

## PICTURESQUE NEW ZEALAND.\*

BY MR. SIDNEY DICKINSON, F.R.G.S.

Whenever Nature prepares a continent for the abode of man, she puts beside it some conspicuous island. Europe has its Great Britain; America, its Cuba; Africa, its Madagascar; and Asia, its Japan; and we shall find, in every instance, that either in natural beauty or in developed strength of national character, these islands exercise a strong influence upon the mind of the sympathetic traveler. The great island continent of Australia is no exception to this general rule. If we compare her with Europe, then shall we find in New Zealand the Lesser Britain of the southern seas. It is a very strange and interesting country which lies almost beneath our feet—a country comparatively little known as yet, but coming yearly into better knowledge because of its unexampled beauties and as a resort for the invalid, the tourist, and the pleasure seeker.

It has a stern, rugged coast, of volcanic origin; the whole stretch of this coast is cut out into deep and narrow channels, hollowed out in caves, wrought in shape of pinnacles and spires; no coast is more fantastic, none is more dreaded by mariners.

We steam through the semi-circular gulf formed by the two main islands and enter Cook's Straits. Through these straits, more than a hundred years ago, England's greatest discoverer sailed; and his enthusiastic crew gave his name to this channel.

He found New Zealand swarming with a dense and savage population, threatening his great ships with their crazy canoes—courageous and intractable; so Cook turned his vessels away, and after him came traders who introduced rum, muskets, and other like adjuncts of civilization; so that the race of half a million in the time of Cook has been reduced to about thirty thousand now. The principal city is Auckland, from which our tour of the island will properly begin. At its wharves lie the steamships of the San Francisco and Vancouver mail services, and of the Union Company, of New Zealand; fruit boats from Fiji, Tahiti, and Samoa; grain and lumber vessels from every part of the globe. Beyond this shore lies a country of fertile soil and temperate climate, broad rivers, and majestic forests, mountains rivaling those of Switzerland, geysers and spouting springs like those of our own Yellowstone; and in the west coast sounds a new Norway of greater beauty than the old.

The great attraction of the North Island of New Zealand, and one of the world's most remarkable wonders, is found in the hot lakes—certainly one of the strangest and weirdest regions on the face of the earth. The entrance into this country is through a land of broad and rolling fields, lingering rivers, and jagged mountains. The soil is used chiefly for grazing, and a large population is moving already into this beautiful region and doing extremely well with dairy farms and fruit orchards.

Scattered about through the country are native villages, and upon the hill-sides may still be seen the palisades by which the ancient fortified forts were defended. In the native villages of to-day appears the granary, used in common by all the members

\* Lecture delivered at Girard College, Philadelphia. Revised by the author.

of the tribe and raised upon posts in order to preserve the store of maize and sweet potatoes from the ravages of rats, upon which animals the Maoris take revenge by serving them up in a nutritious fricassee. As for the natives themselves (who are called the Maoris), let us intrude for a moment upon the privacy of this chief whom we here see

had his prisoners ranged in a row on the ground before him, and, with his greenstone war club, dashed out the brains of two hundred and fifty of them with his own hand, then threw aside his blood-stained weapon and said, "I am tired; let the rest live," and ordered the carcasses dragged to the ovens.

The Maoris have lost very much of their former skill in architecture and in artistic decoration. To observe of what the former race was capable, let us look for a moment upon this carved front of one of the Maori meeting houses still found here and there about the North Island. It is very curious, interesting, and artistic, too, in a rude decorative sort of way. The figures here are quaint, pot-bellied monstrosities with goggling eyes of mother-of-pearl and hands so imposed as to suggest the pangs of stomach-ache. These figures are not ideal, but are, in point of fact, the portraits of deceased ancestors of the tribe, and appear in the Maori eye as authentic likenesses.

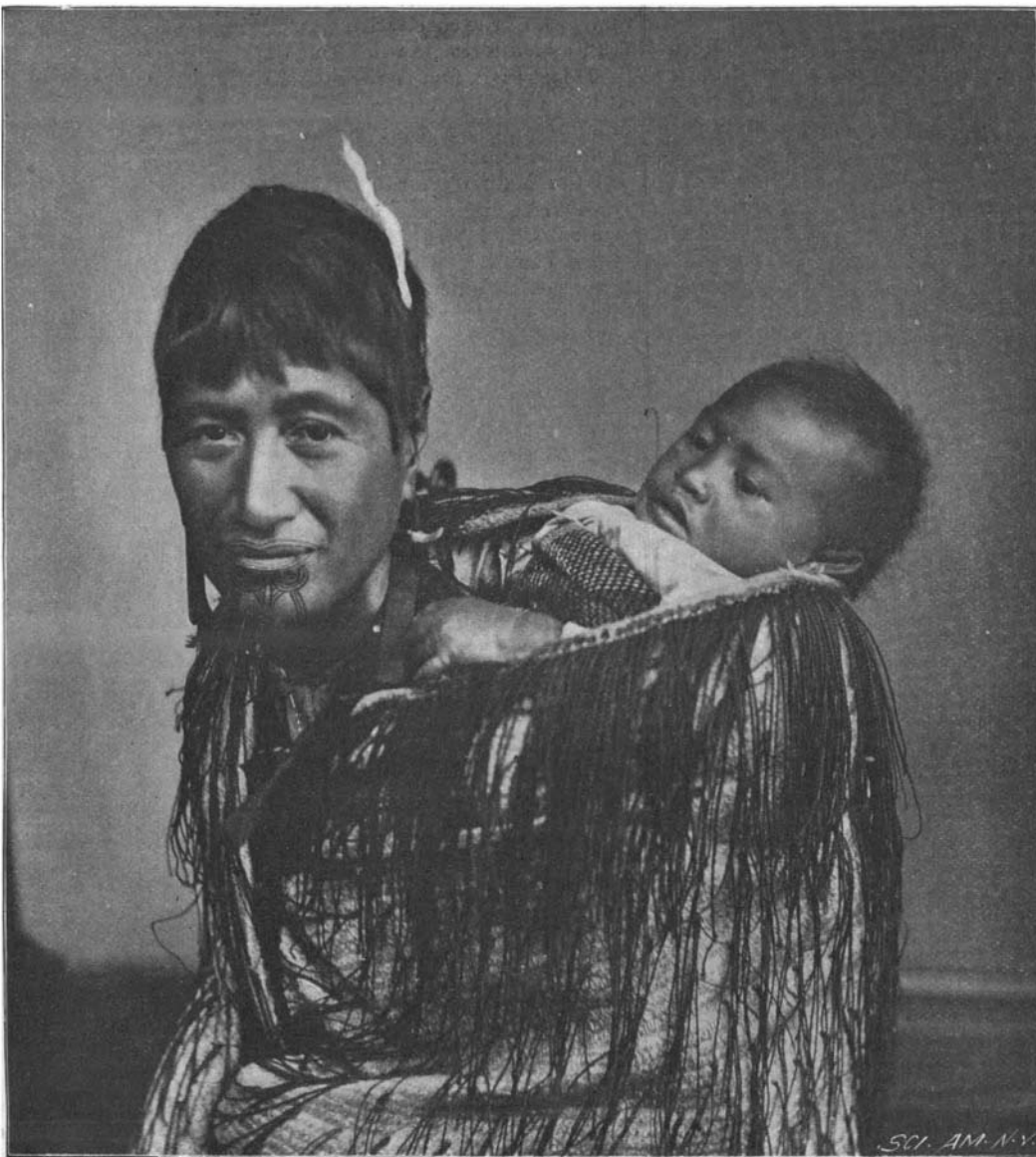
Maori tattooing is something remarkable and still further illustrates the very curious ideas of beauty prevalent among these people in the ancient time. As the Maoris gave over fighting the causes for these hideous disfigurements (whose purpose was to strike terror into the heart of an enemy) passed away. In order to appreciate the full extent of a tattooed warrior's countenance, however, you must imagine the owner of it over six feet high and nearly naked; his features distorted with rage and his tongue hanging out; loud yells issuing from his throat; arms flourishing battle-axe and war-club, and the whole stupendous aggregation coming down in your own immediate neighborhood at the rate of twelve good English miles an hour. The ancestors of these Maoris were an interesting and intelligent race; and the present degradation cannot be

too much deplored. This gentleman was a king, and his name was as elaborate as his facial adornment, namely: Tawhaio Matutiere te Puke-Puke te Pawa te Korate te a'Potatau te Whereo-Whereo.

Finally we came to Oxford, the termination of the railway line; and after a night spent in a very comfortable hotel, we took our seats on the top of one of Carter's line of American built coaches to undertake

the thirty-four miles' drive lying between us and Lake Rotorua. About the third of this distance lies through the "Eleven Mile Bush," where we catch glimpses of pleasant scenery. As we approach the town of Ohinemutu, which lies upon the shore of Lake Rotorua, we begin to discern the odor of sulphur. Our road into the town lies between two streams of nearly boiling water; and in the fields, upon either side innumerable steam holes blow great masses of vapor into the air. Descending to the shores of this curious lake, we find ourselves walking about in a vapor bath. All around us and close at our feet, as we step gingerly along the narrow pathway, the shallow water of innumerable springs boils and bubbles and the air is filled with the sound of its simmering. If you have any curiosity to know how it feels to have your leg boiled, step but one foot off the narrow pathway and you may make that addition to your store of useful knowledge with surprising suddenness.

A place like this is, of course, a perfect godsend

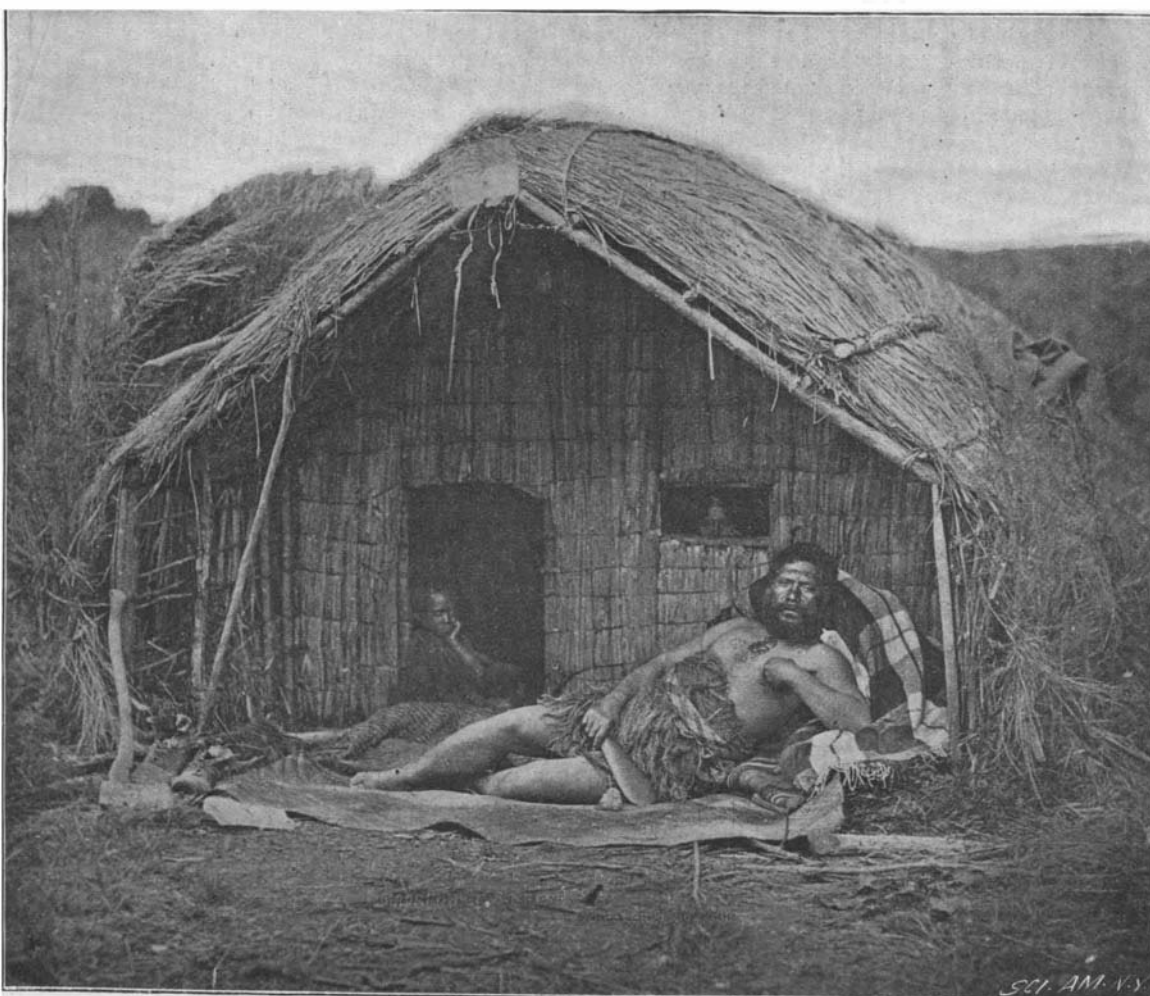


"TIKI-TIKI," NATIVE WOMAN AND CHILD, WITH CLOAK OF NATIVE FLAX.

enjoying a virtuous repose at the door of his hut. This chief attained considerable fame a number of years ago as companion of that notorious Chief Tekouti in his historic raid against the undefended inhabitants of Poverty Bay, where more than two-score men, women, and children were massacred. It is not a great many years ago that a worthy chief, having conquered a number of his enemies in battle,

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MAORI CHIEF AND HUT.

to the Maoris. They can soak themselves all day in the warm weather; cook their meat and potatoes simply by hanging them in their nets in the corner of a boiling spring, and live as happily, lazily, and uselessly as the pigs that share their houses and fortunes. All you have to do to launder clothes is to soak a garment in a hot soda spring and then wash it out in warm, clear water in another spring, and there you are. Even if a Maori has but one garment, he is not abashed. He washes it and hangs it on the fence and sits down in the costume of the Greek Slave until it dries.

Each of these floating black heads you see in the warm baths will have a black pipe in its mouth; and if the weather is foul, you may see individuals holding umbrellas over their heads.

Near by is the great geyser of Whakarewarewa, rising from a cone like the most exquisite coral, by which you can climb to the mouth of the crater. There is a dull, thumping sound far down below. You look over to see what is going on; a spurt of hot steam close to your nose suggests caution; you draw back, and a bushel of diamonds are thrown into the air and rattle down the sides of the cone. It is nothing but drops of pure hot water; but it looks like diamonds in the sunlight. Then there is a sudden roar; the air scintillates; and it seems as if all the jewelers' shops had been exploded at once. I have seen many manifestations of Nature in my time; but few where she displays at once her power and her beauty so completely as in this great geyser.

The great attraction of the North Island of New Zealand and one of the world's most exquisite natural wonders is now, unfortunately, nothing but a memory. The great eruption of Mount Tarawera, in 1886, besides destroying more than a hundred human lives, swept out of existence in a moment both the pink and white terraces. The beauty both of form and color in the white terrace neither pen nor brush can describe. It consisted of an irregular series of buttresses and stairs extending in the shape of a half-open fan from a hot water crater at the top and covered a superficial area of about eight acres. It had been formed through unknown years by the action of water heavily charged with silica, which, welling up from a funnel-shaped column of unfathomable depth, slowly built this wonderful staircase, more exquisite than structures carved by cunning artificers of the kings and sultans of the Orient. In the shallow basins forming near the top of the terrace were pools bluer than the heavens, reflecting in their depths all the tints of the harebell and the violet, the water trickling from them and continually crystallizing in new accidents of form and color, each one apparently more beautiful than any that had preceded it. Slowly, year after year, this wonderful structure obtruded itself upon the surrounding forest, and seemed destined at no distant date to cover the whole land with a carved structure of ivory, alabaster, and pearl; but alas! in one night its glory departed and was forever lost under mountains of hideous gray mud and piles of smoking scoriae.

On the opposite side of Lake Rotomahana was the twin sister of this wonder, the pink terrace, smaller than the other, since it was only eighty feet in height, but with a beauty that was all its own, from that peculiar flush that lay upon it like the flush of sunset upon a frozen cataract or a stairway of marble. The steps were flat in the pink terrace, and at the top was the boiling spring from which this wonder grew. Its waters were as blue as if composed of melted sapphire. Looking into their depths was like looking into the pellucid shallows of the South Pacific, where exquisite shapes of coral and madrepore waver and glisten in an indescribable riot of beauty, both in color and form.

At two o'clock on the morning of the 11th of June, 1886, a terrific explosion took place, the sound of which was heard at Dunedin, 800 miles distant. The sides of Mount Tarawera suddenly gaped open and a column of steam, estimated by competent observers to have been nine miles in height, shot violently up, illuminated to the semblance of a pillar of fire by the glare of the incandescent rockets below. The whole country was shaken with an earthquake, the terraces were blown into space, and the sites they had occupied were covered with mud and scoriae. As for the unfortunate villages that lay under the side of the mountain, they were utterly destroyed, their inhabitants finding common burial under the crushing masses of rock that were hurled upon them by the resistless power of the volcano. The eruption took place from a series of craters that exploded one after another as if they had been mines connected by a series of fuses, making an irregular rent over seven miles in length and from 400 to 1,600 feet in width.

New Zealand is a country of very remarkable contrasts, which I cannot illustrate better than by transporting you from the regions of steam and fire in the North Island to those of snow and ice in the neighborhood of Mount Cook. The main tourist route includes the ranges and gorges which Capt. Cook very happily termed the "Southern Alps," a curious line of cold lakes, chief among them Te Anau, Manapori and Wakitipu, and the west coast sounds. The journey to Mount Cook is one of peculiar attraction. It begins at

Fairlie Creek, upon the eastern coast; and the hundred miles it comprises are covered in two days of stage-coaching. Most of the route lies through mountain gorges, between which shallow rivers are confined, beautiful lakes and flourishing sheep stations, charming views on every hand; and in the intervals we can observe the wild fowl, the paradise ducks, the wood hens, the parrots and black swans which can be brought down from the very roof of the coach with a gun. The whole journey is full of interest; and as the bulk of Mount Sefton, 11,000 feet high, finally rises to mark its close, we feel that it is a worthy culmination of a most remarkable experience. All the other glories of this region, however, fade in comparison with Mount Cook, which is called by the Maoris "Aorangi," the "sky-piercer." It is 12,349 feet high, the capstone of the majestic system which, without ravine or pass that is not choked with eternal snow, stretches along the western coast for a distance of 150 miles. It is covered with glaciers, several of which are larger than any of the Alps, the greatest of all being the famous Tasman Glacier, covering an area of 54 square miles, and constituting a mass of ice unknown to us outside of the region of the polar snows.

A good many naturalists are of the opinion that the giant bird of New Zealand, the moa (generally believed to be extinct), may still be found somewhere among the fastnesses of the mountains, such as we have now seen. Well developed specimens of this fowl, like the one whose skeleton is here depicted, are about thirteen feet in height. At sight of such, no doubt, the hunter's jaw would drop, his arms fall down; while as for the moa, he would undoubtedly gallop off as rapidly in the opposite direction, for according to the local tradition these birds were very timid. It is supposed—in fact, it is known—that within the last hundred years these birds have been alive and walking about in New Zealand. During my visit there I was presented with a thigh bone of one of these birds, which thigh bone was half as tall as myself.

The southernmost city in the world is the city of Invercargill, in New Zealand. The city of Dunedin (about 15 miles distant) is next to it, and is also the metropolis of the South Island, and one of the most interesting towns of the colony. Its location, upon a series of hills, is most picturesque. From an architectural point of view, Dunedin is the first city in New Zealand; and in its high-school building, its university, its several churches, its banks and public offices, gives an example that might well be followed by many municipalities. Dunedin is distinctly of Scotch character, from the fact that it was first settled by colonists of the Scotch Church, who came out from Scotland some fifty years ago, under the leadership of a reverend gentleman named Burns, a grandnephew of Robert Burns.

Five miles below Dunedin lies the port of the town, and from this harbor, in January and February, every year, the Union Steamship Company sends one of its largest steamers on two 10-day excursions to the west coast sounds. The west coast sounds of New Zealand were evidently formed in past ages by glacial action, which is still in operation in the neighborhood of Mount Cook. They occupy about 150 miles of the 400 miles of the west coast, affording the only safe harbors that are to be found in the entire district. Their entrances are narrow and steep and protected by projecting masses of rock.

Milford Sound is the finest of these waterways, and a wonder and delight even to those who have explored the other sounds. It is approached by a way so narrow and winding that the unaccustomed eye can detect no trace of it whatsoever.

Explorations in the neighborhood of Milford Sound have resulted in the discovery of "Sutherland Falls," the loftiest falls in the southern hemisphere. They are 1,904 feet high, and although twice interrupted in their fall by projecting masses of rock, they are, both in form and volume, fully worthy of the enthusiastic descriptions already written about them. Very few eyes have, as yet, looked upon their beauty, for the terrible bush that surrounds them is almost impenetrable.

#### Insect Stings.

The fact of death occasionally resulting from the sting of insects such as bees and wasps is no doubt largely responsible for the species of terror which the presence of these insects brings upon many persons. Only recently, for example, a case was reported of a laborer who placed in his mouth a gooseberry which proved to contain a wasp. The wasp stung him at the "root of the tongue; he went into his cottage, and medical aid was summoned, but death ensued in five minutes." In this instance, of course, death most probably supervened on suffocation due to intense swelling in the throat, and was not due directly to the poison itself.

Vomiting, fainting, delirium, and stupor strongly suggest a highly virulent substance of the nature of a toxin. The precise nature of the poison of wasps and bees is not known. They possess a poison bag and sting and the fluid secreted is as clear as water, exhibits an acid reaction, and, in fact, contains formic acid. But this acid can hardly account for the severity

of the symptoms sometimes following a sting. Fatal results have, indeed, occurred which could only be attributed directly to the toxic action of the sting. Some persons, however, endure the sting with impunity, others develop alarming symptoms, such as blood poisoning, and undoubtedly the toxicity of the sting depends very much upon the condition of the "soil" into which it is implanted.

One of the old-fashioned remedies, and we believe a good one, is to apply immediately to the part stung the juice of a raw onion. The rationale of this remedy is not clear, the sulphur oil in the onion possibly serving as a palliative. The sting, at any rate, if it remains in the wound, should be extracted and the puncture dressed with a little weak ammonia and afterward a little bromide of ammonia may be added, which frequently serves as a sedative. Judging from the great number of wasps which have somewhat suddenly appeared in the country during the recent hot weather, this seasonal pest promises to be of no small dimensions. The intense irritation caused in some persons by mosquito bites may be promptly relieved by the application of ipecacuanha, either the "vinum" or the powdered root, made into a paste with water or vinegar.—The Lancet.

#### Typhoid Fever in the Army.

A commission composed of Major Lee, Dr. V. C. Vaughan, and Dr. Shakespeare, prominent surgeons and members of the Army Medical Corps, spent several weeks in the Southern camps, going over the ground in the most thorough manner possible, and their conclusions have been given in a report to the War Department. The commission is a unit in declaring that the fly is responsible for the prevalence of typhoid fever in the camps, and brings forth facts to support these conclusions. The commission visited the camps at Jacksonville, Huntsville, Fernandina, and Chickamauga. After investigation, the commission concluded that typhoid had undoubtedly been brought by the regiments from the State camps, for at Chickamauga the location was an ideal one, the drainage being good and the water excellent. The commissioners found that flies were present in the camp by the million. They fed off refuse matter from the hospitals, and at meal times shared the hardtack and bacon of the soldiers. Of course, this made an excellent means of transferring the germs of the fever. Hundreds of flies which swarmed on each table served to inoculate a large number of soldiers. The inoculation was slow but sure, and when the systems of the soldiers became weakened by exposure, the disease developed rapidly. The commission found that in all the camps typhoid did not appear in isolated cases, but that whole messes went down with the disease at the same time, showing conclusively that the fault lay with the food.

To prevent the ravages of the disease in the future, and to protect the soldiers from the fly, the commission has recommended that a new sink be used by the camps. It is now possible to have water connections in every camp, even where connections cannot be made with sewers. The commission therefore recommends that metallic-lined sinks be constructed, sixteen feet in length, two feet in width and eighteen inches in depth. These troughs are to be slightly inclined and a connection made with a water pipe at one end. The other end is to project from the house and is to have a waste pipe three inches in diameter and an upright pipe of the same diameter about sixteen inches in height. Every day this trough is to be partly filled with water in which a sufficient quantity of lime is to be placed. The waste matter will thus be disinfected as soon as deposited and all danger will be avoided. Every morning the sink will be cleaned by flushing it through the waste pipe into a covered sink, or it can be flushed into barrels, properly covered and carried to some distant place to be dumped.

The commission will also recommend that in the future movable sinks shall be constructed after the above pattern and placed on wagons. The whole apparatus can then be moved every day, and the contents of the trough deposited in a safe place. These wagons can accompany the army on the march. The commission will strongly urge that in every case care shall be taken to disinfect such matter as soon as possible by the use of lime and other disinfectants. The members hope that by this means the fly will be prevented from reaching the fecal matter, and even if he does, it will have been disinfected and can do little or no harm. As the army cannot carry screen doors or otherwise protect itself from the fly, the commission believes the best thing to do is to render his attacks harmless.

"THE barbed-wire fences surrounding Santiago," says Electricity, "which have proved a hindrance and nuisance to our hard-worked soldiers, have, it seems, after all, their advantages. Not long ago one of the wires of such a fence was sufficiently insulated to allow of telegraphic messages being sent from one army corps to another, a distance of five miles. Thus the Spaniards unwittingly saved the enemy's signal corps the trouble of laying a wire through a rugged country."



# SCIENTIFIC AMERICAN

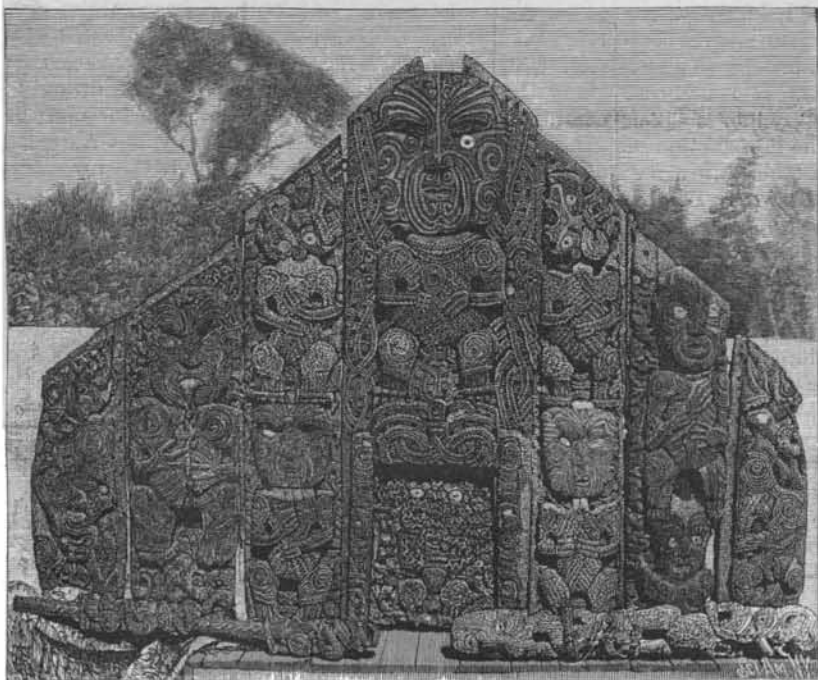
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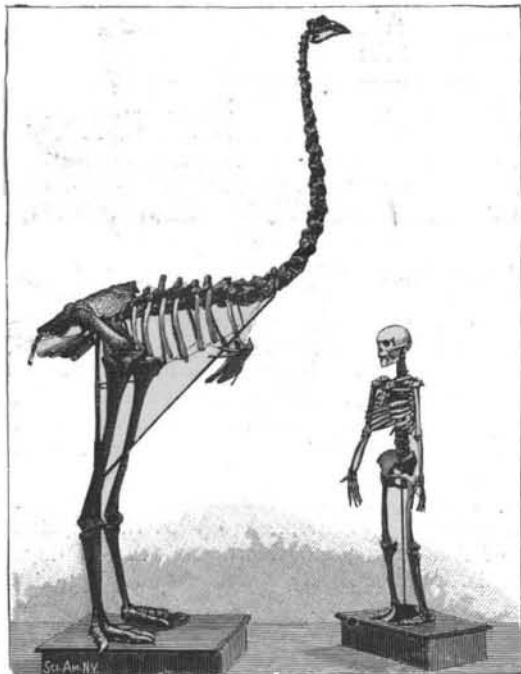
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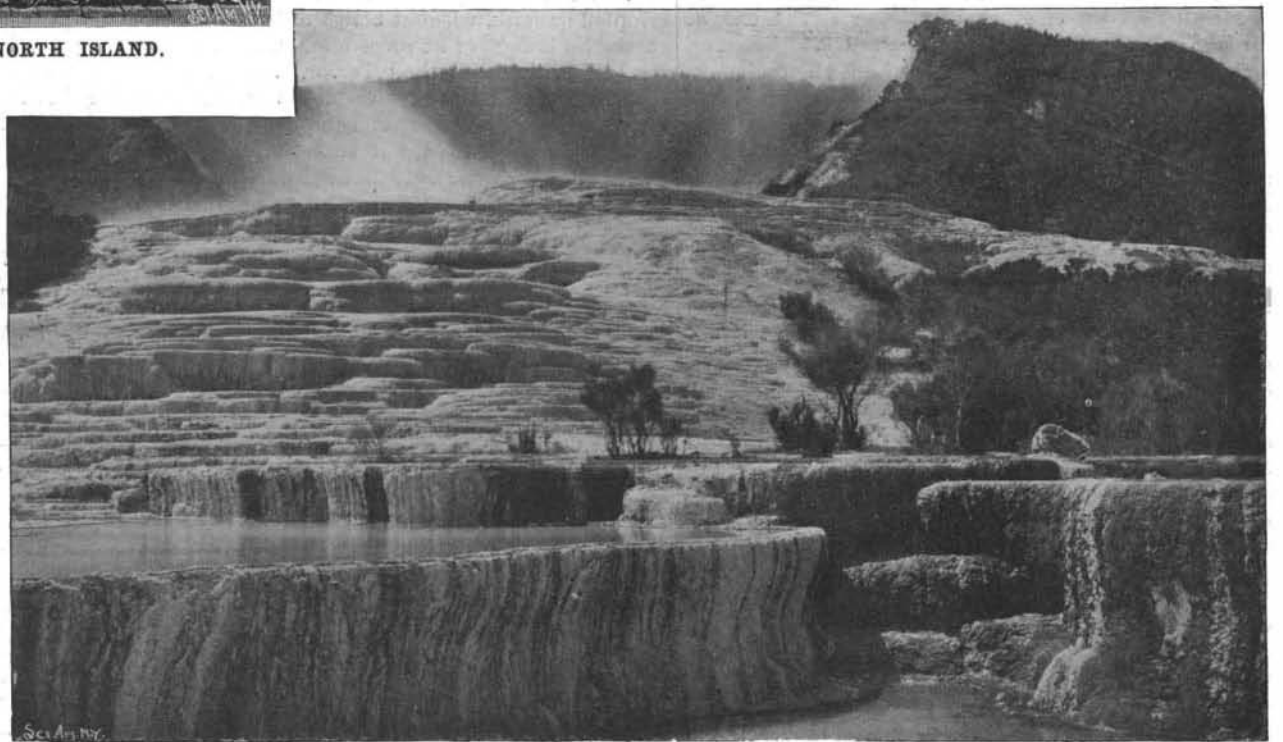
FRONT OF TRIBAL ASSEMBLY HOUSE, NORTH ISLAND.



MAORI VILLAGE—PIPIRIKI, WANGANUI RIVER KING COUNTRY.



SKELETON OF "MOA," AN EXTINCT BIRD.



WHITE TERRACE, LAKE ROTOMAHANA.



SPECIMEN OF MAORI TATTOOING.



DAUGHTER OF CHIEF, SHOWING FEMALE TATTOOING.

PICTURESQUE VIEWS IN NEW ZEALAND.—[See page 233.]