Art. V.—*The Newly-opened Cave near Sumner.*

By John Meeson, B.A.

[*Read before the Philosophical Institute of Canterbury, 3rd October, 1889.*]

Plates I. and II.

In accordance with a suggestion thrown out at our last meeting that some authentic particulars should be gathered respecting the cave recently discovered on the road to Sumner, Mr. H. O. Forbes, as representing the Museum authorities, and myself, as representing this society, made a preliminary visit of inspection on the 10th September last. My coadjutor is at present very fully occupied with official work and alterations at the Museum, so it has been agreed between us that I am to write a general description of the cave and its contents, giving some account of its whereabouts, geology, and discovery, while he will supplement my remarks with notes on the bones found, some of which seem to be probably of a new species of Natatores.

I must mention that Mr. Monck, the proprietor of the ground on which the cave stands, when we introduced ourselves to him and stated our object, showed us great civility, and assisted us as far as he could in the work of investigation.

He exhibited to us everything that he had obtained from the spot in the way of bones, implements, and other remains, and very liberally handed over to us for further examination and future deposit in the Museum such of these as we found to be the most interesting. He also gave us an account of all that he had done or knew about the discovery of the cave, and offered to facilitate its more complete exploration if funds were provided for such a work and it should be thought desirable.

It is perhaps to be regretted that action was not taken in the matter, either by our society or the Museum authorities, a little earlier, because there are some questions—in connection with the date at which the moa became extinct, the people who were in the habit of hunting it, the customs, food, and utensils of the native tribes who successively used the cave as one of their dwelling-places, and the flora and fauna existing here at the period when it was known and frequented—that a careful examination of the different layers of deposit, under the direction of a scientific mind, might have materially helped to solve. It is not by any means too late yet to do something in the matter; and I am glad to say that a small sum has been already placed at the disposal of Mr. Forbes for the purpose of systematic digging and search.

J.M. del.

GROUND PLAN OF MONCK'S CAVE. SUMNER.

C.H.P. lith.

DIMENSIONS OF CAVE.

A.E.	=	80	feet.
D.F.	=	46	".
B.H.	=	36	".
A.C.	=	35	".
A.G.	=	28	"
C.G	=	23	"
B.G.	=	16	".

Facing N.E. — 70 yards from Sumner Rd.

Scale 16⅔ ft = 1 inch.

Although the cave is not so large as that at Moa Point, there is one particular in which its investigation should be more profitable and interesting. The Moa Point cave, in and about which researches and excavations were carried on, under the direction of Sir Julius von Haast, during the spring of 1872, had apparently been continuously open for a very long period. The Maoris had occupied it from time immemorial as an occasional dwelling-place for their fishing-parties, and since 1839 it had evidently been used by Europeans as a shelter for cattle, or a place of temporary habitation by lime-burners, road-makers, and fishermen. Now, in contrast with this, it must be remembered that it is only a few weeks since the mouth of Monck's cave was first laid open. Forty years ago there were a good number of natives about Banks Peninsula, but they knew nothing of this cave. It had been buried a very long time, perhaps some hundreds of years, before the settling of Canterbury, or the natives in question would have had their traditions about it and its whereabouts. For exactly how many years it had been thus sealed up, secured by a mountain of loose earth and stones from the ravages of successive occupants, we at present cannot say; indeed, it is difficult to venture a conjecture on the subject, though it may be possible to do so after a thoroughly careful and intelligent examination of the cave, the deposits therein contained, and the various articles imbedded in those deposits. When it was lately broken into, therefore, the cave was, in all probability, just as it had been left on the morning when the Maori who used it went off on that fishing, hunting, or marauding excursion from which he seems never to have returned. Perhaps he was killed in fight, or perished with his frail canoe off the bold headlands to the eastward. He certainly did not die in the cave, or his skeleton would have been found there; and he just as certainly did not intend to go away without returning, for in that case he would not have left behind him such well-fashioned and, to him, valuable instruments as those which have just been found. Possibly, however, he was not shipwrecked at all, and met with no particular misadventure, but simply found that while he was absent a landslip had occurred which had so completely buried his old home that his superstition or indolence, or both combined, indisposed him to dig a fresh opening to it. There are some circumstances about the contents of the cave—more especially the kinds of wood and stone of which the tools and other articles are made—that seem to point to the fact that its last occupants were from the North Island. Perhaps they were Maoris who were in the habit of coming so far afield in their canoe or canoes every summer for the purpose of fishing, and hunting the moa. In that case it is easy to conceive that during one

of their absences in the winter the landslip occurred which, as far as they were concerned, for ever buried their habitation. Whatever explanation be accepted to account for the desertion of the cave and its contents, this remains certain: that when it was opened by the road-makers a few weeks since it was practically, except as to the decay of some perishable articles, and the amount of *débris* fallen from the roof here and there, in the same condition in which it had been hundreds of years ago. This consideration makes it the more regrettable that any digging whatever took place before some scientific man with special ability for such excavations took direction of the proceedings. Nevertheless it must be stated that Mr. Monck, in so far as he himself has carried on the work up to the present, has done his best to preserve everything of value; but he, naturally enough, did not preserve a record of the exact spot, or depth, or layer from which each article had been obtained, so that the several questions of relative time at which various deposits were made can with difficulty now be answered.

The discovery of the cave was made quite accidentally. Metal and gravel being constantly needed for the Sumner Road, Mr. Monck has for a long time allowed the stuff to be taken from one of his paddocks, as it lay in a heap, apparently having fallen down from the cliffs above. A mass of stuff, 40 yards through, was thus removed, and while clearing this away the opening of the cave was laid bare. The first person to enter was the son of the proprietor, and he when he got some distance in saw two bright eyes glaring at him from the darkness. Immediately after a cat was seen to emerge from the cave. It had entered, most likely, only the night before, through some crevice which the workmen had laid open but not observed, or possibly through some other opening from the surface of the hill into a remote part of the cave not yet explored. The latter supposition seems justified by the finding of a number of rabbit-bones upon the floor.

The geological aspect of the cave seems to be precisely similar to that of the one at Moa Point. It is a hollow in the doleritic lava formed by the washing-away of loose material between the harder rocks. There are probably many more such caves between Christchurch and Sumner, and in other parts of Banks Peninsula. We are told that the peninsula was once an island—that it was first uplifted by Titanic force from the depths below, that it was subsequently depressed about 20ft., and then raised again to about its present level. When the huge volcanic mass was depressed, the low-lying lands between Sumner and New Brighton were entirely under water. The Pacific breakers dashed against cliffs which are now miles from the sea, and everything in the shape of tufa

and other loose material which filled the exposed crevices or lay at the foot of the lava rocks was washed away. This is Sir Julius von Haast's explanation of the origin of the Moa Point Cave, and it is equally applicable in all respects to the cave now exposed. The two are only half a mile apart, the latter being the farther from Christchurch. They are similarly situated in every respect as regards elevation above and distance from the sea, and, singularly enough, each is, or was, exposed to the north-east, and protected from the north-west by a similar point of rock. This, perhaps, accounts for the formation of the caves; for the exposure of both points to the full force of the north-east breakers would facilitate the washing-out of loose rocky material; and perhaps the protection from the north-west—that is, the land side—gave these particular cave-dwellers at a subsequent time the privacy and security which, among such a people, when every man's hand was against that of his neighbour, were matters of no slight importance.

Like the Moa Point Cave, this of Monck's also consists of three chambers, but of smaller dimensions. They are, however, more equal in size to one another. As the front of the cave was covered up by loose material, so are the floors of its chambers, to the depth of how many feet it is at present difficult to say. These figures must be left for subsequent careful measurement, as also the levels of the floors, the heights of the chambers in different places, &c., and also the exact nature of the material of which the *débris* consists. This is only intended to be a preliminary notice: a much fuller and more exhaustive report, more amply satisfying curiosity, and more thoroughly examining the various interesting questions on which excavation will throw light, should certainly be undertaken as soon as can be done conveniently. Generally speaking, it may, however, be said that the *débris* covering up the bottom of the cave consists of a mixture mostly of shell, and fragments of rock and heaps of grit and scoria fallen from the roof. Here and there, however, can be clearly traced layers—in one place as many as five—of various thickness from 1in. or 2in. to 6in. or 9in. These layers are of volcanic ash at top, and the *débris* of fires (ashes of wood, dirt-beds, &c.), intercalated with a kind of silt or loess earth, apparently identical with that found here and there all round the peninsula. The second cave contained as its floor-covering nothing but a 3ft.-thick bed of this silt or loess.

As to the relics, &c., found either on the floors of the cave immediately when it was opened, or since by digging here and there in a very haphazard sort of way before the day of our visit, in so far as pertains to the numerous bones, whether of fish, or bird, or mammal, Mr. Forbes, as I have mentioned, has

promised to follow me with a particular description. Merely remarking, therefore, that the quantity of fragmentary bones of fishes and of the moa shows that these were the animals principally eaten by the natives inhabiting the cave, I proceed at once to specify what things other than bones have already been brought to light. Enough have been found to make the nucleus of a small museum. Such articles as a fisherman needs for the pursuit of his craft are the most common. Two objects first attract attention, because of their size and more finished workmanship. These are a well-made paddle or steer-oar of kauri (?), 7½ft. long and 6¾in. across the blade, and a nicely-carved unique-handled scoop of totara (?), 15in. by 8in., for baling the water out of a canoe. These are the articles referred to above as having been found immediately when the cave was opened, in a sort of natural cupboard or cleft in the rocky side of the outer chamber. Then there is a large piece of wood, that may have been part of a canoe or perhaps a sort of frame or pole for supporting a fishing-net. It is 6ft. long and has three groups of holes in it, each group containing four holes. There are also over thirty fish-spears of bone, of several sizes, from 5in. to 1in. in length, and of different patterns, some notched on both sides, some only on one; a number of stone sinkers up to 3½in. in diameter, and generally of sandstone; floats of pumice-stone; fish-lines of plaited flax; and pieces of net. A large number of stone implements have been found—over a dozen adzes, some highly finished, some very rude, one (a fragment) so broad and massive in the polished portion as to remind one of the domestic flat-iron, and to suggest the probability that it was used for smoothing or polishing rough surfaces; others with very fine sharp points, as though intended to be used as awls for boring holes in wood, bone, or stone. There are, besides, a number of greenstone chisels, one gouge-shaped; and the large quantity of pieces of obsidian, fragments of basalt, and flakes and blocks of chert or flint shows that such rude stone tools as the denizens of the cave required they were in the habit of fashioning on the spot. We found also a fern-root pounder of wood, 14in. long; a beautifully delicate needle of ordinary size, 1¼in. long, of bone, with the eye perfect; fire-lighters 9in. long; and a comb 5in. long, 2½in. across. The latter article is at the present time very brittle and somewhat decayed, like the other wooden implements in the cave. It was found in fragments, but must at one time have been of considerable strength, or it certainly would not have been serviceable for the purposes for which it was intended. Great handfuls of human hair were also found, one coil plaited, two or three wrapped in flax, mostly very dark in colour, but some light as the auburn hair of Europeans and carefully tied; and feathers of various birds,

mostly aquatic, fragments of skin of different kinds of Phocidæ, with the hair still attached, and a large quantity of shells of apparently the same species as are now found on the beaches in this neighbourhood. Besides these there are many fragments of wooden implements, all very brittle with age, the precise nature and purpose of which it will be difficult to decide. But all are evidently of Maori manufacture—nothing whatever of European origin has been found; clearly showing that the cave gives us, so far as it goes, a faithful photograph of the original Maori life. Some of the articles have apparently been intended for ornament, as certain little articles shaped like the *chelæ* of a crab or lobster, and others of the shape and size of a penny-piece with a hole through the centre, and a beautiful greenstone pendant, with a hole bored through it. How this was perforated it is difficult to conceive, for even now lapidaries can only bore greenstone with diamonds, as the metals will not mark it.

One article would almost lead to the belief that the Maoris made toys for their *tamariki*, or pickaninnies. It is a fairly-well-carved image of a dog, about 4in. long. Its tail is so curled up as to form a ring, by which it could have been suspended either as an ornament or charm. It may, however, have been only the handle of some implement or weapon, for there are few articles in this collection bespeaking a frivolous existence. Most of the things were such as would be demanded by hard necessity, and bespeak a life that "scorned delights and lived laborious days," though not in the poet's sense exactly. Of such would be the firesticks (*kauwahi*), apparatus for lighting fire by rubbing one piece of stick in the groove of another (of which there are several specimens), the fern-root beater (*patuaruhe*) aforementioned, pieces of spear, fragments of the parts of a boat, and so forth. Many of the fragments are more or less charred, and there is other evidence that in different parts of the first chamber of the cave, and at different times, cooking was usually done, and fires often kept burning.

It only remains for me to say that the entrance to the outer chamber is easy enough, scarcely involving stooping. Inside, above the *débris*, the roof is arched, and at least 10ft. in the clear. To explore the middle chamber it is almost needful to glide snakewise; but once in, and in the centre, and you have a space above the floor 15ft. in the clear. As for the third chamber, that practically is unexplored. The approach to it is 10ft. long, and very narrow and circumscribed, and an arch of rock is before the entrance. It is almost filled with *débris;* yet it was evidently once much frequented, for the lava stone which forms the doorway is worn perfectly smooth at all exposed points, as if by human

being or other animal daily or hourly passing to and fro and rubbing against the sides. It is more than likely that this was for centuries, perhaps, the abode of sea-lions, the seclusion of such a retreat being just what those animals would seek, and we know that they were plentiful enough about here when the Maoris inhabited the cave, because of the number of fragments of sea-lion fur found in the *débris*. At present the outer chamber promises most reward for digging and clearing away. The second chamber is less inviting to the explorer, but may prove more productive of bones and other relics than is now thought.

Appended is a plan of the cave (Pl. I.) and sketches (Pl. II.) of the principal Maori implements and other articles therein found.

DESCRIPTION OF PLATES I. AND II.

PLATE I.—MONCK'S CAVE NEAR SUMNER, GROUND PLAN.

PLATE II.—ARTICLES FOUND IN THE CAVE.

Fig. 1. Wooden model of dog (?), $\frac{1}{2}$.
Fig. 2. Carved head of stick or paddle, $\frac{1}{6}$.
Fig. 3. Paddle or steer-oar, $\frac{1}{13}$.
Fig. 4. Comb, $\frac{1}{4}$.
Fig. 5. Bailer, $\frac{1}{7}$.
Fig. 6. Fish-hook, $\frac{1}{5}$.
Fig. 7. Fire-lighter, $\frac{1}{6}$.
Fig. 8. Hook (perhaps for suspending an ornament), $\frac{1}{4}$.
Fig. 9. Fern-root pounder, $\frac{1}{7}$.
Fig. 10. Greenstone pendant, $\frac{1}{6}$.
Fig. 11. Needle (bone), $\frac{1}{3}$.
Fig. 12. Adzes, $\frac{1}{8}$.
Fig. 13. Fish-spears, $\frac{1}{5}$.

ART. VI.—*On the Disappearance of the Moa.*

By Major W. G. MAIR.

[*Read before the Auckland Institute, 11th November, 1889.*]

So much has been said and written about the question of whether the Maori people were familiar with the moa, or whether the great bird was practically extinct when the Maoris reached the shores of New Zealand from Hawaiki, about twenty generations ago, that it may be thought that there is nothing left unsaid about it; but I do not think that the matter has been set finally to rest, and perhaps it never will be. Still, every possible scrap of information bearing upon such an interesting point should be placed upon record before the time comes when we cannot possibly collect anything more. For this reason I contribute what little information I