "Report of E. Halswell, Esq., on the Numbers and Condition of the Native Population," *New Zealand Journal,* 14 May 1842, 111–13, quotation on 112, col. A.

80. A letter of 4 December 1841 to Henry Samuel Chapman, probably from Thomas Mitchell Partridge, stated: "I sent you by the *Balley* a chart of the Middle Island drawn by some natives of Otago; it is of course a caricature but in many points useful"; "Letter from a Merchant of Wellington," 4 December 1841, *New Zealand Journal* 62 (28 May 1842): 125, col. A. The departure of the *Balley* was noted on p. 131 of the same issue.

81. *Appendix to the Journals of the House of Representatives of New Zealand,* C.1, 1894, facing 98.

82. Brailsford believes that anchorages (harbors) on the map are drawn large or small according to their importance; see Brailsford, *Greenstone Trails,* 144, caption to fig. 96 (note 32).

83. The reference to the *Endeavour* at Dusky Bay (Sound) is correct, but the other reference to Ohakea (Paterson Inlet) in Stewart Island is not–none of Cook's vessels visited Stewart Island.

84. Atholl Anderson, "Tuhawaiki, Hone, ?–1844," in *The People of Many Peaks: The Maori Biographies from "The Dictionary of New Zealand Biography, Volume 1, 1769–1869"* (Wellington: Bridget Williams Books, 1991), 334–37.

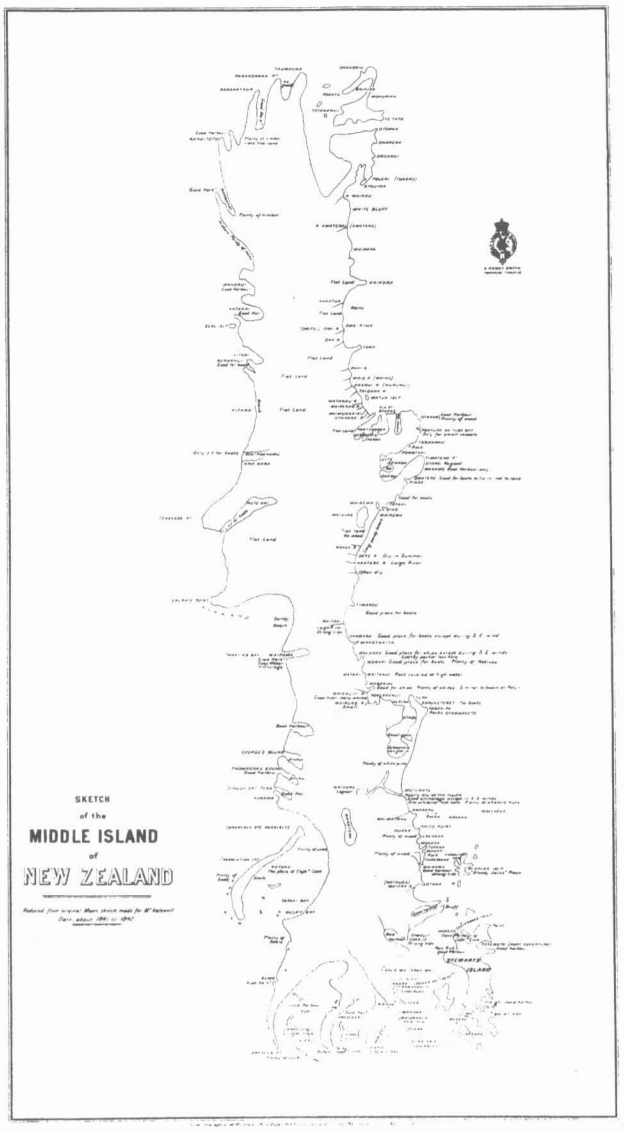


FIG. 14.17. 1894 LITHOGRAPH OF A SKETCH OF THE MIDDLE [SOUTH] ISLAND REDUCED FROM ORIGINAL MĀORI SKETCH MADE FOR EDMUND STORR HALSWELL, 1841 OR 1842. This version was published in the Department of Lands and Survey annual report; north is at the top. Included in the coastal information are harbors, headlands, islands, reefs, rocks, beaches, good sheltered anchorages marked with an anchor, tides, rivers if navigable, places where there are Europeans and Māori, shipwrecks, anchorage of James Cook's vessel, and places where seals can be found. Inland information is limited to four lakes, places where the land is flat, and places where there is a good supply of timber. The four lakes are named Wairewa (Forsyth), Waihore (Ellesmere), Waihore Lagoon (Waihola), and Wakatepa (Wakatipu), at the head of which there is a source of *pounamu* of the *īnanga* variety. The three lakes near the east coast were a good source of *tuna* and waterfowl.
Size of the original: 32 × 18 cm. From *Appendix to the Journals of the House of Representatives of New Zealand,* C.1, 1894, facing 98. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

land in 1851 (figs. 14.19–14.23). Shortland, appointed private secretary to Lieutenant Governor William Hobson in June 1841, became interested in Māori culture and land issues, which involved considerable travel in the South Island.[85] On 8 August 1843 he and Colonel Edward Lee Godfrey, a land commissioner, left Wellington to investigate European land claims in the South Island. Shortland was to act as interpreter and collect information relevant to native land tenure. It was in this context that he met Hone Tūhawaiki, who drew maps for Godfrey at Otakou (on Otago Peninsula).[86] Shortland notes that Godfrey "was much struck with the straightforward and willing evidence given by this chief in all the cases examined [at Otakou], and with the skill displayed by him in illustrating his descriptions of boundaries by tracing with a pencil the line of coast, and the positions of islands, rivers, &c." [87] He commented, however, on the relative inaccuracy of distances: "As I found afterwards by visiting some of the places described. . . . although fifteen or twenty miles distant from each other, in his chart they would not appear to be more than one mile apart." [88]

Hone Tūhawaiki's originals, copies made by Shortland, and the manuscript for Shortland's book have not been located.[89] The maps as published were obviously enhanced. For example, hachuring was used for mountains. The exact relationship of the maps published in Shortland's 1851 work to the maps drawn at Otakou is not known.

On 4 January 1844 Shortland set out for Banks Peninsula, having completed his tasks in the southern part of the South Island, continuing his work on the route. Reaching the Waitaki River on 10 January, he spent six days there in the company of the Ngai Tahu *ariki* Te Huruhuru, obtaining valuable geographical information.[90] In the record of his journey, Shortland writes,

> Huruhuru's leisure in the evenings was employed in giving me information about the interior of this part of the island, with which he was well acquainted. He drew, with a pencil, the outline of four lakes, by his ac-

85. Atholl Anderson, "Shortland, Edward, 1812?–1893," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 394–97.

86. Although Shortland and Godfrey arrived in Otakou together, Godfrey left on 15 October, leaving Shortland to continue the task. Anderson implies that maps were drawn by Hone Tūhawaiki when Edward Shortland made a later visit in November 1843, and possibly on Ruapuke Island, which was the *ariki*'s base; see Anderson, "Shortland," 395, and idem, "Tuhawaiki," 334.

87. Shortland, *Southern Districts,* 81 (note 11).

88. Shortland, *Southern Districts,* 81–82.

89. Michael Bott, Keeper of Archives and Manuscripts, University of Reading Library, England, personal communication, 29 April 1993. Longman's archives are held by the university.

90. Anderson, "Shortland," 395 (note 85).

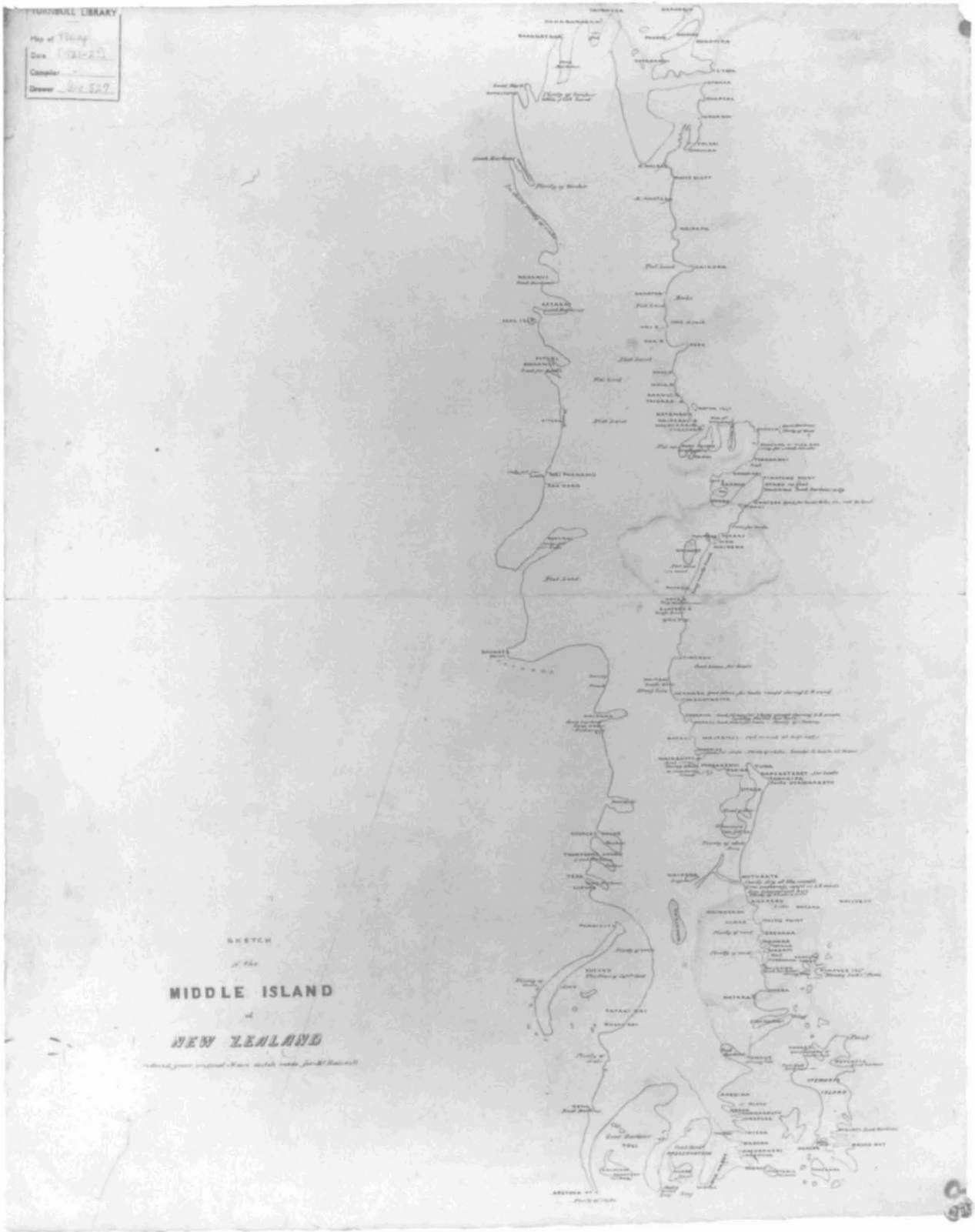


FIG. 14.18. SKETCH OF THE MIDDLE [SOUTH] ISLAND, CA. 1900–1910, REDUCED FROM ORIGINAL MĀORI SKETCH MADE FOR EDMUND STORR HALSWELL, NOVEMBER 1841. Manuscript, black ink on paper with blue watercolor around coastline, linen backed; north is at the top. This is essentially the same map as figure 14.17. Size of the original: 56 × 44 cm. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (834ap/1841-2/acc. no. 527).

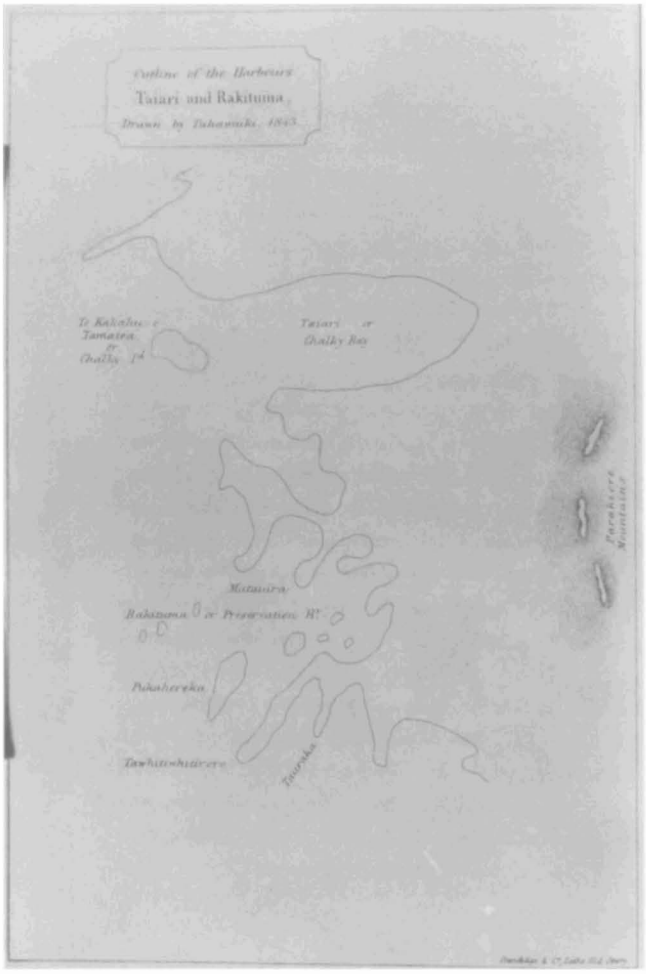


FIG. 14.19. "OUTLINE OF THE HARBOURS TAIARI AND RAKITUMA, DRAWN BY TŪHAWAIKI, 1843." North is at the top of the map. Compared with a modern map, it is clear that Chalky Inlet (Taiari) and Preservation Inlet (Rakituma) are generalized and far less indented on Tūhawaiki's map, with the peninsula separating the two inlets much narrower than it really is. Puysegur (Tawhitiwhitiroro) Point is shown much longer than in reality. Pukahereka is Coal Island (compare fig. 14.4 inset).
Size of the original: 17 × 11 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), facing 81. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

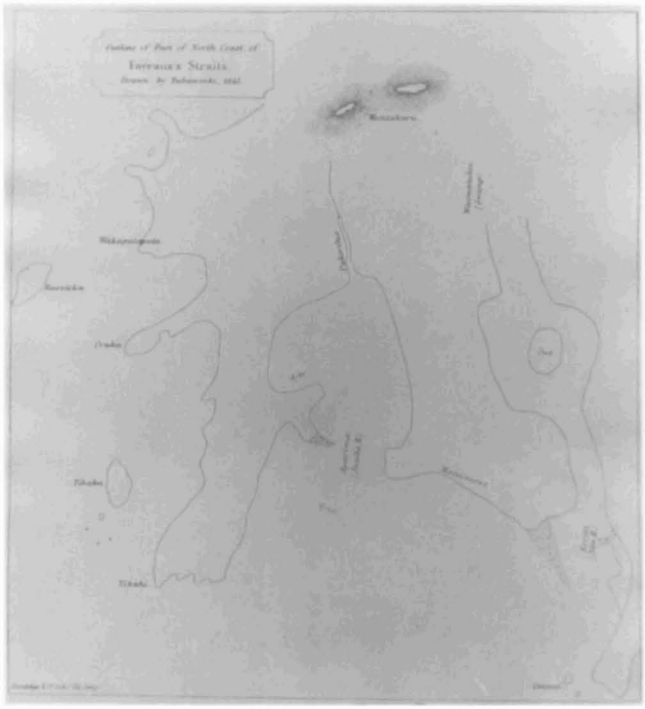


FIG. 14.20. "OUTLINE OF PART OF NORTH COAST OF FOVEAUX'S STRAITS, DRAWN BY TŪHAWAIKI, 1843." North is at the top. On this map, Aparima/Jacob's River Inlet estuary is greatly enlarged, with the Oreti (Koreti)/New River estuary not so distorted. The headland named Titahi is a very exaggerated present-day Howells Point. (Compare fig. 14.4 inset.)
Size of the original: 17 × 16 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), facing 81. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

> count, situated nine days' journey inland of us, and only two from the west coast, in a direction nearly due west of our position.
>
> One of these, named Wakatipua [Wakatipu], is celebrated for the "pounamu," found on its shores. . . . The three other lakes, Hawea, Waiariki, and Oanaka [Wanaka], had formerly inhabitants on their shores, who frequently went to and from Waitaki to visit their relatives.[91]

Figure 14.24 was copied from the map drawn by Te Huruhuru and published by Shortland. The four lakes he drew actually represent three–Waiariki is not a lake but an arm of Lake Wanaka (Wānaka; see fig. 14.25). Te Huruhuru would probably have shown mountains by some means on his map, and names have been given for some of the ranges, but the linework used to delineate the mountains in the published version is certainly by Shortland or the lithographers.

Several place-names appear, including one for the abode of Te Raki, the Ngai Tahu *ariki*; also, there are several notes such as the one relating to the source of *pounamu* at Wakatipu.[92] By Lake Hawea (Hāwea) we

91. Shortland, *Southern Districts*, 205 (note 11).

92. There is also a lengthy note where the Makarere (modern Makarora) River joins Lake Oanaka (Wanaka) that refers to Te Raki's son being taken prisoner with Wakarihariha and family. They were made slaves, and Wakarihariha's grandchild was killed. A *taua* (war

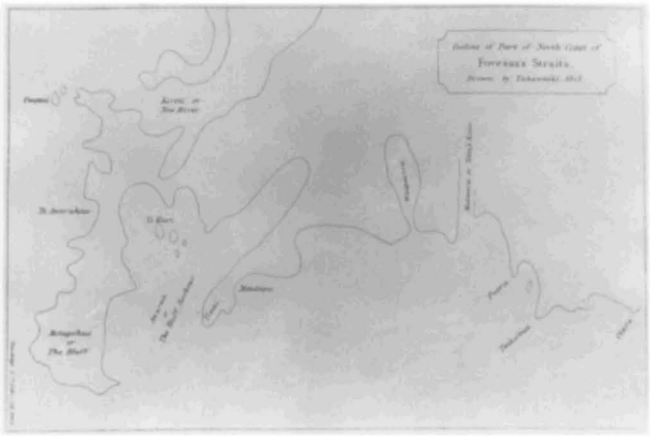


FIG. 14.21. SECOND "OUTLINE OF PART OF NORTH COAST OF FOVEAUX'S STRAITS, DRAWN BY TŪHAWAIKI, 1843." North is at the top. There is little similarity between the Oreti (Koreti)/New River estuary when compared with the same features on figure 14.20. Bluff Harbor (Awarua) is shown as having a wide entrance, which it does not have. The right arm of Bluff Harbor is oriented differently than on a modern map, as is the Waituna Lagoon (Waiparera inlet), and it is shown as open to the sea, but the lagoon now has no opening. The Mataura River is depicted as flowing straight into the sea, but it actually empties into a large lagoon or estuary now called Toetoes Harbor. (Compare fig. 14.4 inset.)
Size of the original: 11 × 17 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), facing 81. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

FIG. 14.22. "OUTLINE OF PART OF THE EAST COAST OF STEWART'S I^{d}., DRAWN BY TŪHAWAIKI, 1843." North is at the top. In comparing this map with a modern map, it seems likely that the name "Lord's Harbour" has been given to the wrong bay. Between Port Adventure and Lords Harbor there should be another large bay, which on modern maps is unnamed, but which has at its head a smaller bay named Tikotatahi Bay. It is odd that Hone Tūhawaiki should leave out this large bay–he knew the coast of Stewart Island well–and it seems more likely that Lords Harbor is misplaced.
Size of the original: 17 × 11 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), facing 81. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

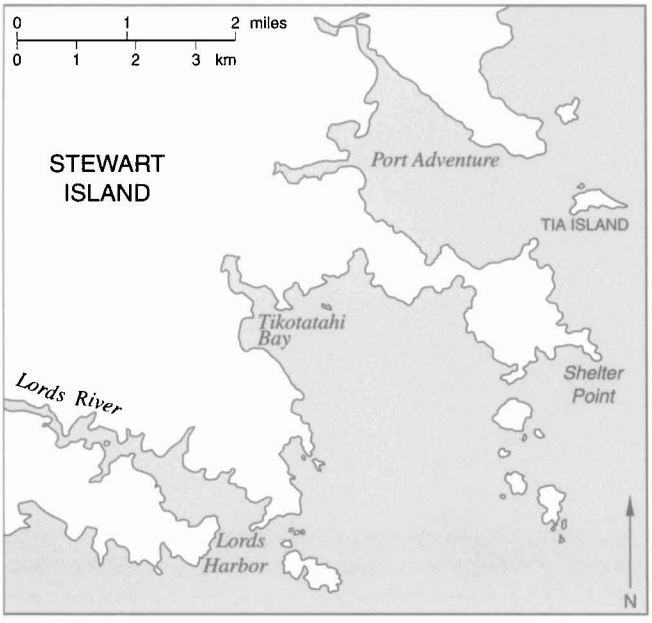


FIG. 14.23. REFERENCE MAP OF THE EAST COAST OF STEWART ISLAND. Compare figure 14.22.

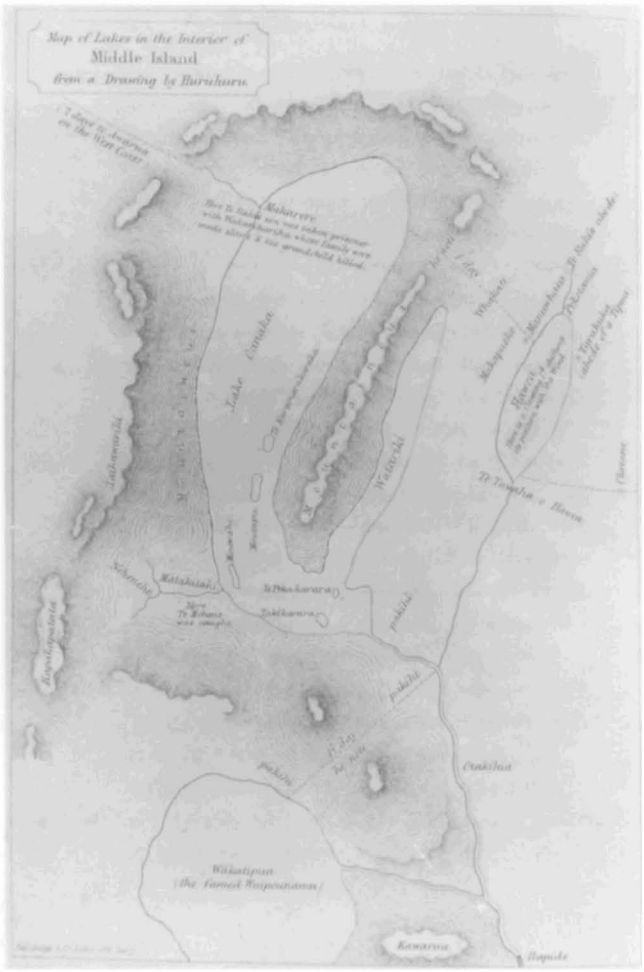


FIG. 14.24. "MAP OF LAKES IN THE INTERIOR OF MIDDLE [SOUTH] ISLAND FROM A DRAWING BY HURUHURU." North is at the top. Lake Hawea is depicted as much smaller than Oanaka (Wanaka), but actually they are of similar size. The Clutha (Matau) and Kawarau Rivers, which have their sources in the three lakes, are shown, and rapids are depicted on the Matau, which is a very swift river. *Pākihi* (open grassland) exists in the form of tussock-covered land in the area between Wanaka, Hawea, and Wakatipu and is labeled on the map. *He noti,* between Lake Wakatipu and the river and also between Wanaka and Hawea, refers to the low saddles (although there is no low saddle between Wakatipu and the river). The map indicates distances in several places. The note "(2 days to Awarua on the West Coast)" in the upper left, however, is optimistic. Any Māori party that completed the journey in two days would have to be very fit, traveling with light loads and with no encumbrances such as children, and would need excellent weather. Perhaps Te Huruhuru's estimate of two days for the traverse to the west coast was based on hearsay rather than experience.
Size of the original: 17 × 12 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), facing 205. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

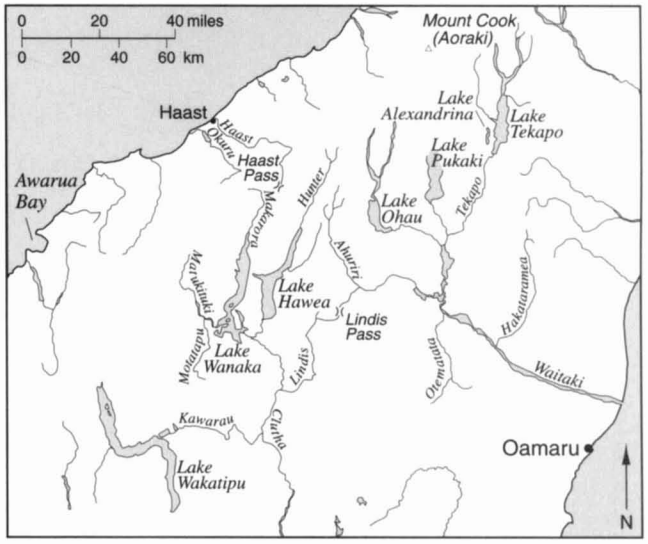


FIG. 14.25. REFERENCE MAP OF WAITAKI AND CLUTHA DRAINAGE.

find the label "Turahuka (abode of a Tipua)." A *tupua* or *tipua* is defined as a "goblin, demon, object of terror"; it is similar to a *taniwha,* a "fabulous monster supposed to reside in deep water."[93] Often the *tupua, tipua,* and *taniwha* were said to have taken the form of a large lizard. In Lake Hawea is an island labeled "Here is a floating Id. shifting its position with the Wind." Beattie links these last two notes on Te Huruhuru's map to a myth in which a *taniwha* created a floating island by setting adrift a point of land on which a Māori man was fishing.[94]

Shortland's account seems to indicate that Te Huruhuru's original chart showed much more of the South Is-

party) commanded by Te Puoho o te Rangi (Ngāti Tama *ariki*) was responsible. For a detailed account, see Atholl Anderson, *Te Puoho's Last Raid: The March from Golden Bay to Southland in 1836 and Defeat at Tuturau* (Dunedin: Otago Heritage Books, 1986), 23–28, 74–75. The exact route taken by Te Puoho is disputed, but Te Huruhuru told Shortland that Te Puoho took advantage of a mountain path to Wanaka from the mouth of the Awarua River (exact location unknown); see Irvine Roxburgh, *Jacksons Bay: A Centennial History* (Wellington: A. H. and A. W. Reed, 1976), esp. 9.

All the literal accounts of maps being drawn and all the extant maps described in this chapter were made by Māori males and recorded by European males. Anderson, however, does record an incident where Māori women acted as guides with obvious cartographic knowledge. Two young Ngai Tahu women, Ruta and Papako from Arahura, knew the trail from the west coast via Tioripātea (Haast Pass) to Otago. They acted as guides to Te Puoho and *taua* in 1836. Ruta and Papako must have acquired a mental map of the area, since they had probably traversed the trail before (Anderson, *Te Puhoho's Last Raid,* 15–16).

93. Williams, *Dictionary of the Maori Language,* 458 and 377, respectively (note 24).

94. H. Beattie, *Maori Lore of Lake, Alp and Fiord: Folk Lore, Fairy Tales, Traditions and Place-Names of the Scenic Wonderland of the South Island* (Dunedin, 1945; reprinted Christchurch: Cadsonbury, 1994), 39.

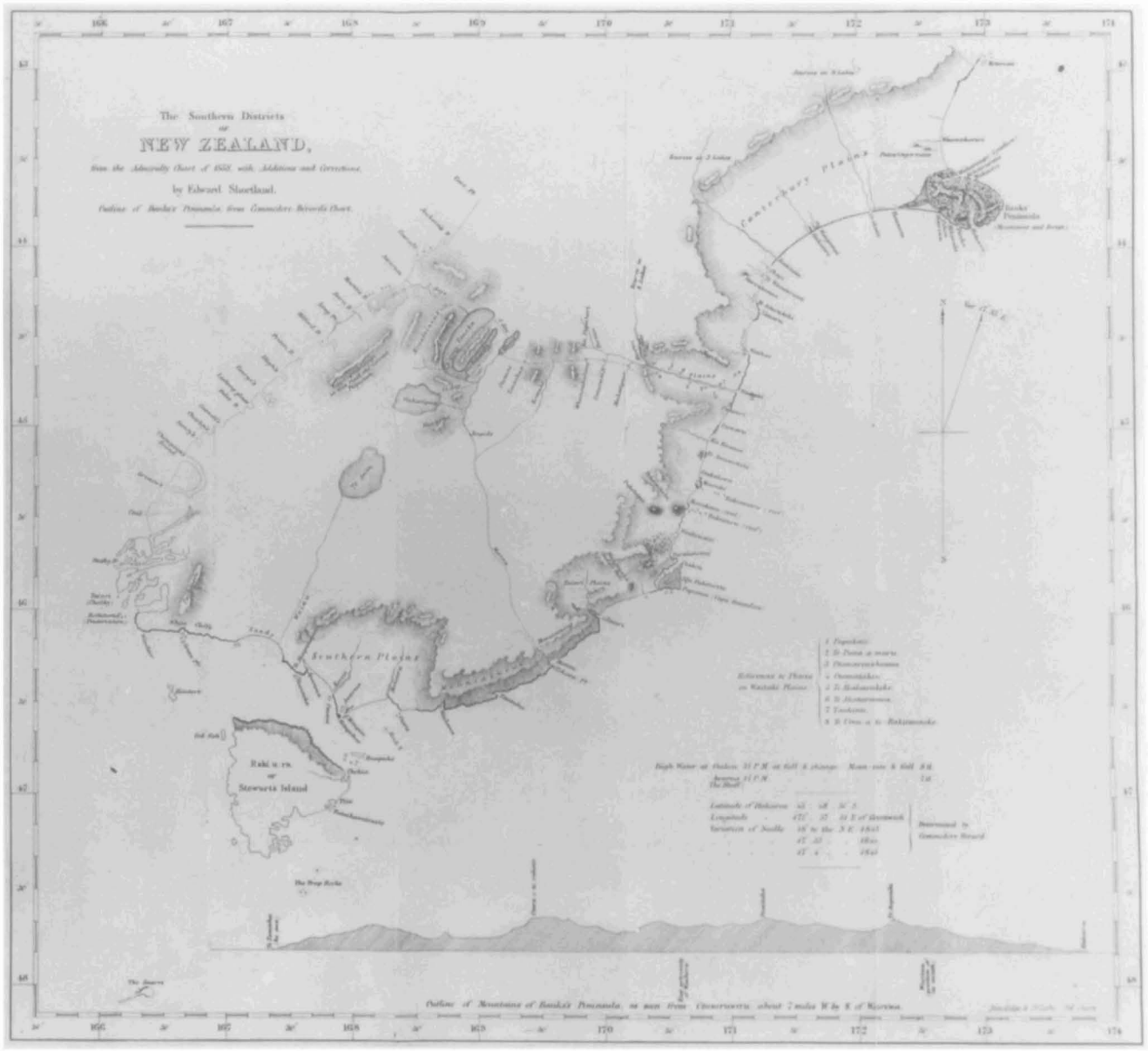


FIG. 14.26. "THE SOUTHERN DISTRICTS OF NEW ZEALAND, FROM THE ADMIRALTY CHART OF 1838, WITH ADDITIONS AND CORRECTIONS BY EDWARD SHORTLAND."
Size of the original: 25 × 27 cm. From Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green, and Longmans, 1851), frontispiece. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington.

land than just the three lakes and probably included the route across the island to the lakes from the east coast.

> Huruhuru pointed out on his chart the positions, and told me the names of several of their places of residence, and described the country through which the path across the island passed. He even told me the names of the principal streams and hills which it crossed, and of the places where parties travelling that way used to rest, at the end of each day. . . . It is probable that the resting places mentioned by him are at very unequal distances from each other, although I placed them in imaginary positions on the chart, from ten to fifteen miles apart.[95]

The chart referred to in the last sentence of the quotation is the frontispiece to Shortland's 1851 work (fig. 14.26), but unlike figure 14.24 it was not attributed to Te Huruhuru. It shows on the true right of the Waitaki River the points and names of the places at which traveling parties

95. Shortland, *Southern Districts*, 205–7 (note 11).

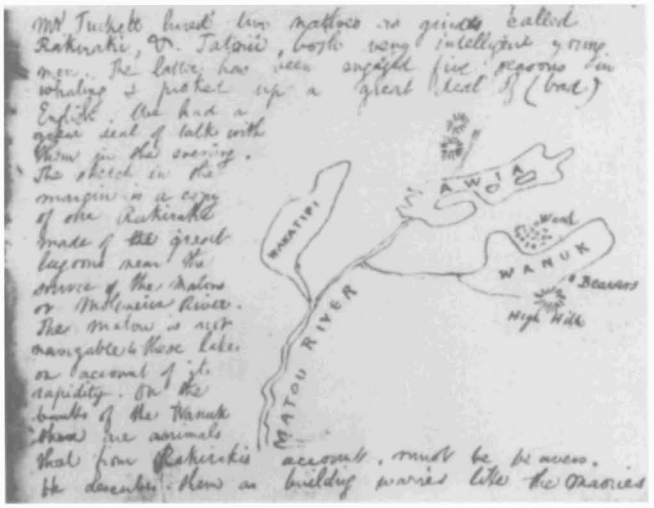


FIG. 14.27. MAP OF LAKES WAKATIPU, WANAKA, AND HAWEA, 1844. Manuscript, ink on paper. Northwest is at the top of the map. The names Awia (Hawea) and Wanuk (Wanaka) are transposed on the map. The lakes are easily recognizable by their appearance and orientation.
Size of the original: 6 × 7 cm. From John Wallis Barnicoat, Journal, 1841 to 1844, p. 41. Photograph courtesy of the Hocken Library, University of Otago, Dunedin.

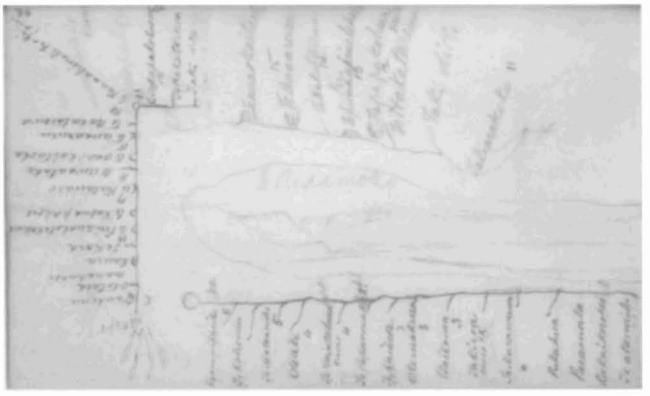


FIG. 14.28. THREE MAP SEGMENTS OF THE WAITAKI RIVER AND LAKES AT ITS SOURCE, 1848, FROM PAGE 36 OF MANTELL'S SKETCHBOOK. The map sections (figs. 14.28–14.30) have various orientations in the manuscript and are pencil and ink on paper. The maps were drawn by Te Ware Korari and annotated by Mantell. The Waitaki River flows through an area of limestone rock and has numerous caves and rock-shelters. The page shown here depicts three segments of the river: the source and immediate true left bank; an enlargement of a portion of that segment; and a middle portion of the true right bank of the river. See also figures 14.31 and 14.32.
Size of the page: 14 × 24 cm. Walter Baldock Durrant Mantell, Sketch Book no. 2, p. 36. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (E333).

of Māori would spend the night. The numbered points (1–8) on either side of the Waitaki River were where Shortland visited and spent nights during the six days he was with Te Huruhuru and his people (a key to the eight places is given at lower right).

A map of the same lakes is known to have been drawn about six months later by Rakiraki. He and Tatou were guides for John Wallis Barnicoat and Frederick Tuckett, surveyors for the New Zealand Company. Commencing in March 1844, Barnicoat and Tuckett explored the whole of the east coast of the South Island to Foveaux Strait to search for a suitable site for the future New Edinburgh (now Dunedin) settlement.[96] On 1 June 1844, at the mouth of the Matou (Matau; now Clutha) River, they hired the two Māori guides Rakiraki and Tatou (Tatou had been engaged in whaling for five seasons and spoke some English). Rakiraki drew a map of the three lakes in the interior of the South Island that were the source of the Clutha, and Barnicoat made a copy of the map in his journal. "The sketch in the margin is a copy of one Rakiraki made of the great lagoons near the source of the Matou or Molyneux River. The Matou is not navigable to these lakes on account of its rapidity. On the banks of Wanuk [Hawea] are animals that from Rakiraki's account must be beavers. He describes them as building waries [*whare*] like the Maories and as making a screaming noise. I also understood him to say that they build floating houses."[97] The map in Barnicoat's journal (fig. 14.27) shows all three lakes broadened and has two of the lake names transposed. In this generally mountainous region, the hachuring represents mountains to the west of Lake Wanaka and to the east of Lake Hawea. The hachuring would have been drawn by Barnicoat. The label "wood" represents the beech forest, which still exists in this generally treeless area.

The word "beavers" on the shore of Lake Hawea and the description in Barnicoat's journal refers to a large mythical carnivorous, amphibious lizard, the *kaurehe*.[98] It bears a clear resemblance to the *tipua*, whose abode by Lake Hawea was recorded on Te Huruhuru's map (fig. 14.24).

Six map segments showing the Waitaki River and its source lakes were drawn in pencil by Te Ware Korari in the sketchbook of Walter Baldock Durrant Mantell, who was appointed commissioner for extinguishing native

96. "Barnicoat, John Wallis (1814–1905)," in *A Dictionary of New Zealand Biography,* 2 vols., ed. Guy Hardy Scholefield (Wellington: Department of Internal Affairs, 1940), 1:41.

97. John Wallis Barnicoat, Journal, 1841 to 1844, 40–41, manuscript in the possession of the Hocken Library, University of Otago, Dunedin. There is also a typescript of the same title in the Manuscripts Section, Alexander Turnbull Library, Wellington (ATL qMS-0139), 178.

98. H. Beattie, *Traditional Lifeways of the Southern Maori,* ed. Atholl Anderson (Dunedin: University of Otago Press, 1994), 354; Williams, *Dictionary of the Maori Language,* 108 (note 24), defines this as a monster.

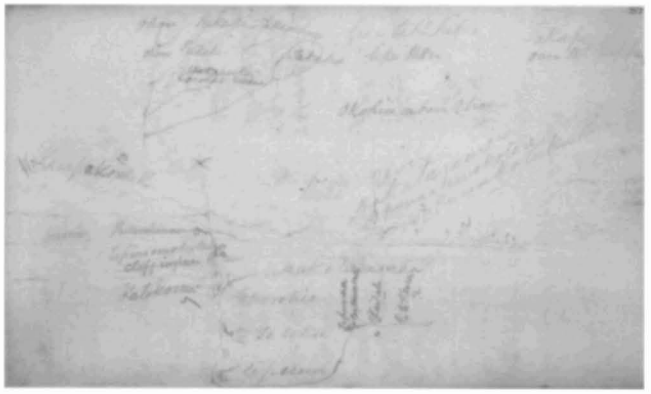


FIG. 14.29. TWO MAP SEGMENTS OF THE WAITAKI RIVER AND LAKES AT ITS SOURCE, 1848, FROM PAGE 37 OF MANTELL'S SKETCHBOOK. The top segment depicts the source lakes at a larger scale than on page 36 (fig. 14.28), and the true left and right banks of the river near the mouth. See also figures 14.31 and 14.32.
Size of the page: 14 × 24 cm. Walter Baldock Durrant Mantell, Sketch Book no. 2, p. 37. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (E333).

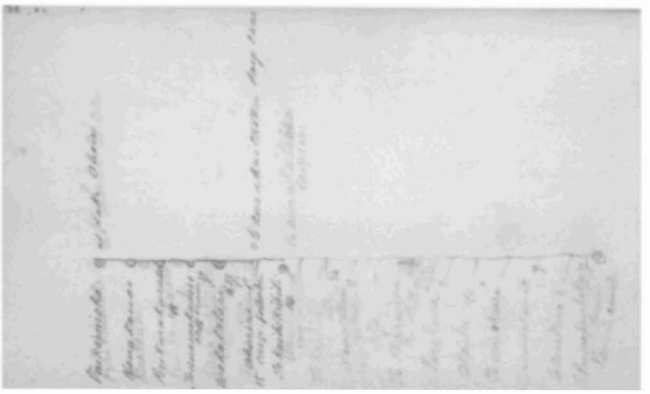


FIG. 14.30. ONE MAP SEGMENT OF THE WAITAKI RIVER, 1848, FROM PAGE 38 OF MANTELL'S SKETCHBOOK. This depicts the true right bank of the river just below the source lakes (see figs. 14.31 and 14.32). The Ahuriri and Otematakou (modern Otematata) Rivers are shown as being fordable, which was important to traveling Māori.
Size of the page: 14 × 24 cm. Walter Baldock Durrant Mantell, Sketch Book no. 2, p. 38. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (E333).

titles, Middle Island (South Island). Mantell's initial responsibility was to set aside native reserves for the Ngai Tahu *iwi* within the Canterbury Block, which had recently been purchased from them.[99] He visited the mouth of the Waitaki River on 8 and 9 November 1848, where he met Te Ware Korari and obtained from him six sketch maps of segments of the Waitaki River and the lakes at its source. Roberts records that Te Ware Korari, probably a Ngai Tahu Māori, drew the maps and that the place-names were written along the sides of the maps by Mantell as told to him by the Māori.[100]

The six map segments (figs. 14.28–14.30) cover three pages in Mantell's sketchbook. All the place-names were originally written in pencil. Those that became indistinct were overwritten in black ink by Mantell, but since then some of the names and information left in pencil have become difficult to read. Figures 14.31 and 14.32 explain how the six segments are related to each other and make up a composite map of the Waitaki River, tributaries, lakes, place-names, and other features. Mantell later drew a colored map of the southern two-thirds of the South Island and included the same five lakes, the source of the Waitaki River, which were drawn for him in his sketchbook by Te Ware Korari (plate 24). The date of this map is about 1848–52. It is on a separate sheet, and its only relevance to the sketchbook is that it includes the same basic information about the lakes.[101]

Andersen, Roberts, and Beattie have made studies of the place-names in the Waitaki River area and refer to Te Ware Korari's map.[102] The meanings of many of the place-names cannot be determined with certainty, however. Te Ware Korari's map is a fascinating record of one

99. M. P. K. Sorrenson, "Mantell, Walter Baldock Durrant, 1820–1895," in *The Dictionary of New Zealand Biography*, vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 267–68.

100. W. H. Sherwood Roberts, *The Nomenclature of Otago and Other Interesting Information* (Oamaru: Printed at "Oamaru Mail" Office, 1907), 4.

101. Also shown on the map are Lakes Wakatipu Wai Maori (Wakatipu), Wanaka, and Kauea (Hawea). The information on the existence of these lakes most probably came from information given to Edward Shortland by Te Huruhuru and to John Wallis Barnicoat by Rakiraki. Lake Te Anau is shown and the Māori route to it. The first Pākehās to visit the lake were Charles James Nairn and W. H. Stephen in January 1852. A copy of Nairn's diary with an explanatory map was sent to Mantell. Mantell probably drew the major part of the map in 1848 and added details from Nairn's information in 1852 or later.

102. Andersen, *Jubilee History*, 39 (note 6), gives nineteen names for the true left of the river and eleven names for the true right; sixteen and ten of which, respectively, appear on Te Ware Korari's map (there are differences in the spelling, but I have endeavored to follow the exact spelling of the place-names as they appear on the map segments in the sketchbook). Roberts, *Nomenclature of Otago*, 4–7 (note 100), lists twenty-four names for the true left and twenty-one names for the true right, seventeen and fifteen of which appear on Te Ware Korari's map. H. Beattie, *Maori Place-Names of Canterbury* (Dunedin, 1945), 17–22, and idem, *Maori Place-Names of Otago*, 20–23 (note 28), list fifty-five names for the true left and twenty for the true right; fourteen and thirteen of which appear on Te Ware Korari's map. Many of Beattie's names were obtained from aged Māori folk, representing their collective memories of names that probably extend back centuries.

The maps and information given to Walter Baldock Durrant Mantell by Te Ware Korari, and those given to Edward Shortland by Te Huruhuru (above), appear on the *Map of the Colony of New Zealand from Official Documents by John Arrowsmith, 1850 and 1851*. Arrowsmith does not state the sources on his maps, but the only sources must have been those cited above.

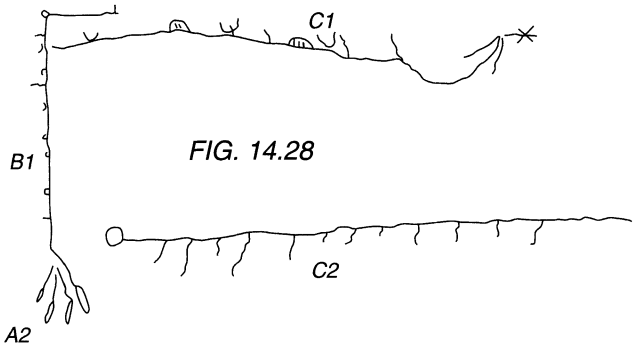
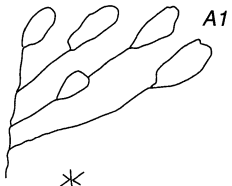


FIG. 14.28



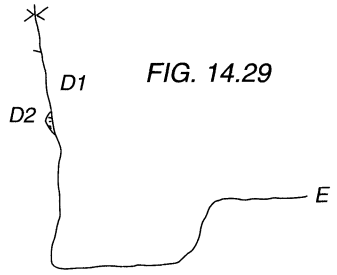


FIG. 14.29

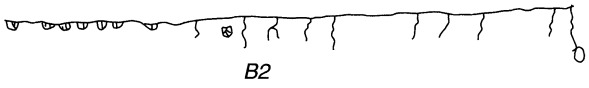


FIG. 14.30

FIG. 14.31. EXPLANATION OF TE WARE KORARI'S SIX MAP SEGMENTS. This diagram shows how the segments relate to each other (A–E) from the source to the mouth of the Waitaki River. A1 is a detail of the source lakes; A2 is the source lakes at a smaller scale. B2, C2, and D2 join each other and detail the true right bank of the river. B1, C1, and D1 show the true left of the river; B1 and C1 overlap–C1 shows a section of B1 in greater detail. E is the mouth of the river. Compare figure 14.32.

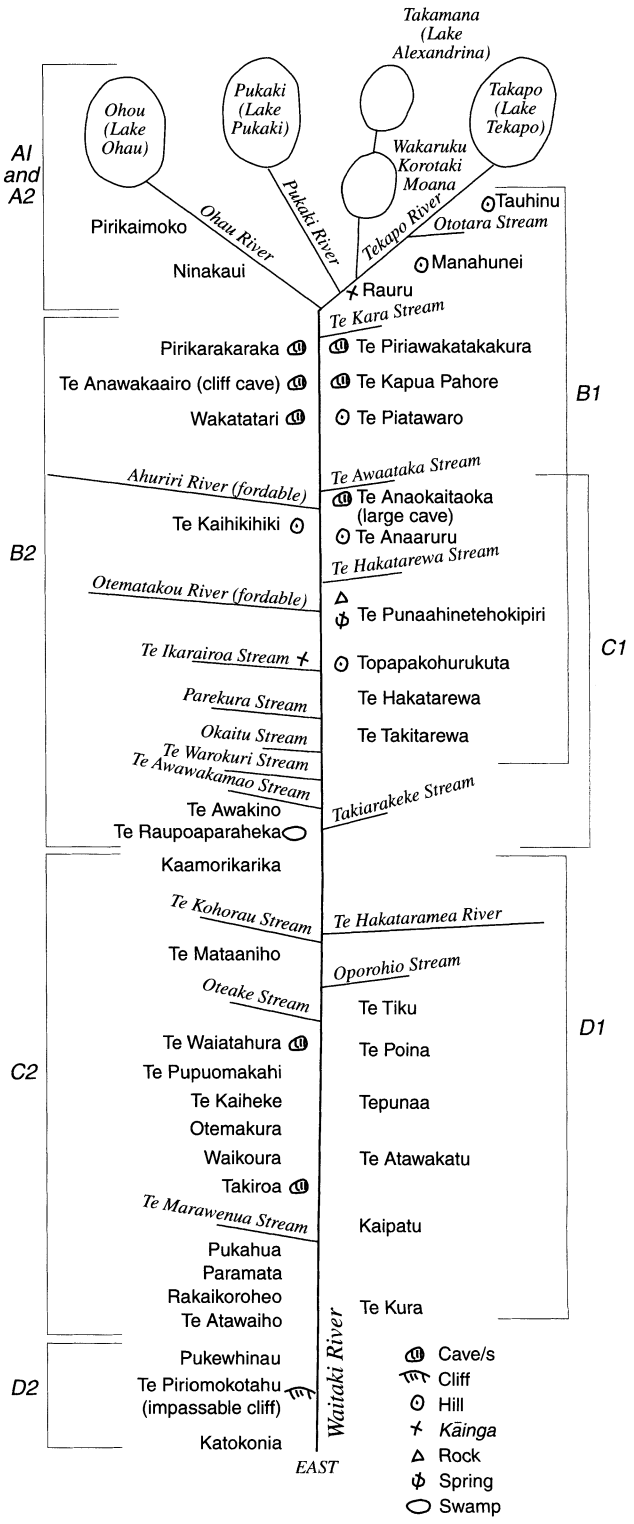


FIG. 14.32. DIAGRAM OF TE WARE KORARI'S SIX MAP SEGMENTS. Composite map of the Waitaki River compiled from the map segments. The number of place-names in such a harsh environment is striking, but unfortunately many of the meanings of these place-names are not certain. Both sides of the river gave Māori access to the interior of the island, but the true right had more caves, which were used for camps by parties of Māori traveling inland, and perhaps it was used more frequently.

Māori's knowledge of an important part of the interior of the South Island and provides much topographic information. If correct interpretations of more place-names could be obtained, the map could be regarded as an example of "singing the trail."

Another map of the interior of the South Island was obtained from an unknown Māori by Julius von Haast when, as the geologist for the Canterbury provincial government, he was exploring the major Canterbury River systems that drain the eastern flanks of the Southern Alps.[103] The Canterbury Māori supplied von Haast with information on the topography of the river systems, lakes, and passes leading to the west coast beyond[104] and drew him a map covering the headwaters of the Rakaia and Ashburton (Hakatere) Rivers (fig. 14.33; compare fig. 14.34). The main emphasis is on the upper Rakaia River and its tributaries, lakes, mountains, and pass to the west coast. The Ashburton River is included, but with little detail, and its labyrinthine drainage system is ignored. The specific Māori source and the exact date the map was drawn are not known, but the geologist began his exploration in 1862, so the map must have been drawn about that date. It is in black ink on paper with place-names probably written by a European, although the writing does not match von Haast's. The mountains in profile suggest European acculturation, but drawing them would require some sketching ability. It is also possible that rather than being the result of European influence, the profile view was used by the Māori to express their importance in Māori traditions and mythology.[105] The Arahura River and the route over Browning Pass (Nonoti Raureka; labeled "Pass" on the map) often appear in myths and traditions of the South Island because of their association with the much-valued *pounamu*.

Passes over the Southern Alps came to be of particular importance to Europeans when gold was discovered on the west coast of the South Island in the early 1860s. Land communications with the west coast were almost nonexistent, and the area could be reached only by sea. By 1865 a number of rich goldfields had been discovered, and John Hall, secretary of public works for the Canterbury provincial government, asked James West Stack to seek information from Māori on routes and mountain passes through the Southern Alps between Canterbury and the west coast.[106] Stack, born in New Zealand to missionary parents, became superintendent of the Christchurch Diocesan Māori Mission in 1860. He spoke fluent Māori and recorded and published much information on Māori culture and traditions, including a book on the South Island Māori.[107] He was thus the ideal person to obtain geographical information from the Māori. William Taylor reported that "on March 31st, 1865, the Rev. J. W. Stack replied:–'I am sorry to say the only Maori who has gone to the West Coast by the old route is now too infirm to leave his whare. There are no Maoris now living, except this old man, who know anything about the route beyond what they have heard in the past from others.' This old Maori furnished a sketch (reproduced) and gave detailed information."[108] In addition to a reproduction of a transcript of the map (fig. 14.35), a detailed description of the route, including topography and vegetation, followed in Taylor's text. However, none of the sources–the original map, Stack's copy, or the original translation from the Māori by Stack–has been located.[109]

The date when the map was drawn is uncertain, but it certainly existed by April 1865, when it was dispatched up the Waimakariri to an exploring party that included John Samuel Browning (after whom Browning Pass was named), Richard James Strachan Harman (after whom Harman Pass was named), and J. J. Johnstone.[110]

Harman reported that the Kaiapoi Māori's map and account for the trail over Browning Pass were received and states: "The account was however, in some respects very confused and perplexing, and we were obliged to form our own ideas as to the amount of positive information it contained. We came to the conclusion that the existence of a cave, a pass, and a large lake with a stream running out of it, were the only facts upon which we could depend, and we accordingly determined to make them our landmarks."[111] The survey party did not locate the cave, but it did cross the pass and saw the lake and stream.

The mountains are in profile as in figure 14.33. Stack

103. Von Haast, an explorer, geologist, writer, and museum founder, was born in Germany about 1822 and arrived in New Zealand in 1858, the day before von Hochstetter, another geologist, with whom he performed a geological survey of the area south of Auckland. See Peter Bromley Maling, "Haast, Johann Franz Julius von, 1822–1887," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 167–69.

104. See McClymont, *Exploration of New Zealand,* 83 (note 49), and Heinrich Ferdinand Von Haast, *The Life and Times of Sir Julius von Haast: Explorer, Geologist, Museum Builder* (Wellington, 1948), 275–76.

105. See, for example, Margaret Rose Orbell, *The Illustrated Encyclopedia of Māori Myth and Legend* (Christchurch: Canterbury University Press, 1995), 122–23.

106. William A. Taylor, *Lore and History of the South Island Maori* (Christchurch: Bascands, 1952), 188.

107. Stack, *South Island Maoris* (note 25).

108. Taylor, *Lore and History,* 188.

109. Taylor is notorious for not citing sources (Josie Laing, Librarian, Canterbury Museum, Christchurch, personal communication, 15 March 1994). It could be that Taylor rewrote or slightly altered the original description.

110. J. W. Hamilton, "The Best Route to the West Coast," letter, *Lyttelton Times,* 7 March 1865, 5, col. F, suggests the April–May 1863 date. See also the report in the *Lyttleton Times,* 8 April 1865, 4, col. D, and Philip Ross May, *The West Coast Gold Rushes,* 2d rev. ed. (Christchurch: Pegasus, 1967), 133–35.

111. *Press* (Christchurch), 6 May 1865, 2, col. E.

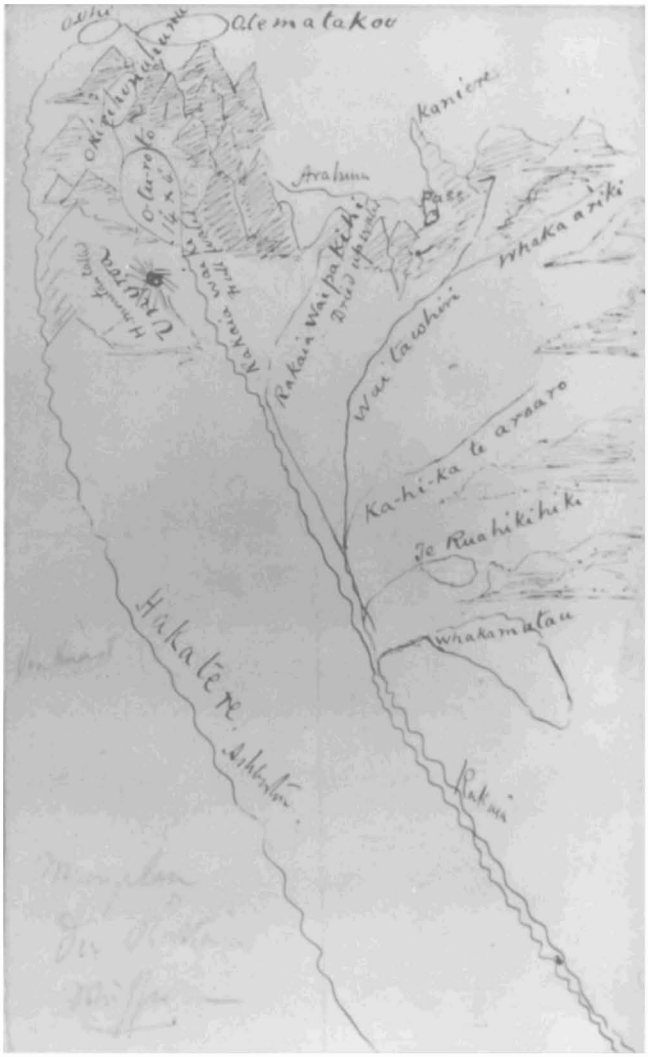


FIG. 14.33. MĀORI PLAN OF RAKAIA AND ASHBURTON RIVER HEADWATERS, CA. 1862. North is at the top; manuscript, black ink on paper. A number of place-names can be positively identified. Whakamātau is Lake Coleridge. Te Ruahikihiki has been suggested to be the name of a ridge of mountains (H. Beattie, *Maori Lore of Lake, Alp and Fiord: Folk Lore, Fairy Tales, Traditions and Place-Names of the Scenic Wonderland of the South Island* [Dunedin, 1945; reprinted Christchurch: Cadsonbury, 1994], 64), possibly the main peaks south of the Wilberforce (Waitāwhiri) River (Barry Brailsford, *Greenstone Trails: The Maori Search for Pounamu* [Wellington: A. H. and A. W. Reed, 1984], 131). Yet the name appears near a lake–lakes Catherine, Lyndon, and Selfe are all roughly in the area and near Lake Coleridge. Kāhika te Aroaro is approximately in the position occupied by the Harper River. Brailsford (p. 132) suggests that the Whakāriki is Gifford Stream. Figure 14.33 shows the Whakāriki as flowing into the Wilberforce (Waitāwhiri) from the true left. Figure 14.35 shows the Whakāriki as flowing into the Wilberforce from the true right. This is confusing. If figure 14.33 is correct, it suggests that the Whakāriki is Cronin Stream. If figure 14.35 is correct, the Whakāriki, which is shown as a substantial stream, is more likely to be Griffiths Stream than the Gifford.

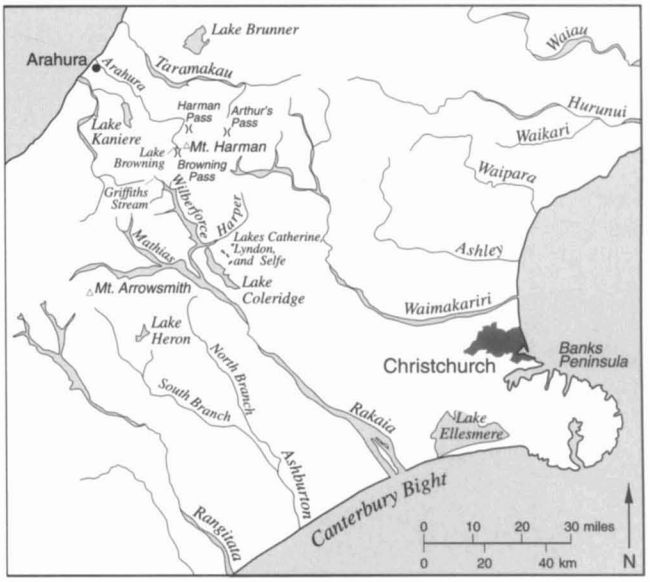


FIG. 14.34. REFERENCE MAP OF HEADWATERS OF WAIMAKARIRI, RAKAIA, AND ASHBURTON RIVERS.

may have added them to his copy, or, if drawn by Māori, they may be evidence of European acculturation. On the other hand, as in figure 14.33, they may have been drawn this way to show the mountains' importance in traditional lore and mythology. The informant had passed over Browning Pass many years before and therefore would have experienced the ritual necessary to undertake such a journey for *pounamu*. In 1865 the route over Browning Pass had not been used for a considerable time; Stack was told that a Māori party carrying *pounamu* was caught in a snowstorm on the pass or in the cave below Kaniere, according to Waitaha traditional history, was the name of a mountain peak on the western side of the Southern Alps. The name is now that of a lake in the same area. Brailsford (pp. 128–29) identifies Mount Kaniere as lying to the northeast of Browning Pass. This mountain is clearly identified as Mount Harman; see Howard Keene, *Going for the Gold: The Search for Riches in the Wilberforce Valley* (Christchurch: Department of Conservation, 1995), map on 33 (although recently published, this book tells us very little about the Māori use of Browning Pass). Arahura is the present name of the west coast river from which *pounamu* is obtained. Nonoti Raureka is named after Raureka, a woman who according to traditional history was the first person to cross the pass and who was carrying *pounamu*. The Rakaia Waipākihi corresponds with the Mathias River; Rakaia Waiki is the western Rakaia River, which has Ō Tūroto (Lake Heron) at its head. The high mountain called Unuroa is possibly Mount Arrowsmith or, more probably, the Arrowsmith range of mountains.

Size of the original: 21 × 13 cm. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (-834.44cdc/ ca. 1860/acc. no. 3739).

and all perished. The route was made *tapu* (under religious or superstitious restriction) in their memory and not used.[112]

Three maps made by Māori, two existing in the original, show boundary lines and are connected to land claim issues. The first, of the island of Motutapu in the Hauraki Gulf off Auckland, was entered as evidence in a court hearing in 1857, but it had been drawn in 1845, when the southern half of the island was sold by the Māori to two Europeans, James Williamson and Thomas Crummer.[113] Five years earlier, in 1840, Thomas Maxwell had agreed to purchase the entire island. He did not pay the full agreed price, however, and the Māori view was that he had purchased only the northern half. Maxwell later disappeared, and the 1857 court hearing related to the land claims of his five part-Māori sons. Robert Graham, who had purchased Williamson and Crummer's land, testified at the hearing and produced "a rough native sketch of the Island of Motu Tapu made by some of the Native Settlers shewing the boundaries assigned" (fig. 14.36).[114] He also testified that he and Maxwell's sons had checked the boundary and found it agreed with the map.

The map was drawn in pencil on paper by Ngātai, who had been acting in the interest of the young Maxwell children when the southern half of the island was sold. He wrote place-names and other information on the map, explaining in court that although his name was written on the northern part of Motutapu, he did not own it (see fig. 14.37). He did own land on Rangitoto, the triangular island shown on the map. A second boundary on this island marks the division between Ngātai's land and that of a Pākehā (European).

On 7 May 1861 James Mackay, acting land purchase commissioner for the New Zealand central government, who had been involved with extensive government land purchases and had a good grasp of Māori land matters, came across a group of Māori who had drawn a map in sand. The event took place on the beach by a Māori *pā* at the mouth of the Pariwhakaoho River, which empties into Golden Bay at the north end of the South Island. The Māori were of the Ngāti Awa *iwi* and included an important *ariki*, Ropoama te One. The map, drawn by Ropoama te One, showed land belonging to him and another *ariki*, Wiremu Kingi Rangitakei, in the North Island at Waitara. *Pā* were indicated on the map by small enclosures made of pieces of split flax stalks.[115]

Mackay felt that Ropoama te One's map was more reliable than one drawn at the behest of an officer of the Native Department, since the map was made for the Māori's own information and amusement, although Mackay did not know his intention in making it. The Ngāti Awa Māori were of the opinion that the map was accurate; Mackay got Ropoama te One to explain it to him and copied it in his notebook. He also recorded the names

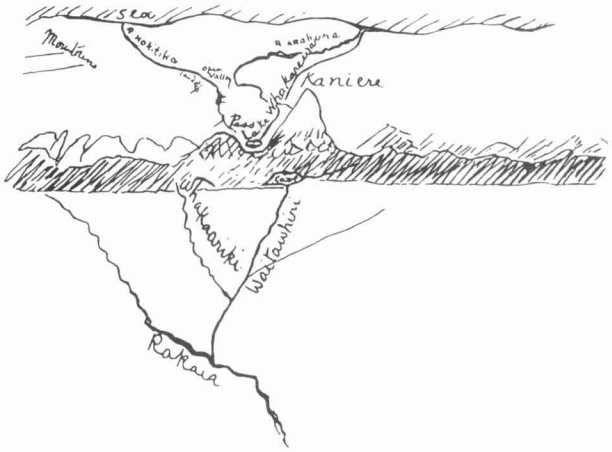


FIG. 14.35. PLAN OF ROUTE FROM CANTERBURY TO THE WEST COAST VIA BROWNING PASS, 1865. West is at the top. The sketch map contains much of the information contained in figure 14.33, the sketch of the Rakaia and Ashburton River headwaters. Whakarewa (now called Lake Browning) is the name of the lake on the northern side of Browning Pass, and the mountain called Kaniere appears to coincide with Mount Harman. The cave at the head of the Wilberforce (Waitāwhiri) River is where Māori are reported to have stored provisions. Taylor made this copy, which he published in 1952, and he added the place-names.
Size of the original: 8 × 10 cm. From Barry Brailsford, *Greenstone Trails: The Maori Search for Pounamu* (Wellington: A. H. and A. W. Reed, 1984), fig. 89 (p. 132). Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington. By permission of Stoneprint Press, Hamilton, New Zealand.

of the *pā* as they were told to him.[116] Figure 14.38 is a lithograph made from a copy of the map in Mackay's notebook.[117]

112. Report, *Lyttleton Times,* 8 April 1865, 4, col. D (note 110), and *Press* (Christchurch), 8 April 1865, 2, col. D.

113. The map and transcripts of the testimony at the hearing can be found in the National Archives of New Zealand, Wellington, Half Caste Claim of the Children of Thomas Maxwell, Old Land Claims (OLC) File 332. For information on Williamson, see Russell C. J. Stone, "Williamson, James, 1814–1888," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 598–99.

114. Half Caste Claim of the Children of Thomas Maxwell.

115. Memorandum, James Mackay to Donald McLean, Native Secretary, 20 June 1861, in *Appendix to the Journals of the House of Representatives of New Zealand,* E.23, 1863, 1. Following that memorandum was a letter from James Mackay to Henry Halcombe, curate of Golden Bay, who had been with him when the map was drawn, asking that he confirm the events, and Halcombe's subsequent confirmation. For more on Mackay, see Harry C. Evison, "Mackay, James, 1831–1912," in *The Dictionary of New Zealand Biography,* vol. 1, *1769–1869* (Wellington: Allen and Unwin, 1990), 252–53.

116. Memorandum, Mackay to McLean, 20 June 1861, 1.

117. James Mackay's notebook with the copy of the map he made has not been located. Neither have copies that were sent and forwarded to colonial officials (see Memorandum, Mackay to McLean, 20 June 1861;

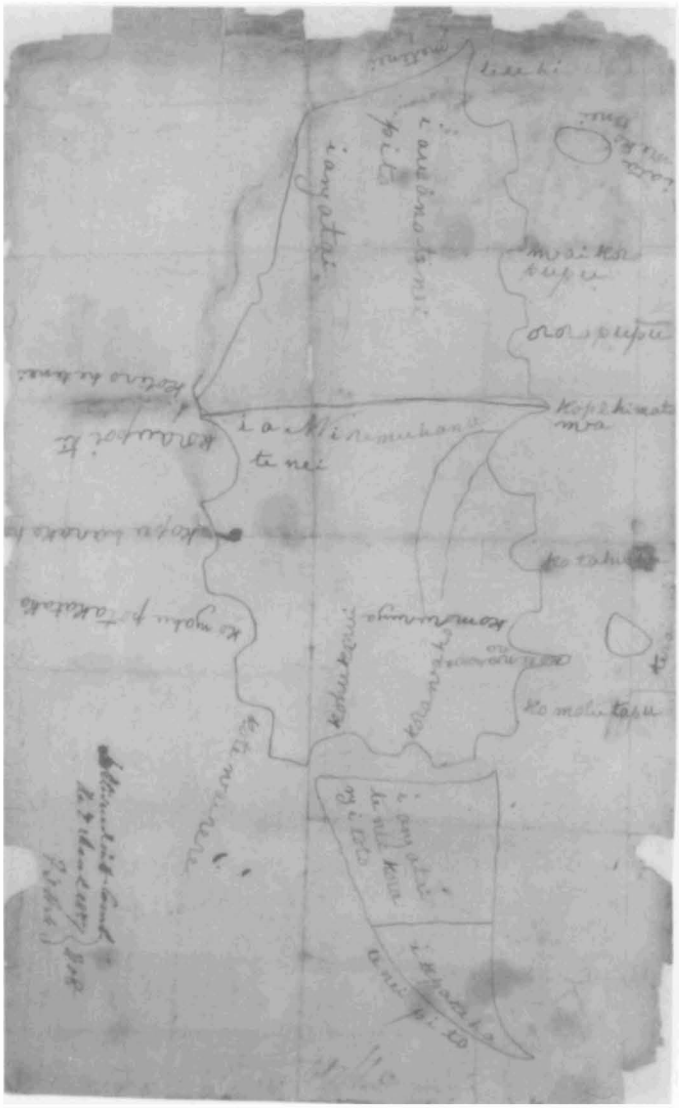


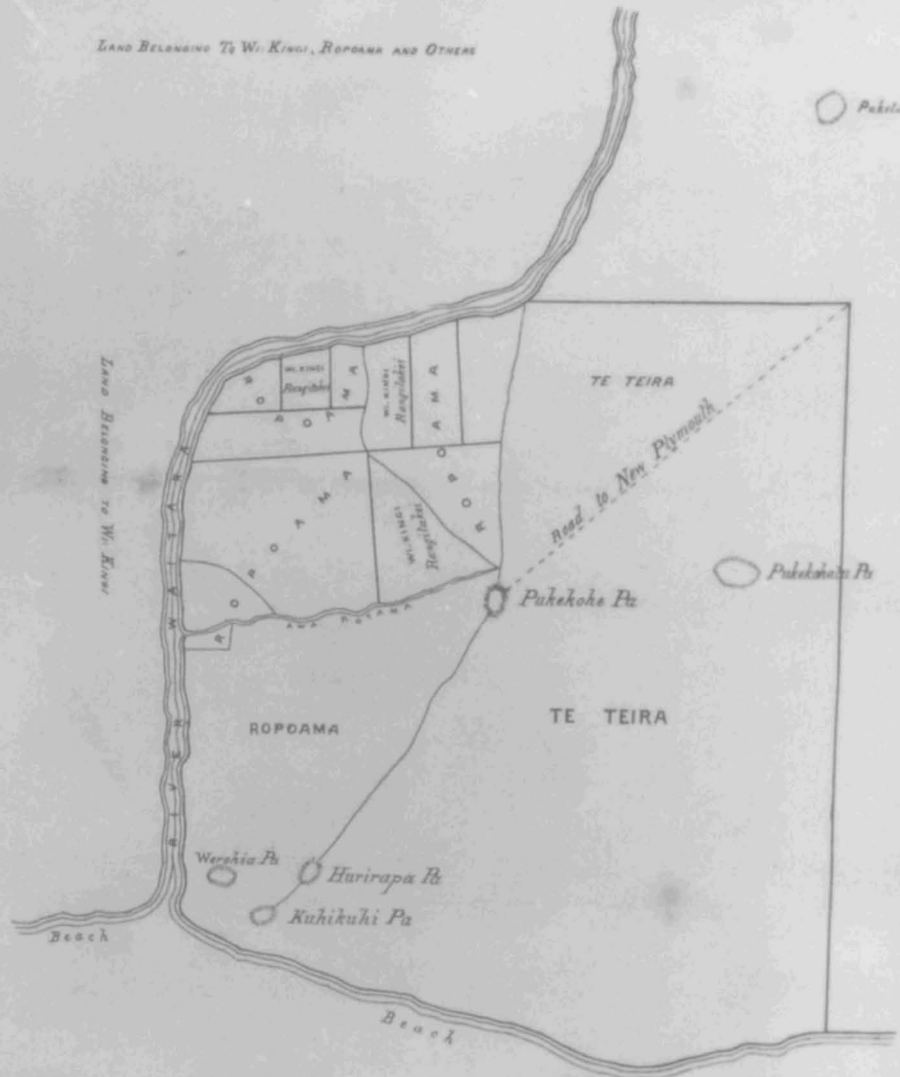
FIG. 14.36. MĀORI MAP OF MOTUTAPU AND RANGITOTO ISLANDS, 1845. North is at the top. Manuscript, pencil on paper. A number of coastal features on Motutapu Island have names, but regrettably only one, Tāhuhu, appears on current large-scale maps, as Otahuhu Point. This name was most useful in orienting Ngātai's map. The only way to identify other names on his map with coastal features on the island would be to traverse the entire coast on foot with a Māori linguist and local historian who knew the island's Māori history. Rangitoto Island has no place-names, perhaps because the island is of little value for growing crops. See also figure 14.37. Size of the original: 36 × 21 cm. Photograph courtesy of the National Archives Head Office, Wellington (Old Land Claims File [OLC] 1/332, Sep. 22).

FIG. 14.37. INTERPRETATION OF NGĀTAI'S MAP (FIG. 14.36). The translations in roman type are place-names.

(*Facing page*)

FIG. 14.38. "COPY OF SKETCH MADE BY ROPOAMA TE ONE," 1861. The map was made on the beach at Pariwhakaoho, Golden Bay, on 7 May 1861. This copy is oriented to the southeast. It is a monochrome lithograph, linen backed, and the legend implies that it was prepared from a manuscript copy that was in color. A copy of Ropoama te One's map and a copy of the map prepared from the official survey of the land at Waitara were sent to the colonial secretary–any copy of either map made and kept in New Zealand would have been in color. Six *pā* sites are shown on the map, five in the area of land under dispute. Only two *pā* sites can be located on modern maps: one is probably Pukekohe *pā,* and the other is definitely Puketakauere. The area had a large Māori population, and the land near the river was fertile for crops. The *pā* were there to protect the asset.

Size of the original: 29 × 24 cm. From *Appendix to the Journals of the House of Representatives of New Zealand,* E.23, 1863, tipped in between title page and p. 1. Photograph courtesy of the Alexander Turnbull Library, National Library of New Zealand, Te Puna Mātauranga o Aotearoa, Wellington (832.2gbbd/1861/acc. no. 6677).



COPY OF SKETCH MADE BY ROPOAMA TE ONE, ON THE BEACH, AT PARIWHAKAOHO, MASSACRE BAY, ON THE 7TH. MAY, 1861, SHEWING THE PORTIONS OF THE DISPUTED LAND AT WAITARA, WHICH BELONGED TO HIMSELF, TE TEIRA, AND WIREMU KINGI RANGITAKEI, RESPECTIVELY.

COLLINGWOOD, 20TH. JUNE, 1861.

SD. JAMES MACKAY JUNR., ASST. NATIVE SECY.

PINK—SHEWS THE LANDS BELONGING TO WIREMU KINGI RANGITAKEI.

GREEN—SHEWS THE LANDS BELONGING TO ROPOAMA TE ONE.

YELLOW—SHEWS THE LANDS BELONGING TO TEIRA.

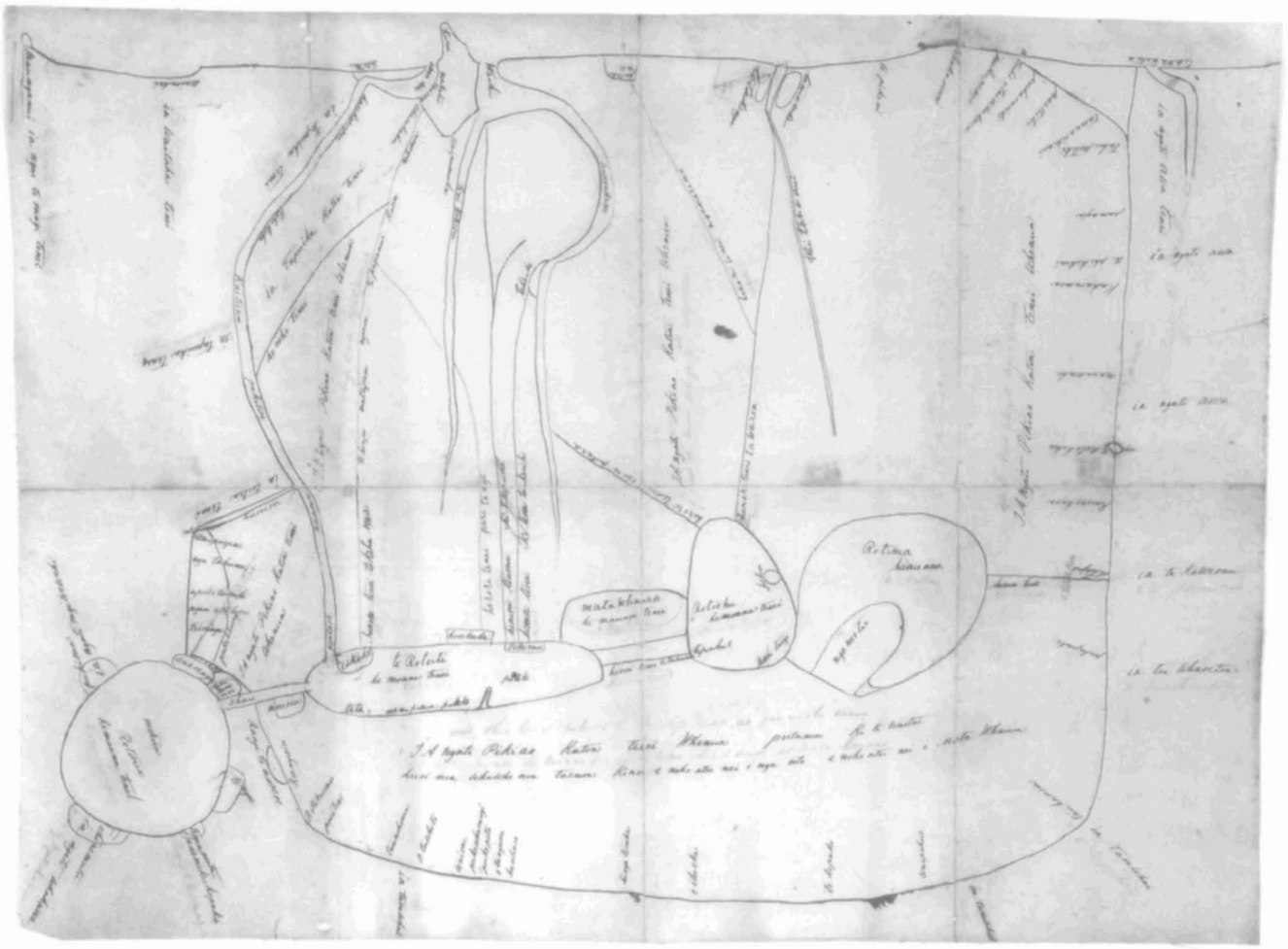


FIG. 14.39. MĀORI MAP OF ROTORUA LAKES AND NGĀTI PIKIAO LANDS, CA. 1877–95. The map is oriented approximately to the northeast; manuscript, black ink on paper, linen backed. Lake Rotorua is the most accurate of the four lakes on the map but lacks Mokoia Island. The coastlines of Lakes Rotoiti, Rotoehu, and Rotoma are very generalized. See also figures 14.40 and 14.41.
Size of the original: 60 × 85 cm. Photograph courtesy of the National Archives Head Office, Wellington (LS Misc. 2071).

Although Mackay did not ascertain why the map was made, the area covered was in dispute among Māori and between Māori and the Europeans, and the land had been offered for sale to the government in 1859 by a Māori called Te Teira, whose name appears on the map. Te Teira was paid an installment for the land, but he had no title to it. His right to sell was disputed by his *ariki*, Wiremu Kingi Rangitakei, who was opposed to selling land to Europeans. Wiremu Kingi Rangitakei not only had the right to forbid the sale of communal land, but he also had hereditary and personal claims to parts of the land in question. Government officials, however, believed he had no right to the land and regarded him as challenging the sovereignty of Queen Victoria. In February 1860, when an official survey of the land began, the surveyors were resisted, leading to the beginning of one of the land wars in the North Island.[118]

The provenance of figure 14.39, which shows the land of the Ngāti Pikiao *hapū* of the Te Arawa *iwi* and the Rotorua lakes, is uncertain, but it is thought it may have originated in the late nineteenth century under the auspices of the Great Committee of Rotorua. That committee, which represented several *hapū* of the Te Arawa *iwi,* was formed to investigate Māori land titles and settle claims without recourse to the native land court. Such investigation would avoid the costs of overlapping surveys, prevent litigant claimants from having owners pay for

Memorandum from Thomas H. Smith, Acting Native Secretary, to James Mackay, dated 31 August 1861; and Memorandum from Thomas Gore Browne, Governor-General to the Duke of Newcastle, Colonial Secretary, London, dated 31 July 1861; the last two are in the *Appendix to the Journals of the House of Representatives of New Zealand,* E.23, 1863, 2 and 3 respectively).

118. Keith Sinclair, "Browne, Sir Thomas Gore (1807–87)," in *An Encyclopaedia of New Zealand,* 3 vols., ed. Alexander H. McLintock (Wellington: Government Printer, 1966), 1:258–59.

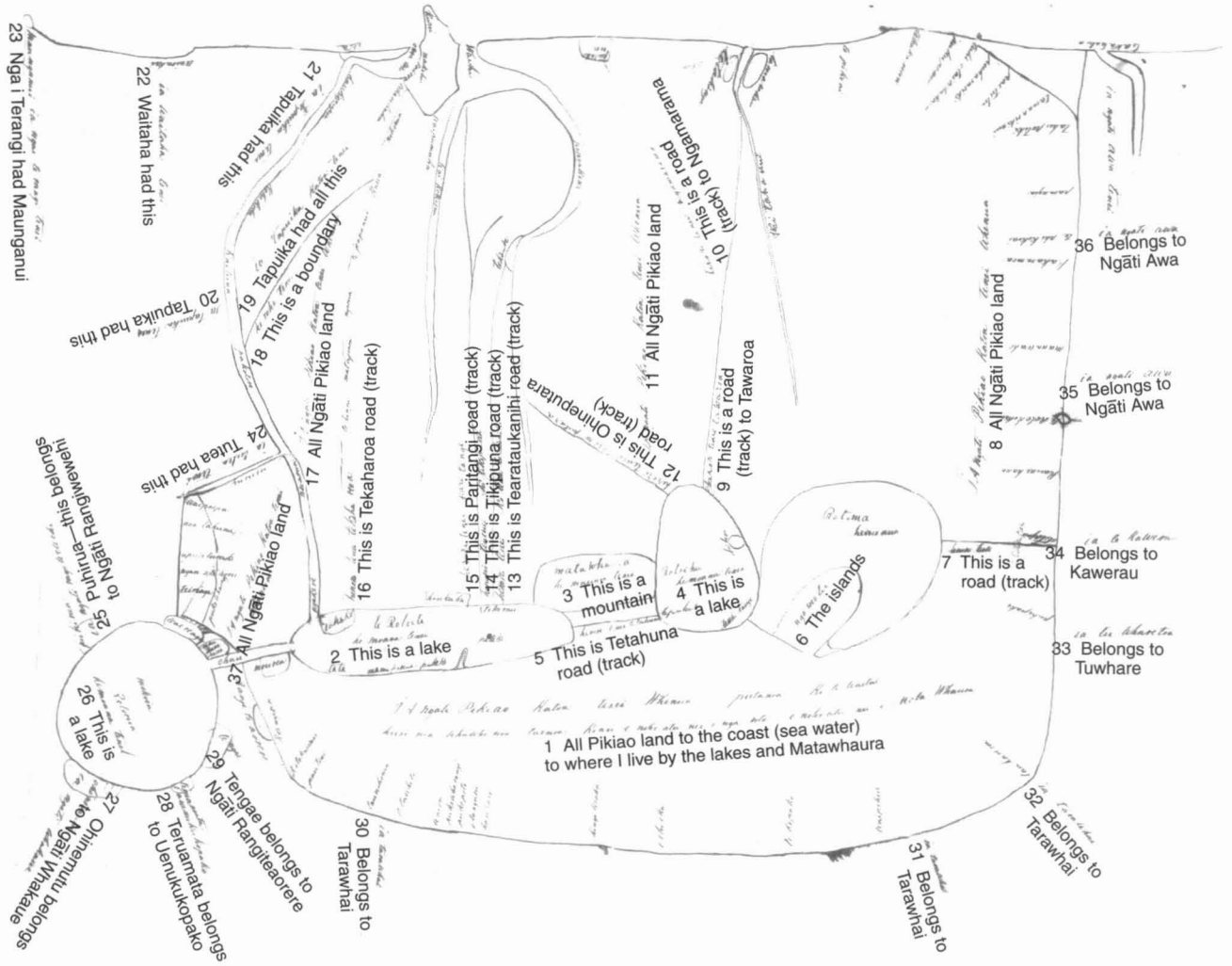


FIG. 14.40. TRANSLATION OF FEATURES ON MAP OF NGĀTI PIKIAO LAND (FIG. 14.39). A translation of thirty-seven names has been made by Manu' Whata–Te Runanganui o Ngāti Pikiao. The items include lakes, a mountain, islands (but none currently on Lake Rotoma), roads or tracks, landowners, and the boundary of Ngāti Pikiao land. The Bay of Plenty coastline, the Ngāti Pikiao boundary, and the Kaituna River form the periphery of the map. Landownership is shown beyond the Ngāti Pikiao boundary by the *hapū* and *iwi* name. The lines running from the lakes toward the bay (except the rivers and streams) are described as roads or tracks, most likely the latter connecting *hapū* lands and the lakes with the streams and rivers, estuaries, and the Bay of Plenty coast. None of the names given to the tracks can be found on modern maps.

surveys against their will, and gain the confidence of the Te Arawa Māori. Land titles in the Rotorua area were very complicated.[119]

D. M. Stafford, the Māori historian of the Rotorua area in the North Island, believes the map could have been made for the committee as early as 1877 or as late as 1895 on the occasion of one of the great meetings of all Ngāti Pikiao *hapū* held to settle boundary disputes before land court hearings.[120] Since the committee made its report in 1879, the earlier date is consistent with the committee's involvement.

The map was drawn by one Māori but represents the collective knowledge of the *hapū*. All the written information was added by the same person. A partial translation of the map has been made (fig. 14.40), and it includes lakes, a mountain, islands, roads or tracks, and names of landowners within the boundaries of Ngāti Pikiao land. Outside of Ngāti Pikiao boundaries, landownership is shown by the name of the *iwi* and *hapū*. The tracks connect lakes and streams with the coast, giving access to for-

119. Herbert William Brabant, "Report on the State of the Native Population in the Bay of Plenty and Lake Districts to the Under Secretary, Native Department, 31 May 1879," in *Appendix to the Journals of the House of Representatives of New Zealand,* G.1, 1879, session 1, 18.

120. D. M. Stafford, personal communication, 5 September 1994.

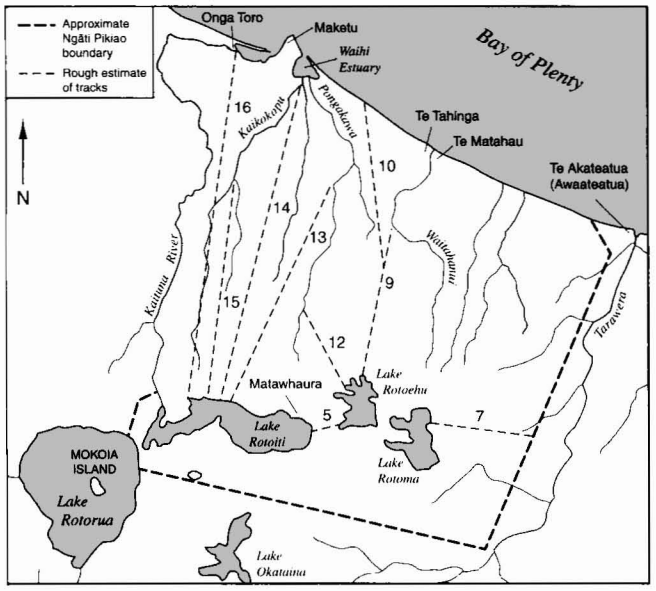


FIG. 14.41. PLACE-NAMES, BOUNDARY, AND TRACKS ON MAP OF NGĀTI PIKIAO LAND (FIG. 14.39). The place-names and numbers correspond to those on figure 14.40. Dashed lines are rough estimates of the tracks between lakes, lakes and coast, and lakes and rivers.

est, stream, estuary and coastal food resources, and serve as routes for trade and war (fig. 14.41).

The map has been used by Ngāti Pikaio in a dispute about a recent claim for much of their land, particularly for the forest around Lake Rotoehu, from Ngāti Awa *iwi* in the Whakatane area.[121] The present Ngāti Pikiao *hapū* had not known of the map, and much of the information and place-names on it were no longer known to them when it was brought to their attention. Members of the *hapū* had various interpretations of the names on the map and took some time to reach consensus on the translations given in map 14.40.[122]

Conclusion

Māori culture and survival were inextricably entwined with the natural environment. The Māori had great respect for the environment, especially for its visible expression as landscape. Furthermore, toponyms long associated with the landscape encapsulated much Māori traditional history that commemorated events and myth, both of which served as geographical mnemonics. Added to these mnemonics were names that suggested the appearance or shape of topographic features.

Māori obtained overviews of the landscape from high viewpoints called *taumata* (resting place and the brow of a hill). Best described their role thus: "The old type of Maori much appreciated a commanding *taumata* from which a fine view of his tribal lands might be obtained, and when resting at such places I have frequently heard them crooning old songs that referred to long past occurrences at the places they looked upon."[123] Few places in New Zealand are more than one hundred kilometers from the sea. The islands have a moist, temperate oceanic climate throughout the year, and generally the rainfall is much heavier on the western mountainous sides of both islands than on the eastern sides. In the North Island, Hawkes Bay and the Wairarapa receive less rainfall; in the South Island, the same is true from the Kaikoura Peninsula south to Foveaux Strait.

Before European settlement, the vegetative cover was an approximate reflection of the rainfall. The western and northeastern parts of the North Island were primeval forest. The Auckland Isthmus and the area south to Lake Taupo and northeast of the lake were covered in scrub and fern. Lowland tussock covered the area surrounding the three volcanoes. South from the Mahia Peninsula to Palliser Bay, the land was covered in scrub and fern. In the South Island, the western side from Cape Farewell south to Fiordland grew primeval forest to the bush line of the Southern Alps. Above the bush line, tussock, rock, and snow predominated. On the eastern side of the Southern Alps, primeval forest occupied the mountain valleys and sometimes the foothills. This gave way to lowland tussock from the Kaikoura Peninsula south to Foveaux Strait. In spite of the forest cover, there were probably many *taumata* in both islands that commanded panoramic views of extensive and distinctively etched terrains.

Māori were well traveled in the North Island and particularly so in the South Island. Both islands were covered with an extensive network of trails. The difficult coastal terrains of the west and southern coasts of the South Island were known and used. *Waka* and *mōkī/mōkihi* (rafts) were used for crossing major rivers, and *waka* were used for travel around the southern coast.

Culture, toponyms, *taumata,* environmental conditions, and travel combined to afford Māori the ideal bases from which to form geographical images of large areas. Hence, when a party of Māori visited the *Endeavour* in 1769, an *ariki* responded enthusiastically to Cook's request for geographical information by drawing an extensive map in charcoal on the deck. It represented 750 kilometers or more of the complex coastline of New Zealand, and Cook considered it sufficiently useful to make a copy and ask for the names of places and features. The *ariki's* coastal chart is the most convincing link in what was probably a continuous mapping tradition extending from prehistory to the late nineteenth century.

121. D. M. Stafford, personal communication, 28 June 1995.

122. D. M. Stafford, personal communication, 10 October 1994.

123. Elsdon Best, *Forest Lore of the Maori,* ed. Johannes Carl Andersen (1942; reprinted Wellington: Government Printer, 1977), 28.

Extant maps and maps described in accounts were almost without exception made for explorers, officials, and surveyors in response to questions about land, coasts and islands, and routes. All but three of the maps discussed in this chapter were made after the beginning of organized European settlement in New Zealand. Occasionally Māori responded by making maps with alacrity. This was certainly so not only in the case of the *ariki's* map made for Cook in 1769, but also of Tuki's map made for King in 1793, as well as perhaps of the unknown Māori's map of Lake Rotokakahi made for Hochstetter in 1859. In other cases, however, there is little indication of how much questioning and persuasion was used in obtaining maps or other geographical information from Māori. We know very little about maps Māori made for themselves or about how such maps may have differed from those they made for Europeans. Mackay may have been giving a clue when he observed, with reference to the map made in sand by Ropoama te One, that "in my opinion there is more reliance to be placed on the plan from its having been drawn by the Natives themselves and for their own information and amusement than if it had been drawn for, or at the request of an Officer of the Native Department."[124] As a negotiator for Māori land on behalf of the government's Native Department, Mackay's observation may well have stemmed from experiences involving misunderstandings between Māori and Pākehās arising from the use of maps.

In most cases the content of the original map is likely to have been influenced by the need to communicate with Europeans about matters of mutual or Pākehā interest. Deliberately or by default, content is likely to have been omitted, modified, or supplemented by Europeans in the course of copying and printing. In virtually every case, toponyms and inscriptions were inserted by Europeans, though the balance between careful transcriptions and altered or supplementary content must always remain in doubt. Nevertheless, we can make some generalizations about how frequently categories of features appear in the maps described in this chapter. Topographic and hydrologic features are most numerous and occur most often. Cultural features are almost as numerous but occur considerably less frequently. Biological features are few and rarely occur.[125] Abstract, mythological, and religious concepts are also embodied in Māori maps. When Te Heuheu Tukino II made his map he used a fernstick to represent Tongariro (the three volcanoes) and a smaller fernstick to represent his *mana*. When the map was made in charcoal for Cook, the *ariki* wanted to explain that immediately after death the Māori *wairua* went to Te Rēinga and there descended into the Underworld. The language problem made his explanation difficult, so he became a map symbol by lying on the deck miming death and then pointing to Te Rēinga on the map he had drawn. Rakiraki's map (see fig. 14.27) records where beaverlike animals were supposedly found, and Te Huruhuru's map (see fig. 14.24) mentions a floating island and the abode of a *tipua,* which have all been linked by some scholars to Māori mythology.

The symbols on the extant derivatives of Māori maps are the most Europeanized of all their characteristics. The most blatant example is the use of an anchor to symbolize anchorages on several maps (see figs. 14.12 and 14.19–14.22). These apart, however, point symbols are rare. Of the extant maps, Tuki's, the oldest, is by far the richest in symbols.

From the maps examined in this chapter we know that maps were made by Māori in sand or dust, on wood, on the floor, and on paper. Various instruments were used: sticks, knife, charcoal, chalk, pencil, and ink. Although Māori were excellent wood-carvers from the precontact period onward, there are no records of maps' being carved in wood until late historical times.[126] Roger Neich suggests that the reason for this virtual absence is found in the conceptual basis of Māori wood carving.

> Maori artists used woodcarving to convey conceptual symbolic ideas and values about ancestors and tribal relationships. They did not use woodcarving as a form of note taking, nor as a form of recording facts about the natural world. . . . All carvings of ancestors placed them in an ideal space and time without ever indicating any sort of landscape. Landscape features in carving only came in after acquaintance with European art. I think all this is fairly good reason why there are no maps carved on wood.[127]

The vast number of nineteenth-century cartographic manuscripts from New Zealand constitute an uncharted sea. Records kept by the eleven regional and district offices of Land Information New Zealand and by the National Archives of New Zealand, Wellington, and in England by the Public Record Office, London, and the Hydrographic Office, Taunton, represent the main corpus of

124. Memorandum, Mackay to McLean, 20 June 1861 (note 115).

125. These generalizations are based on my tallies of the number of maps that depicted the following items: for topographic and hydrological features I included bays and inlets, caves, cliffs, coastal features, estuaries, fjords, islands, lagoons, lake outlets to the sea, lakes, large rocks, marshes, mountains in plan (hachuring), *pākihi* lands, passes or saddles, rapids, reefs, rivers, springs, and streams; for cultural features I included anchorages, "camps," carved *whare,* European settlements, fordable rivers, harbors, *kāinga,* landownership boundaries, notes on flat land, *pā,* place-names, places where fighting happened, roads, tracks, travel times, and whaling stations; and for biological features I included forest, kauri trees, notes on timber, and seal rookeries.

126. A carved map of the North Island on a *waka* paddle is mentioned by Roger Neich, *Painted Histories: Early Maori Figurative Painting* (Auckland: Auckland University Press, 1993), 252.

127. Roger Neich, personal communication, 14 September 1994.

original nineteenth-century New Zealand cartography. The records consist of surveyors' field books, survey plans, manuscript maps, fair charts, coastal profiles, and other archival files–the latter often containing small manuscript maps. I made a search of the holdings of the Hydrographic Office in 1994 but saw only fair charts and coastal profiles. None of the other organizations' holdings have been systematically searched–this would be a tremendous task. The manuscripts in the Cartographic Collection of the Alexander Turnbull Library, Wellington, and the Hocken Library, University of Otago, Dunedin, are additional sources. Success in locating maps drawn by Māori or directly from information supplied by them in all these collections is difficult to predict, since such maps are unlikely to be cataloged as Māori maps and may lack documentation. However, it is likely that there are Māori maps buried in these records awaiting discovery by researchers.

APPENDIX 14.1
CHRONOLOGICAL LIST OF EARLY EXTANT MĀORI MAPS AND DERIVATIVES OF MĀORI MAPS

Date, Author of Original Map, and Area Covered	Derivative Versions	Where Held or Where First Published[1]	Size (cm) (h × w)	Orientation	Medium	Language	Description
1793, Tuki (fig. 14.6); the North and South Islands and some offshore islands		Public Record Office, London, MPG 532/5	41 × 53	Roughly west	Manuscript; pencil on paper overdrawn in black ink–place-names also in black ink	English and Māori	Record of sociopolitical situation in North Auckland Peninsula
	Slightly later version, apparently copied from original	Public Record Office, London, MPG 298	41 × 53	Roughly west	Manuscript; black ink on paper	English and Māori	Same as above; see also note 70 in text
1841, unknown Māori; the South Island, Stewart Island, and offshore islands	1894 (fig. 14.17)	*AJHR,* C.1, 1894, facing 98	32 × 18	North	Lithograph	English and Māori	Essentially mariner's chart of the South Island
	Ca. 1900–1910, by draftsmen of the Department of Lands and Survey (fig. 14.18)	Cartographic Collection, Alexander Turnbull Library, Wellington, 834ap/1841-2/acc. no. 527	56 × 44	North	Manuscript; black ink on paper, blue watercolor around coastline; backed	English and Māori	Same as above
	Ca. 1900–1910, by draftsmen of the Department of Lands and Survey	Location unknown					Same as above
1843, Hone Tūhawaiki; southwest part of Fiordland, South Island	1851, copy published by Shortland (fig. 14.19)	Shortland, *Southern Districts,* facing 81	17 × 11	North	Lithograph	English and Māori	Illustrates Chalky and Preservation Inlets and islands
1843, Hone Tūhawaiki; northern part of Foveaux Strait, South Island	1851, copy published by Shortland (fig. 14.20)	Shortland, *Southern Districts,* facing 81	17 × 16	North	Lithograph	English and Māori	Illustrates harbors and anchorages

APPENDIX 14.1 (*continued*)

Date, Author of Original Map, and Area Covered	Derivative Versions	Where Held or Where First Published[1]	Size (cm) (h × w)	Orientation	Medium	Language	Description
1843, Hone Tūhawaiki; northern part of Foveaux Strait, South Island	1851, copy published by Shortland (fig. 14.21)	Shortland, *Southern Districts,* facing 81	11 × 17	North	Lithograph	English and Māori	Illustrates harbors and anchorages
1843, Hone Tūhawaiki; eastern coast of Stewart Island	1851, copy published by Shortland (fig. 14.22)	Shortland, *Southern Districts,* facing 81	17 × 11	North	Lithograph	English and Māori	Illustrates harbors and anchorages
1843, unknown Māori; Lakes Wairarapa and Onoke, North Island	1843, copy by Tiffen (fig. 14.9)	Wellington Regional Office, Land Information New Zealand, H. S. Tiffen Field Book 28, p. 3, map marked "copy"	20 × 12	North	Manuscript; pencil on paper	English and Māori	Illustrates lakes, river, streams, and place-names
1843, unknown Māori; Chatham Island	1843, copy in Tiffen's field book (fig. 14.12)	Wellington Regional Office, Land Information New Zealand, H. S. Tiffen Field Book 28, p. 21	12 × 20	North	Manuscript; pencil on paper	English	Illustrates harbors, anchorages, lakes, and whaling station
1844, Rakiraki; Lakes Wakatipu, Wanaka, and Hawea and Clutha River, South Island	1844, copy by Barnicoat (fig. 14.27)	Hocken Library, University of Otago, Dunedin, Barnicoat, Journal 1841 to 1844, p. 41	6 × 7	North	Manuscript; ink on paper	English and Māori	Illustrates lakes, river, mountains, forest, and where "beavers" are
1844, Te Huruhuru; Lakes Wakatipu, Wanaka, and Hawea, South Island	1851, copy published by Shortland (fig. 14.24)	Shortland, *Southern Districts,* facing 205	17 × 12	North	Lithograph	English and Māori	Illustrates lakes, rivers, mountains, settlements, tracks
1845, Ngātai; Motutapu and Rangitoto Islands (fig. 14.36)		National Archives of New Zealand,	36 × 21	North	Manuscript; pencil on paper	Māori	Illustrates landownership, boundaries, and place-names

		Wellington, Half Caste Claim of the Children of Thomas Maxwell, Old Land Claims (OLC) File 1/332, Sep. 22					
1848, Te Ware Korari (place-names written by Mantell) (figs. 14.28–14.30); Waitaki River (South Island) and lakes at its source		Drawings and Prints Section, Alexander Turnbull Library, Wellington, E333, W. B. D. Mantell Sketch Book no. 2, pp. 36–38	page 14 × 24	Various	Manuscript; pencil and ink on paper	Māori	Illustrates rivers, lakes, caves, cliff, hills, spring, swamp, and *kāinga*
1859, unknown Māori; Lake Rotokakahi, North Island	1867, copied and published by Hochstetter (fig. 14.14)	Hochstetter, *Physical Geography,* 404	6 × 3	Roughly northeast	Printed	English	Illustrates lake
1861, Ropoama te One; disputed land at Waitara, North Island	1863, *AJHR,* E.23, tipped in between title page and p. 1 (fig. 14.38)	Cartographic Collection, Alexander Turnbull Library, Wellington, 832.2gbbd/1861/acc. no. 6677 (loose copy of map)	29 × 24	Roughly southeast	Lithograph	English and Māori	Illustrates landownership boundaries, river, coast, and *pā* sites
Ca. 1862, unknown Māori (place-names probably by European) (fig. 14.33); Rakaia and Ashburton (Hakatere) River headwaters and route to west coast, South Island		Cartographic Collection, Alexander Turnbull Library, Wellington, -834.44cdc/ca. 1860/acc. no. 3739	21 × 13	North	Manuscript; black ink on paper; backed	Māori	Illustrates rivers, lakes, mountains, pass, and place-names
1865, unknown Māori; Rakaia River headwaters, South Island	1952, redrawn by Taylor (fig. 14.35)	Taylor, *Lore and History,* facing 168	8 × 10	West	Printed	English and Māori	Illustrates rivers, lake, mountains, pass, and place-names

APPENDIX 14.1 (*continued*)

Date, Author of Original Map, and Area Covered	Derivative Versions	Where Held or Where First Published[1]	Size (cm) (h × w)	Orientation	Medium	Language	Description
1870, unknown Te Arawa Māori (fig. 14.15); Lakes Rotorua and Rotoiti, north to Bay of Plenty coast, North Island		Manuscripts Section, Alexander Turnbull Library, Wellington, MS. papers 0032–0217, Donald McLean, private correspondence with H. T. Clarke (1), 1861–70	23 × 19	Roughly north	Manuscript; black ink on paper	English and Māori	Routes of escape open to Te Kooti
1870, Ruka te Aratapu (fig. 14.16); Waihapu, roughly 32 km west of Tolaga Bay, North Island		National Archives of New Zealand, Wellington, AD1, 1870/3334	6 × 13	Cannot determine	Manuscript; black ink on paper	Māori	Showing site of ambush of Te Kooti
Ca. 1877–95, unknown Māori (fig. 14.39); Rotorua lakes north to seacoast, North Island		National Archives of New Zealand, Wellington, LS Misc. 2071	60 × 85	Roughly north-east	Black ink on paper; backed	Māori	Illustrates lakes, rivers, streams, seacoast, estuaries, tracks, landownership, boundary, and place-names

[1] *Appendix to the Journals of the House of Representatives of New Zealand,* E.23, 1863, and C.1, 1894; Ferdinand von Hochstetter, *New Zealand, Its Physical Geography, Geology and Natural History with Special Reference to the Results of Government Expeditions in the Provinces of Auckland and Nelson* (Stuttgart: J. G. Cotta, 1867); Edward Shortland, *The Southern Districts of New Zealand: A Journal with Passing Notices of the Customs of the Aborigines* (London: Longman, Brown, Green and Longmans, 1851; reprinted Christchurch: Capper Press, 1974); William A. Taylor, *Lore and History of the South Island Maori* (Christchurch: Bascands, 1952).