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1877.



MONDAY, 26TH APRIL, 1875.

WILLIAM MACLEAY, ESQ., PRESIDENT, in the Chair.

NEW MEMBER PROPOSED.

A. R. Fraser, Esq., New England.

MEMBERS ELECTED.

Edwin Chisholm, Esq., Surgeon ; C. A. Fraser, Esq., New England.

Dr. Cox read the following paper on the Stone Implements of Australia and the South Sea Islands :—

The Aborigines of this vast Continent and adjacent Isles show no exception to the almost universal custom of making use of stone as a means of searching for their food, and also for making the necessary weapons of offence and defence. The few specimens of these rude implements, which I have laid before you this evening, are chiefly those which have been used by the natives of Australia, some are from New Caledonia, a few from New Zealand, others from the Fiji Group, the Loyalty Islands, several from the Solomon Isles, and a few from New Guinea. It is now very difficult to obtain specimens peculiar to New South Wales, although it is no great time since these implements were to be got in abundance. I can myself remember seeing them in the hands of the greater number of the natives of the tribes which once inhabited in large numbers the Valley of Mulgoa near Penrith ; but so thoroughly has all trace of them now disappeared that I have searched that district in vain for specimens peculiar to the tribes, and if the total disappearance of them has taken place within the short space of less than thirty-five years, I think, unless some record of these rude relics of the inhabitants of this land be made, future generations may doubt their having existed at all. In Victoria they have totally disappeared from use, and but comparatively few specimens are left on record. I have never yet been able to procure a specimen from Tasmania, although I have offered liberal rewards for them. In Western Australia stone

hatchets, knives and spears (such as I show you) are still found in the hands of the dark tribes, and also in Queensland.

The hatchets found in Western Australia appear to point to one of the lowest types of creation, their stone implements being so primitive that, unless the stones were found in gum and fixed to handles, I scarcely think it would be credited that they had ever been used for the important duties they had to serve. Some are said still to be found in the hands of the natives of the northern part of South Australia, and also in the back rivers of Queensland, especially to the north-west, where fine specimens can be procured with handles fixed to them with a gum resin, just as they were originally found throughout the Continent.

Most of the specimens from New South Wales which I show you have been ploughed up in various districts such as Dapto, Baulham Hills, Monaro, Ashfield, and Kurrajong, while others have been dug out of the beds of oyster shell, found so abundant near the mouths of our principal rivers, under shelving rocks, evidently the scene of many a cooking fire. I presume the hatchets got mixed with these masses of shells by their making use of them to open the large mud oyster, which, judging from the abundance of the shells, were then to be found in quantities, or it might have been, that it was around the fire that they manufactured their implements, melting and moulding the wax which was to secure the handle to the stone. Others of the tomahawks I have received from the Wollombi, having been dug from the bottom of the large caves in that district, on the arched roofs of which are still to be found impressions of the "Red Hand" and other figures. Other hatchets have been found in the crevices of rocks about the locality where they were sharpened and the edge ground. Of these localities I shall speak presently. Generally one or more of these hatchets were to be found in the graves of the natives, but unfortunately almost all of the old mounds have disappeared, and it requires a keen eye to discover them. It seems to have been one of the native customs of the New South Wales blacks to bury the goods and belongings of the men of the tribes with the bodies, and it is in this way that I account for their being ploughed up from time to time.

The generality of these hatchets had handles fixed to them by doubling a piece of tough wood round them, the two were then bound together tightly with kangaroo sinews, and the whole plastered with the gum of the grass tree. Usually the handle is fixed so that only one end of the stone could be used; but specimens which I have only recently received from the Macdonald River, a tributary of the Hawkesbury, lead me to assume that in some instances the handles was fixed in the centre of the stone so that both edges were used. That stone hatchets have been made and used in this manner by neighbouring tribes is shown by the beautiful specimen, the property of Mr. Markey, kindly lent me by him to show this evening. The edges of those peculiar to Australia are almost invariably worn quite straight, transversely, across the stone, and curved from side to side, and with this single exception shown with only one edge sharpened. But this rule cannot be considered absolute, for I show you a stone dug from the Wollombi Caves by Mr. Brooks, Police Magistrate, of a shape totally different to any hitherto recorded as having been found in Australia. It approaches, in fact, more to the hatchets of the Fiji Group than to any other that I know of. It has a broad upper surface flat and well polished; below it is also flat and well polished, the two surfaces tapering towards each other and making a good cutting edge but bevelled off from above downwards with great precision and the angles of the different edges carefully worn off. It also presents at the opposite end a portion evidently worn down for the purpose of attaching a handle to it; and from analogy I believed it to have been fastened into a crooked handle, similar to those of the Fiji Group; and I cannot believe that it has not been introduced. The hatchets from the Solomon Isles are always conical in form and the cutting surface is not straight, but formed with a decided curve and are highly polished.

The Fiji weapons are generally long and tapering to each end, one end coming to a sharp cutting surface, and the other morticed in an elbow shaped handle.

In New Caledonia some of the finest specimens of these hatchets are to be found. In form they are generally circular, made of green stone, flat with a cutting surface all round, and the handle

is fastened by having two holes drilled through the stone, and tying the stone and handle together with fibre. Many of the handles are beautifully worked in various devices. Others appear to have been fastened to long sword-like pieces of wood by being morticed to it at one end. Stone hatchets have been found in New Zealand mounted in the same manner, and formed most formidable weapons when used in the same way as Javelins were used. The "Meri" of New Zealand, I am led to believe, was carried in the hand, having one or more holes drilled through it with the object of attaching it to the wrist of the wearer by a strong cord. These "Meris" appear to have been passed from tribe to tribe. Generally they were made of the finest green stone highly polished, and must have taken almost a generation to make, but others have been made of a hard pebble stone, and were of the same shape and similarly used.

New Guinea seems to possess two distinct forms of this weapon. One of my specimens is in the form of an adze of large size, let into an angled handle, and is used only, I am told, for cutting canoes. The other is a small rather square stone angled at either side of the cutting margin which is always curved. The convexity of the curve being set away from the handle.

The implements found in Australia proper vary considerably in the stone used, as well as in the workmanship. Usually they have been made of the flat elongated pebbles, found in the beds of many of our Australian water courses; but from facts which have come under my notice, it appears to me that the tribes resorted to certain localities in their various districts for the purpose of collecting and grinding these stones. I know of two places where the rocks in the neighbourhood have been worn on every side by grinding the hatchets, so deep indeed are these marks that they must have been the result of many years work. But in addition to grinding them in these places the natives evidently carried about with them stones for rubbing up and sharpening the edges. Specimens of these stones I now show you.

It is very remarkable, also, that all the specimens I have shown from the coast tribes are exceedingly rude and only polished at the cutting edge, while those from the interior are

more perfect in form and highly polished, as seen in the specimens from the Namoi River district, while some of those of the Northern tribes of Queensland appear rather to have been formed by splitting pieces off them. In Western Australia the implements found are of the very rudest description. They do not appear to possess sufficient river pebbles from which to form their weapons, their tomahawks being merely small sharp pieces of granite stuck into each end of a lump of grass tree gum in the centre of which a handle is firmly attached, and thus forms a double tomahawk. Their knives are of two kinds, one made of a piece of sharp crystal with one end protected with fur and gum. The other specimens of knives are formed by simply sticking a number of small sharp pieces of granite in a row to a stick with gum.

I must next draw your attention to the stone weapons made in the form of arrows used either as spears or arrows, the only specimens of which are to be found on the north coast of Australia, west of Cape York. The spears are a long and formidable wooden implement pointed with a black igneous glassy crystalline stone. The arrows are tipped by the same sharp stony formation and are found in the hands of the same tribes. I have still another very remarkable weapon to show, appropriately called a "gubba gubba" or headache stone. For this rude and curious weapon I am indebted to my friend Mr. Beddome, lately Government Resident at Cape York. In the old world some remarkable round stones have been at various times found with large holes in the centre; and it has been a matter of much conjecture what these stones actually were, some suggesting that they were weights for fishing tackle, others, that they had had strings attached to them and were used for throwing at a distance. The specimens which I show you set the theory at rest, as far as Australia is concerned, for they are mounted in such a way that they may be used as a most formidable weapon of offence. The stones of which these weapons are composed, are circular in form, six inches in diameter, having a large hole in the centre through which a strong wooden handle is passed, and the two are firmly bound together with gum and fibre. The stones themselves are, as I have said, quite round and beautifully bevelled off to a very sharp edge.

These implements, of which I have three, I believe to have come originally from New Guinea and so far, I think, are the only specimens on record.

The other, and somewhat similar weapon, is said to have come from the Solomon Islands; it differs from the others by not having any sharp edge on it. In fact, it may be described as a long wooden handle with a heavy stone ring attached to the end.

The following list of specimens were exhibited:—

Two specimens with original handles attached, fixed on with the gum of the grass tree. One from the Clarence River district, about $6\frac{1}{2} \times 3\frac{1}{2}$ inches long, oval, sharpened at one end only, the edge being quite straight, *central from above downwards* for about one half of the stone. The other from the Bowen River, a tributary of the Bowen, Queensland, $5 \times 2\frac{1}{2}$ inches, of exactly the same shape and form. Two very large elongately square shaped specimens measuring 8 inches long, by $5\frac{1}{2}$ inches broad, flattened, of a very coarse stone, the cutting edge very slightly curved, only occupying one end of the stone, from Stony Creek, near Picton, New South Wales. Two long narrow very slightly flattened specimens, about an equal thickness throughout, the cutting edge, central, confined only to one end of the stone, the opposite end, the head of the hatchet, gradually tapering off. Presented to me by D. Ashworth, of Manaro. The other was ploughed up at West Dapto, Wollongong. About thirty other specimens varying in length from 6 to $2\frac{1}{2}$ inches, and in breadth from $4\frac{1}{2}$ to 2 inches; many others are proportionately much broader than long; most of them are smooth as if made from water worn pebbles, others are evidently roughly chipped to bring them to a proper form for use.

One from Western Australia, about 6×3 inches, consists of an irregular oval mass of grass tree gum, to which a wooden handle is firmly fixed in the centre below, the cutting edges are formed by sharp edged chips of granite firmly imbedded in the gum. Two knives from the same district made by fastening thin sharp chips of quartz in a line along the lower edge of a wooden

handle with a similar gum, making a cutting edge of about $5\frac{1}{2}$ inches in length, the wooden handle being about 16 inches. One knife from West Australia, made from a sharp chip of rock crystal which is imbedded into an oblong mass of gum covered at the end with opossum skin to prevent it from adhering to the hand.

One from the Wollombi, as described, $5\frac{1}{2} \times 1\frac{1}{2}$ inches, in all probability introduced from abroad.

Two specimens from New Caledonia, the larger one oval, pointed at one end, broader and rounded at the other, much flattened, with a rather sharp cutting edge all round, measuring 7×4 inches; the smaller one is similar in form, but is oval, measuring $3\frac{1}{2}$ inches wide by 4 inches in length, made from pale green cracked pieces of turpentine.

Two fine hatchets from Canala, New Caledonia, these are flattened discs of transparent greenstone with a very sharp cutting edge all round, ranging from $7\frac{1}{2}$ to 6 inches in diameter. These two specimens have wooden handles attached about 18 inches long bound round with a soft cordage made from the fur of the flying fox and dyed dark crimson, the end ornamented by shells; there are two holes drilled through the stone about $1\frac{1}{2}$ inches from the edge, and the handle is fastened to the stone by strong cordage passed through the holes.

Two from New Zealand; one consists of a flattened oval piece of greenstone with a cutting edge all round, obtusely pointed at either end, rounded at the tips, measuring 11 inches long and 5 inches wide. The other a very perfect spatulate shaped meri, about 13 inches long, $3\frac{1}{2}$ inches broad at blade, having a handle with a hole drilled through.

Two from Sir George Grey's Island, New Zealand, a pale gray ragstone, flattish, elongated, somewhat rectangular at the cutting edge which is bevelled to one face, the sides are also squared, the attached end is slightly narrower and left in the rough.

Three large broad axes from New Guinea, the stone blade of which measures about 15 inches long by 6 inches at the cutting edge, and tapering to the end attached to the handle to about

3 inches, when it is rounded off ; it is a flat smooth elongated stone widest at the cutting edge, which is central and rounded, and continuous with the sides of the stone, which are sharply bevelled off. These blades are set in an elbow shaped handle bent at rather an acute angle, one of the limbs being shortened and spilt to receive the blade, which is secured by being firmly bound round with thin cane, the point of the elbow is produced to a long point about 10 inches and ornamentally carved. The blade in these fine specimens is always set obliquely from the long arm of the handle. Three small adzes, the heads of which measuring $3\frac{1}{2} \times 2$ inches, of roughish flattened stone, the cutting surface is confined to one end, the inner face concave the outer convex, making the cutting edge arched. These stones taper towards the attached end which is left in the rough ; they are fastened to a short kind of elbow shaped handle by a strongly platted bracelet of cane.

Three from the Fiji Isles also attached to elbowed handles, but made from thicker pieces of wood, the stone being fastened by a twine of platted cocoanut fibre. The stone portion of these varies in length from 6 to 9 inches, and from $1\frac{1}{2}$ to 2 inches in breadth, they are long, narrow, slightly fastened stones of nearly an equal width throughout, the cutting edge is confined to the unattached end which is slightly narrowed round laterally.

Six specimens from the Solomon Group of Isles, four of which are from Florida Isles ; these last vary in length from $5\frac{1}{2}$ to 3 inches, they are elongated triangles, the base of the triangle being formed by the cutting edge, which is curved and rounded from side to side, and formed on the outer surface of the stone, being very much bevelled off from within ; the whole surface is smooth and polished, flattened laterally, with blunt rounded edges. Those from the other Solomon Isles differ only in being narrower and longer, measuring in length about seven inches.

Two from the Loyalty Isles, very similar in form and general appearance to the last, but contracted above the cutting edge, and about an inch longer and broader at the cutting edge, which is also slightly more central.

Some twenty other specimens were exhibited from various isles in the South Seas, the exact localities of which have not yet been determined.

One specimen from Ambrym Isle, New Hebrides Group, similar in shape to those from Florida Isles, but shorter and broader at the cutting edge, made from the shell of the tridochna.

One remarkable specimen was also exhibited by Mr. Markey, it was a stone about a foot in length, almost round, with a cutting edge at either end, and to the centre was fastened a handle of strong true cane; its locality is said to be New Zealand, but from the nature of the cane handle appears to be doubtful.

Three fine specimens of what are known as gubba gubbas—these consist of circular discs of stone about 7 inches in diameter and about $2\frac{1}{2}$ inches from side to side, through which a round hole is bored, and into this hole a wooden handle about three feet long is fixed; the circumference of the stone is ground to a sharp edge all round.

Two fine spears about ten feet long, to the end of which has attached a piece of sharp pointed flint of about ten inches long.

MONDAY, 31st MAY, 1875.

W. J. STEPHENS, Esq., M.A., in the Chair.

NEW MEMBERS PROPOSED.

The Honorable Leopold Fane de Salis, M.L.C.; E. O. Moriarty, Esq., Engineer of Rivers, &c.; Captain Eldred; The Rev. J. V. Atkin, M.A.; H. Prendergast, Esq.; and Dr. Tarrant, Kiama.

MEMBERS ELECTED.

A. R. Fraser, Esq., New England.