

VI.

NOTICE OF THE EXAMINATION OF PREHISTORIC KITCHEN MIDDENS ON THE ARCHERFIELD ESTATE, NEAR GULLANE, HADDINGTONSHIRE, IN NOVEMBER 1907. BY ALEX. O. CURLE, SECRETARY.

The links which fringe the shore on the Archerfield estate are, on the east side of Gullane Bay and northward of the Black Rocks, deeply indented by a series of long ravines running inland among the sand-hills in an easterly direction. From their surface the sand is being constantly blown by the prevailing westerly winds, and there have been thus exposed to view sites of former occupations readily recognisable from the number of bleached whelk and limpet shells scattered over them. Quantities of bones and teeth, of oxen and other animals, lie strewn about the surface, and numerous small cairns also testify to the presence here of a community in prehistoric times. The more important of these ravines are four in number, and of these the second, approached from the direction of Gullane, now particularly claims our attention. From the upper edge of the old raised beach which crosses its entrance it extends landward for several hundred yards. On the south side, where its walls are some 20 feet in height and about 60 yards inwards, lies a low mound of loam and sand whose highest elevation is 3 to 4 feet above the gravelly floor exposed towards the opposite side. The breadth of the ravine at this point is 37 paces. The area over which the bleached shells lie strewn is not capable of accurate definition, but is approximately 24 paces from north to south and 20 paces from east to west. Except on the summit of the mound, the shells lie almost entirely on the surface. There, however, a few feet out from the bank, beneath a depth of 2 or 3 inches of blown sand, lay two well-defined deposits of sandy soil, much discoloured, and thickly interspersed with food refuse. The first lay towards the seaward end of the mound, and was found to measure about 12 feet by 9 feet. For a foot or two near the centre a compact mass of shells, etc., lay to a depth of about 4 inches, and thence the

deposit gradually diminished in depth till at the limits of the excavation it was represented merely by a thin black streak. The shells of whelks and limpets greatly predominated, but there were also in smaller quantities shells of the oyster and mussel, portions of crab claws, bones of various animals, and parts of horns of the red deer. Intermingling with this refuse lay a number of fragments of coarse, hand-made pottery, portions of two vessels of a finer quality decorated in parallel rings with the impress of a twisted cord or thong, two scrapers, and several flakes of

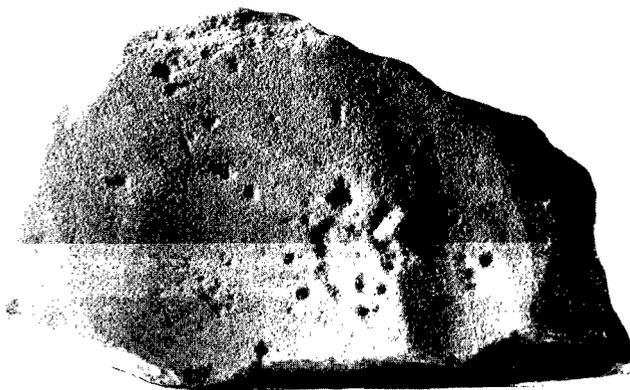


Fig. 1. Rubbing Stone of Sandstone. ($\frac{1}{3}$.)

flint; and likewise, strangely out of place, a small copper coin, a "turner," of the reign of Charles II. From this area there came also part of a block of sandstone (fig. 1) $9\frac{1}{2}$ inches in length by 6 inches in breadth, broken at one end, and showing on its upper side two parallel hollows. The larger, which occupies about two-thirds of the area of the stone, has its surface smooth except for a number of small indentations suggesting some secondary use. In the smaller hollow are faintly discernible certain smooth, parallel faces such as would be produced by polishing or sharpening a narrow, flat-edged tool. Similar

rubbing stones are common among the relics of the Swiss lake dwellings, and have been found elsewhere.

The second deposit lay 5 feet east from the first, and at the same level. The conditions disclosed were identical, the discoloured sand or soil being almost black and very full of food refuse. The deposit, from a thickness of about 4 inches in the centre, gradually thinned away till at

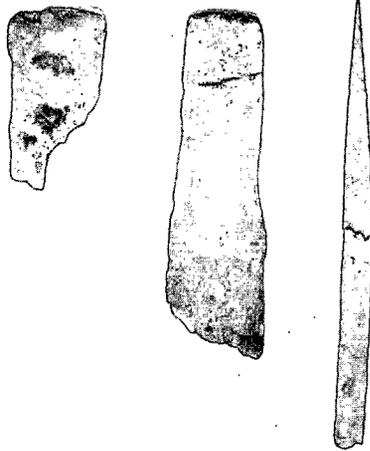


Fig. 2. Bone Pin and Chisel-ended Bones. (3.)

the edge of the excavated area, which also measured 12 feet by 9 feet, it was represented by a mere streak. The relics, however, were much more plentiful, and included portions of eighteen different vessels, most of which were highly decorated and of a character quite distinct from that of the heavier fragments found in the adjacent deposit. There were also found a bone-pin 3 inches in length (fig. 2), a portion of a chisel-ended implement of bone, which may be compared with somewhat similar objects found in the Oban caves and in the shell mounds at Oronsay

(described in the *Proceedings*, vol. xxxii.), a flint knife, two scrapers, and a few flakes of flint (fig. 3). To make sure that no other deposits lay near, the surrounding sand was examined till an area 54 feet by 12

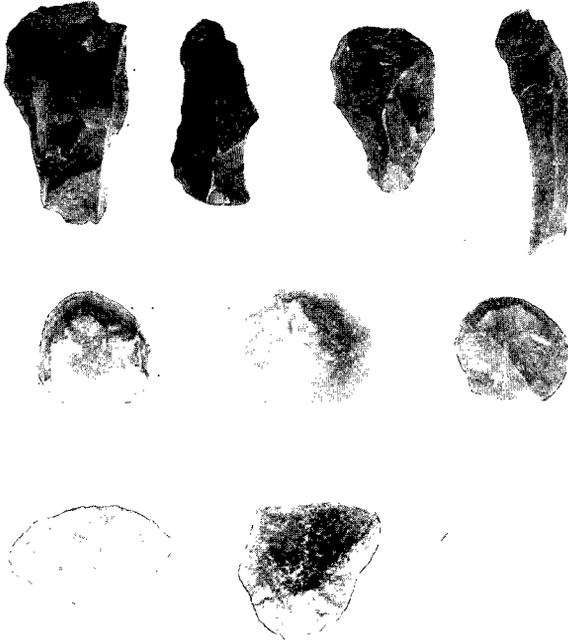


Fig. 3. Flakes and Scrapers of Flint.

feet had been cleared, but except a few small fragments of pottery, some of which was much weathered, and a few pieces of flint, nothing further was discovered.

Twenty feet or so eastward were surface indications of a similar midden. Here also, when the upper sand had been removed, there was

exposed a layer of sand blacker than in the other areas and containing traces of charcoal and charred wood. The shells, though less numerous, were of the same character, and there were a few broken animal bones. Remains of pottery were much less abundant and less varied than in the deposit previously examined. Eight distinct vessels are, however, represented by fragments contrasting markedly in character with the pottery from the other two sites, viz. four vessels of the thin red ware decorated with the impressed twisted cord, three with the class of ornament predominating on the shards from the second site (two of which, however, are represented only by single small fragments), and one of the coarse thick quality found in the first deposit. A few scrapers and flakes of flint were also obtained. The area examined, the sand from which, as in the previous cases, was all passed through a half-inch riddle, covered about 30 square yards.

No remains of cairns lay in the immediate vicinity of these middens (the only one in this particular ravine being upon the opposite side, about 40 yards distant), nor were there any indications whatever of a burial, either by inhumation or after cremation, in connection with them. At the seaward end of the bunker and in those adjacent are a number of shell-bestrewn areas presenting similar features, but though I made a partial examination of several of them, from none did I obtain a trace of pottery or flint.

The pottery of which portions have been recovered resolves itself into two main classes, (1) thick coarse vessels of large diameter, and (2) vessels of finer texture, smaller diameter, and with decoration in repeating zones. The first class is represented by the remains of five vessels, four of which came from the first, the most westerly site, and one, a solitary fragment, from the eastmost site furthest up the hollow. They are distinguished by the thickness of their walls and consequent weight as well as by the character of ornamentation. The three of which sufficient portions remain to warrant an opinion of their forms appear to have been cylindrical, with raised mouldings around the brim. In one case (fig. 4) these mouldings, four in number, are on the outside, while

on No. 1 (fig. 5) there is a single moulding on the inside. On both vessels the hollows which define the mouldings bear impressed markings. On No. 2 (fig. 5) the three prominent mouldings are also on the inside.



Fig. 4. Portion of cylindrical Vessel with exterior mouldings round the rim. ($\frac{1}{2}$.)

The additional ornamentation on the body of the vessel shown in fig. 4 consists of longitudinal stripes of herring-bone pattern enclosed between two narrow parallel lines $\frac{3}{4}$ inch apart. The pattern is repeated at $2\frac{7}{8}$ inches distance. Both stripes converge slightly towards the base,

suggesting a gradual restriction of the diameter of the vessel in that direction. The height of the fragment (which does not extend to the

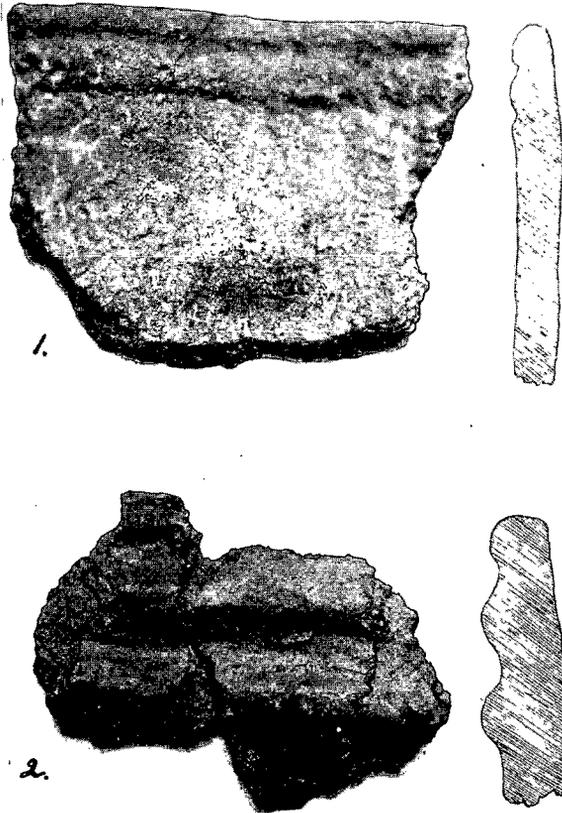


Fig. 5. Portions of Vessels with interior mouldings round the rim. (3.)

base of the vessel) is 8 inches, and indicates an approximate diameter for the vessel of $9\frac{7}{16}$ inches. No. 1, in fig. 5, is quite plain on the outside and much blackened on that surface, with a sooty incrustation. The

approximate diameter of the vessel was $7\frac{1}{8}$ inches. No. 2, in fig. 5, is a small fragment also undecorated on the outer surface and showing an approximate diameter of $9\frac{1}{8}$ inches. The fourth example is a portion of the side of a vessel decorated with a bold, zigzag ornament running horizontally around it. It is thick and heavy, with a very smooth external surface and much blackened in the interior. The fifth vessel of this class is represented by a small shard from the most easterly site,



Fig. 6. Upper part of Vessel reconstructed. (3.)

much blackened externally and internally, and ornamented on the outside with a band of rudely formed chevrons made with the finger-nail pressed forward into the soft clay. There is an indication at the edge of the fragment of a repetition of the band.

The second class is represented by remains of twenty-seven vessels. Of this large number it was only possible in two cases to piece together a sufficient number of fragments to show the original shape of the vessels, as represented in figs. 6 and 7. So far as a conclusion is justified from

the fragments, they differ in no respect from the vessels associated with burials and known as drinking cups or beakers. Here is the same characteristic style of ornament in repeating zones, the same combinations of chevrons, diapers, zigzags, and straight lines, made with a pointed implement or a comb, or the impress of a twisted cord or thong.

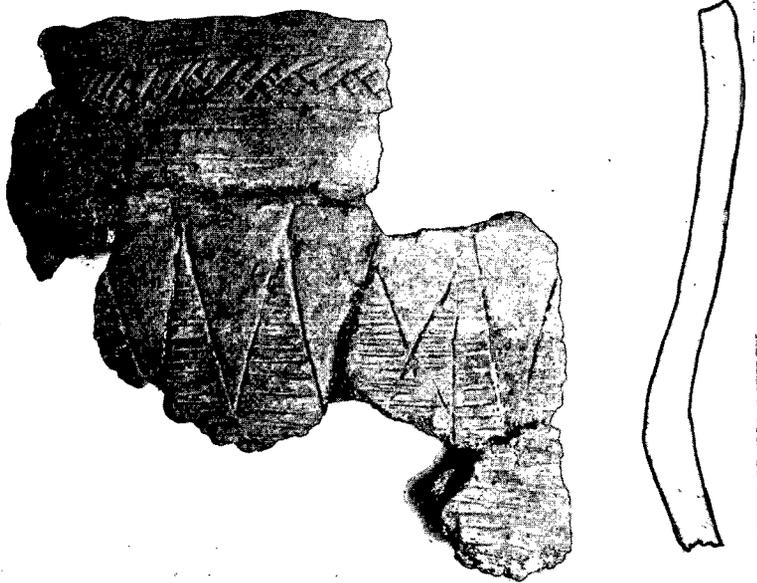


Fig. 7. Upper part of Vessel reconstructed. ($\frac{3}{8}$.)

The texture and thickness of the pottery is similar, and the dimensions of the vessels, so far as ascertainable, are analogous. Unfortunately there was not recovered a sufficient portion of any one vessel to supply the exact shape, but the indication from the upper portions, which predominate, is that they fall into two classes, viz.—those with a high straight brim with a slightly incurving tendency, and those with an everted brim. To the former category belonged apparently all the

vessels with the varied ornament, while to the latter belonged those ornamented solely with the impress of the twisted cord. Besides a

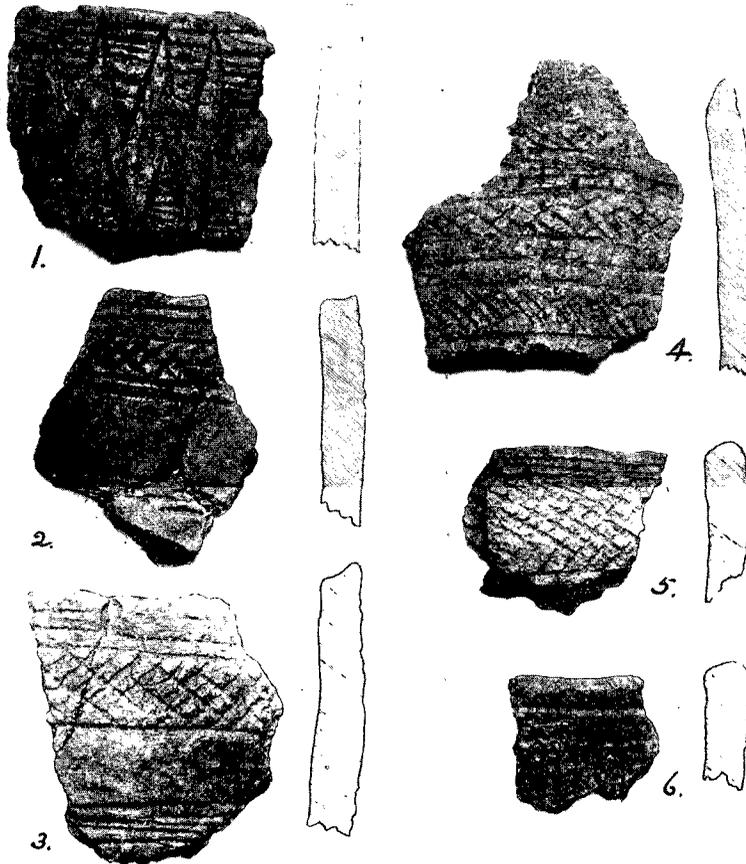


Fig. 8. Fragments of Vessels with straight brims. (§.)

difference in outline, a distinction may be noted in the character of the lips, which are either worked to a narrow, rounded edge as shown in the sections of fig. 6, fig. 8 No. 4, and fig. 9 No. 7, and in all the cord-

impressed specimens, or flattened with a slight level inwards, retaining

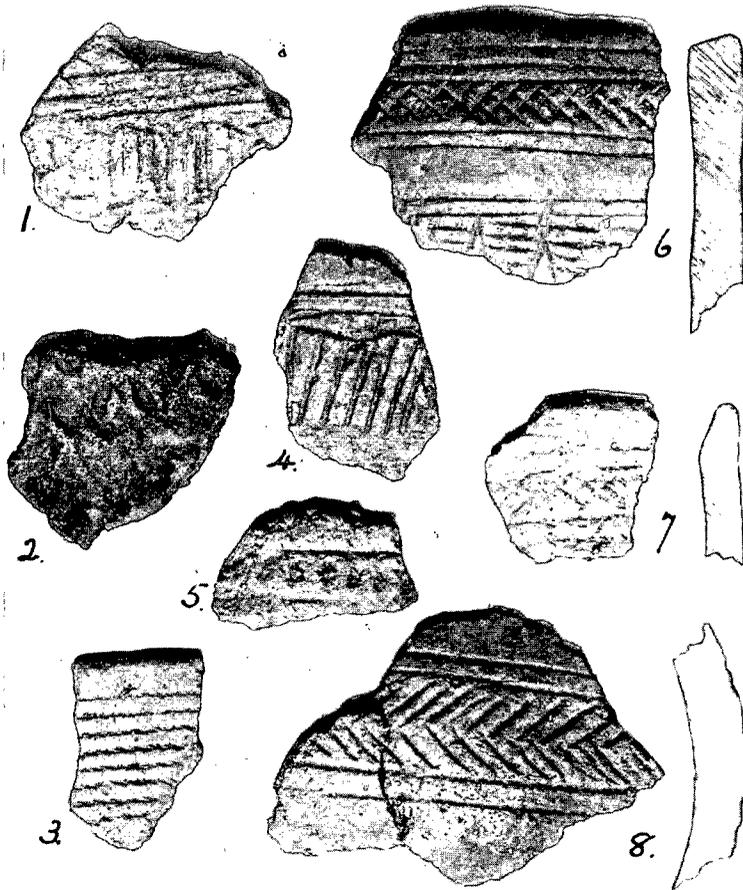


Fig. 9. Fragments of Vessels showing different varieties of decoration.

the same thickness as the wall of the vessel, *e.g.* sections of fig. 8 Nos. 2, 3, and 5 ; and fig. 9 No. 6.

The thin reddish vessels decorated with the cord impress were common to all three sites, though only two fragments of different vessels came from the first site and portions of probably only one from the second. From the third site there came the remains of four, all distinct, viz.—one with three lines of impression on the inside of the lip, another with four lines in a similar position, one with a plain lip of $\frac{3}{8}$ inch in depth above the impressions, and a small portion of the side and bottom of another vessel on which the impression was double.

None of the vessels of the second class show the sooty incrustation or discoloration apparent on those of the first class.

No fragments of the highly decorated ware were found in the first site nor of the thick heavy pots in the second, which was almost contiguous.

Though the pottery of the second class is characteristic of the age of bronze, the absence of metal and the presence of the flint knife, bone, chisel, and scrapers indicate that the inhabitants of these sites had not yet emerged from the Neolithic state of culture.

I am indebted to Professor Bayley Balfour and Mr Harry F. Tagg of the Royal Botanic Gardens for examining the fragments of carbonised wood which they have pronounced to be remains of the bark of the Scots pine (*Pinus sylvestris*) and the bark and wood of the birch (*Betula alba*).

In conclusion, I would add that Mr J. E. Cree's interesting discovery of similar remains in his garden at North Berwick (reported elsewhere in this volume), suggested to him and myself an inspection of these sites, with the results above narrated. Besides assisting in the active work of excavation, I am indebted to Mr Cree for piecing together the broken pottery, drawing the sections, and other assistance.

MONDAY, 11th May 1908.

SIR ARTHUR MITCHELL, K.C.B., M.D., LL.D., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows :—

ALEXANDER THOMSON CLAY, W.S., 18 South Learmonth Gardens.

GEORGE CLINCH, F.G.S., 3 Meadowcroft, Sutton, Surrey.

JOHN CUNNINGHAM MONTGOMERIE, of Dalmore, Stair, Ayrshire.

JOHN PARKER WATSON, W.S., 14 Magdala Crescent.

GEORGE HARVEY JOHNSTON, 22 Garscube Terrace.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors :—

- (1) Presented, in memory of their father, by the family of the late ARCHIBALD STAVERT, of Hoscote.

Finely Polished Axe of green Avanturine Quartz, ploughed up at Cunzierton, Roxburghshire, in 1892. This fine axe (fig. 1), one of the very finest ever found in Scotland, is absolutely perfect, and retains its original polish from edge to butt. It measures $7\frac{1}{2}$ inches in length, $3\frac{3}{4}$ inches in greatest breadth across the cutting face, and its greatest thickness at about one-fourth of its length from the butt is only $\frac{5}{8}$ of an inch. Axes of this thin-bladed type, and made of a somewhat similar variety of stone, are rather rare in Scotland; but there are now in the National Museum eight specimens, all made of somewhat similar stone, of which three are from Perthshire, one from Fifeshire, one from Roxburghshire, one from Kirkcudbrightshire, one from Wigtonshire, and one the locality of which is unknown but supposed to be Midlothian. They have been found in Brittany, chiefly in dolmens, and the same form, made of jadeite, occasionally occurs in Central Europe.

(2) By ARCHIBALD SHOLTO DOUGLAS, Birkhill, Muckart.

Medal in Copper of George II. and Frederick of Prussia, found near the Manse of Muckart.

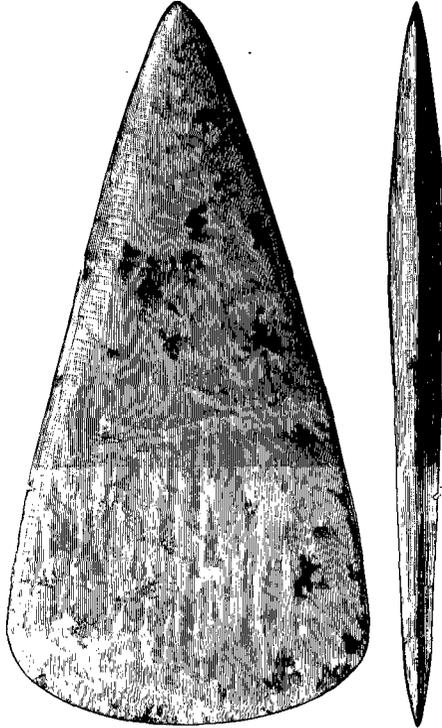


Fig. 1. Axe of Avantine Quartz, from Cunzierton, Roxburghshire.

(3) By JOHN LANG, 2 Salisbury Road.

Stone Ball and Circular Stone with a concavity, used for grinding seeds by the natives, from Albury, New South Wales.

(4) By SENOR RUSO, per ARTURO LENGO, Almeria, Spain, through JOHN BRUCE, F.S.A. Scot.

Tribulum or Threshing-Sledge, with teeth of stone and of iron, from
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Alcantarilla, Province of Murcia, Spain. This instrument (fig. 2) is of great interest taken in connection with other two of the same kind from Cavalla in European Turkey, presented in 1904 by Mr Ludovic M'Lellan Mann, and described and figured in the *Proceedings*, vol. xxxviii. p. 506. The Spanish example is of smaller size and more roughly finished than the others, but it differs from them in the important particular that the "teeth" with which the under side is studded are, in the anterior, posterior and side rows, made of iron, the middle part of the rows being of flint or quartzite, whereas in the case of the Turkish specimens the whole of the "teeth" are of flint or quartzose stones. This survival of

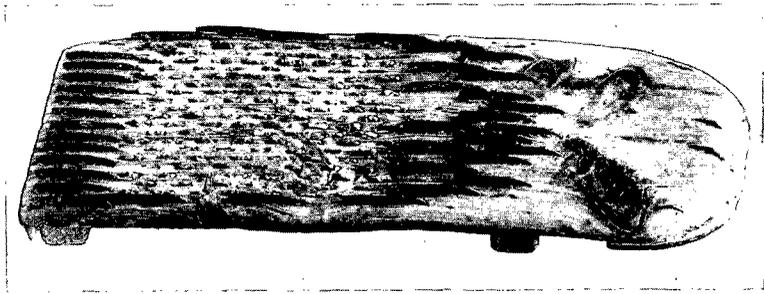


Fig. 2. Threshing Sledge from Alcantarilla, Spain.

the use of chipped flints to modern times in Europe is an interesting illustration of the past in the present, which has not received the attention it deserves from those who study archaic customs and their survivals. Mr Mann, in the paper above referred to, has given a very full description of the tribulum and its functions in connection with the grain and straw brought from the harvest-field and laid on the threshing-floor. He has also discussed the archæological relations, and the technical construction of the tribulum, and the manufacture and renewal of its flint-flake teeth, showing that, contrary to the opinion of some writers on prehistoric archæology, these modern flint flakes, which must be numerous in the agricultural soil, are finely chipped by a secondary

process which he witnessed in operation. He also mentions that in some parts of Turkey the threshing-sledge is armed with teeth of iron instead of flint or stone, the iron being used in the shape of nails driven in and turned over, a less successful method than the one exhibited in the Spanish example from Alcantarilla, in which the iron teeth are blades of wrought iron. It measures 3 feet 6 inches in length by $15\frac{1}{2}$ inches in breadth, the front being rounded off from side to side, and also rounded upwards with a considerable slope to the front. The under side is armed by 38 knife-shaped blades of iron disposed in rows at the front, down the sides, and at the back, with 14 rows of stone teeth in the centre, these rows numbering 10 and 9 alternately. The groups of knife-like blades of iron in front are disposed in 3 rows, the first row consisting of 3, the second of 7, and the third of 7, but so disposed that the hinder half of those in each row in front comes in between the front half of those in the row behind it. A single row of 3 blades goes down each margin on the outer side of the group of stone teeth, and a row of 13 blades across the hinder end of the sledge completes the armature. Of the 133 stone teeth the majority appear to be of quartz or quartzite, a few being of a light-coloured flint and some of a darkish greenstone. They are arranged in rows of 10 or 11, alternating with rows of 9, so that those of the shorter row come in line with the middle of the gap between those of the longer. The upper part of the sledge is strengthened by two transverse cross-bars firmly riveted on, one near the rear and the other near the front. In the front part, which is strengthened by a piece riveted on to the upper side, there is an iron staple, through which passes an iron draw-bar ending in a hook, the other end being fastened to the forward transverse bar, to which the traction rope or harness was affixed. Mr John Bruce communicates the further information that "the Spanish name for the implement is 'trillo,' the full name being 'Trillo de Piedras de Lumbre' (Harrow of Fire Stones). This particular implement was used up till about eight years ago. It is not at all common at present, and there are very few left in the country. What are being used now are either made entirely of iron or with wooden

rollers fitted with steel pikes or knives. The trillo in question came from Alcantarilla, in the Province of Murcia."

The following purchases, acquired by the Purchase Committee during the session 30th November 1907 to 11th May 1908, were exhibited:—

Flat Axe of bronze, 6 inches in length by $3\frac{1}{4}$ inches across the cutting face, found at The Lee, Innerleithen.

Stone Cup, $3\frac{1}{2}$ inches in diameter by $2\frac{1}{4}$ inches in depth, having a squarish, perforated handle at one side, and a slight groove round the rim on the outside, found at Old Scone, Perthshire.

Polished Axe of brownish basaltic stone, measuring $6\frac{3}{16}$ inches in length by $2\frac{1}{2}$ inches in breadth across the cutting face, by $1\frac{3}{16}$ in greatest thickness, of peculiar form, the body of the axe slightly oval in the cross-section, with broad, flattened sides, straight and almost parallel from butt to where they merge into the cutting edge, which is almost semicircular, said to have been found sixty years ago, or thereby, near Blairgowrie.

Polished and perforated Stone Hammer of indurated clay-slate, slightly oval in the cross-section and the ends slightly rounded, measuring almost 4 inches in length by $2\frac{3}{4}$ in breadth and 2 inches in thickness, the shaft hole nearly in the middle of the length of the implement and $1\frac{3}{16}$ inches in diameter, bored straight through, found near Birsay, Orkney.

Perforated Stone Hammer of reddish sandstone, oval in the cross-section and measuring $4\frac{3}{16}$ inches in length by $2\frac{5}{8}$ inches in breadth, and $2\frac{1}{8}$ inches in thickness, the shaft-hole nearly in the middle of the length and slightly wider at both orifices than in the middle, found at Forgandenny, Perthshire.

Whorl of reddish sandstone, plain, $1\frac{5}{8}$ inches in diameter.

Polished Axe of quartzose stone, slightly oval in the cross-section, measuring $3\frac{1}{8}$ inches in length by $1\frac{7}{8}$ inches in breadth and $1\frac{1}{8}$ inches in thickness, the sides roughened for hafting, found in making a road near Broadford, Skye.

Cup of steatite, shallow and saucer-like, measuring $4\frac{3}{8}$ inches by $3\frac{7}{8}$ inches and less than an inch in depth, found in making a road near Broadford, Skye.

Brooch of brass, circular, $2\frac{1}{8}$ inches in diameter, the flattened band of which it is made $\frac{3}{8}$ inch in width, plain, the pin $1\frac{1}{2}$ inches in length, found in an old ruin at Balishare, North Uist.

Whorl of greyish stone, dome-shaped on upper side, flat on lower side, measuring $1\frac{7}{8}$ inches in diameter and $\frac{7}{8}$ inch in thickness, the spindle-hole $\frac{9}{16}$ inch wide, from Balishare, North Uist.

Small Arrow-head of flint, and worked flakes from Tannadice, Forfarshire.

Hanging Candle-holder of wrought iron, measuring, when extended, 3 feet $6\frac{1}{2}$ inches, with a scalloped tray $4\frac{3}{4}$ inches in diameter, in the centre of which is the socket for the candle.

Porter's Badge of pewter, with Edinburgh Arms and "Town Porter, No. 888."

Papal Seal of lead, $1\frac{5}{8}$ inches in diameter, and having on reverse the Adoration of the Magi, found in digging the foundations of a house at Warrender Park.

Celtic Illuminative Art in the Gospel Books of Durrow, Lindisfarne, and Kells. By Rev. Stanford F. H. Robinson. 4to. Dublin, 1908.

Musée Ostéologique, Étude de la faune quaternaire, Ostéométrie des mammifères, par Edmond Hue. 8vo. Paris, 1907.

Neue Untersuchungen über die römische Bronzeindustrie von Capua und von nieder Germanien von Heinrich Willers. 4to. Hanover, 1907.

L'art celtique avant et après Columban, par Charles Roessler. 4to. Paris, 1908.

Manuel d'Archéologie préhistorique, celtique et gallo-romaine, par Joseph Dechelette. Vol. i. 8vo. Paris, 1908.

Index of Archaeological Papers, 1665-1890. Compiled by George Laurence Gomme. 8vo. London, 1907.

Ancient Britain and the Invasions of Julius Cæsar. By T. Rice Holmes. 8vo. London, 1908.

The following Communications were read :—