

I take the cord and smear it with blood procured from an incision in the left side of my body. I then kindle a fire and burn the cord; also, I cook a single *kumara* or *taewa* at that fire. The cooked *kumara* I give to the *ruwahine* (a childless woman employed in various sacred rites), who eats it. Friend! That man is dead!

“Another method of averting the effects of witchcraft is to place the *kumara* beneath the *paepae-poto* (door-sill) of my house and get the *ruwahine* to step over it.”

The *paepae-poto* is one of the most sacred parts of a house. The saying is, “*Kia wehi ki te paepae-poto a Hou.*”

To describe the various rites, customs, and ceremonies of the natives of Tuhoe Land as they obtained in pre-pakeha days would require a volume, and also much care and patience on the part of the compiler, combined with a thorough knowledge of the Maori tongue, or, at least, the vernacular thereof, a qualification which I myself, unfortunately, do not possess. It is greatly to be desired that these matters should be placed on record during the next few years, for the present generation is the last which will retain such knowledge, and, indeed, only a few old men of this time can tell of the countless ceremonies of the ancient Maori. Much has been lost beyond recall, but much may yet be saved if a few capable persons will but take the matter up.

ART. V.—*The Building of Hotunui, Whare Whakairo, W. H. Taipari's Carved House at Thames, 1878.*

Told by MEREANA MOKOMOKO, widow of the late chief, W. H. Taipari, to Gilbert Mair, 12th July, 1897.

[Read before the Auckland Institute, 6th September, 1897.]

My father, Apanui Hamaiwaho, chief of Ngatiawa at Whakatane, built the house Mataatua. Taipari, his father, Hotereni, and myself were invited to go to Whakatane to take away that house, but before we could go Sir Donald McLean visited Whakatane, and Ngatiawa, to show their *aroha*, gave him the house.

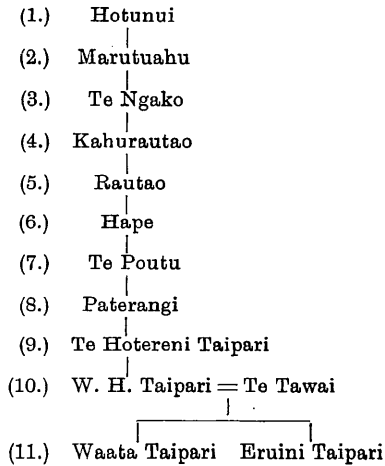
My father then said Ngatiawa would carve a house for me. This was in 1875. Accordingly the work was commenced forthwith, and in May, 1878, the posts were all finished, and about seventy Ngatiawa, under the chiefs Wepiha Apanui (my brother), Rangitukehu te Wharewera,

Tiopira Hukiki, Te Putere, and Te Pirini, came to Hauraki, bringing all material. The freight and passages cost £170. The first post erected was named after Pereki Awhiowhio, chief of Ngatiwhanaunga. When an attempt was made to lift the ridge-pole it failed: then we sent for Paroto Manutawhiorangi, who uttered an incantation, or *karakia*, called "*Tehuti o Tainui*" (the raising of Tainui), and lo! the great tree was lifted up quickly and easily. Such was the power of magic as exercised by Maori priests of old. During the building a number of the Ngatiawa workmen were smitten with sudden illness, which was attributed to their having burned in a cooking-fire some chips from Apanui's chisel (*whao*). It was the women who inadvertently committed sacrilege, and the sickness which fell upon our people was termed a *mate-ruahine*. When several persons had died, my brother Wepiha came to me at dawn of day saying, "*Kua ngaro u Ngatiawa* (Ngatiawa will be annihilated). Hasten you quickly to remove the spell caused by the desecration of the work of our father's chisel." I hurried to the spot, and in the midst of the assembly a small fire was made of chips from the carvings, and two kumara roasted therein, which were offered to me to eat. I trembled with fear, lest death should come to me also; but the old men said, "Fear not, you are equal in mana to Apanui, your father, and you alone can remove this spell which is destroying Ngatiawa." I then ate the roasted food, and the epidemic ceased. Soon the house was completed, and Wepiha summoned a *tohunga* called Mohi Taikororeka from Opotiki to perform the ceremonies called "*whai kawa*"—i.e., making the house "*noa*," removing the *tapu*, &c. After this was done, and the men had entered and eaten food in the house, three women (myself, Kitemate Kiritahanga, and Mere Taipari) were sent for to *takahi te paepae* (to tread on or cross over the threshold, and thus remove the enchantment which debar women from entering a sacred house until this ceremony is ended), for, as you know, the ridge-pole would sag down in the middle and destroy the appearance of the house were this ceremony disregarded. As the morning star (*Kopu*) rose, we, the three women, crossed over the threshold which Te Raihi, of Ngatihaua, had *tapa'd* (called) Hape Koroki, and then the *mana o te whakairo* (the sacredness of the carving) was subjugated, overcome, and women generally were free to enter and eat within the house.

The several tribes of Ngatiawa who took part in the building were as follows: Ngatihokopu, Te Pahipoto, Te Patuwai, Te Patutatahi, &c.

The ridge-pole was a kahikatea (white-pine), procured at Turua. It was carved by Hotereni Taipari himself, and

named after his great ancestor Hotunui. These are the generations from that ancestor :—



The length of the house is 80 ft. ; width, 33 ft. ; height, 24 ft. ; length of porch, 12 ft.

The figures on the right-hand side of the porch are—(1) Kopuani, (2) Takuao, (3) Te Tai te Hura, (4) Takoto Titaha; inside on the right hand the large figures are as follows: (5) Te Motuituiti, (6) Te Iwi Tuha, (7) Te Putara, (8) Ngahaupaha, (9) (not named), (10) Te Apurangi, (11) Kahurautao, (12) Hape, (13) Matatahi, (14) Ngangaia, (15) Taitoi, (16) Pereki Awhiowhio, (17) Te Whero, (18) Te Umu, (19) Matau, (20) Kiwi.

On the left-hand side of the porch there are—(1) Kauahi, (2) Te Tuki, (3) Horowhenua, (4) Tauaiwi; on the left hand inside the figures are—(5) Paharua, (6) (not named), (7) Ramuri, (8) Parera, (9) Ureia, (10) Rautao Pouwharekura, (11) Uetawhiti, (12) Tapane, (13) Toitoi, (14) Puhoi, (15) Putoa, (16) Kawhero, (17) Pahae, (18) Pakira, (19) Tarakai Kahia, (20) Riki.

The *paepaewaho* (threshold of porch) is called “Rua-mano.”

When the builders were returning to their own place they would not accept payment beyond the food and presents we had given them from time to time, but my father-in-law (Te Hotereni Taipari) felt ill at ease, saying the Ngatimaru had not sustained their ancient name for generosity; so he said to me, “My daughter, do you take this letter quickly to the Bank of New Zealand at Tauranga, and when our friends the

Ngatiawa [who were returning by sea] reach that place give them the money the bank-manager will pay you." I travelled day and night overland, and overtook the steamer at Tauranga, and I got the bag of money from the bank, and took it to the people, saying, "Behold! I have brought you a *koha* (gift) from your grandparent, Hotereni Taipari." £1,000 in single bank notes did I give them, and Ngatiawa went on their way rejoicing.

ART. VI.—*The Insulation of Cold-stores.*

By Professor F. D. BROWN.

[Read before the Auckland Institute, 12th July, 1897.]

Plates XI. and XII.

WHEN a low temperature is artificially maintained in any space, such as a portion of the hold of a steamer, a room in a freezing-works or butter-factory, or in a railway-truck, it is necessary to prevent, as far as possible, the access of heat from the outside. This is done by providing an internal lining to the walls and roof, distant from them some 12 in. to 18 in., and packing the intervening space with some material which does not readily allow heat to pass through it. Charcoal has hitherto been generally employed for this purpose, but it is claimed that pumice-stone is more suitable; while it is conceivable that other substances known to be good insulators might be employed with advantage.

It seemed desirable to institute an exact comparison of the insulating powers of these substances, and the following is a description of some experiments made with this object in view:—

The apparatus employed is shown in Plate XI.; it consisted of a small cylinder A of thin brass, 2 in. in diameter and 7 in. high, surrounded by a double cylinder or jacket BB made of copper. The internal diameter of this second cylinder was $5\frac{3}{8}$ in. and its height $10\frac{5}{8}$ in.; so that A, when placed centrally, was separated from BB by a space $1\frac{1}{8}$ in. wide. This space CC was loosely packed with the charcoal or other substance to be experimented upon. The cylinder A was provided with a thermometer T, divided into tenths of a degree centigrade, and of such an open scale that hundredths of a degree could be easily distinguished by means of a suitable reading-telescope, which instrument was employed through-