DISCOVERY OF AN ABORIGINAL CHIPPED FLAKE IN DEEP GROUND NEAR GLADSTONE.

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Plate V.

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Up to the present, aboriginal worked flakes have been recorded only from the surface of the ground, or in shifting superficial sands such as the sand dunes of the coasts. It has been recognised by every investigator who has dealt with the question that the Tasmanian aboriginal migrated to this island on dry land, and therefore prior to its separation from Australia; the absence of the dingo also has been appealed to as proof that at the time of the migration the animal had not then entered Victoria.

At the time of the separation the sea invaded the north-eastern part of the island for many miles inland from the present coast-line. The marine waters laved the northern base of Mt. Cameron, and worked their way round the eastern end of the mount, covering the ground between the present Ringarooma and Mussel Roe rivers. Residual hills and other deposits of marine grits attest the former presence of the sea in this area.

Subsequently the land rose and brought the old marine drifts above sea level. The aboriginals, therefore, must have witnessed both the invasion by the sea and its retreat. It would consequently seem natural for the pre-invasion deposits, such as the beds of fresh-water streams, lagoons, and sea beaches, to contain aboriginal implements. Beds of this nature could probably not be expected to contain them in quantity; nevertheless, the discovery in them of stray examples may be anticipated. Possibly some have already been found, but have not been recognised by the discoverers.

I happened to be at Gladstone last March when a worked stone of chalcedony was brought to me as a strange specimen found by Mr. Richards in working Richards's and Murray's alluvial tin claim at the old Doone mine, north of the Ringarooma River, and two miles from Glad-

ABORIGINAL IMPLEMENT FROM GLADSTONE.

OBVERSE.

REVERSE.

The figures are slightly enlarged, the natural size of the implement being 1⅝ inch in its maximum diameter. They show both sides, the obverse being the chipped side and the reverse the smooth side. The serrated upper edge is well seen in the reverse figure.

stone. I recognised it as an aboriginal flake, but, to make sure, I submitted it to Mr. R. M. Johnston, whose knowledge of these implements is unrivalled, and he at once pronounced it to be of human workmanship.

The following day I proceeded to the claim in order to examine the conditions of occurrence. The actual block of gravel from which the stone had been picked had disappeared in sluicing, but I stood on the actual site of the discovery, and Mr. Richards, who enjoys a high reputation for reliability and integrity, explained to me all the attendant circumstances.

The mine owners are sluicing tin ore from a bed of gravel 2½ to 4 feet thick, which underlies 10 to 20 feet of a drift which has been deposited all over this plain by the sea in former times. This overburden of drift has to be removed before the wash gravel is exposed. In the course of working, an excavation has been made below the surface of the ground about half a chain wide and 10 feet long with a maximum depth of 25 feet.

After bringing down the overburden at the west end of the excavation by means of a stream of water, a block of wash or gravel, here 2½ feet thick, was detached from the cliff face at a depth of 10 feet from the surface, and from the top of this block Mr. Richards picked out the flake in question, noticing that it was a different kind of stone from any he had previously seen in the wash. It was slightly adherent to the gravel, and broke in two pieces as he handled it. Not attaching any particular importance to it, he did not preserve the piece which was broken off. On examining the plane of fracture, a deposit of silica is noticeable on the surface of it. I examined the working face closely, with a view of seeing whether it was at all possible for the stone to have been derived from the surface, but the possibility seemed to be quite excluded. The two facts that it was adherent to the wash, and that silica had crystallised on the fracture plane, add additional weight to the conclusion that the stone belonged to the wash.

We are shut up to the conclusion that it is the handiwork of aboriginals who lived at the time of the deposition of the wash (probably a beach deposit) and prior to the accumulation of the overlying marine sands. It is not waterworn. Most of the stones in the wash are well worn by the action of water, but there are some among them which are absolutely angular, though they have to be looked for.

The question arises what amount of denudation have the overlying drifts undergone since deposition? Is there

any way of making even a roughly approximate estimate of this? Two and a half miles to the north-west, near the MacGregor and Aberfoyle claims, two hills of made ground, Brown's Hill (sometimes called the Aberfoyle Hill) and the Little Hill, rise from the plain to a height of about 60 feet. These are residual hills of cemented marine drift which once covered the area of this great plain. A mile and a quarter to the north-west of the Doone the Government line of bores shows bedrock at upwards of 100 feet below the surface of the drift, but in that direction there does not appear to be any available indication to serve as guide in an estimate of denudation. To keep strictly within the limits of the evidence, we must confine our estimate of minimum denudation to about 70 feet, which is the difference of level between the Doone wash and the summit of the Aberfoyle Hill.

The Doone is about 7 miles from the coast line at Boobyalla; its height above sea level has not been determined, but probably does not exceed 60 or 70 feet, and is perhaps less than that, as I am informed that the tide backs up the fresh water in the Ringarooma west of the Aberfoyle Hill.

Further confirmation of the antiquity of the wash is derived from the fact that the general body of drift extends southwards across the Ringarooma River, which has subsequently intersected it. Thus the wash and the overlying drift existed before the Ringarooma flowed in its present channel. But can the age be thrust as far back as the time when the ancient Ringarooma flowed out to sea at the west end of Mt. Cameron? Such a conclusion would involve an age too great to accord with accepted views of the antiquity of man in Tasmania, but the deposition of these sediments was plainly prior to the final establishment of the existing channel in this part of the course of the river.