more than throwing together this short notice of a district, upon the wonders and picturesque beauties of which a volume might be written; and I can only express a hope that the time is not far distant when the means of reaching it will be more easy, for although there are many scenes in which the active forces of nature may be observed under grander aspects, there are few more calculated to excite our interest than those which are contained within the Lake District of Auckland.

Art. II.—*Notes of the Traditions and Manners and Customs of the Mori-oris.* By W. T. L. Travers, F.L.S.

[*Read before the Wellington Philosophical Society, 28th October,* 1876.]

There are few subjects which excite greater interest amongst those who are engaged in inquiries into the origin and progress of civilization, than authentic accounts of the habits and customs of the lower races of men, especially before these have become modified by contact with civilized peoples; and as it is notorious that modifications resulting from such contact are very rapidly effected, it is important that those who may have opportunities of intercourse with the lower races should make and record their observations at the earliest possible moment. Such inquiries assume a still greater degree of interest when they relate to an uncivilized people which has long occupied an isolated position, remote from chances of intercourse; for if its relationship to any known race, and the period of its separation from the parent stock, can afterwards be established, a comparison of their several existing conditions will be of the highest value in connection with inquiries of the nature alluded to. It is necessary, however, to the correct determination of many of the most important points involved in such inquiries, to note, not merely the habits and customs of the lower types of mankind, but also the physical conditions under which they live; for these conditions must, manifestly, exercise a considerable influence in determining the nature of those habits and customs. This point has not, as I conceive, been sufficiently borne in mind by writers on the history and progress of civilization, when discussing the condition of inferior peoples in their relation to the contemporary state of more advanced branches of the same race. But it is one which cannot be ignored without the certainty of error in the deductions arrived at. I will take an instance: It is more than probable that the Mori-oris, at the time of the invasion of the Chatham Islands by the Ngatitama, in 1835 or 1836, were a mixed race, having a large proportion of Maori blood in their veins. This may, I think, be fairly deduced from what appears in the sequel of this paper, although we have

no present means of ascertaining, even with the slighest approach to definiteness, the period at which the admixture took place. But, although we may be justified in assuming that, however remote the period at which this admixture occurred, the then progress of the Maori in some of the arts of civilization had been far greater than that of the earlier inhabitants of the Chathams, we see, nevertheless, in the manners and customs of the present Mori-ori people, very little trace of this greater progress—a circumstance which can, as I conceive, only be accounted for by the different nature of the physical conditions under which the Maori and the Mori-ori respectively lived. Whilst, therefore, on the one hand, we may be justified in assuming that changed conditions of life had produced upon the descendants of the Maori emigrants to the Chatham Islands a degrading effect, we should not, on the other, be justified in concluding that the condition of the Maori in those islands was, at the time of the immigration to the Chathams, as low as that which we now observe in the inhabitants of the latter group. It must not be assumed, however, that I would lay down as a proposition, that the same conditions of life must necessarily produce similar effects upon the habits and customs of all uncivilized peoples exposed to their influence. Indeed, we find the Hottentot, the Kaffir, and the Bojesman, existing under much the same physical conditions, and yet presenting very different states of progress, due, no doubt, to the fact, that each one of these races is, itself, one of the conditions which produces modifications in the others. All I suggest is, that in considering the habits and customs of isolated uncivilized peoples, whose relations to some specific neighbouring race may be well ascertained, but whose habits and customs differ in important respects from those of that neighbouring race, we must take into account, for all purposes of comparison, the physical conditions under which each of them exists. If I am correct in this, it becomes important, when recording observations upon the habits and customs of an isolated uncivilized people, even where its affinity to any known race may not yet be established, that we should also correctly record all we can learn as to the physical conditions of the *habitat* in which we find it.

I do not propose to follow this course in the present paper, simply because the physical geography—including in that term the natural productions of the Chatham Islands—have already been described by several writers, as well as by myself, in papers read before this Society; but these must unquestionably be borne in mind in any comparisons which may be instituted between the Mori-ori and the Maori on the one hand, and between the Mori-ori and any other race between which and it a connection can be traced, on the other.

The notes which I am about to read in relation to the traditions and habits and customs of the Mori-oris, are drawn up chiefly from memoranda furnished to me by my son from notes made during his visits to the Chatham Islands some years ago. They are, unfortunately, imperfect—a defect which is not, however, to be attributed to any want of interest on his part in the subject itself, but partly to the difficulty of interpretation and partly to the still greater difficulty of arousing a sufficient degree of interest in these matters in the few old men who can give information in regard to them. In this connection it must be borne in mind, that for many years after the Maori conquest, the unfortunate Mori-oris were kept in a condition of abject slavery by their conquerors, who looked upon them very much in the light of sheep and oxen, to be killed and eaten as required, a condition of things by no means favourable to the maintenance of traditional lore or to the observance of original habits and customs, more especially if these should be at all obnoxious to the prejudices of the conquerors. Indeed, my son tells me that the Mori-oris have almost entirely abandoned their own customs, and that it is only when a few of the older people get together that they even speak their own language. I have no doubt, however, that with a knowledge of their language—unless it be altogether too late—the notes which he obtained would afford a clue to further knowledge, and it is to be hoped that some opportunity may occur for obtaining it. In former papers (published in the "Transactions of the New Zealand Institute"), some information is to be found as to the manners and customs of the Mori-oris; but I purpose, even at the risk of repetition, to give all that is contained in the memoranda furnished to me by my son.

The Mori-oris themselves say that they are a mixed race, and that the people who occupied the islands prior to the admixture, were larger in stature, and darker in colour, than the present inhabitants, and had very black hair. They state that these aboriginal people traced their descent, at a distance of 30 generations from the arrival of the first immigrants, with whom the admixture took place, to a great chief named Rongomai, whom they looked upon as a godlike man. It will be observed by those who have read the "Traditions of the New Zealanders," and the Rev. Mr. Gill's interesting work, "Myths and Songs from the South Pacific," that in almost every instance the islanders look back to Rongo, or Rongo-mai, or Rongo-ma-toure, as one of their remote ancestors, ascribing to him the powers of a god; and assert that, although he was a younger son, yet, through the craft of his mother, Papa, all the functions of government, the arrangement of festivals, and the right to distribute honours and power, had been secured to him. It is interesting, therefore, to find the elements of the same tradition amongst a people so

isolated as the Mori-ori. Moreover, Rongo is always represented as being very dark, and as possessing raven black hair, characters which, as it appears, distinguished the original inhabitants of the Chathams. My son was unable to obtain any definite information as to the parentage of the Rongo-mai of the Chatham Islands, the sole idea being that he was a very great chief, from whom the first inhabitants were descended. They also said that these original people had immigrated from Hawaiki in consequence of constant and devastating wars, a statement similar to that which is made with respect to the first Maori voyagers to New Zealand. At the time of the arrival of the first immigrants, the principal chiefs of the islands were: Marupuka, who lived at Awa-patiki; Rongopapa, who lived at the Wakuru; Mumuku, who lived at Muriroa; Mamoa, who lived at Tikeri; and Tarangi-mahora-whakina, who lived at Pitt's Island. The first strangers are said to have come in two large canoes, one of which was called the Rangimata, under a chief named Mararoa, and the other the Rangihoana, under a chief named Kawanga-koneke. They say that the people who arrived in these canoes were very numerous, and also came from Hawaiki, but no special reason is assigned for their leaving that place. Mr. Gilbert Mair, in a paper read before this Society, in 1870, mentions five canoes, but in other respects his account tallies a good deal with that obtained by my son. He, however, says that the people of these canoes also left Hawaiki in consequence of inter-tribal wars. The second batch of strangers arrived in a canoe called the Oropuke, under a chief named Mohi, and are said to have come from Awatea, or Arapawa, which is supposed to have been New Zealand, and is stated to have been a cool country. The probability is that the latter canoe did come from New Zealand, for the name Awatea, or Aotea, is that which is said to have been given to New Zealand by its first Maori discoverers. The name Arapawa is also common in New Zealand. Further strength is also added to the supposition, that some of the ancestors of the present people had come from New Zealand, by the fact, that Mr. Shand, on one occasion, heard some old Mori-oris singing a "Karakia," or song of gladness, upon the completion of a large fishing canoe, during which they used the words "*totara*," and "*pohutukawa*;" and, on being questioned as to those words, they mentioned that they were the names of trees in the country from which some of their ancestors had come. My son also states, that fragments of green-stone, similar to that used by the New Zealand natives, have been found on the islands, under circumstances which forbid the supposition that they were taken over by the Maori invaders of 1836, one of these fragments having been obtained from soil below the root of a tree of considerable size. It is related that the islands were afterwards visited by another canoe,

under a chief named Kakahu, who is said to have resided for a short time at Waitangi, but left because the climate was unfit for the growth of the *kumera.*

The people in the canoes Rangimata, Rangihoana, and Orepuke assumed the name Mori-ori, but were termed by the first inhabitants *Tangata tare* or strangers, whilst the aboriginals called themselves *Tangata whenua*, or people of the soil.

The people in the first two canoes, although said to have been cannibals, settled down peaceably, and soon became incorporated with the original inhabitants. On the arrival of the canoe Orepuke, however, disputes arose, leading to bloodshed and an outbreak of cannibalism, but the wars resulting from these disputes ultimately ceased at the command of a great chief named Numuku, by whom all deadly fighting was prohibited, their feuds being from thenceforth decided by combat with staves only, used, as my son states, in the manner of the quarter-staff, it being understood that the first side which drew blood was to be deemed victorious. Their quarrels appear to have arisen chiefly out of conflicting claims to the possession of valuable *karaka* trees, the fruit of which was a staple and much liked article of food, and my son informs me that nearly all the older *karaka* trees on the island are marked with devices indicating their special ownership—a fact of very great interest. He made drawings of many of these figures, which are very rude, but were evidently sufficient for the purposes of the owners. Copies are appended to this paper.

One of the leading chiefs of the Ngatitama, who was with the invaders in 1835 or 1836, informed me that the Mori-oris were large and powerful men, darker in color than the New Zealanders, and distinguished by hooked noses. Mr. John Amery, in his little work on the Chatham Islands, also mentions this form of nose, adding also that they had almond shaped eyes, and that in features they bore a strong resemblance to the Jewish people. They never tattooed, and indeed are said to have known nothing about it, a circumstance sufficiently remarkable in itself, and indicating the remoteness of the period at which the immigrations from New Zealand took place.

My son informs me that the language of the Mori-oris differs a good deal from that of the Maori, but that it is now rarely spoken, except amongst some of the older people. He observed that almost every sentence concludes with a kind of lisping sound. He also says that gestures are much employed, but I am not in a position to say whether the language is so defective as to require the use of gestures for the purpose of their ordinary intercourse. The point is one of interest, ethnologically, on several grounds, but I think it doubtful whether this was the case amongst the Mori-oris.

Capt. Wilkes, in his narrative of the United States exploring expedition, says :—" Chatham Island, which will probably soon be connected with the English colony of New Zealand, is now considered as a nest of rogues, and several vessels have been robbed there. Its inhabitants have a tradition that they are derived from New Zealand, whence their progenitors came about a century since, having been driven off in their canoes by a storm, and that on landing they had changed their language. The change consisted in reversing the ordinary construction of their phrases and the syllables of words, as for *haremai*, *maihare*, and for *paika*, *kapai*. The natives of Chatham Island are not tattooed, do not wear clothing, and are said to be more intelligent than their progenitors." I should especially recommend this latter statement to those who adopt the views of Archbishop Whately.

They divide the year into four seasons,—Mitorikau, or the eating of the *karaka* ; Tumatahua, or the growing of the *toe toe* ; Tupuku, or the coming of the cuckoo ; and Korahua, or the hot season, each of which was entered upon with special observances, of which, however, my son was unfortunately unable to obtain any intelligible account.

Their food consisted of fern-root, the fruit of the *karaka*, shell and other fish, birds, seals, and the carcases of stranded whales, and their ordinary modes of cooking were similar to those of the Maoris. It appears, however, that when fish was caught in large quantity it was placed in a running stream, and kept there until the flesh separated freely from the bones. This flesh was then pressed into flax baskets, and kept in store for consumption when required. Like all savage people they were gluttonous and improvident, stuffing to-day to hunger to-morrow. Flakes of chert were employed in cutting up the flesh of animals used for food, but my son was unable to ascertain whether, as in the case of the Maoris, particular kinds of chert were applied to particular classes of food. Chert flakes were also used for cutting the hair, the clippings from the head of a chief being held sacred, and placed in some secluded spot. The women always eat apart from the men. Slabs of sandstone, hollowed in the grinding of their stone implements, were used as dripping dishes in which the fat and juices of roasting flesh were collected. It is interesting to note that two dishes, manufactured in the same manner, are amongst the historical relics of the Maoris, and were exclusively used by them for collecting the fat and drippings obtained in cooking the Moa. It appears strange that these were the only instances in which the latter people employed such utensils, although the manufacture was simple and their usefulness apparent.

As a rule the Mori-oris built no huts, being ordinarily satisfied, even during winter, with the shelter of a sloping breakwind, under which they

huddled at night. When, however, a permanent settlement was to be formed, circular and V shaped huts were built, the former composed, like the huts of the Kaffirs, of a circle of poles drawn together at the top, and then thatched; and the latter of similar poles ranged along a ridge, one end resting on the ground, and the whole also covered with thatch, in each case a trench being dug to carry off the rain water. Their meeting houses were occasionally decorated with rude carvings, of which specimens were brought over by my son, and placed in the Wellington Museum. These carvings are different in character from, and are much ruder than those of the Maoris, but were made in the same manner.

Their clothing was composed chiefly of seal skins and of garments manufactured from the fibre of the *Phormium tenax*, much in the same manner as those used by the Maoris, but with less elegance in texture or design. Before going into battle the chiefs put on a long narrow piece of close matting, made from the raw leaves of the *Phormium*, and wrapped round the upper part of the body after the fashion of a Scotch plaid, but with one end hanging in front and the other behind. Both sexes wore ornaments made from the flax fibre dyed in black, or red and white, the black color being produced by steeping the fibre in the juice of some bark containing tannin, and then in a swamp, the water of which was impregnated with iron; and the red by wrapping up the fibre with scrapings of the inner bark of the Matipo (*Myrsine chathamica*) and the bruised leaves of the Kawa kawa (*Piper excelsum*), which was then steeped in water, where after remaining for some time it was taken out and dried before a fire, then assuming the red color.

They also used ornaments made from the teeth of the whale, but these were by no means common. My son was unable to find any trace of the use of ornaments made from any form of stone or mineral. The women used combs made from the back-bone of a fish. Stone tools of various forms were used, each of which was sacred to its own particular purpose, one being used in house building, another in cutting wood, a third in carving, and so forth. Some of the axes are peculiar in shape, differing from any of those used by the Maoris. My son discovered some singular shaped stone clubs, evidently of great antiquity, and made from stone different from that used for their ordinary tools. On enquiry he found that these were unknown to the present people, who merely conjectured that they must have belonged to the earlier people already referred to. These clubs are scarce and are usually found buried at some depth in the ground.

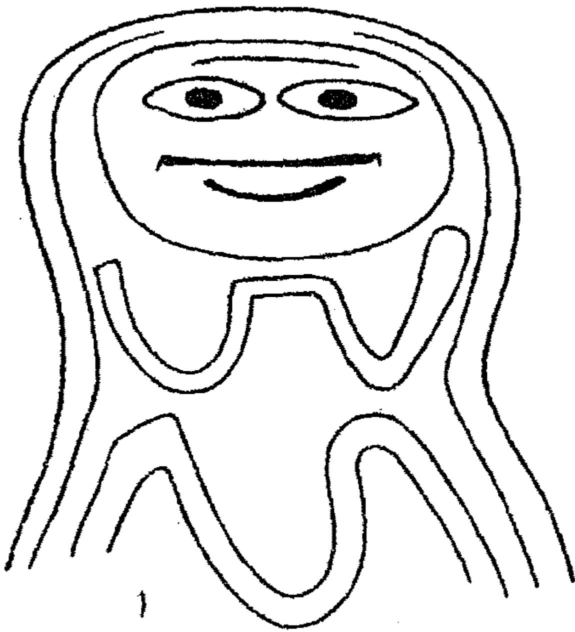
Polygamy was common amongst them, and it was usual for a brother to marry a deceased brother's wives. No marriage, however, was originally contracted without the consent of the parents of both parties. When a

marriage had been agreed upon it usually took place in the largest house in the settlement, all the people being assembled to partake of the store of food provided for the occasion. A bed of flax leaves mixed with feathers was made in the centre of the house, and after the food had been consumed the couple were placed on the bed, in the centre of the house, a ring made from the fibre of some plant, of which, however, my son could not ascertain the name, being placed round them. The song of marriage was then sung by the assembled people, who immediately afterwards retired, leaving the newly-married couple in the house. The females married very early, the reason given being that it was to prevent fornication. If a man were convicted of the seduction of an unmarried woman he was prohibited ever after from marrying a virgin. Adultery was severely punished, but not with death, beating until blood was drawn being the usual thing.

Children were baptized between the ages of two and three years, and the ceremony bears a striking resemblance to that performed amongst the Maoris. The people of the settlement being assembled at the appointed time and place, the child was brought forth by the priest, and placed in the arms of a chief member of the tribe. If the child's father held a high position in the tribe, a tree was at the same time planted, the growth of which was to be as the growth of the child. During the planting of this tree an incantation song was sung by the priest. This over, the person holding the child advanced towards the priest, who then poured water over it, another incantation song being then sung. A name was then given to the child, and the assembled people at once proceeded to a great feast, which concluded the ceremony. The resemblance in all this to the baptismal ceremony of the Maoris, so well described in Mr. John White's lectures on their manners and customs, is very apparent.

In the Rev. Mr. Gill's "Myths and Songs from the South Pacific" (already alluded to), the following is the account given of the naming of children amongst the islanders of the Hervey Group :—

"At convenient intervals, the principal King of Mangaia, as high priest of all the gods, assisted by the priest of Motoro, summoned the young people to their various family maraes, to be publicly 'named.' Some might be verging on manhood or womanhood, whilst others were scarcely able to walk. Standing in a half circle, two or three deep, the operator dipped a few leaves of a beautiful species of myrtle (*maire*) in the sacred stream flowing past the marae, and sprinkled the assembly; all the while reciting a song or prayer to the particular god at whose shrine they were worshipping, and who was supposed to be the special protector of those present. At certain pauses in the song, the King, as '*pontifex maximus*,' gently tapped each youngster two or three times on the head or shoulders,



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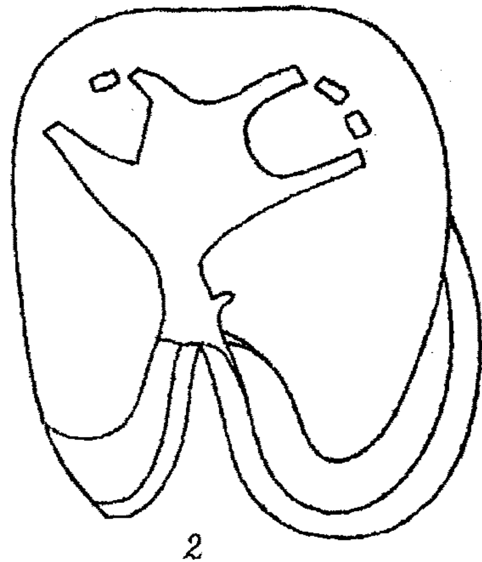

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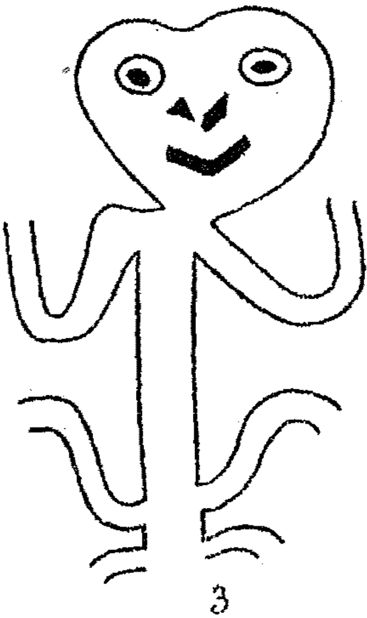

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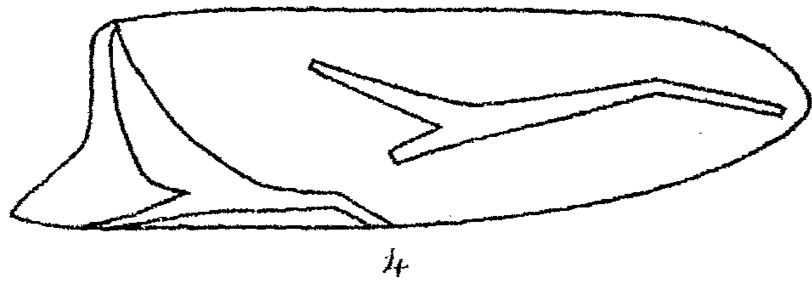

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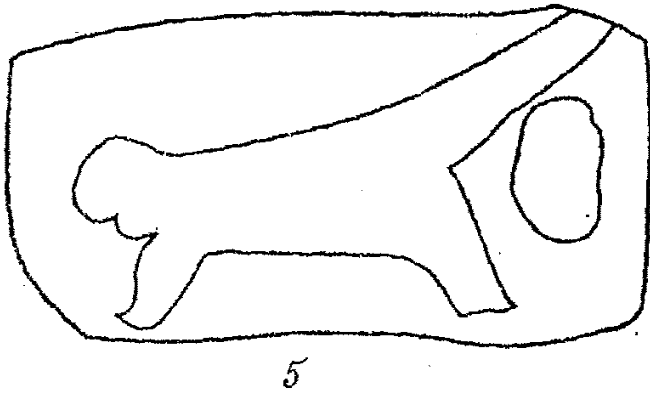

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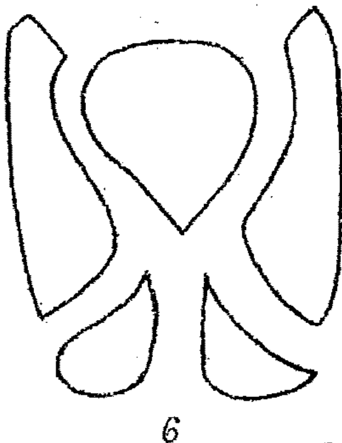

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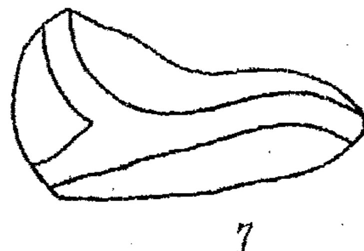

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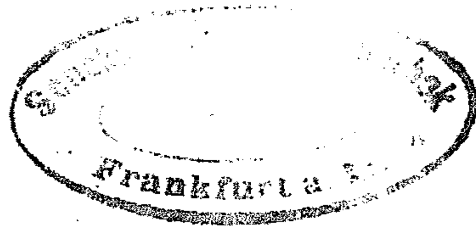
MORIORI CARVING.



pronouncing his or her name. The idea evidently was to secure a public recognition of the god and clanship of each of the rising generation—for their own guidance in the ceremonial of heathen life, and for the guidance of priests and chiefs afterwards. The greatest possible sin in heathenism was 'ta atua,' *i.e.*, to kill a fellow worshipper by stealth. In general, it might be done in battle. Otherwise, such a blow was regarded as falling upon the god himself; the literal sense of 'ta atua' being, god-striking or god-killing. Such crimes were generally the consequence of ignorance; to prevent the priests and chiefs from such blundering, these occasional 'namings' were appointed. In the event of war, and a consequent re-distribution of lands, the favour of all the principal gods must be secured by favours shown to their worshippers—at least to a selection of a few to keep up the worship of each idol. A great feasting invariably succeeded this ceremony of 'naming.'"

Mr. Mair, in the paper already referred to, says that the Mori-oris had neither songs nor chants; but in this he is undoubtedly in error. Mr. Shand has made, I am told, a considerable collection of their chants, which I hope he will soon publish. It appears, indeed, that in all their principal ceremonies chants, or *karakias*, were used.

Their modes of burial were various. While living, they almost invariably selected their own spot for interment; sometimes on a high hill commanding a view of the sea, some *atua* rock, or the vicinity of their food-yielding *miko*. Others were lashed to young trees, and some were bound in a canoe and sent to sea. The most common mode, however, was this: When a person conceived the approach of death to be near, he would select a long piece of the heart of *ake ake*, about the thickness of a man's wrist, and sharpened at one end. Upon the top he would rudely carve the figure of a bird or a fish. He would then go to a particular spot, and kindle a fire with brushwood. Where the fire died out, he would stick in the *ake ake*, and that was to be the place of his sepulture. When dead, the arms were forced back against the chest, and securely bound there with plaited green flax ropes; the hands were bound together and drawn over the knees, and a stick was then inserted between the arms and knees. This was the orthodox method of trussing a body, and it was sometimes a work of great difficulty; for, when the body became rigid, the efforts of many men were required to bring it into a proper position. This being done, the dead was enveloped in plaited flax matting, and interred as far as the knees, the upper portion of the body being invariably above the soil. To this very day, clearing away land, one frequently lights upon leg and arm bones pointing upwards. Others, again, would be bound to two or three young trees growing closely together, in which case the body would be placed in

an erect position, and bound round and round with vines from head to foot, but always looking seaward. Mr. Amery tells that, a few years since, in sawing across a *karamu* tree, something offered unusual resistance to his saw; to his great astonishment he had sawn through the hip bones of a man; he had been lashed against the tree; it had grown and enfolded him in its embrace. Some noted fisherman, again, would direct his remains to be consigned to the waves; in which case, he would be secured, lashed in a *waka korati*, or flax-stem canoe, in a sitting position, as if in the attitude of fishing, a long flax line, with a baited bone hook, and a sinker attached, was suspended over the side, and when the wind or tide was favourable he was launched to sea. A few years since, an American whaler, beating some twenty miles from land, observed one of these canoes with a man apparently sitting in it. Thinking it must be some poor native driven out to sea, a boat was lowered. Upon approaching the canoe it was discovered to contain a dead body. The vessel was making for the South-east Island, so they took the dead man in tow. Upon being boarded by some white men, accompanied by natives, the latter instantly recognised an old companion they had turned adrift, and implored the captain to send him off again, or the *kiko kiko*, or evil spirit, would be exceedingly wrathful; in fact, they should never hear the last of it. Softened by their pathetic appeals, the worthy skipper cut him adrift once more, and away he sped in the direction of Cape Horn. "In my rambles through the bush," (says Mr. Amery), "I have frequently observed a time and weather-bleached skeleton grinning at me from some old tree. Walking one day with an ancient native woman, she suddenly stopped, and commenced an affectionate and whining *korero* with a skull suspended from a branch. I said, 'What old friend is that?' 'Oh, said she, 'it is my first husband; he was a *tane pai*'' (a good husband). My wife and I used both entreaties and arguments to break them from such indecent and unholy customs. One day during my absence from home a person was about to be interred in the usual manner. My wife, however, hastened to the spot, and insisted upon having a deep grave dug. She was instantly obeyed, upon which she read an appropriate prayer, and the body was interred with decency. From that time the old custom was never revived. Upon another occasion, a young person was about to be interred in a neat coffin; the prayer had been uttered, and the body was lowered into the grave; at that moment a huge piece of rock, weighing upwards of a ton, rolled from a height into the grave, crushing both corpse and coffin. Upon this the friends and relatives, who had hitherto maintained great decorum, clapped their hands joyfully together, shouting and laughing. They said the *kiko kiko* was killed, and would never come to trouble them now."

When sick their only medicine was water from some particular spring, and *miko*, or cabbage tree, and though the spring was at a distance of 20 miles, it mattered not, it would be brought to the sick person in a flax bucket. Another strange custom was this: the first who should see or touch the body of a person whose death had been caused by accident or violence should abstain from food for three consecutive sunrises and sunsets. They also believed that when a friend died he would send ashore black-fish, or sea leopards, and whenever either happened to be taken they would all muster together to eat the food sent by the dead. Of course the generous action was attributed to the last person deceased. "But of all their customs" (says Mr. Amery) "the most cruel one was to destroy every child that cried during the act of being born, as it was deemed an unlucky one. Upon my first arrival, a Mori-ori child was born during the night. On the following morning I went to enquire about it. They told me that it was "*tamaiti tangi*," *i.e.*, crying child, and they had destroyed it before sunrise. I requested them to show me where they had put it. They led me to a spot, and to my horror and disgust pointed out a poor infant crushed to atoms beneath a huge piece of rock, weighing at least six hundredweight. They appeared to think they had performed a most praiseworthy and meritorious action. I told them they must never do so again. If they did a great curse would be put upon them. Their reply was, that it might be bad for the white men to do so, but that it had been the Mori-ori custom from time immemorial, and therefore it was not wrong in them. It is true they have seen good and evil examples set by white men; nevertheless the contact has been beneficial, inasmuch as it has exercised a humanizing influence. The old customs I have alluded to are now obsolete, but the *kiko kiko* they stick to with great pertinacity."

"Amongst the most fatal diseases" (says Mr. Amery), "are those of a pulmonary nature, the predisposing causes to which are numerous. I believe it to arise from hereditary taint and scrofulous habit; in fact, they are all scrofulous, and the connexion between scrofula and pulmonic consumption is obvious, and generally acknowledged; for, when one disappears from the surface, the other almost invariably falls upon the lungs. Consumptive malady has fearfully increased of late years. They are also subject to cutaneous diseases, engendered by unwholesome food, and neglect of cleanliness. Of such diseases, the *hakihaki*, as it is termed—an aggravated form of itch—first arising in small pimples, is the most distressing and disgusting. I have seen wretched objects literally a mass of sores from sole to crown."

The Mori-ori tradition as to Creation is very similar to that of the Maori, and, indeed, to that of most of the Polynesian race. In the begin-

ning there was darkness, *Rangi*, the heavens, lying close to *kopapa*, the earth. Then *Rangi-tokano*, one of the offspring of *Rangi* and *Kopapa*, sung a powerful incantation song, which caused *Rangi*, the heavens, to rise above the earth, and thereupon light appeared upon the earth. Then *Rangi-tokano* made man out of the earth, and called him *Te-ao-marama*, and from him are descended all the people of the world. *Rangi*, the heavens, sometimes visits his wife, *Kopapa*, such visits being followed by copious dews.

The Mori-oris do not appear to have had any religious feeling in the ordinary acceptation of the term, although they believed in good and evil spirits, both of whom were known by the common name of *Atua*. They were very superstitious; and old and young alike were in the habit, it appears, of telling ghost stories as wild and wonderful as the story of the Cock Lane Ghost. Indeed, they believed that, after death, the spirit of the departed had power to return to earth and haunt the living, and that a person visited by the *kiko kiko* (or evil spirit of the dead), and touched on the head by it, would die very soon after such visitation. To prevent the dead from troubling them, they had a curious custom. As soon as breath had left the body, they would all assemble at midnight in some secluded spot, and proceed to kill the *kiko kiko*. First kindling a large fire, they would sit round in a circle, each person holding a long rod in his hand; to the end of each rod a tuft of spear grass was tied; they would then sway their bodies to and fro, waving the rods over the fire in every direction, jabbering strange and unintelligible incantations. Attempts were made by the first European settlers to wean them from this foolery, but without success; they would persist in the custom, so one of the settlers determined upon the first opportunity to give them a fright. Hearing of the death of a Mori-ori, and that a party were to meet that night in a certain place to kill the *kiko kiko*, he arrayed himself in a white sheet and night-cap, whitened his face, and made himself appear as unearthly as possible, and, going stealthily to the place whilst the ceremony was proceeding, he suddenly appeared before them. With one simultaneous yell they cleared the course, and fled to their huts as if a legion of devils were at their heels. In the morning, their miserable, woe-begone faces plainly indicated a sleepless night, and the horrid *kiko kiko* was the talk amongst them for many months. This experiment, however, succeeded admirably, for their performance was never again repeated. Long after, when they had become more humanized and enlightened, they were told who the *kiko kiko* of that occasion really was. Upon this they looked very serious, shook their heads, and said it was very bad to play with the *kiko kiko*. It was by no means an unusual thing for a person to affirm that he or she had been visited by the *kiko kiko*; in which case, at the

slighest approach of sickness, they would resign themselves to death, and that would be the invariable result. This may be accounted for simply by a dream, and the effect of an excited imagination upon a weak, untutored mind.

I do not apologize for the fragmentary nature of the notes which I have thus put together, but I may express a hope that some of those who have had opportunities of inquiry into the same subject, will, as early as possible, place on record the results of their observations.

Appended to this paper are drawings of the private marks on *Karaka* trees, and the Mori-ori and Maori names of some of the indigenous birds and plants.

ART. III.—*Notes on the Influence of Atmospheric Changes on the Hot Springs and Geysers in the Rotorua District.* By Capt. GILBERT MAIR.

[*Read before the Wellington Philosophical Society, 28th Oct., 1876.*]

FOR many years past, partly from my own observations, and partly from conversations held with intelligent natives, I have been led to believe that some of the hot springs and geysers in the Rotorua and Taupo districts are affected to a remarkable degree by changes in the wind. Latterly I have carefully noted down these changes, and hope at a future time to reduce such observations to some system. But in the hope of drawing attention to this very remarkable phenomenon, I will now give a few instances as they occur to my mind.

Close to my residence at Tekautu, Ohinemutu, there is a large steaming pool 30 by 50 feet wide, and about 60 feet deep, named Tapui. It is situated on a grassy mound, about a hundred yards from Rotorua Lake, and some fifteen or twenty feet above its ordinary level. I have been in the habit of bathing here for some years past, and generally found the water about blood heat.

Since October, 1874, I have observed that immediately the north and east winds (which blow directly across the lake) set in, Tapui fills up four or five feet, a strong outflow takes place, and the temperature rises from 100° to 190° This continues till the wind shifts round to south, south-west, or west, when Tapui resumes its ordinary level and temperature.

In 1875, from January to September, sea breezes or winds from north to east, set in, generally about 9.30, and at noon Tapui would be full and running over, and nearly at boiling point. In the evening, as the wind from the sea died away about six o'clock, the water began to recede, the