At Karaka point, a promontory, four miles south of Tapuaeharuru, are some interesting caves. They were worn by the action of the water on the volcanic conglomerate in which they are formed. The caves are about thirty feet above the present level of the lake. Underneath the tufa of the caves, and along the shore of the lake, the rocks are rhyolitic lava. Three miles to the north-west of Karaka Point, on the shore of the lake, a large deposit of iron pyrites appears in the rhyolite and tufa beds.

With the exception of the sandy bays of Whangamata, Waihora, Waihaha, and the several smaller bays shown on the map, the whole of the northern and western shores are formed of steep rugged cliffs of rhyolite, intermingled with which are masses of tufa and volcanic ashes. The heights of these cliffs vary from 100 to 800 feet above the lake, with generally deep water close alongside them—from forty to fifty fathoms being found, with our boat made fast against the rocks. The scenery all round the western arm is picturesque and beautiful; there are numerous interesting waterfalls and many secure and picturesque boat harbors, with a depth of water from ten to forty fathoms within them, and safe anchorages can be reached with good shelter from almost every wind.

The western shores of the lake are in many places wooded to the water's edge; the trees frequently seeming to grow on the almost bare rocks, which protrude here and there through the foliage. The natives have their settlements inside the little sandy bays, and on the alluvial flats along the several rivers which empty into the lake.

Karangahape point, with the little island rock of Motuwhara, which lies a short distance off the point, would afford an interesting subject for the study of a geologist. The cliff is 1500 feet in height from its summit to its base, at the bottom of the lake. As will be seen from the section, its rises quite perpendicularly from the floor of the lake, a portion of it—600 feet above the water—overhung our boat, whilst the lead-line, dropped close alongside the cliff, showed a depth of 400 feet. The formation round the point is alternate beds of rhyolitic lava, scoreous tufa, and ashes. The little island of Motuwhara was probably a crater plug; it is composed of rhyolite; at one time it was an important pa of the Ngatituwharetoas, and a safe retreat from their enemies in time of war. At Karangahape point are to be seen Tamatea's two dogs, which he left there to guard the point; they are represented by large masses of consolidated tufa, some thirty feet in height. It would be difficult to trace in their shapes any resemblance to the form of a dog. Many of the natives to the present day retain a superstitious awe of these stone dogs, and I have seen them cover their faces in passing by them, as to see Tamatea's dogs would probably cause a storm and the wreck of their canoe.

It is unnecessary for me to enter upon any description of Tokaano, its thermal springs and other natural curiosities, which are all pretty well known. I may mention, however, that there are a number of hot springs and fumaroles on Kakaramea mountain, which, I believe, have not hitherto been known to Europeans. They are situated in the forest, at the head of the Waihi stream, and about three-quarters of a mile north of the highest point of Kakaramea. They occupy a considerable area, extending for about twenty chains along the stream. The principal one is over one hundred feet in length, and about thirty feet in width; the water is muddy, of a greyish cream colour. Fumaroles, steam jets, and small mud volcanoes abound. Several of the springs are of a boiling heat.

A distinctly marked terrace extends right around Taupo Lake, 100 feet above the present water level. This terrace plainly indicates that the water stood for a long period 100 feet higher than it now is; the subsidence is probably due to the lowering of its only outlet—the Waikato River—where it probably broke through a barrier, about one mile from the point where it leaves the lake. Te Heuheu points out a flat rock at the edge of the lake at Waihi, which, he says, their ancestors used for a sacrificial altar, shortly after their first arrival in Taupo. This would shew that the lake has not altered its level within the last 400 years, and, from the appearance of the shores, it is probably a much greater length of time since the subsidence took place.

It has been suggested that a great deal more water flowed into Taupo Lake, from the many rivers which discharge into it, than goes through its only outlet, the Waikato River, and that probably the volcanic foci in the district might be fed by the lake. To anyone who has seen the volumes of the many rivers which flow into Taupo Lake, it certainly would appear strange that the seemingly small outlet of the Waikato River, would carry off as much water as is supplied by the infalling rivers. Whilst traversing the shores of the lake I took the opportunity to measure the volume of its rivers and streams. This was very carefully done and under favorable circumstances, in fine weather, no rain having fallen during the operations. The Waikato River was measured, where it leaves the lake, at three different periods of the operations, namely—at the start, when half the rivers had been gauged, and at the end; the results shewed that, practically, the same quantity of water was discharged as flowed into the lake.

I am indebted to Major Scannell for the following interesting narrative of the sudden rise and fall of the water at the north end of the lake, on or about 28th August, 1883. On the day mentioned a little schooner which used to ply across the lake, was lying afloat at Tapuaeharuru. Some men working close by noticed that the schooner was suddenly left high and dry. They went to shove her afloat again, and in doing so they noticed that the river had fallen about two feet; in the course of fifteen or twenty minutes it again rose to its previous level. This phenomenon was noticed by four or five people. It occurred at half-past twelve o'clock in the day. On that same afternoon, between one and two o'clock, Sergeant-Major Smith and Sergeant Miles, of the A.C. force, were bathing in a warm spring, called Waiarike, situated on the bank of the Waikato River, about a mile from the lake; the bath was fenced round with stones on the side next the river, and it stood about two feet above the level of the water. They found their bath become suddenly cold, and were astonished to find that the river had risen to a level with it; it remained so for about five minutes, and then suddenly resumed its former condition. So far as I have been able to learn, this was the only occasion on which the phenomenon occurred.

The origin of Taupo Lake is an interesting physiographical question, and one to be dealt with by an abler and more experienced observer than myself; sufficient evidence has probably not yet been collected to lead to any definite conclusion on the subject. The jagged appearance of the volcanic rocks forming the steep northern and western shores leads at once to the conclusion that they were separated from the masses, of which they originally formed part, by some violent agency, either of eruption or subsidence. The islands and reefs in the lake are more than probably plugs of volcanic vents and lava flows, and it