## IV.

NOTES ON—(1) A DRINKING-CUP URN, FOUND AT BATHGATE; (2) A PREHISTORIC HUT IN TIREE; (3) A CAIRN CONTAINING SIXTEEN CINERARY URNS, WITH OBJECTS OF VITREOUS PASTE AND OF GOLD, AT STEVENSTON, AYRSHIRE; AND (4) PREHISTORIC BEADS OF COARSE VITREOUS PASTE. By LUDOVIC M'LELLAN MANN, F.S.A. Scot.

### 1. Note on a Drinking-Cup Urn found at Bathgate, Linlithgowshire.

On 22nd March last Mr Arthur Hart, C.A., Glasgow, on the suggestion of Dr David Murray, showed me a fine drinking-cup urn which had been found about 22nd February last in a sand-pit near Bathgate. Soon thereafter I went and examined the place where the vessel had been found, and obtained information of the circumstances in which it was discovered from Mr William Houston, the workman who came upon it in digging sand, and from Mr Joseph Clayton, Manager of the Asbestic Sand Company, for which the sand is being excavated. The

sand-pit is about a mile east of Bathgate, 100 yards south of the North British Railway, and about 50 yards west of the road which leads to Blackburn. The vessel was found lying on its side, about 43 feet below the summit level of the natural bank of sand and gravel; but, as the sloping face of the bank had previously been cut away, no accurate measurements of the actual depth beneath the surface of the slope were

Fig. 1. Drinking-Cup Urn from Bathgate.

obtainable. I was told that the vessel contained nothing but sand, and that the sand above and around it appeared undisturbed, no traces of artificially placed pebbles or bones having been noticed.

The vessel (fig. 1) is an ovoid cup with recurved upper part, measuring $5\frac{5}{8}$ inches in height, and the same in its greatest breadth, $5\frac{1}{2}$ inches across the mouth, and 3 inches in diameter at the base. The decoration has been produced by winding spirally round the exterior of the cup a thin, tightly twisted cord, and impressing it in the soft clay.

The cord has been wound round the vessel so closely as to give eleven or twelve lines surrounding it horizontally in the space of an inch of its vertical height. It has been thus passed thirty-three times round the upper part and twenty-three times round the lower part of the vessel, and three times round the inside of the rim, covering the interior surface to the depth of a quarter of an inch. At the widest part of the exterior is a plain, undecorated band an eighth of an inch in width, separating the upper part from the lower. Midway up the upper part the impressions of the cord have been blurred before the clay was fired, probably by the accidental pressure of the fingers, and here the artist has very neatly continued and imitated the lines of the cord impressions by putting in a series of little notches over the blurred area, using some pointed tool.

In the series of 172 photographs of drinking-cup urns compiled by Mr Abercromby (*P.S.A.S.*, vol. xxxviii. pp. 325–410), the cups bearing horizontal string-markings, and no other decoration, form a compact group.[1] No cups so decorated occur between Nos. 1–59 nor between Nos. 93–172, while fourteen of the cups solely string-marked occur between Nos. 59–93.[2] Some of these fourteen, like the Bathgate vessel, were not, apparently, associated with sepulchral remains.

If this compact grouping be not a mere coincidence, it indicates some connection between the shape and the decoration of these cups, and may throw light on the chronology of this group of prehistoric pottery. It is a fact not hitherto recorded that string-marked "drinking-cups" are not uncommon in the Hebrides and the south-west of Scotland, of which a good many specimens are known to me. The Bathgate cup has been generously presented to the Scottish National Collection by the Governors of Daniel Stewart's Hospital.

[1] The vessel most closely resembling the Bathgate vessel which I have been able to examine is No. 79 in Mr Abercromby's series, and is in the National Scottish Collection (Cat. E G., 39), and is referred to in *P.S.A.S.*, vol. xxxvii. p. 231.

[2] Of the fourteen, some have the markings continuous from rim to base without a break or plain zone. These are Nos. 70, 72, 82, 83, 84, 92, and 93; while a plain or vacant zone occurs on Nos. 59, 67, 69, 73, 77, 79, and (?) 86.

## 2. On the Exploration of the Floor of a Prehistoric Hut in Tiree.

On 15th July 1905, when walking over a sand-blown area between the sea and Loch Bhasapoll, Tiree, I noticed, at a point about 70 yards north from the north-west corner of the loch, a piece of pottery protruding from the soil. On clearing away the drifted sand there was found a hard, compact, dark layer or old surface. This would soon have become exposed by the blowing away of the superincumbent sand. The black layer was about 9 inches deep, covering a circular space about 8 to 9 feet in diameter. It lay upon a deposit of undisturbed pure white drift sand. With two assistants, and using a pocket-knife, the whole of the dark matter was patiently dug over and sifted by hand. There were found fragments of pottery representing at least five different vessels, two perforated discs of stone and eight implements of stone, and other interesting objects, all pointing to the place having once been an occupied site, probably a small circular dwelling.

The circular edge of the site was clearly marked towards the south-west edge, but towards the north-east the black layer or floor thinned out beyond the periphery. Here, probably, was the door. Beyond the site was pure white sand. Many of the implements and pottery fragments were found close to the wall at the edge of the floor. The pottery had been broken in ancient times, as shells adhered to the fractured edges. All the objects were embedded in the dark layer. No trace of a walling remained, but it was quite noticeable where the floor soil had accumulated against it. The walling may have been either portable or easily perishable.

The pottery vessels differ from the mediæval and modern hand-made *craggan* of the Hebrides. Some have raised beadings or mouldings. Pottery with similar mouldings, placed horizontally and in festoons, and notched with the finger tip, has been found in the south of England, in graves of the Bronze Age. In Devizes Museum I recently examined Bronze Age pottery closely resembling some of the vessels from Tiree.

At Ashford, Middlesex, similar vessels associated with Bronze Age burials have been found, and are now in the British Museum. So far as I know, no such pottery has until this occasion been recorded from Scotland.

Some small, formless lumps of unbaked clay were found in the floor, also limpet and cockle shells, claws of crabs, two large univalvular shells with broken or chipped edges, and one half of the valve of a large pecten shell.

Of stone objects there are two small circular discs centrally perforated. At first sight they might be pronounced spinning whorls. The discs were found closely together. Two naturally perforated stones were found near them. Other naturally shaped stones, noticeable by reason of their odd shape or colour, may have been brought into the hut by the hut-dwellers.

Four fragments of flint were found. One, a fire-injured piece, shows the bulb of percussion.

Two polishers of stone and four hammer-stones and some other worked stones were recovered.

A descriptive list of the objects found is given below:—

*Objects of Flint.*—Four pieces of flint were recovered—all chippings without secondary working. One seems to be a very rough core, and another, a small, thin, oval fragment (fire-injured), shows the bulb of percussion.

*Anvil Stone.*—One anvil stone was found, a flattish oval pebble of grey and pink granite, $3\frac{3}{4}$ inches long, $2\frac{5}{8}$ inches broad, and $1\frac{1}{8}$ inch thick, with a portion of the periphery somewhat decayed. Its use as an anvil stone is evident from the presence of a small circular portion of abraded surface on the centre of one of the flat sides.

*Hammer Stones.*—Four of these implements were got, all quartzite, water-worn pebbles, three ovoid and one chisel-shaped. The largest ($4\frac{3}{4}$ inches by $3\frac{1}{2}$ inches by $2\frac{1}{4}$ inches) has its two ends abraded by use. Another, which has a large portion broken away, is worn on two corners, and measures, in its present condition, $4\frac{1}{2}$ by $1\frac{7}{8}$ inches. No other fragment of this stone was noticed.

The third, abraded at one end only, measures $3\frac{1}{4}$ by $2\frac{3}{4}$ by $1\frac{3}{4}$ inches. The fourth is of a less common type, and is a longish, thin, rather chisel-shaped stone. This type seems more frequent in the islands than in the mainland. It is of bluish stone, worn into two facets at one end and abraded slightly at the other, and measures 4 inches by $2\frac{3}{16}$ inches by 1 inch. One of the flat sides is unusually smooth, and may have been employed in some rubbing process.

*Two Discoid Chopper-like Stones.*—Two stones, fragments of oval water-worn pebbles, one of red-grey, the other of grey-blue quartzite, are perhaps worthy of notice. The fragments are not the result of fire splintering the pebbles. Both have been struck off by blows. One is a thick ovate flake 4 inches by $3\frac{1}{4}$ inches by $1\frac{1}{2}$ inch, the original convex surface remaining on one side. The other side is also convex, and has been worked out to that shape by a series of blows. The points of impact of some of the blows can be seen on the edge of the stone. Viewed from the worked side, the stone resembles the ovate implements of the much earlier Palæolithic period. Like them, the stone may have been used as a wedge or as a strong, somewhat blunt-edged chopper. I have found similar implements on other early sites in Scotland.

The other fragment has been struck from the pebble, and the whole of one side retains the original surface. Unlike the stone just described, it bears no secondary working. A single, small, bruised hollow (with corrugations radiating from it) on the edge of the butt or thickest side of the flake indicates the point of impact of the only blow used to produce this implement. The flake is thin, its maximum thickness being $\frac{3}{4}$-inch, and is an almost circular disc, the longer and shorter diameters being $3\frac{5}{8}$ and $3\frac{3}{8}$ inches respectively. The edge opposite the point of impact is thin and presents evidence of use, the flake having probably been used as a knife or thin-edged chopper.

Many similar stones have been found by me in other early domestic sites in Scotland, and always with objects apparently assignable to a period not later than the Bronze Age. No attention seems to have been given so far to these types of implement. The cores or boulders from which the flakes have been struck have also been found. The thin, ground or polished, knife-like discs of stone found in Shetland can scarcely be classed with these.

*Polishers of Stone.*—There was found a water-worn pebble, flat on one side and convex on the other, measuring 3 inches by $2\frac{1}{4}$ inches by $1\frac{1}{16}$ inch, of some dark, compact volcanic stone. A portion of the flat side is so highly polished as to resemble a varnished surface.

Another stone which has been used as a polisher on one side is a flattish, roughly circular pebble $1\frac{5}{16}$ inch thick, with the longest and shortest diameters measuring $3\frac{1}{16}$ and $2\frac{3}{4}$ inches respectively. It is of a rusty brown colour, except on the polished face, which is of a greyish tinge, with black patches. It contains much iron. The unpolished face bears many artificial scratchings done as if by a sharp-pointed object. The polished side has also been similarly operated upon before it was used for polishing, as the ends of the scratchings can still be seen on the unpolished edges of that face. That this pebble of ironstone has been used to produce fire by the drawing along its surface of a flint flake is possible; but I have not experimented with the stone.

*A Large Hammer-like Stone.*—A squarish block of quartzite about 12 inches in height, and weighing about 18 lbs., was left on the site. Its weight made its removal difficult. One side is much, though not roughly, battered away. It is too awkwardly shaped and too heavy to have been manipulated in one hand, and, on testing its weight and capabilities, I concluded it had not been used anvil-wise, but that the prehistoric worker had grasped it, using two hands (one hand at each of the two sides), raised the block about a foot or eighteen inches, and then allowed it to fall upon the material to be crushed or broken. Massive drop-hammer-like implements of stone are referred to by Professor W.

Gowland in *Archæologia*, vol. lviii. p. 70; and large grooved mauls of stone by Sir John Evans (*Anc. Stone Imp.*, 2nd edition, pp. 233-235).

*Two Artificially Perforated Discs of Stone.*—Two worked perforated discs of hard grey sandstone were found 2½ feet inside from the south-east edge, both in the same handful of sand, and very near two stones immediately to be noticed, a perforated flint and a small discoid green and white stone.

One of the discs, larger than its companion, is roughly oval, the longer and shorter axes (which pass through the centre of the perforation) being 2⅝ and 2¼ inches respectively. It is flat on one side and roughly convex on the other. At the perforation the thickness is ½-inch, but the maximum thickness is $\frac{1}{16}$ inch greater. The perforation is uneven (possibly owing to the rubbing of a cord or the crumbling of some of the sandstone), being somewhat oval, measuring ⅜ × ⅜ inch, with irregular sides, and not centrally placed. Taking the middle of the perforation as the centre, the longest and shortest radii to the periphery of the disc measure 1⅛ inch and 1 inch respectively. Neither the shape of the disc nor the appearance and position of the perforation point to the stone having been a spindle whorl.[1]

The other disc is ⅝ inch thick, of somewhat harder sandstone; the faces are rather flat and parallel, and both bear distinct signs of having been subjected to some rubbing. Compared with its companion disc, it is smaller, with a more regular but still quite unsymmetrical contour, and the perforation is more centrally placed and is circular, with fairly regularly made walls. The longest and shortest radii, reckoned as in the other case, are 1 inch and ¾ inch respectively. The improbability of its companion disc having been a spindle whorl is some evidence against the smaller disc having been so used.

*Noticeable Naturally-Shaped Stones.*—The other perforated stone, mentioned as found very near the two discs, is like them in size and appearance. At first sight one might fancy it is a centrally perforated disc with a portion of one side broken away into the perforation; but the stone is, however, natural, apparently water-worn, with natural pittings which in three places extend to produce irregular canals from one surface to the other.

Near the three stones just mentioned was got a naturally-shaped, rounded, water-worn discoid pebble 1⅛ inch in diameter by ⅝ inch thick, of rather soft dark blue stone. A vein of white quartz runs horizontally through the disc and is exposed symmetrically all round the periphery, rendering this little stone a most conspicuous object.

Of similar size and shape is a smooth pebble of marble, delicately mottled over the entire surface with blotches of light brown and light green, with a few thin lines of reddish brown. The surface of each of the flat sides is so smooth as to suggest that some artificial polishing has been done.

A third naturally-shaped stone is a piece of brownish grey metamorphic sandstone, about 2¾ by 1¾ by 3⅜ inches, broken from a larger stone. It bears many small pittings, and also three large pittings (apparently produced by a boring mollusc) which give the stone, if viewed from one side, a marked likeness to the frontal part of a human skull with its eye-sockets and nasal

[1] I know of no discovery in Scotland of spindle-whorls of the Bronze Period or any earlier period; but they have been found in England on sites occupied a century or two before the Roman invasion.

cavity. The peculiar features of these stones may have caused them to be picked up and brought into the hut.

*Two Univalvular Shells* (*Buccinum undatum*), originally about $3\frac{1}{2}$ and $4\frac{1}{4}$ inches long respectively, were found. No fragments derived from these two shells (and no fragments of other similar shells) were encountered. In each case a small part of the apex, or tip of the spire, has been either worn or knocked away; and the mouth, and part of the sides adjoining, have also been chipped away, the chipping being particularly distinct in the larger specimen. The pillar or central column supporting the volutions is also partly broken away. These chippings have so exposed the interior as to render the shells serviceable as cups.[1] Shells were used as spoons and cups until recently in Scotland and in the Isle of Man[2]; but this is, apparently, the first

Fig. 2. Fragment of Upper Part of Bucket-shaped Pottery Vessel (Tiree).

instance which suggests the employment of shells for domestic purposes in Scotland in prehistoric times.[3]

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[1] Somewhat similar shells (*Turbinella pyrum*) are used in India, Ceylon, and the Philippines to administer food to infants and invalids, and to hold oil in sacred rites.

[2] The Manx "sligs" were shells used as broth spoons. I have referred to them in notes on Manx neo-archaic objects in the *Isle of Man Examiner* of 29th Oct. 1904.

[3] While shells as ornaments and implements are in frequent use among modern primitive peoples, the employment of shells in prehistoric times was not apparently so very common as might have been expected. There have been noted a perforated cowry shell in a Dorset Bronze Age burial (*Arch.*, xxx. p. 330), others with a Yorkshire Anglo-Saxon burial (*Forty Years' Researches*, p. 292), a limpet shell with a Yorkshire Early Iron Age burial (*op. cit.*, p. 250), and a similar shell "with marks of grinding on the upper surface," with a burial of Viking times in Colonsay (*P.S.A.S.*, vol. xxv. p. 433). Wiltshire barrows have yielded a barrel-shaped bead of shell (*Arch.*, lii. p. 57), and a necklace of pierced *dentalium* shells (*Anc. Wilts.*, i. 114).

*Pecten Shell.*—The half of one valve of a large clam shell (*Pecten maximus*), 5½ inches long, was found. No other part of this shell (or of other similar shells) was noticed. The valve has been split nearly down the middle, from the centre of the fan to the centre of the hinge. It was found at the south-west corner of the hut, lying with the concave side downwards, on the top of and touching the large hammer-stone described on page 373, both objects having apparently been deposited carefully against the hut wall. This large shell may have been used for slicing or some such work. Portions of similar shells were used recently in Scotland for skimming milk, and, being thick and strong, lasted well.[1]

*Other Objects.*—Many limpet shells, a few cockle shells, and several claws of small crustaceæ, probably crabs, and one small indeterminable piece of bone, were found.

*Pottery Fragments.*—The pottery obtained is fragmentary, and represents five different vessels, all hand-made ware, characteristically prehistoric in colour and fabric, and different from the mediæval and modern "craggan."

One vessel is represented by a handle or lug only.

One set of fragments (fig. 2) belongs to a bucket-shaped vessel which measured about 8 and 5 inches across the mouth and base respectively, and about 12 in height. A horizontal moulding ran round the vessel at its broadest point, 2¾ inches from the rim. The moulding was deeply notched at regular intervals of about ½ an inch by the finger tip and nail edge (which often has left an impression), always at right angles to the line of the moulding.

Another set of fragments belongs to a similar vessel, but a similarly notched moulding is arranged in festoons. This style of notched mouldings has not until now apparently been recorded from Scotland.[2]

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Mr W. J. Knowles recently showed in Belfast fragments of *Lutraria elliptica* from Donegal, anciently worn down apparently by use as scrapers and knives. The Cro-magnon cave yielded a string of periwinkles (*Littorina littorea*), now in the British Museum, and other shells worked in prehistoric times have been found at Zurich (*Mitth. d. Ant. Ges. in Zürich*, i., 3. Heft, S. 31), and at Hedingen (*Alterth. d. Hohenzollern Samml.*, Taf. iv. 8, v. 24).

[1] I am told by a person familiar with such skimmers that so long did individual specimens remain in use that the corrugations became quite worn down. In historic times the "Slige-chreachainn" was used in the Hebrides for drinking purposes (Macfarlane's *Gaelic Vocabulary*, 1815, p. 119). Pecten valves were found in the MacKay Cave, Oban, inhabited at a remote period; half of a valve was found at Fimber with a Bronze Age burial (*Forty Years' Researches*, p. 190, fig. 480); a valve pierced artificially at the hinge was got with relics of the French Reindeer period (*Le Maconnais Préhistorique*, 1870, pl. xxx. and p. 134); and one valve each of *Pecten opercularis* and *P. septemradiatus*, both similarly pierced, were found in the terramare (Coppi's *Terramara di Gorzano*, 1871, Tav. lxiv.).

[2] It is, however, common in the south of England. Specimens may be seen in the Farnham Museum, and several are figured in Warne's *Celtic Tumuli of Dorset*. Many bucket-shaped vessels with notched horizontal mouldings were found in a cemetery (supposed to be of the Bronze Age) at Ashford, Middlesex, and are preserved in the British Museum (*Proc. Brit. Arch. Assoc.*, vol. xxvii. p. 449), where also may be seen pottery somewhat similar from Bloxworth Down, Dorset (Durden Coll.); Milborne, Dorset; Littleston Down, Dorset (Durden Coll. *Cat.*, p. 18, No. 18); Roke

A fragment of a fourth vessel, differing in texture and thickness, is undecorated.

A fragment representing a fifth vessel is a small piece of the rim, slightly everted, and indicating a diameter at the mouth of about six inches. Under the rim the decoration consists of a series of vertical lines about a quarter of an inch apart, produced by drawing the frayed end of a twig downwards in the soft clay. The lines all begin evenly at a depth of about half an inch beneath the brim, and their channels show distinctly the striation of the frayed ends.

## 3. Discovery of a Cairn containing Sixteen Urns at Ardeer, Stevenston, Ayrshire.

A discovery of a cairn and within it at least sixteen cinerary urns, some recovered in a fragmentary condition, was made in February 1906 by Mr John M. Orr and Mr David Bryden of Saltcoats and Mr Robert Irvine of Stevenston, who noticed boulders cropping out at a point about 66 feet distant from, and 5 feet in height above, the western base of a hill of drifting sand at Ardeer, Stevenston, Ayrshire. The place is near the Misk Knowes, within a roughly triangular area bounded by the river Garnock, the sea, and the Caledonian Railway line, and is rather south of the middle of the hill. From the site of the cairn to the centre of the railway line measures 1545 feet, and from there along the railway

Down, Dorset (Durden Coll. *Cat.*, pp. 12, 14, Nos. 2 and 8); Barrow, Bere Regis Down, Dorset; Barrow, Nether Swell, Gloucestershire (Greenwell Coll., *Brit. Barr.*, ccxvi.); Millhill Park, Acton, Middlesex; Jersey; Nussdorf in Switzerland; Klein Rossen, Merseburg, Saxony (Klemm Coll.).

The Bronze Age barrows in Wiltshire, Berkshire, and Dorset have also enriched the museum at Devizes with ware of the same class, including the famous Stonehenge bucket-shaped urn bearing three horizontal mouldings notched with the finger-tip (*Anc. Wilts.*, p. 126, pl. xvi.).

Another urn (263 in Mus. *Cat.*, and figured and described in *Anc. Wilts.*, p. 119, and pl. xvi.), from Stonehenge, has mouldings notched at the usual short intervals by the impression of the finger-tip. Certain barrows at Collingbourne Ducis, Wiltshire, escaped Sir Richard Colt Hoare's scrutiny, but were partly explored in 1861 by the Rev. W. C. Lukis, and are described by him in the *Wiltshire Archl. and Nat. Hist. Mag.*, vol. x., No. xxviii., pp. 85–103.

Some of the pottery from the Collingbourne Ducis barrows is remarkably similar to, and some is identical with, the Tiree hut pottery. The ware is not described in detail by Mr Lukis, but the fragments from Barrow No. 3 are in no manner different from the Tiree ware with notched and festooned mouldings; while the vessel from Barrow No. 6 is identical with the Tiree ware with horizontal notched mouldings.

north-eastwards to a railway bridge, giving access to Bog farm, measures 2211 feet, the measured lines containing a right angle.[1]

On clearing away some of the sand, a small oval cairn about 15 feet long by 10 feet wide was exposed, composed of about eighty water-rolled boulders all about the same size and portable by one man, except one boulder which would require two men to carry it. The cairn has been built over a nearly horizontal ancient land surface forming a dark layer about 3 inches deep. Under this old surface was a deposit of pure drift sand. The cairn rose to a height of 3 feet in the centre. The surface of the cairn was coated with a layer of dark soil about 3 or 4 inches deep. It is not easy to say when the cairn became submerged in the blown sand; but as the surrounding old surface about 30 yards to the south-south-west was not submerged in mediæval times, but was then occupied (as is clear from the presence there, in the layer of old surface, of mediæval relics such as iron slag, an iron arrow-point, and fragments of green glazed pottery), this little shallow cairn at that time was probably still unhidden by the sand drift.[2]

## 1. *The Pottery.*

Many of the urns broke to pieces on drying, and they were all in a fragile condition, probably because of the nature of the clay or its manipulation or firing.[3] Pounded stone has been mixed with the clay.

[1] It was on the invitation of Mr John Smith (author of *Prehistoric Man in Ayrshire*) that I joined him in a visit to the site. At a subsequent visit there were present the three discoverers, also Mr Smith, Mr A. Shanks of Dalry, Mr D. A. Boyd of Seamill, and Dr Lambie. Mr P. MacGregor Chalmers, I.A., F.S.A. Scot., also made an examination of the place. These gentlemen have kindly read the proof-sheets of this account and made valuable suggestions. The discovery was referred to by Mr Orr in the *Ardrossan and Saltcoats Herald* of 23rd March 1906, and by Mr Smith in the same journal of 13th April following, and in the *Irvine and Fullarton Times* of seven days later.

[2] The sandhill, according to Mr John Smith's observations, which extend back to 1871, is moving at the rate of 10 feet yearly towards the north-east, in the direction of the most frequent winds.

[3] Though carefully extracted and handled, most of the urns looked hopelessly fractured, but Mr Orr has repaired Nos. 9, 14, and 15, which were discovered by him

The urns are all hand-made, flat-based, comparatively small (varying from 5 to 11$\frac{1}{16}$ inches in height), and are bucket-shaped, without overhanging rim. Some bear the unusual pattern of looped and wavy lines, and some were closed by covers of unbaked or half-baked clay, a rare

Fig. 1. Urn No. 1, 11$\frac{1}{16}$ inches in height.

feature. On one vessel have been impressed twisted cords of different thicknesses, and the potter has left accidentally finger-prints on three

and Mr Bryden. Mr Irvine, to whom is due the credit of recovering Nos. 1 to 8, sanctioned my reconstructing his urns and acquiring them, with their clay covers, beads, and other contents; and these relics are now presented to the National Scottish Collection.

vessels. Many small white pebbles were noticed. Their association has often before been recorded with prehistoric burials.

In describing the urns they will be numbered according to the order in which I first examined them.

*Urn No. 1* (fig. 1), found inverted, is bucket-shaped and $11\frac{1}{16}$ inches high. Across the mouth, which is slightly oval, the least and greatest outer diameters are $8\frac{7}{8}$ and $9\frac{1}{2}$ inches respectively. The base has a diameter of $4\frac{1}{2}$ inches. The rim is squarish and plain. A horizontal moulding, very slight and somewhat broad, runs round the vessel at a point $3\frac{1}{4}$ inches below the rim. The contour line, which runs slightly outwards from the base, changes at the point where the moulding occurs, and thereafter runs vertically upwards. The decoration consists of impressions made in the clay while unfired of a twisted cord, about $\frac{1}{8}$-inch thick, of at least six strands of what was probably coarse hair, judging from the sharpness of the imprints of the component filaments. A horizontal line is impressed at a point $\frac{1}{4}$-inch below the rim, another from $\frac{1}{2}$ to $\frac{3}{4}$-inch below, and a third from $1\frac{3}{4}$ to 2 inches below the rim.

The zone of varying depth contained by the two last lines is filled with an uncommon style of decoration, partly consisting of obliquely placed loops. There are also sets of lines (the component lines of each set being parallel) placed in one or other of the two directions possible at the angle of 45°. The pattern, following it round the vessel, consists of, first a set of three lines, then another of three, then one of four, then another of four, each set being placed zigzag-like in the direction opposing that of the neighbouring set. This is followed by a plain interspace, then by a set of three lines coinciding in direction with the last mentioned. Then comes another interspace and another set of three lines parallel to the last. Then, without interspace, follows a set of three lines running in the opposite direction to the last mentioned, and again another set of three placed in the reverse direction. Partly overlapping the last, and lying at the same angle, is a loop like the letter U reversed. After a short interspace occurs a similarly placed loop, crossed by a line

giving it the appearance of the letter A. Then follows, both placed at the same degree of obliquity as the immediately preceding figures, a set of three lines and then a third loop, which finishes the circuit of the vessel.

Fig. 2. Urn No. 2, 10½ inches in height.

*Urn No. 2* (fig. 2) is of similar contour, 10½ inches high, 8¾ inches and 3½ to 4 inches across the mouth and base respectively. The exterior surface of the base has a slight, probably accidental, convexity. The urn was found upright, and like all the others contained burnt bones;

but in this case they were sealed by a layer or plugging, 1 to 2 inches thick, of soft, light brown, unbaked or half-baked clay, without admixture of pounded material. The top surface of the plugging was $2\frac{1}{2}$ inches below the rim. Particles of the clay still adhere to the walls.[1] There is a wide

Fig. 3. Urn No. 3, 9 inches in height.

I know of no other cases of urns found sealed with covers of soft clay; but in 1837, in an Ayrshire grave-mound were discovered burned bones packed round with clay, and an urn (containing burned bones) protected by flat stones and a packing of clay. (Smith's *Prehistoric Man in Ayrshire*, p. 149.) Mr Mortimer found in the Yorkshire grave-mounds that clay, frequently brought from a distance, had often been used to cover graves and to build the mound, and in one case (p. 156) to cover the urn and its cavity; and he quotes from page 60 of Worsnop's *The Aborigines of Australia*, that the aborigines covered the grave-mound with a layer of clay. (*Forty*

crack running up one side of the vessel, but at what time this distortion took place is uncertain. The rim is steeply bevelled inwards, with a single, centrally placed line made by the impression of a twisted cord. An irregular, very slight double moulding, 1 inch in breadth, occurs 4 inches

*Fig. 4. Urn No. 4, 9¼ inches in height.*

below the rim. At this point the contour changes slightly, as in the case of Urn No. 1. The decoration is confined to the upper part, and has been effected by a twisted cord of what appears to have been animal fibres, probably hair. The cord applied to the wall has become loosened

*Years' Researches*, p. xl.) A small cup, "the mouth of which was stopped with a lump of half-baked clay," was found inside a large urn in a grave-mound in Kent (*Arch.*, vol. xlx. p. 53). In the mound were found beads of vitreous paste like the Stevenston beads.

at times, and has been at least of five strands, and is thicker than the cord which has been applied to the bevelled rim. A horizontal line occurs ½-inch and another 3½ inches below the rim. Between these lines (and after they have been impressed) there has been placed a series of oblique lines crossing each other, forming a very irregular zigzag pattern.

*Urn No. 3* (fig. 3) is devoid of decoration or moulding, is bucket-shaped, rather squat, 9 inches high, and measures 8 and 5 inches across the mouth and base respectively. The rim is rounded and plain. The wall at one side bulges unsymmetrically. No plugging or lid was observed. It stood upright.

The bones from Nos. 1 to 3 (and those from Urn No. 6) were emptied together in a heap on the site, but some are preserved.

Dr Thomas H. Bryce has kindly examined some parcels of bones taken from the site. He reports that "the fragments have all the typical characters of human bones deposited in urns after cremation."

Dr Bryce reports upon the bones from Urns 1, 2, 3, and 6 as follows:— "All recognisable and distinctive fragments must have belonged to skeletons of adult persons, but some are of relatively more slender proportions, so that it is possible one of the individuals was a female."

Four white quartz pebbles, each about ½-inch in diameter, were found with the bones from these four urns.

*Urn No. 4* (fig. 4) is plain like No. 3. It has a rather squarish rim, is 9¼ inches in height, 8¼ inches in width at the mouth, and 4 inches in diameter at the base. One side bulges somewhat unsymmetrically. No lid was observed. It stood upright. Hard, sooty matter to an unusually large extent adhered firmly to the lower part of the interior. Among the bones within this urn were fifteen white quartz pebbles, the smallest about ⅛-inch and the largest about ¾-inch in greatest dimension. Regarding the bones found within this urn, Dr Bryce reports: "The deposit from Urn No. 4 is a relatively small one. Many of the fragments are more charred than usual, the surface being grey or black, and the fracture black throughout. There is a good deal of charcoal dust among the

*débris*, and also several pieces of charred wood. The individual must have been of adult age."

*Urn No. 5* (fig. 5), the smallest vessel, 5 inches in height and $4\frac{3}{4}$ and 3 inches across mouth and base respectively, was found lying at an angle, mouth upwards. No cover was observed.

The urn is bucket-shaped. At a point 2 inches below the rim the

Fig. 5. Urn No. 5, 5 inches in height.

contour line betrays an almost imperceptible change. There is no moulding, but the upper part has two horizontal lines $1\frac{1}{4}$ inches apart of cord impressions. Placed within these lines are sets of two and three parallel oblique lines somewhat like those in Urn No. 1, but the cord has been thin and of soft material. The rim is slightly bevelled inwards, and decorated by a centrally placed line made by a twisted cord. The lines have been blurred and smoothed by pressure and handling before the firing was done. Part of the top of the urn is broken away.

The bones found within this urn, in the opinion of Mr Smith and Dr Lambie, who saw them soon after their discovery, were very slender, and were those of a young person; but are not now apparently available for examination.

Within the urn were two small white quartz pebbles each about $\frac{1}{4}$ of an inch in diameter, traces of thin gold leaf of indeterminable character,[1]

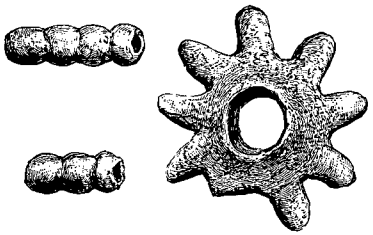


Fig. 6. Three Beads found within Urn No. 5.

and (fig. 6) three objects of known types, all of the same shade of grey, made of a vitreous paste. Of these, two are slender cylindrical notched

[1] "A piece of gold lace" was found with a body within a barrow in Dorset (the Chronicle of the *Annual Register* of 12th March 1767, quoted in *Forty Years' Researches*, p. xxvii). In grave-mounds of the Bronze Age in the South of England have been found pieces of thin gold leaf or plating, which were not soldered, but were joined by being lapped over at the edges to cover "buttons," "boxes," bosses, drums, plates, and conical cores of lignite and other material (*Arch.*, xv. pl. ii. and vii.; xliii. 527; and *Ancient Wiltshire*, 44, pl. ii.; 99, pl. x.; 201 and 202, pl. xxv.; and 204, pl. xxvi. and xxvii.). In Orkney, four, and near Broughty Ferry, two, very thin gold discoid platings were found within cists, and closely associated with Bronze Age burials (*Proc. Soc. Ant. Scot.*, vol. iii. p. 183; and vol. xxi. p. 322).

Dr Anderson has described seven other instances where gold objects (all less delicate than the Orkney objects, being of solid gold) were found in apparent association with early burials in Scotland (*Scotland in Pagan Times*, The Bronze Age, pp. 62–68); and in one instance (p. 61, fig. 68) five penannular rings of solid gold were, it was stated, found within an urn which closely resembles the undecorated urns from Stevenston. Gold has been very rarely found with Yorkshire Bronze Age burials; but Lord Londesborough obtained a wrist-guard decorated with gold (*Forty Years' Researches*, p. 274). In the South of England, in a grave-mound where beads like the Stevenston beads were found, there were discovered a pair of gold earrings (*Anc. Wilts.*, 204).

Fig. 7. Urn No. 6, $9\frac{3}{8}$ inches in height.

Fig. 8. Urn No 7, 9 inches in height.

beads, one notched into four and the other into three segments or bulbs, and the third a star-shaped bead of nine points, one of which has been broken in ancient times. The subject of these paste objects is discussed at the end of this note.

*Urn No. 6* (fig. 7) is a tall, elegant, bucket-shaped vessel, quite plain, with slightly swelling sides, not unlike in shape the grave pottery of pre-Dynastic Egypt. Its dimensions—height, breadth at mouth, and base—are respectively $9\frac{3}{8}$, $6\frac{3}{4}$, and $4\frac{1}{4}$ inches. The rim is squarish. The lower part is unusually thick-walled, but the upper part has walls about $\frac{1}{2}$-inch thick, which is about the thickness of the walls of all the urns from this site. It was found deposited upright. No lid was observed. The bones from this urn are referred to in the note on Urn No. 3.

*Urn No. 7* (fig. 8).—The rim of this urn is wanting. The height of the surviving part is 9 inches. The original height was probably 10 inches. The diameter at the mouth was about $7\frac{3}{4}$ inches. The base measures $5\frac{1}{4}$ inches across. A slight moulding occurs a short distance below the rim, and at this point the contour line changes slightly. The decoration has been done by the impression of a twisted cord applied irregularly and sparingly over the upper zone in zigzag fashion. With the bones in this urn was found a single, roughly oval, white quartz pebble $1\frac{3}{4}$ inches by 1 inch by 1 inch. The stone is stained dark red over parts of its surface. No lid was noticed. Dr Bryce reports: "The bones from Urn No. 7 are specially numerous, but they represent the skeleton of only one adult person. The fragments are white and chalky, and completely incinerated."

*Urn No. 8* (fig. 9) is plain, bucket-shaped, and very squat, being only $6\frac{1}{2}$ to 7 inches in height. When set on a flat surface it leans a little to one side. The outside diameter at the mouth is from $7\frac{1}{8}$ to $7\frac{1}{4}$ inches. The base has a diameter of $4\frac{1}{8}$ inches. This is one of the few urns which on their drying did not fall to pieces and require reconstruction. The rim is square, with a slight inward bevel. There were three small white quartz pebbles within the urn. The bones and pebbles were sealed up by a plugging of clay similar to that of urn No. 2. The urn was found

upright. Dr Bryce reports that the deposit of bones received by him from this urn "is a small one and cannot represent the remains of a complete skeleton. The individual was an adult, probably male."

*Urn No. 9* (fig. 10).—This urn is stated to have been found upright. The bones are not preserved. A good part of the base is wanting. The

*Fig. 9. Urn No. 8, 6½ to 7 inches in height.*

urn is of the usual bucket-shaped type. The mouth measures 8½ inches across, and at a depth of 7¾ inches below the rim the diameter is 7 inches. The height when the urn was complete was about 9 inches. The rim is rounded and plain, but 1 inch down, in the interior, is a slight moulding. It is not known whether there was a clay cover.

On the exterior of the upper part is a panel of roughly incised cross-hatched lines made by a rather broad-pointed tool. The panel is bounded

by two incised horizontal lines, the upper line being placed about 1 inch, and the lower about 2 inches, below the rim. The impression of a finger-tip with skin corrugations occurs 4 inches below the rim on the exterior.

*Urn No. 10* is fragmentary. The rim was rather steeply bevelled inwards. A thickish cord of twisted strand, probably of hair, was impressed in a horizontal line ½-inch below the rim, and in another

Fig. 10. Urn No. 9, 8½ inches diameter.

similar line 1 inch lower. A slight moulding occurred 2½ inches further down. Between the lower line and the moulding was a series of obliquely placed lines of impressed cord markings. There was no interior decoration.

*Urn No. 11* is also fragmentary. It was impressed with a similar cord both on the exterior and interior of the upper part. On the exterior were two horizontal lines. One ½-inch and the other 1½ inches below the

rim formed the boundaries of a zone completely filled by a line which ran in loops or festoons. Immediately beneath the zone was a slight moulding. The rim was steeply bevelled. Inside the vessel was a horizontal line $\frac{1}{4}$-inch below the rim and another 1 inch lower. The

Fig. 11. Urn No. 14, 9 inches in height.

latter had running upwards from it at intervals of $\frac{3}{4}$ of an inch short oblique lines about $\frac{1}{2}$-inch long with free ends.

*Urn No. 12* is also fragmentary, and was decorated by the same style of cord. It had a squarish rim. Running horizontally was a line $\frac{1}{2}$-inch and another 2 inches below the rim. Between these was a symmetrical wavy line filling the zone.

*Urn No. 13* is likewise represented by fragments. The decoration was of the same character as that of No. 12, but the two horizontal lines enclose a row of figures each like the letter U placed normally. The rim was flattish and square, and near the rim the wall, unlike that of No. 12, curved slightly inwards.

Fig. 12. Urn No. 15, $9\frac{3}{4}$ inches in height.

Many fragments of the last four mentioned urns are being kept as "curiosities" by various people.

*Urn No. 14* (fig. 11) was found upright with a cover of soft clay like those of Nos. 2, 8, and 15. It is rather elegant, and bucket-shaped. It measures 9 inches in height, and varies in width across the mouth from $6\frac{7}{8}$ to 7 inches. The base measures $3\frac{1}{2}$ inches in diameter. Neither

cover nor bones are preserved. A very slight moulding occurs at a point 1½ inches, and another similar at 3½ inches, below the rim. Coinciding with the upper moulding is a single, incised horizontal line. The rim is squarish, inwardly bevelled, and ornamented with a centrally placed incised line. On the exterior, 1 inch below the rim, is a slight concavity made by the impression of the ball of the finger-tip before the clay was fired. The imprint of the corrugations of the skin is preserved clearly.

*Urn No. 15* (fig. 12) was found inverted and was the first taken out of the cairn, and is bucket-shaped with oval mouth, the least and greatest diameters of which measure 7½ and 8¼ inches respectively. The base is lost. The height of the surviving part is 9¾ inches. The vessel, when perfect, stood about 10½ inches high, and has had a base about 5 inches wide. The rim is rounded and plain. Immediately outside under the rim is a horizontal string-marked line, and 2¾ inches down from the rim another similar line. The space enclosed by these lines is filled with similar string-marked lines disposed in an irregular zigzag pattern of sets of parallel lines somewhat like those on Urn No. 1. The cord used has been of hair probably. The bones in this urn were sealed by a clay cover or plugging like those already noticed. Found embedded in the centre of the cover were about six small white quartz pebbles and a reddish quartz pebble about the size of a hen's egg. Dr Bryce reports that the deposit of bones from this urn is small, and that "it includes a number of complete phalanges and the ends of some of the long bones. These indicate that the individual was of adult age, and, as they are specially slender, probably a female."

*Urn No. 16* is represented by fragments. The decorative lines are incised. A horizontal line ran ½-inch down from the rim. This was the upper boundary of a zone of incised zigzag pattern.

*Urn No. 17.*—Mr James Fulton, Saltcoats, has shown me a fragment of the rim of an urn taken from the cairn which may represent a seventeenth vessel. The rim is steeply bevelled, and has centrally placed on it an incised line.

One half-inch below the rim a similar line has been etched, and again 1 inch below is another similar line.

*Deposit No. 18.*—There was found compactly placed in a neatly made cavity, without traces of an urn but with a cover of soft clay, a deposit of burned bones which, Dr Bryce reports, include fragments of charcoal, and represents the remains of an adult person.

*The Disposition of the Urns.*—I did not see the site until after it had been dug over. It appears that some of the urns were closely packed round with stones, and many had a layer of white quartz pebbles over, and some a layer under them.

The disposition of the various burials and the exact dimensions of the cairn were difficult to ascertain, owing to the encumbrance of drift-sand. The longer axis of the cairn lay about north and south.

The urns seem to have been in groups. One group near the north-east side of the cairn was found by Mr Orr and Mr Bryden. Another was placed at or near the centre, and comprised the burial without an urn and urns Nos. 4, 5, and 8. Horizontally placed an inch or two above these urns was a slab of sandstone which measured 2 feet 3 inches by 10 inches by 4 inches. These burials were thus closely together, and were all above the old land-surface on which the cairn had been laid. A line through No. 5 (which urn lay slanting, probably because of the pressure of the slab) and the urnless burial ran about north and south, and urn No. 8 lay a little to the east.

A group to the south comprised urns Nos. 1, 2, 3, and 6. No. 3 was sunk 2 or 3 inches into the old surface. Nos. 2 and 6 were placed higher, and No. 1 still higher. Nos. 1 and 2 were about 4 inches distant from each other. No. 1 was about 6 inches from No. 3, and about 15 inches from No. 6. The upper part of the inverted urn No. 14 was about 6 inches under the surface of the cairn.

*Worked Objects of Stone.*—Mr Smith found in the soil of the cairn an oval water-rolled pebble of dark green stone, 3 by $1\frac{3}{4}$ inches, artificially smoothed on one of the longer sides, showing that it had been used

as a polishing stone. It is impossible to ascertain whether this stone had been deposited within an urn. Mr Irvine found a flattish, ovoid, water-rolled pebble, 5½ inches by 3¼ inches by 2 inches, which had been used as a hammer-stone and was abraded in two facets at one end, and in one small facet at the other end.

One of the stones of the cairn is a large-grained, whitish, flattish, irregularly-shaped boulder of sandstone, uniformly 5½ inches thick, but with a maximum breadth in the middle of 11 inches. At each end the breadth is respectively 6 and 8 inches. On one of the flat sides are slight traces of fine artificial pitting. The other face has been used over its whole area as a surface upon which to polish objects, and a small central portion of the face, about 4½ inches square, is finely and uniformly punctulated to a depth of ⅛ of an inch. A splinter has anciently been struck from one corner of the boulder.

### 4. Prehistoric Beads of Coarse Vitreous Paste.

The subject of British prehistoric beads has received little attention. The following note is an attempt to marshal the main facts regarding the interesting class of bead-like objects, of which three specimens were found in one of the Stevenston urns.

Of the beads and pendant personal ornaments of coarse vitreous paste and of fine-surfaced glass assignable to the Bronze Age and discovered in the British Islands, those of paste are less rare and are probably earlier than those of glass. Of these objects of vitreous paste about 150 are known to have been discovered. They seem to be the earliest non-metallic personal ornaments of artificial prepared material known in these islands.[1] They are opaque, seldom grey in colour (like the Stevenston beads), but are usually of some shade of blue or green. They have not been found with inhumed burials, but with cremated urn-burials. The associated urns are nearly always of the cylindrical, bucket-shaped or barrel-shaped class, having (as in the Stevenston urns) a contour line with little or no change

[1] Not improbably their chronological position is towards the beginning of the first millennium before Christ.

between the upper and lower parts, and are seldom of the class of narrow-based flowerpot-like vessels with pronounced overhanging rim. The two classes of pottery seem, however, to be near each other in chronological position. The objects of paste referred to are not to be confused with any of the Early Iron Age glass beads and pendants, nor with the notched cylindrical beads of Roman Egypt[1] and of the Early Levant, nor with the beads found with Merovingian and Anglo-Saxon remains[2] and in the cemeteries at Hallstatt[3] and at Marzabotto,[4] in Northern Italy.

They may be classified as Globular, Cylindrical, and Ring-like, and they fall into ten types, all of which are shown in fig. 13, in the preparation of which I have had the assistance of Mr F. R. Coles.

In the Globular class is a minute round bead (type No. 1),[5] and scarcely $\frac{1}{8}$ of an inch in diameter; an ovoid bead (type No. 2)[6] about

[1] See, for example, in the British Museum, beads of the Roman period presented by the Egyptian Exploration Fund (1886) from Defenneh.

[2] Anglo-Saxon glass beads, of the shape under discussion, are referred to in *Wilts. Arch. Mag.*, xxviii. 107; *Forty Years' Researches*, figs, 783, 851, 865, 884, and 888; and in *Arch.*, xlviii. 331 and 336.

[3] Von Sacken's *Das Grabfeld v. Hallstatt*, p. 77.

[4] Gozzadini, *Antic. Necrop. a Marzabotto*, p. 45; *Arch. Jour.*, viii. p. 352; *Arch.*, xliii. p. 497.

[5] These beads are green and very weakly translucent, with furred or roughened surface (possibly the result of the friction of blowing sand). Whether they should be here classified is doubtful. None has been found with definite associations. The twenty-eight specimens in the National Scottish Collection all come from Culbin, Elginshire, while one in my possession was found in Wigtownshire. It is shown in fig. 13, No. 1. Identical in size and colour, but of clear glass, are some other beads from Culbin, but they have been excluded.

[6] Four specimens of this type, one of which is shown in fig. 13, No. 2, were discovered with types 9 and 10 within an urn which contained burned bones got in a Dorsetshire barrow in 1843. Dr Thurnam and subsequent writers have overlooked this remarkable discovery, which is carefully described, and the objects figured, in *Archæologia*, vol. xxx. p. 330. To some type of the Globular class may belong a green bead from a Dorset grave-mound, "in form merely a drop of glass" (*Arch. Jour.*, iii. 58); a "small blue opaque glass bead" found in a Somerset grave-mound (Rutter's *North-West Somerset*, p. 329; *Arch. Jour.*, xvi. pp. 148-9); a larger bead found within an urn in Sussex (Horsfield's *History of Lewes*, vol. i. p. 49, pl. iv. fig. 9); a bead of blue colour reported in 1779 (*Arch.*, vol. vii. p. 414) as found with a cremated urn-burial; and four small beads of light green vitreous

$\frac{1}{4}$ of an inch in greatest diameter, and (type No. 3)[1] a flattened globe about $\frac{1}{2}$ an inch in greatest diameter.

In the Cylindrical class are four types. There is (type No. 4) the well-known thin notched bead (the least rare)—a notched or segmented cylinder like a set of round beads strung closely together. The bulbs, which are sometimes irregular in shape (as shown in fig. 13, Nos. 4A to 4B), vary in number in each bead from two to twelve, and vary in diameter from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch. Each bead has bulbs usually of uniform size. The length of the bead varies from $\frac{1}{2}$ inch to $1\frac{1}{4}$ inches. To this type belong two of the Stevenston beads (see fig. 6).[2] Beads of

paste found in a Bronze Age grave-mound and within an urn in East Kent (*Arch. Cant.*, vol. ix. pp. 21–26 ; *Arch.*, xlv. pl. viii. No. 7, p. 55). Four "minute beads of green glass" from a barrow at Fovant, Wiltshire (Devizes, *Mus. Cat.*, 222*b* ; *Anc. Wilts.*, 236), may be early mediæval. Two small round beads said to be of glass, but of the precise fabric and colour of which I am unaware, are figured in Nilsson's *Stone Age*, Eng. edn., 1868, p. 82, and in his *Ureinwohner*, 1868, p. 65.

[1] A specimen was found with an urn in a barrow at Ringwould, Kent (*Arch.*, xlv. p. 53), and is shown in fig. 13, No. 3. When Stukeley referred to a bead of "white earth" (*Stonehenge*, p. 62, Tab. xxxii.), he may have had before him a specimen of this type or of type No. 2.

[2] In Wiltshire this type of bead was got in twelve barrows (*Anc. Wilts.*, i. 46, 76, 114, 161, 163, 168, 205, 207, 211, 238, and title-page), and others are recorded from the same area (Thurnam, *Arch.*, xliii. p. 495 ; *Wilts. Arch. Mag.*, vi. p. 324) and from Dorset (Warne's *Celtic Tumuli of Dorset*, ii. p. 13) and Cambridgeshire (*Arch. Jour.*, ix. p. 22). Others are mentioned by Mr Woodruff (*Arch.*, xlv. p. 53), and by Canon Greenwell (*Arch.*, vol. lii. p. 51), and in *Jour. Royal Inst. Cornwall*, xxi., pl. iii.

Many of these South English specimens are preserved in the British Museum, and in Devizes Museum.

In the British Museum are a set of thirteen from Wiltshire (*Anc. Wilts.*, p. 204) ; a set of ten from the same county (Hawley Collection) ; a set of seven from Cornwall (*Jour. Royal Inst. Cornwall, supra*) ; a set of five from Dorset (Durden Collection, Warne's *Celtic Tumuli, supra*) ; a set of three from Wiltshire ; one and a fragment of another from the same county (*Arch.*, xliii. p. 494) ; a fragment of one from Sussex (Horsfield's *History of Lewes*, p. 47—Mantell Collection),—in all, forty-one beads or fragments of beads, representing seven discoveries.

In Devizes Museum, all from Wiltshire, are a set of ten (*Anc. Wilts.*, 76, pl. ix.), two sets of three each (*Anc. Wilts.*, 163, pl. xvii.), a set of two (*Anc. Wilts.*, 205), two single specimens (*Anc. Wilts.*, 168 and 211),—in all, twenty beads, representing six discoveries. In Northern England one, and the fragment of a second in the same

nearly the same shape of a later period are often of a brownish iridescent glass.[1; 2]

When the bulbs of the bead are set well apart as if strung detached on a bar it falls into type No. 5,[3] and when the cylinder is spirally twisted, into type No. 6. Specimens of the last-mentioned type have been found in Wigtownshire and Ayrshire.[4]

The fourth cylindrical type (No. 7) is a bead slightly more than 1 inch in length, consisting of five closely-set, graded segments of rectangular section, and each nearly $\frac{1}{4}$ of an inch thick. The central segment is $\frac{5}{8}$ of an inch in diameter. On each side of it is a small segment $\frac{3}{8}$ of an inch in diameter. Adjoining each of these last mentioned (and forming the terminal segments) is a still smaller segment $\frac{3}{16}$ of an inch in diameter.[5]

grave, have been found by Mr Mortimer, and are in Driffield Museum (*Forty Years' Researches*, p. 169).

There are thus sixty-two in English museums. I know of none recorded from Ireland or Wales.

In Scotland, most of the specimens on record are in the Scottish National Museum. In addition to the two now recorded from Stevenston, there was a specimen of three bulbs, also of grey colour, got within an urn at Marcus, Forfarshire (*Proc. Soc. Ant. Scot.*, vol. xxiv. p. 471). These, with twelve, five, and three from sand-blown areas in Elginshire, Wigtownshire, and Ayrshire respectively, represent twenty-two discoveries comprising twenty-three beads. A thin notched cylindrical bead from Wigtownshire (in my possession) of brownish grey colour, and more glassy than porcellaneous in texture, and another similar from Culbin in the National Scottish Collection, seem to belong to a later period, and are therefore excluded from the list just given. There are thus known to be in collections eighty-five specimens of type 4.

[1] See, for example, in the British Museum, beads of the Roman period presented by the Egyptian Exploration Fund (1886) from Defenneh.

[2] Instances of Anglo-Saxon glass beads, of the shape under discussion, are given in note 2, p. 397.

[3] A specimen is recorded in *Proc. Arch. Inst.* held at Salisbury, 1849, p. 93, fig. N; and another by Stukeley (*Stonehenge*, Tab. xxxii. p. 62). The latter is shown in fig. 13, No. 5.

[4] Three specimens are known. Two from different sites in Ayrshire are in Mr Downes's collection, and are figured in Smith's *Prehistoric Man in Ayrshire* at pp. 44 and 116. The third was found in Wigtownshire and is in my possession, and is shown in fig. 13, No. 6.

[5] Two are known, and were found in Cornwall within an urn by Mr Borlase (*Arch.*, xlix. p. 188). One is shown in fig. 13, No. 7.

The fourth class comprises three kinds of ring-like objects, all probably cast in moulds—discs convex on each face, or convex on one face and flat on the other, varying from about ¾-inch to 1¼ inches in diameter and ¼ of an inch in thickness, with large central perforation. The first (type No. 8) is a plain quoit-like ring.[1] The second (type No. 9) is similar, but has a small perforated protuberance or loop at one point at the periphery.[2] The third (type No. 10) is star-shaped, the periphery being cut into at regular intervals to form straight, rather short rays. One of the Stevenston beads (fig. 6) is of this type. A star-shaped bead in my collection was examined some years ago by Prof. W. Gowland, F.S.A., who stated it was of "crude enamel coloured by copper."[3]

[1] One, shown in fig. 13, No. 8, was got within an urn in Dorset (*Arch.*, xxx. p. 330). A fragment of one of this type or of type 9 was found in Ayrshire (*Prehistoric Man in Ayrshire*, p. 44, fig. 111). With the assistance of Mr J. Graham Callander, F.S.A. Scot., I have ascertained that six ring-like beads, or "quoit" beads as they have been appropriately called by some Irish archæologists, all of type 8 (and none of type 9, I understand), have been found in Ireland, but all without recorded associations. Mr Knowles has two; the Marchioness of Downshire, one; Mr G. Raphael, Galgorm, one; the Rev. Canon Grainger, Broughshane, Antrim, one; and the sixth specimen is preserved at St Columba College, Dublin. The Rev. L. Hassé has stated that the Irish specimens are the same as the English (*Journ. Roy. Soc. of Ant. of Irel.*, vol. xxi. p. 364). A ring of greenish material from Italy very like this type was given by Mr Temple to the British Museum about 1812. On close examination it was seen to be of stone, lathe-turned, and of a late period.

[2] Two of these pendant rings have been found in Sussex with Bronze Age burials. One, shown in fig. 13, No. 9, now in the British Museum, was found at Mount Caburn (Horsfield's *History of Lewes*, i. p. 47, pl. iii. fig. 4; *Horæ Ferales*, p. 200, pl. xxv.), and the other at Clayton windmill (*Arch. Jour.*, xix. 186, and *Suss. Arch. Coll.*, viii. 285).

[3] One only has been found in England. It is recorded as having six points, and as being grey like the recently discovered specimen from Stevenston (*Arch.*, xxx. p. 330). Irish specimens have been noticed (*Proc. Soc. Ant. Scot.*, vol. xxv. p. 510), and Mr Knowles possesses two specimens and the British Museum one. Scotland has yielded more of them than any other country, thirteen, whole or fragmentary, having been found there—one in each of the counties of Elgin, Ayr, and Perth, two in Aberdeenshire, and eight in Wigtownshire. Of the complete Scottish specimens, one has five points, three have six, one has eight, and four have nine points. One of Mr Knowles' specimens has nine points (the most frequently recurring number), and the other five points. One of them came from Whitepark Bay sandhills. One from Wigtownshire sandhills, in my possession, is shown in fig. 13, No. 10.

This enumeration seems to embrace all known varieties of Bronze Age objects of the coarse paste variously styled, in conjunction with many adjectives, "plaster," "concrete," "earth," "earthenware," "porcelain," "enamel," "pearly grey substance," "baked clay," "glass," and "paste," by writers since Stukeley in the first quarter of the eighteenth century.

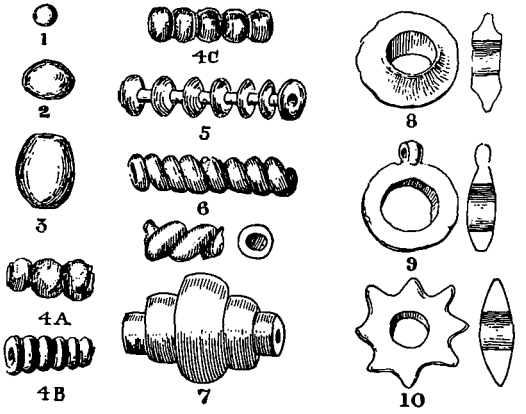



Fig. 13. A Classification of Prehistoric Beads of Coarse Vitreous Paste. Types 1 to 7 are shown actual size, and types 8 to 10 half actual size. I. *Globular*: Type 1, Wigtownshire; 2, Dorset; 3, Kent. II. *Cylindrical*: Type 4A, Ayr; 4B, Ayr; 4C, Wiltshire; 5, Wiltshire; 6, Wigtownshire; 7, Cornwall. III. *Ring-like*: Type 8, Dorset; 9, Sussex; 10, Wigtownshire.

Yet more classes and types may await discovery.[1]

In the sand-blown areas in Ayrshire there have now been found specimens of types Nos. 4, 6, 8 (or possibly 9), and 10. Types 2, 8, and 10 have been found within the same urn,[2] and in similar close association

[1] Resembling the well-known flattish conical "buttons" of jet or amber, with V-shaped perforation, was an object of "concrete" (*Arch.*, xlix. p. 189), got in the same grave-mound as specimens of type No. 7; which may constitute a fifth class and the eleventh type of these paste objects.

[2] *Arch.*, xxx. p. 330; see footnote No. 6, p. 397.

have been discovered types 4 and 3,[1] 4 and 7,[2] 4 and 9,[3] and 4 and 10.[4] Specimens of all types except 1, 5 and 6 have thus been found in the closest association, and are therefore contemporary. While there may be some doubt as to whether type 1 should be here classified, specimens of types 5 and 6 seem clearly identical in colour and fabric with specimens of the other types, and it may with some safety be inferred that types Nos. 2 to 10 (if not also No. 1) are contemporary.

Quoit-like objects of lignite, of type 8, have been found in the same urn with paste objects of types 4 and 9.[3] Lignite objects, of type 9, were got with a paste bead of type 4.[3] Near beads of type 4 was found a lignite object of type 9.[5] A bead of tin, of type 4, was got in a Wiltshire barrow.[6] The same type made of bone and ivory has been found in British barrows.[7] Type 5 occurs in black glass and in bronze.[8] Types 2 and 3 frequently occur in lignite.

I have failed to notice any precisely similar objects of vitreous paste in collections in various parts of Continental Europe, Asia, and Africa, and in collections of old-world relics in America, and to trace any reference by Continental investigators to these objects having been found outside of the United Kingdom.[9] Their rarity in Ireland (so rich in glass

[1] *Arch.*, xlv. p. 53.

[2] *Arch.*, xlix. p. 188; see footnote No. 5, p. 399.

[3] See footnote No. 2, p. 400, referring to the discovery at Mount Caburn.

[4] Within urn No. 5 described in this note.

[5] *Arch.*, vol. lii. p. 51.

[6] *Anc. Wilts.*, i. 103, pl. xii.

[7] *Anc. Wilts.*, i. 68.

[8] A specimen in black opaque glass from Culbin, Elginshire, is in the National Scottish Collection. Mr Downes has discovered a bronze specimen in Ayrshire. Beads of bronze of very similar form have been found at Hallstatt (*D. Grabfeld v. Hallstatt*, Taf. xvii. and pp. 76-80), and in Denmark (Boye's *Trouvailles de cercueils en chêne de l'age du Bronze en Danemark*, 1896, pl. xxvi.).

[9] Specimens of type No. 4 are, however, somewhat like the notched cylindrical beads of considerable rarity got with Egyptian remains of the pre-Roman periods. The British Islands seem particularly rich in different kinds of prehistoric notched cylindrical beads. These differed much at different periods with respect to size, fabric, and colour. There are five distinct kinds, which may be tentatively styled A, B, C, D, and E in order of a conjectural chronology. Class A, probably the earliest, is represented in the Stevenston "find." Class B is the rare, pale blue, opaque, smooth-surfaced bead of glass, almost like fine porcelain, about $\frac{3}{4}$-inch in

beads of a later period) is noteworthy, considering the number of explorations and the extent there of sandy and boggy areas. Their extreme rarity in the North of England is also remarkable, one bead and the fragment of another only having been recorded as found there, notwithstanding the industry of Yorkshire barrow-diggers.

Incidental to the manufacture of bronze was the production of a beautiful greenish-blue and sometimes a greyish vitreous slag; and fragments of this slag I have discovered on ancient Scottish sites, and two small lumps of brownish slag, with patches of greenish material, of coarse texture, were found at Culbin, and are in the National Scottish Collection. The chemistry of the slag is discussed in Figuier's *Primitive Man*, English edition, 1870, p. 261. Figuier there states that "chemistry and metallurgy combine to inform us that as soon as bronze foundries existed glass must have been discovered. What, in fact, does glass consist of? A silicate with a basis of soda and potash, combined with some particles of the silicate of iron and copper, which coloured it blue and green. As the scoria from bronze foundries is partly composed of these silicates, it is indubitable that a kind of glass was formed in the earliest metal works where this alloy was made. It constituted the slag or dross of the metal works."

Selected portions of this slag could easily be poured when molten into moulds, or otherwise manipulated to produce beads and bead-like objects of various shapes. It is probable that the native bronze artificers of these islands began and carried on the making of vitreous beads independently of any Egyptian or other outside influence.

The distribution of these beads points to the South of England and

length, in shape like two small oval beads (often of different sizes), joined end to end by a thick waist. A specimen has been found in Ayrshire, and in Aberdeenshire, and within a cinerary urn in Forfarshire (*Proc. Soc. Ant. Scot.*, xxv. p. 447). Class C is the less rare bead of clear blue or green glass, varying in length from $\frac{3}{4}$-inch to $1\frac{1}{2}$ inches, dumb-bell-shaped, like two round beads joined by a thin waist. It is common in Ireland, and less common in Scotland. Class D closely resembles class A, but is of clear blue glass in two or more bulbs. Class E is similar to class A, but of brown iridescent glassy material, and is found with Anglo-Saxon burials.

Scotland having been bead centres, and the whole body of evidence favours a theory that the beads have been made at home. There is literary and archæological evidence of a cross-channel bartering in beads of the Early Iron Age[1]; but there seems to be no evidence of such traffic in Bronze Age objects of vitreous paste.

[1] The reference in Strabo's *Geography* (iv. 5, par. 3) is vague, but archæological evidence is clearer.

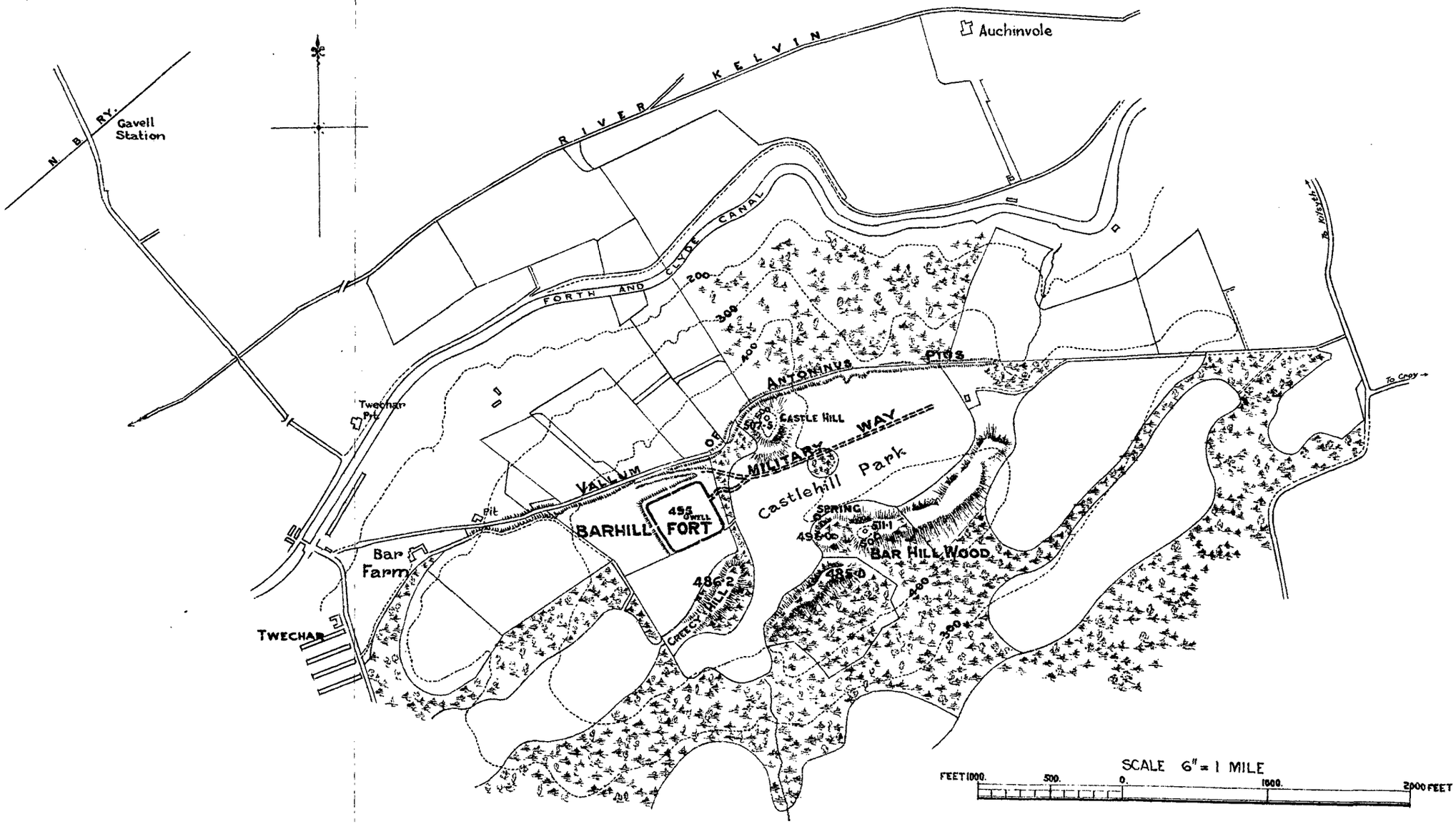
For example, the globular bead of clear glass, with inlaid spiral lines of glass different from that of the body of the bead, is not uncommon in Scotland. One was found with a burial in Ross-shire (*P.S.A.S.*, vol. v. 313), with a bronze fragment and a peculiarly shaped urn, and may belong to the latest phase of the Scottish Bronze Period. A very similar bead from Hallstatt is figured by von Sacken.

Also found at Hallstatt were small flattish rings of fine surfaced blue glass and of opaque straw-coloured glass.

These have been found in Egypt and in France (in graves at Somsois, with objects of iron and bronze, according to Morel in the *Revue Archéol.*, 1866, pl. xiv. I.), and in graves at Præneste (*Arch.*, xli. 187).

A few straw-coloured specimens (some apparently lost or abandoned in course of being made) were found in a West Scottish hill-fort and in sandy areas in Elginshire and Wigtownshire, and specimens in blue glass have been obtained in the last-mentioned district, associated apparently with objects of the late Scottish Bronze Period.

# FORT ON BAR HILL AND ITS SURROUNDINGS.

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