

turquoises, and rubies. Oxidised silver brooches are a great deal used, but are not so new as the iron ones which hail from Berlin, and find favour in Paris. The designs are of the Renaissance period.

Crêpe de Chine is a most useful material, which in all the most delicate and beautiful shades is used for the front of gowns, or for the entire evening dress of young people. With black fancy velvet, or rich velvet, striped silks, &c., pink or lemon-coloured crêpe de Chine forms a most happy contrast.

Large square pockets appear on the sides of many dresses as well as jackets, and for stout figures they have the great advantage of hiding the waist-line and so diminishing the size of the waist. In making skirts it is well to remember that, if they are short, it is better they should fall in straight folds at the back; if they touch the ground, the puffs and loopings are permissible.

Bengaline is a favourite material, also veloutine, which has a wool warp, and consequently drapes well, indeed far better than the more costly poult de soie. Dressmaking is too expensive to admit of the use of poor materials, for they wear out directly, and the cost of the making is thrown away.

Tuckers and lace frillings are but little worn. They are replaced by folds of velvet or silk, and, wherever the complexion admits, it is considered in better taste to forego the intervening white and cream, which used to be considered a necessity.

Linen collars and cuffs, however, have once more come to the fore, and there are many fashionable coloured kinds sold with pocket handkerchiefs to match, these being demonstratively displayed in the front of the bodice or from a side pocket.

The change that has come over sleeves will be seen from our engraving. The coat-sleeve, so long in favour, has given place to epaulettes and puffs. The young lady mounted on a chair has her sleeves of China crêpe, arranged with full bouillonnés at the shoulders, and again with fulness at the cuffs. On the brown velvet mantelette on the third figure there are also full epaulettes of ribbon and passementerie. The centre figure wears one of the caped mantles much affected by French matrons. It is bordered with silver fox—the popular fur of the season. The mantle is not closed in front, but is left sufficiently open to show the handsome front of the dress—a tasteful arrangement of beaded velvet and French moiré.

A MARVELLOUS CHANGE.

THE RESULTS OF THE VOLCANIC ERUPTION IN NEW ZEALAND.

BY A RESIDENT IN THE COLONY.



READERS of CASSELL'S MAGAZINE will, doubtless, recollect an interesting article which appeared in its pages some time ago, descriptive of "The Bethesda of New Zealand"—its healing springs, its geysers, and sulphur vents, and above all, those wondrous speci-

mens of Nature's architecture, the Pink and White Terraces. Regarding the latter, artists, poets, and authors of every degree seem to have united in lamenting the inability of pen or pencil to do justice to their beauties.

The Terraces, exquisite as they were in their loveliness, at the same time inspired a feeling of awe. They were quite unique, so far as is known, throughout the whole world. There was something about their regular formation which suggested human handiwork, and yet it needed not a second glance to satisfy the spectator that no human skill could ever turn out a work so impressive in its proportions, and at the same time so delicately fretted and carved in its smallest details. Here was emphatically a structure made without human hands, and the thought must have occurred to the visitor—Was it possible that this lovely vision could really be of earth and permanent

in its nature, or was it destined to melt away like the sweet sights and sounds conjured up by Prospero on his enchanted island?

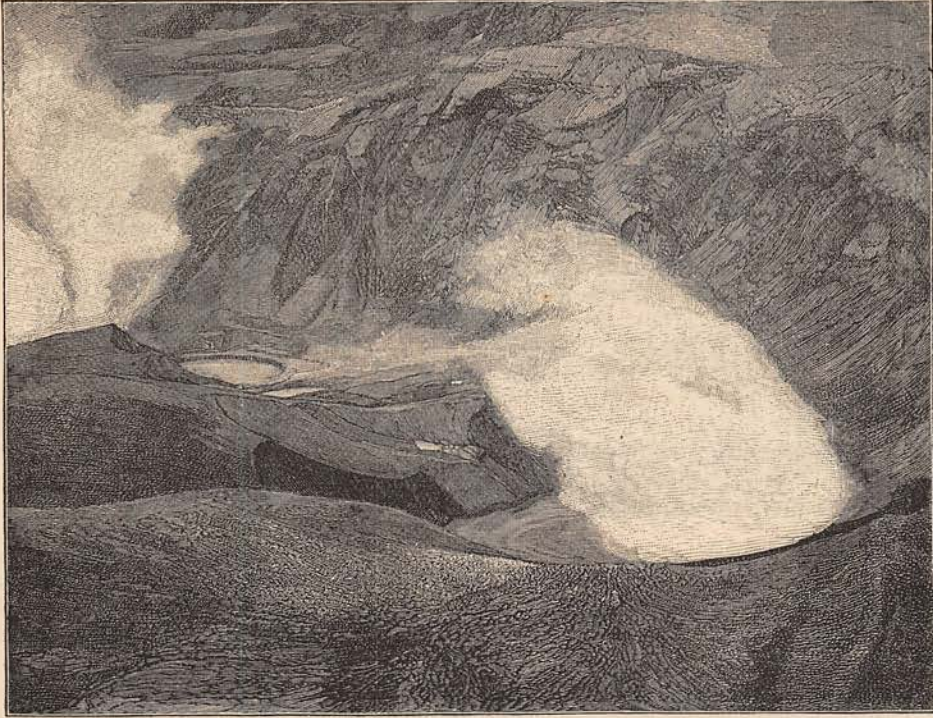
When such a doubt arose, however, it was quickly dismissed. True, the district was of volcanic origin,



BEFORE THE ERUPTION—THE PINK TERRACE.

(Reprinted from CASSELL'S MAGAZINE, January, 1883.)

* "A New City of Health"—CASSELL'S MAGAZINE, January, 1883, page 79.



THE SITE OF THE PINK TERRACE—AFTER THE ERUPTION.
 (From a Photograph by Messrs. Wheeler and Son, Christchurch, N.Z.)

and boiling mud pools, and *puias*, and fumaroles abounded on every hand. Still, scientific men agreed that the volcanic activity was dying out, and the traditions of the Maoris showed that, at any rate, while they had been resident in the district—say from 500 to 1,000 years—no event had occurred to make them fear the possibility of any fresh outbreak of the fire-fiend.

Before I describe the startling and horrifying manner in which we have suddenly been deprived of those wonderful natural features which the people of New Zealand had learned to regard as their most priceless national possession, let me say a word or two as to the way in which they were originally formed.

Nature, great artist that she is, produces her most charming effects with the simplest materials, and so it was in this case. Deep down in one of her hidden laboratories beneath the crust of this volcanic region, she prepared a strong solution of siliceous matter in boiling water. This solution is so strong that a shirt dipped in it would be "starched" stiff in a few seconds, and an immersed twig becomes quickly encrusted with silica, reminding us of the "dripping wells" to be found in the limestone caves of some parts of England.

This solution being prepared, it was forced through a pipe to the top of a small eminence, and flowed down the latter into the waters of the lake which

nestled at the foot. In the course of some hundreds of years the silica, becoming deposited from the water, had built a series of graduated basins extending from the foot of the hill to its summit, and these formed the most perfect natural baths it was possible to imagine. Their floors were as true as if laid by a spirit-level, while the water in trickling over the edge of the basins deposited an exquisite filagree-work of shining crystals. Such was the White Terrace.

The other Terrace, situated some distance away, was constructed on similar lines though smaller, and here Nature had varied her effects by tinging the crystals with a slight flush of rose-colour. The water in the basins was a delicate ultramarine, and the lovely contrast thus obtained was at once the delight and despair of artists.

Nor was it alone the eye of the visitor that was delighted. To bathe in these basins was a luxury as of Elysium. Some of the ingredients cunningly mixed with the water by Nature's subtle alchemy, gave a soft, creamy feeling to the skin, and a sense of elasticity to the body, which made people ask themselves whether they had indeed discovered the secret of perpetual youth.

All this loveliness is now, alas! a thing of the past. About two o'clock on the morning of June 10th, 1886, the inhabitants of Wairoa and other places in the Hot Lake district were aroused out of their beds by a terrific commotion. Overlooking the Terrace district



BEFORE THE ERUPTION—THE WHITE TERRACE.
(Reprinted from CASSELL'S MAGAZINE, January, 1883.)

is a singular-looking mountain with three peaks, known respectively as Wahanga, Ruawahia, and Tarawera. First there was an eruption from Wahanga with a loud roaring noise and shocks of earthquake; a few minutes afterwards there was a more violent outburst from the top of Ruawahia, the middle peak, and lastly there was a tremendous explosion from the remaining peak, the whole east end of which was blown away, the *débris* covering the country to a distance of many miles. Huge clouds of steam and pumice dust and showers of hot stones were flung into the air, and constant flashes of lightning illuminated the scene. What the eye-witnesses described as "fire-balls" hurtled through the air, and as the eruption was accompanied by terrific roaring of high-pressure steam escaping from the volcanic vents, and the constant thunder produced by the electrical discharges, it need scarcely be said that the combined effect was appalling in the extreme. The explosions were heard over the greater part of the North Island of New Zealand; and the steam-clouds, which were estimated to have attained the height of nine miles, could be seen for a distance of 80 or 100 miles.

The effect of the eruption was particularly disastrous as regards the township of Wairoa, and the native settlements of Mourea and Te Ariki. The two latter were overwhelmed by avalanches of volcanic mud, and all the inhabitants perished. Wairoa was buried in ashes and cinders, but most of the inhabitants managed to escape. Altogether, however, seven Europeans and between 90 and 100 natives lost their lives in this terrible outbreak.

So far I have dealt only with one phase of the outbreak.

The Pink and White Terraces were situated on the shores of Lake Rotomahana, and here another very extraordinary phenomenon occurred. I have already mentioned how one end of Tarawera mountain was blown off. Dr. Hector, F.R.S., C.M.G., Director of the

New Zealand Geological Survey, who has made a careful examination of the spot, and to whom I am indebted for many details in this article, states that this rent is a most wonderful feature. It is not a slip from the mountain-side, but appears as if a portion of the mountain measuring 2,000 feet by 500 feet, and 300 feet deep, had been blown off, leaving a rocky chasm, from which steam was being discharged in rapidly succeeding puffs. The eastern side of this chasm is brightly tinted as if by the efflorescent deposit of a mineral substance, probably ferro-chlorides.

Starting from this rent is a terrific chasm extending right across the site occupied by Lake Rotomahana and some distance beyond. The lake has quite disappeared. Within the chasm is a chain of mud volcanoes, which are constantly ejecting stones and boiling water to a distance of from 600 to 800 feet in the air. As the sides are continually falling in and being again cast forth, each crater presents the idea of a huge monster eating away the surrounding country and vomiting forth boiling mud and steam.

Such is the scene of horror which now occupies the spot once beautified by one of the most lovely natural objects in the world!

I have not yet exhausted the catalogue of wonderful things which happened in connection with this eruption. The Government township of Rotorua, where are situated the healing springs that exert such a marvellous effect on cases of rheumatism, skin diseases, and the like, had a most providential escape. When the first outbreak occurred, the gigantic column of dust was heading straight in the direction of Rotorua, and for this town a similar fate to that of Wairoa appeared inevitable. Suddenly the wind changed, diverted the course of the devastating cloud, and Rotorua was saved.

As is usually the case in most eruptions, the volcanic dust was carried to immense distances. Settlers living eighty miles away from Tarawera awoke in the

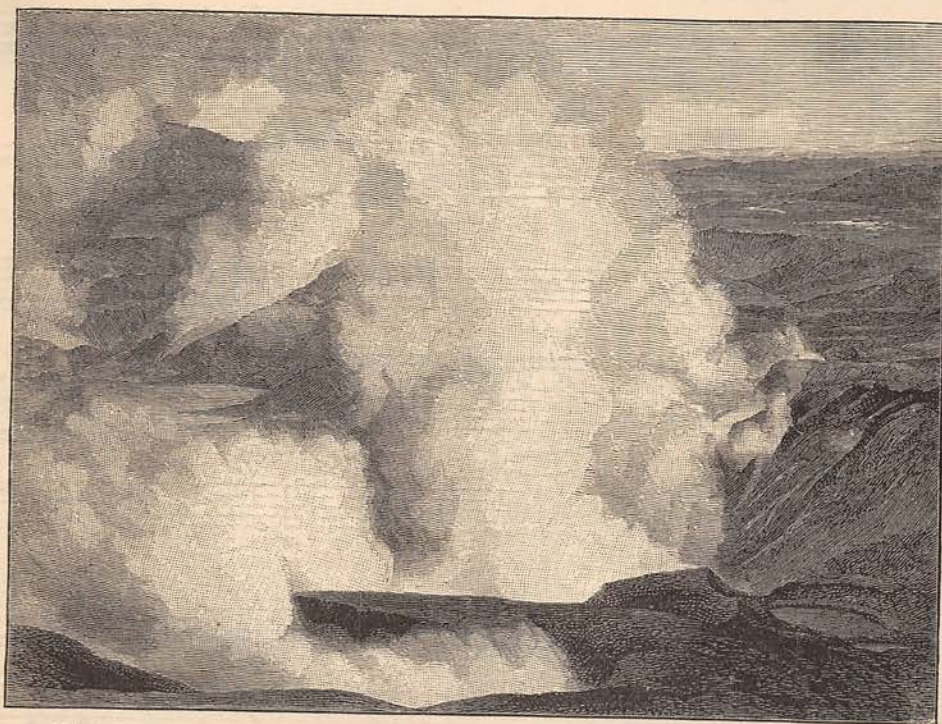
morning and found their houses and farms covered four inches deep with what at first appeared to be a strange, ghastly kind of snow, but turned out to be grey volcanic dust, which darkened the air like a dense London fog as it fell. Vessels out at sea, 120 miles away from the volcano, also had their decks and rigging covered with powder. Near the scene of the eruption the drift covers the ground to the depth of ten to a dozen feet. Cattle being thus deprived of food are roaming about in a starving condition, and the loss to the colonists will be very severe.

There are, of course, conflicting theories as to the cause of the eruption, which is not surprising, considering how little is really known by scientific men about volcanoes. The outbreak undoubtedly took place in a line of volcanic activity, which can be distinctly traced to the Sandwich Islands, and some people are inclined to argue that as Kilauea, the great volcano of Hawaii, has been quiet lately, the pent-up volcanic energy has relieved itself in New Zealand. Dr. Hector, however, holds that the outbreak is a purely local development of "hydro-thermal energy." His theory seems to be that, by some means or other, the water of the hot springs or lakes in the district obtained access to subterraneous heat; and this caused the generation of an immense amount of super-heated steam, which brought about all the mischief.

At present the volcanoes have quieted down to some extent, but no one knows, of course, when some fresh outbreak may occur. A day or two ago a party of *savants* were exploring in the district, when an ex-

plosion took place within 200 yards from where they were standing, throwing up a column of *débris* and steam thousands of feet high. Scientific ardour for once gave place to regard for personal safety, and the *savants* beat a rapid, if not very dignified retreat.

The whole aspect of the country is now so changed that the most experienced guides are unable to recognise localities with much accuracy. Avalanches of mud, geysers, and landslips also render sight-seeing an extremely dangerous occupation. By-and-by, however, when the country has become a little more stable, it is hoped tourists will be able to visit the spot, and a fresh attraction will be added to the many wonderful sights offered by New Zealand to the lover of the picturesque. It has been discovered that we shall not be altogether without something to remind us of the vanished Terraces. These formed so powerful an attraction that people quite lost sight of the fact first pointed out by Dr. Hochstetter some years ago, that there were other Terraces of siliceous sinter—to use the technical phrase—in New Zealand. These are situated in a little-known part of the North Island, within the Hot Lake district, but in such a secluded spot that they have been seen by few Europeans. They are greatly inferior both in size and beauty to those which have been destroyed, but doubtless will now be sought out by tourists as affording some idea of that majestic vision which has vanished for ever, leaving in its place an inferno of doleful sights and sounds.



AFTER THE ERUPTION—THE SITE OF THE WHITE TERRACE, LOOKING TOWARDS TARAWERA.

(From a Photograph by Messrs. Wheeler and Son, Christchurch, N.Z.)