

ART. IV.—*Notes on Moa Remains in the vicinity of Cape Campbell.*

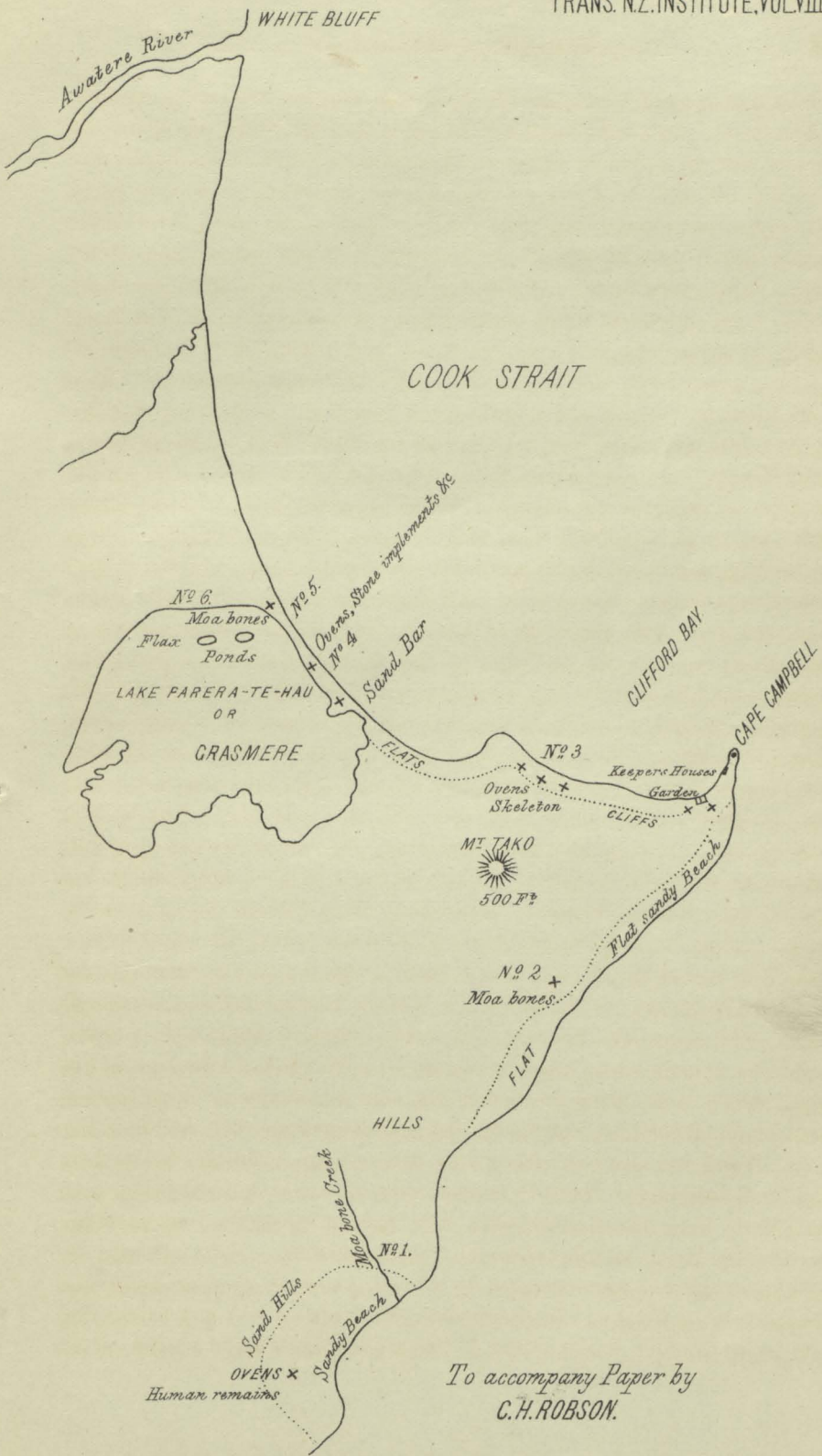
By C. H. ROBSON, Chief Lighthouse-Keeper.

[Read before the Wellington Philosophical Society, 12th February, 1876.]

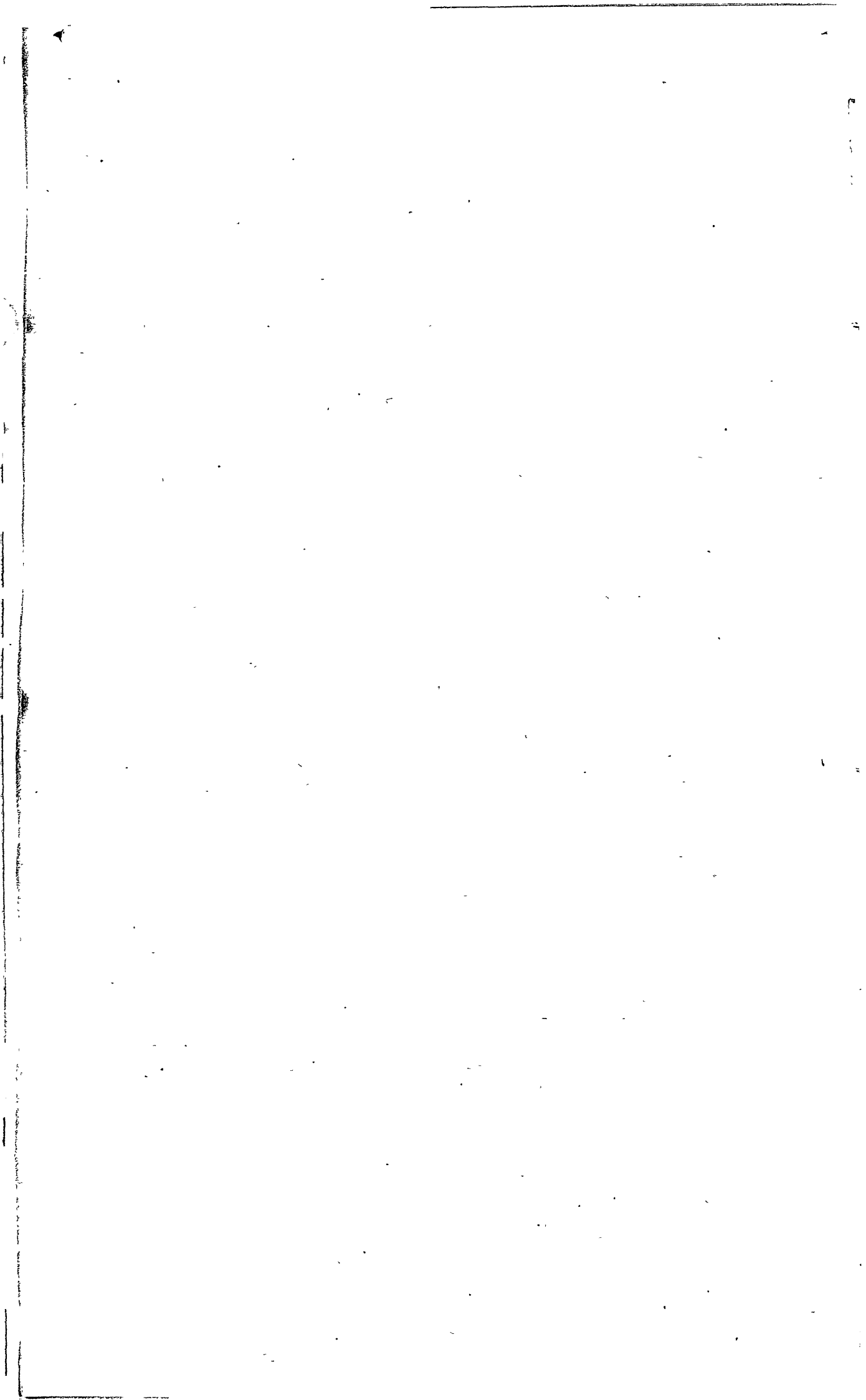
Plate IV.

PREVIOUS to my arrival at Cape Campbell in March, 1872, to take charge of the light station on the Cape, which forms the northern extremity of the Flaxbourne sheep run, the property of Sir Charles Clifford, formerly Speaker of the House of Representatives, and Mr. F. A. Weld, now Governor of Tasmania, I had heard nothing of Moa bones having been found near it, but soon after, having occasion to visit Flaxbourne on business, I was there shewn part of the tibia of a large Moa. Upon asking one of the shepherds where it came from, he told me that it had been found on the run, and that he had seen other bones which, from his description, must have been tarsi, and this was all the information which I was able to obtain respecting them, then or at any subsequent time; and seeing that the Flaxbourne run extends south from Cape Campbell about 20 miles, with an average breadth of four miles or more, it was, to say the least, a little vague. It served, however, to direct my attention to the fact that this part of New Zealand had, at one time, been frequented by the Moa, and to set me on the look-out for its remains. In the winter of 1873, after a heavy fall of rain, one of my sons found, on his way home from Flaxbourne, at the mouth of a stream some five miles from here, our first Moa bone—a right tarsus, which had evidently been carried down by a freshet, which had taken it nearly to high water mark on the beach. Thinking it probable that more bones would be found higher up the stream, we made a careful examination both of its bed and banks, from the beach to its source, but without finding any more bones, except a small portion of the distal end of a tibia, much decayed; and I think it most probable that the remainder of the skeleton has been washed away by degrees, and either taken into the sea, or buried in the shingle on the beach. On the sketch map (Plate IV.) which illustrates this paper, the stream in question is marked 1. Upon making an examination of the bone above-mentioned, I saw that it had been in a fire of some kind, and the thought struck me that it might have been cooked by the ancient Moa-hunters, so we explored the vicinity of the stream for traces of them, and on a bank to the south of it found some old ovens, which I at first thought might have been used by the Moa-hunters; but a careful examination soon convinced me that the place had been used as a camping-ground by the Maoris on their journeys up and down the coast, or when they came to catch eels in the stream, and that, instead of being Moa-hunters, they were fish eaters and cannibals. The ovens contained, besides ashes and charcoal, shells;

bones of fishes and birds, as well as human remains, but not a trace of a Moa bone. On a sand-bank not 20 yards from the ovens, we found the greater part of a human skeleton, which had, I think, been buried, and probably belonged to a woman, one of some travelling or fishing party. The under jaw accompanies this paper. These ovens were close to the stream first-mentioned, and about five miles from the end of Cape Campbell. Much nearer to it, only about a quarter of a mile from the light-house, I found another tarsus much smaller than the first. It was found partly embedded in a steep clay hill at the spot marked 2 on the map, but no other bones could be found near it. All the remains mentioned above were found to the east and south of Cape Campbell; to the west of it lies Clifford Bay, extending from the Cape to the White Bluff, which divides it from Cloudy Bay. All along the shores of Clifford Bay, as far as the western extremity of the sand-bar, which separates it from Lake Grassmere, are to be found old ovens and the signs of Maori occupation. Two places have also been pointed out to me where great battles are said to have been fought between the natives. All the stone implements which accompany this paper were picked up at various times at the places marked on the map by crosses. At the place marked 3, is a piece of flat land, lying between the hills and the bay, ending in a reef of large rocks covered with mussels, and here, as might be expected, are the remains of a considerable Maori settlement. The natives inhabiting this settlement were certainly not Moa-hunters, for, on opening a great number of the old ovens, ash heaps, etc., we found chiefly shells, with fish, bird, and seal bones, but no Moa bones; and I am of opinion that these ovens, etc., are of too recent a date for any to be found in them. Maoris were, I believe, living about the mussel rocks the last 50 years. Proceeding along Clifford Bay in a south-west direction, we come to its deepest indentation, where the shore is now formed by a sand-bar, on one side of which is the sea, and on the other the lake, Parera-te-hau, or Grassmere, a shallow brackish lagoon, occupying about 4000 acres, and the resort of swans, Paradise ducks, stilt plovers, and other aquatic birds; and here again we come upon the remains of the Moa, which must have frequented the lake in numbers, bones having been found all round it, but chiefly at the places marked 4, 5, and 6 on the map. There are also a number of old ovens on the sand-bar, full of fish, bird, and seal bones. Lake Grassmere must at one time have formed part of Clifford Bay, for at its western side I came upon the remains of an ancient sea beach, samples of which I send herewith. More recently, its area seems to have been occupied by a forest, the trees growing below the present level of the sea. In September, 1874, after a very wet winter, the lake broke through the sand-bar to the sea, leaving a large portion of its



To accompany Paper by
C. H. ROBSON.



bed dry, exposing a number of trees, many of them being of large size. At various points, both in the dry bed of the lake, from which I send shells, and beyond its limits close to the hills, I have found Moa bones, the greater number in an advanced state of decomposition. At 4 and 5 were found parts of a foot with toe bones and a small tarsus, all of which I forward with this paper, and have marked them all with numbers to correspond with those which indicate on the map the places where they were found. So far as I have been able to discover, without making any very extended search, the Moa-hunters do not seem to have inhabited this part of the coast, or if they did, they were probably Maoris, such as now inhabit New Zealand, all the stone axes, etc., which I have found near their ovens and camping-places being similar to those in use amongst them up to the time when they became acquainted with the use of iron tools. No doubt there have been plenty of Moas about here at some time, but whether they lived here at the same time as the Maoris does not seem clear. I am, however, unable to agree with Mr. Booth and Dr. Haast in thinking that they have been extinct for thousands or even for hundreds of years; and I would direct particular attention to the state of preservation in which the tarsi, which accompany this paper, have been found. They were all obtained on the surface, exposed to wind and sun and rain, and would long ago have turned to dust had the date of the bird's extinction been so remote. I think Mr. Booth is right enough in saying that we know just three things about the Moa, namely, that it has lived in New Zealand, that it does not live in it now, and that it could not live in it now.

ART. V.—*Notes on Moa Caves, etc., in the Wakatipu District.*

By TAYLOR WHITE, ESQ. (communicated by Captain HUTTON).

[Read before the Otago Institute, 24th August, 1875.]

Cave near Mount Nicholas.

THIS cave is situated on the south side of Lake Wakatipu, two miles east of the Von River, in a small conical hill about a quarter-of-a-mile from the Lake. There is a tolerably steep rise, covered with long fern, to the entrance of the cave, which is in the overhanging face of a mica schist rock.

The entrance is about sixteen feet high, and ten feet broad, from which it narrows, both in height and width, to five feet. The top meeting the