

II.

NOTES ON A COLLECTION OF IMPLEMENTS AND ORNAMENTS OF STONE, BRONZE, &c. FROM GLENLUCE, WIGTOWNSHIRE. BY THE REV. GEORGE WILSON, CORRESPONDING MEMBER, GLENLUCE.

The objects forming this collection have been presented to, or acquired for, the National Museum of Antiquities of Scotland by me during the last eight or nine years, and some of them have been described in two former papers, along with specimens exhibited by several gentlemen.¹ In the present paper I shall describe some objects of great rarity and interest lately added to the collection, and shall also refer to it as a whole. The collection is remarkable for the great variety of objects found in one district, and for the presence of objects very rare, at least in Scotland, and even unique. Many of them have been found among the sand-hills along the northern shore of the Bay of Luce. Among these dunes a number of ancient storm-beaches, about 20 feet above the level of the sea, lie in parallel ridges tending to the south-west. They are also seen in the cultivated fields on the farm of Culmore, in Stoneykirk. Many articles are from new localities in Stoneykirk and Glenluce.

The *stone implements* are either naturally or artificially formed.

I. NATURALLY FORMED STONE IMPLEMENTS.

1. *Hammerstones*.—I have selected about eighty out of a great number to illustrate material, form, or locality. They are all water-rolled pebbles, of a tough gray Silurian sandstone, or gray granite, quartz, and quartzite, and two are of flint. Two are from a "kitchen midden" in front of a cave at Garheugh, Mochrum, and one of quartzite is from a crannog in Barhapple Loch, Glenluce. There are also *pounding-stones*, and *lapstones* or *anvils*. I have observed some pebbles, too large to be carried home, which have been used as anvils for breaking flints on. And I may again

¹ Proceedings Soc. Ant. Scot. vol. xi. 580 587, and the New Series, vol. ii. 126-142. Donations are noticed in vol. i. 356, vol. x. 45, vol. xii. 625 and 570.

refer to a sandstone pebble, like one's open hand, which had been set on end in the sand, with stones rammed round its base, and used for breaking flints on its upper edge.¹

1. *Whetstones and Hones*.—These are of various material and type; but they may be classified as having been used for grinding or whetting implements of *stone* or of *metal*. Of the former class the most interesting is a pebble of soft red sandstone, such as occurs in our drift at some places, measuring $4\frac{1}{2}$ by 5 by $1\frac{1}{4}$ inch at the sides and $\frac{1}{4}$ inch at the middle, where it is hollowed out by much use on both faces (fig. 1). It

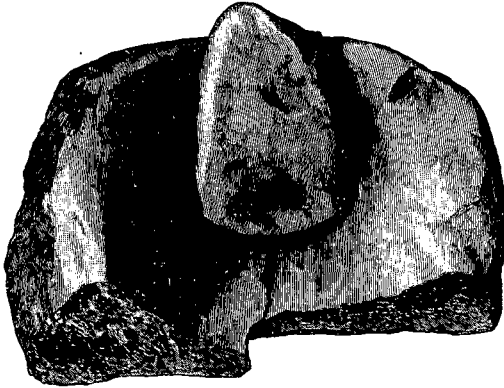


Fig. 1. Whetstone with Stone Axe lying in its hollow (5 inches in length).

was lying in the moor-pan on a flat place near the sand-hills in Stoneykirk, split down the middle, but with both pieces undisturbed and in contact. There lay in the upper hollow, with its edge to the open end, a pretty little stone celt of Silurian schist, with slightly convex edge, rounded and splintered butt, and some chip hollows on one face, and measuring $2\frac{1}{4}$ by $1\frac{5}{8}$ by $\frac{1}{2}$ inches. This is the only example yet reported in Scotland of a stone celt found lying on a whetstone, and indeed it appears to be quite unique. Evans records one or two cases in which flint tools with ground edges have been found lying beside whetstones.² About 9 inches to the

¹ Proceedings, vol. xi. 682.

² Evans, "Stone Implements," p. 239.

south side of it lay a curious lozenge-shaped stone of the same red sandstone, with rounded edges and angles, and smooth all over, measuring $5\frac{1}{4}$ by $4\frac{5}{8}$ by $1\frac{3}{4}$ inches, and perforated at the centre by a hole $1\frac{5}{8}$ and $1\frac{3}{4}$ inches in diameter at the surfaces, and $\frac{1}{4}$ of an inch at the centre. Beside these objects there were many fragments of apparently three different clay urns, one of them unmistakably of the "drinking cup" type. A tooth was picked up, but it is unfortunately lost; and there were many minute fragments of bone, the best of which is exhibited; it bears marks of fire, but that may be due to the burning of the heather, and it seems also to be stained by contact with bronze. It seems safe to conclude that this interesting find has been connected with an interment. Several broken whetstones, and a number of polishers, hammer-stones, and many worked flints, including arrow-heads, have been picked up near this spot, and there were traces of two or three circular floors of flat pebbles laid on their faces, so that it seems to be the site of a village or settlement.

Several whetstones bear the marks of edge tools apparently of *metal*. One of these is an oval water-rolled pebble of quartzite, $3\frac{1}{2}$ by $2\frac{3}{4}$ by $1\frac{1}{8}$ inches, 'worn into a hollow on both faces, on one of which there is a well-marked groove $2\frac{1}{2}$ inches long, $\frac{5}{16}$ wide, and $\frac{1}{16}$ deep. It has also been used as a hammer-stone. It was found on the surface of a ploughed field at Freugh, Stoneykirk, and is the first reported from this district. One in the Museum was got in the Borness Cave, Kirkcudbright.

3. *Polishers*.—These are of various kinds, some worn smooth on one face, some on two faces, others on the edge; and some have also been used as hammer-stones. They are usually of Silurian sandstone, but one is of soft red sandstone, and they are circular, oval, flat, or long-shaped. One small object, $1\frac{1}{8}$ by $\frac{3}{8}$ by $\frac{5}{16}$ inch, which seems to have been used as a polisher or burnisher, is black and has a vitreous lustre like obsidian.

There are sixteen specimens of *hematite iron ore* polished on one or more faces, the largest measuring $3\frac{1}{8}$ by 2 by 1 inches and the least $\frac{1}{2}$ by $\frac{3}{8}$ by $\frac{1}{4}$ of an inch, which have perhaps been rubbed down to obtain a red pigment.¹ There is one from a ploughed field in Kirkeolm, which was

¹ Evans, "Stone Implements," pp. 238 and 280.

presented through me by Mr Wallace of Daly, and there appear to be few specimens hitherto reported in Scotland. The nearest locality where this ore is found is Auchencairn, Kirkcudbright.

4. *Drills of Quartz in natural Crystals.*—There are three of these which seem to have the point worn by use. They measure about $\frac{7}{8}$ by $\frac{1}{2}$ by $\frac{3}{8}$ of an inch, and seem to be rare in Scotland.

II. ARTIFICIALLY FORMED STONE IMPLEMENTS.

1. *Celts or Imperforate Axes.*—For the first time I am able to exhibit celts *polished or ground only at the edge*. There are thirteen of them, all being water-worn pebbles, six of Silurian schist, and seven of brown or gray Silurian sandstone. One of schist has already been described as lying on a whetstone. The least measures $2\frac{3}{8}$ by $1\frac{1}{4}$ by $\frac{3}{8}$ inches, curved on one side towards the rounded butt, and with straight edge. The largest measures $4\frac{1}{2}$ by $2\frac{3}{8}$ by $1\frac{3}{8}$ inches, with rounded sides and butt, and the whole surface pecked except at the edge. Two similar celts are broken across. Of the sandstones the least measures $2\frac{1}{2}$ by $1\frac{1}{8}$ by less than $\frac{1}{2}$ inch, with rounded butt, one side curved and the edge splintered. The largest is leaf-shaped, with rounded butt, and much splintered on both faces; the size $4\frac{1}{8}$ by $2\frac{3}{8}$ by $1\frac{5}{8}$ inches.

Polished wedge-shaped Celts.—There are six of claystone or Silurian schist, four of them much broken, two with the sides flattened, two sharp, and one rounded.

I direct attention to a stone which appears to be an implement, though it is of a form which is unique. It is of the same close-grained but soft red sandstone as the whetstone and lozenge-shaped perforated stone already described, flask-shaped, flattened, with a distinctly formed convex edge, continued up the sides till they narrow into a rounded neck which fills the hand. The butt is oval, rounded, and slightly hammered, and measures $2\frac{5}{8}$ by $2\frac{1}{8}$ inches. The size is $8\frac{1}{2}$ by 4 by $1\frac{7}{8}$ inches. It was found near a small cairn of stones in a ploughed field at Freugh, Stoneykirk, and near it was a lenticular stone of the same material, a little hollowed on both faces by use as a whetstone, hammered round the

edge, and measuring $3\frac{5}{8}$ by $3\frac{1}{4}$ by $\frac{1}{8}$ inches. Perhaps they have been connected with an interment; but this is doubtful.

2. *Perforated Axes and Hammers.*—One large wedge-shaped pebble of gray Silurian sandstone, with rounded butt, and one side unequal, measures 12 by $5\frac{1}{8}$ by $3\frac{3}{4}$ inches. When ploughed up in a field at Culmore, Stoneykirk, the haft-hole was only partially bored on both faces, the diameter at the surface being 2 inches, but the finder stupidly punched it through with a hammer and nail. Another (fig. 2), of a less

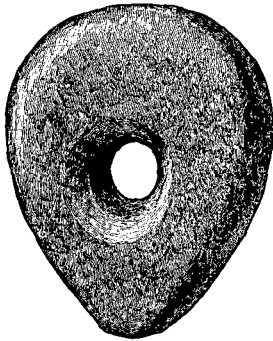


Fig. 2.
Perforated Axe-like Implement.
($3\frac{1}{2}$ inches in diameter).

common type, is presented to the Museum through me by the Rev. Alexander Scott of the United Presbyterian Church, Kirkcowan. It is a Silurian sandstone pebble, ovate, with a very blunt edge, measuring $3\frac{1}{2}$ by $3\frac{1}{4}$ by $1\frac{1}{4}$ inches, the haft-hole nearest the edge, and $1\frac{1}{4}$ inch in diameter at the surface, and $\frac{3}{4}$ inch at the centre. A lozenge-shaped stone has already been described, and there are three other perforated stones broken across.

3. *Stones with central Circular Hollows worked in their Faces* (the *tillhuggersteen* of Scandinavian archaeologists). In the volume of the Proceedings for 1879–80, at pages 127–129, I have described seven of these stones, and have stated that only one specimen has been reported from any other part of Scotland. I now direct attention to eleven more, from Glenluce and Stoneykirk, added to the Museum, making eighteen from Wigtownshire. One is from Clachsiant, of soft red sandstone, oval and flat, measuring 5 by $4\frac{3}{8}$ by $1\frac{3}{8}$ inches, hammered all round the edge, and with roughly pecked hollows $1\frac{1}{2}$ inches in diameter and $\frac{1}{2}$ inch deep. A lenticular pebble of gray Silurian sandstone from Two Mark, Stoneykirk, measures $2\frac{1}{8}$ by 2 by $\frac{3}{4}$ inches, with pecked hollows $\frac{7}{8}$ inch in diameter and $\frac{1}{8}$ inch deep. Another $3\frac{3}{4}$ by $2\frac{1}{4}$ by $1\frac{1}{4}$ inches has a pecked hollow $\frac{1}{4}$ inch in diameter and $\frac{1}{8}$ inch deep on one face, that on the other face being only begun. Four are

broken across and one is split, and one which I found on a raised sea-beach at Stairhaven, Glenluce, near an ancient stone and turf ring, is worked only on one face.

4. *Stones drilled on one Face.*—There are two of these: one, a gray Silurian sandstone pebble, $2\frac{1}{8}$ by $1\frac{7}{8}$ by $\frac{3}{4}$ inches, slightly narrowed at one end, has a central smoothly bored hollow $\frac{1}{4}$ inch in diameter and $\frac{1}{8}$ inch deep; the other is a nearly circular flat pebble of reddish sandstone, $1\frac{1}{16}$ by 1 by $\frac{5}{16}$ inches, with a very small drilled hole.

5. *Spindle Whorls.*—There are twenty of these, some handmade, others turned in a lathe. Those are fragments of a steatite or soapstone whorl beside which lay a piece of the stone with fine scratchings on it. One from Gillespie, Glenluce, is of a black stone, like some sort of jet. Another, from Gillespie, of whitish sandstone, is conoid, with a herring-bone pattern on the base.

6. *Socket-Stone.*—A pebble of gray Silurian sandstone from Dergoals, Glenluce, 6 by $4\frac{1}{2}$ by $2\frac{3}{4}$ inches, has been the socket of a small gate. An iron pivot with a cylindrical head, in which the upright bar of the gate is fixed, is bent at right angles, with the end sunk into a hole in the stone. This way of mounting gates is still practised here. When the pivot has worn the hole deeper, the cylindrical part on the bar foot cuts roughly circular marks on the stone, as in this specimen.

III. ORNAMENTS OF STONE.

1. *Stone Ring.*—A curious stone ring, $1\frac{1}{4}$ by $\frac{1}{4}$ by $\frac{3}{8}$ inches, the hole $\frac{3}{4}$ of an inch in diameter, from a crannog in Barlockhart Loch, Glenluce, has been placed among the ornaments.

2. *Jet, Black Shale, and Cannel Coal.*—There are ninety-one articles in this collection.

Bracelets.—Most of these are plain, but one has a grooved margin with curved lines on the back; another has four curved lines starting from a groove; and another has been *penannular*, with a deep rough groove near the end. All these are broken; but one entire bracelet (fig. 4), found in digging at a crannog in Barhapple Loch, Derskelpin, Glenluce, October

1880, is exhibited through the kindness of the Earl of Stair. It is unevenly formed and not highly polished, and measures $2\frac{1}{4}$ inches diameter.

Rings.—There are two, both unfortunately broken, but finely made and polished, one measuring $\frac{7}{8}$ by $\frac{3}{16}$ by $\frac{1}{8}$ of an inch, the others $\frac{1\frac{5}{16}}$ by $\frac{3}{16}$ by $\frac{1}{2}$ of an inch.

Beads.—There are six or seven of various shapes, some rude, others neat. Two are oblong and flat; one of them, which is split, having the

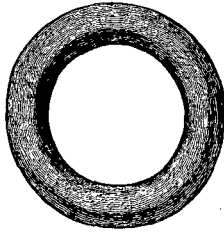


Fig. 3. Stone Ring from a Crannog (actual size).

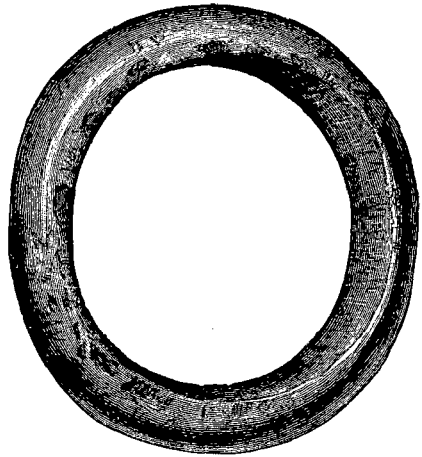


Fig. 4. Bracelet of Jet, Barhapple (actual size).

end truncated, and measuring $\frac{7}{8}$ by $\frac{5}{8}$ by $\frac{3}{16}$ of an inch. In Proc. Soc. Ant., vol. xii. p. 625, there is an account of a few lignite beads found with some small clay urns near Stranraer.

Pendant.—There is only one (fig. 5), 2 by $\frac{5}{16}$ by $\frac{1}{4}$ inches, curved, rounded at the point, and flat at the other end, where it is drilled with a hole less than $\frac{1}{8}$ inch in diameter.

Buttons.—There are two conical buttons (figs. 6 and 7), with a V-shaped hole drilled in the flat base, the two openings being $\frac{1}{16}$ of an inch apart. One is $\frac{1}{2}$ inch in diameter and $\frac{5}{16}$ inch in height; the other, $\frac{5}{8}$ and

$\frac{1}{2}$ inch diameter and $\frac{1}{4}$ inch in height, was lying in a sand hollow beside a bronze chisel.

There are various fragments with small circular hollows worked on one or both faces, and there is a pretty *knife* well worked. There are also fragments of two objects, which seem to have been cylindrical, with a broad spreading mouth.

3. *Amber Beads*.—A flat one, much decayed, was found at the edge of a pool a few feet from the spot where a bronze chisel was afterwards found ; it is likely these objects accompanied an interment. Another, of a



Fig. 5. Pendant of Jet
(actual size).



Figs. 6 and 7. Buttons of Jet
(actual size).

reddish colour, is remarkably small, measuring only $\frac{3}{16}$ of an inch in diameter, and $\frac{1}{12}$ of an inch in thickness, with a neat hole about $\frac{1}{20}$ of an inch in diameter.

I may mention here a fragment of greenish schist which has been part of a stone mould for casting metal.

IV. FLINT IMPLEMENTS.

The worked flints are so numerous (about 2350), and of so many kinds, I can only refer to them generally, and select a few for description.

1. There are many *strike-lights*, and many hundreds of *scrapers* of various forms, round nosed, duck-bill, kite, oyster and ear shaped, horse-shoe, circular, oval, gun-flint type, straight edged and irregular. Many of the horse-shoe form have originally been longer and have been broken across when in use.

2. There are several small trays filled with worked flints of unusual or at least unobserved forms, some of them rude and yet evidently formed for some purpose and worthy of attention. One set look like cores from which flakes have been struck, but the edge of the smooth circular or oval base is worked all round, and in several specimens is worn by use. The largest are about $1\frac{1}{2}$ in. long and $1\frac{1}{4}$ in. in diameter, the least is $\frac{3}{4}$ by $\frac{1}{2}$ in.

3. There are many curious flints worked with three somewhat triangular faces, and some also with a triangular base, and with all the edges worked and worn by use. Many irregular flints are also worked on three or more edges. Thirteen coarse-looking tools of unknown use have one or two curved notches of $\frac{1}{4}$ inch chord worked on one or both sides. Above sixty small tools, many of them neatly worked, have from one to four or five notches on their edges. Perhaps they were used for working articles of wood, horn, or bone, but this is a mere guess. There is a large number of very small flints, often beautifully worked, one or two of which are cubes with all the edges worked. There are now sixty-one slender tools, some blunt, others sharp at edge and point, worked on one or both edges, and a few of them covered with very fine secondary working. There is a set of pointed tools with a concave or convex edge, and some with both, which may be put by themselves rather than among the knives. One tray contains sixteen tools with a neatly worked concave edge. A few flakes with a double curve on their faces seem to form a special class of tools.

4. *Drills and Borers of Flint*.—There are fifty-two of these of various forms, broad or narrow, strong or slender. A drill of reddish colour measures $1\frac{1}{4}$ by $\frac{1}{2}$ by $\frac{3}{16}$ of an inch, is flat on one face, and has the slender point worked on opposite sides. Another is a rudely worked flake $1\frac{5}{8}$ by $1\frac{5}{8}$ by $\frac{1}{4}$ inch.

5. *Knives*.—There are above two hundred and forty of every degree of workmanship, from the rudest to the finest; one, two, or three edged, or worked all round; and of various forms, slender or thick, round-nosed, pointed or square ended, straight, curved, or nearly circular, pear and leaf-shaped. It is difficult to draw a line between the leaf-shaped knives and the arrow-heads of the same form. There are two quadrant-shaped knives, one of which measures an inch along each edge and is less than $\frac{1}{16}$ of an inch in thickness, being very beautifully worked.

6. *Saws*.—There are sixty-four saws, some of them very finely serrated, with upwards of twenty-four teeth to one inch. Some are simple flakes; others are ridged, or worked with a nearly triangular cross section. Some are pointed, others square ended. The edge is straight, concave, or irregular, and several of the finest are two edged.

A finely serrated brown flint, $1\frac{5}{8}$ by $\frac{3}{4}$ by $\frac{1}{4}$ inch, picked up near the spot where the stone celt lay on a whetstone, has on the flat face, at the serrated edge, a *distinct metallic gloss, as if it had been used in cutting bronze*. I tried a coarse flint of similar form on a small lump of bronze; the outer coating of green oxide was very hard and flew off in small pieces, but when the yellow metal was reached it cut quite easily, and left a similar gloss on the flat face of the flint. I have recently got another with a similar metallic gloss on the upper side of one edge. It is a ridged flake $1\frac{5}{8}$ inch long, $\frac{7}{8}$ inch broad at the base, and $\frac{1}{2}$ inch at the small end, and $\frac{1}{4}$ inch thick, with two irregular strongly serrated edges.

7. *Chisels and Gouges*.—There are no unmistakable examples of these tools, but one tray contains flints which may perhaps be classified as such.

8. *Flakers*.—Six strongly worked and much worn tools seem to have been used in working other flints.

9. *Arrow-Heads*.—There are about two hundred and forty in all, and of these upwards of one hundred and sixty are leaf or lozenge-shaped. Some of these are oval, and scarcely or not at all more pointed at one end than the other. Others are very sharply pointed; some are kite-shaped and others elliptical, these last shading off into the lozenge type. Seventeen are triangular, or with slightly concave base. Six are barbed,

but without a central stem, and forty-seven are barbed arrow-heads of various types, alate, narrow, with the barbs incurved or square cut, and some are finely serrated.

Many of the arrows and other implements are beautifully worked, and many of the specimens now in the Museum are from new localities in the district around Glenluce.

V. BRONZE IMPLEMENTS AND ORNAMENTS.

There are one hundred specimens of bronze and brass, some going back to the most ancient types, and others quite modern.

1. *Bronze Knife Dagger*.—This is figured and described in Proceedings, vol. xiv. p. 136, and is referred to by Evans as one of the implements of the earliest type, when the metal was very scarce and precious.



Fig. 8. Bronze Chisel found at Low Torrs, Glenluce.

2. *Bronze Chisel*.—This interesting specimen of bronze chisel (fig. 8) is figured by Evans as of unusual type. I quote his description:¹ “the blade tapering evenly away from the edge. The point which was intended to go into the handle appears to have been ‘drawn down’ a little by hammering, which has produced slight flanges at the sides, the edge has also been hammered. The original was kindly lent me by the Rev George Wilson, of Glenluce, Wigtownshire, and was found, with a conical button and a flat plate of cannel coal or jet, on the sandhills of Low Torrs, Glenluce. Numerous arrow-heads and flakes of flint have also been found among the sands at the same place.” On being shown the spot, after writing to Dr Evans, I found that it was on Mid Torrs where I had picked up a flat bead of amber and a very small one of yellow paste, and also some fragments of coarse crock. It seems likely these objects have accompanied an interment.

¹ Evans, “Anc. Bronze Implements of Britain,” p. 166, fig. 192. The Society is indebted to Mr Evans for the use of this woodcut.

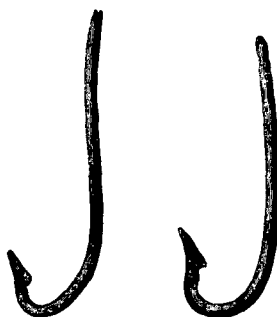
3. *Bronze Ferule*.—A rude ferule, made by rolling a thin plate of bronze round some cylindrical object, and not rivetted or soldered but simply overlapped, was picked up close to the spot where the chisel lay. It measures $4\frac{1}{4}$ by $\frac{11}{16}$ by $\frac{3}{16}$ inches.

4. *Bronze Pins*.—There are four with heads, and twenty-one fragments. A square-headed pin is figured in Proc. vol. xiv. page 139, which is proved by analysis to be true bronze. Another has the side of the head flattened, with a lozenge and central dot. A fragment above $1\frac{1}{2}$ inches long has a lozenge between two rings, with a central ring and dot.

5. *Bronze Needles*.—In Proc. vol. xiv. page 131, I have figured one



Fig. 9. Bronze Needle
(actual size).



Figs. 10 and 11. Bronze Fish-hooks
(actual size).

which has lost the point and most of the eye, which is referred to by Evans.¹ There are now two more, one with most of the eye lost, but distinctly crutched, measuring $1\frac{1}{4}$ by $\frac{1}{8}$ inch; the other (fig. 9) is perfect, although the point is blunt, measuring $1\frac{3}{16}$ by $\frac{1}{10}$ by $\frac{1}{16}$ inch, the eye opening being $\frac{5}{16}$ inch long and $\frac{1}{16}$ inch wide. All these have a bright green patina.

¹ Evans, page 192.

There are eighteen bronze needles in the Dublin Museum.

6. *Bronze Fish-Hooks*.—Evans figures at page 192 an Irish specimen, the only example he is able to cite from the British Isles. I have placed five in the Museum, three of which show the barb. One is $1\frac{5}{8}$ inch long, $\frac{1}{2}$ inch across the bend, and above $\frac{1}{16}$ inch thick; the barb is perfect. Another, with an imperfect barb, has the butt end flattened for attachment to the line, and measures $1\frac{3}{4}$ by $\frac{1}{2}$ inch. A large one, made of a plate of bronze rolled and beaten flat, has lost the point and barb. Another, with the butt broken, has no patina, and is probably not so ancient.

7. *Bronze Brooches*.—A penannular one, with serpent heads, has been

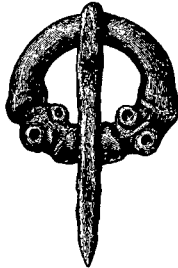


Fig. 12. Bronze Brooch (actual size).

Fig. 13. Bronze Mounting.

figured, Proc. vol. xiv. p. 140. Another (fig. 12), from the same sand hollow, is of later type, having a duller colour than the true bronzes, except the flat pin, which has a bright green patina. It measures $\frac{3}{4}$ by $\frac{7}{8}$ by $\frac{1}{8}$ of an inch, is flat on the under side, and has the straight cut ends ornamented with a kind of head with hollow eyes.

8. *Bronze Rings*.—There are two; one broken, which is $\frac{3}{4}$ of an inch in diameter, $\frac{1}{8}$ in thickness, and $\frac{1}{2}$ in depth. The other is a ribbon of bronze, with the narrowed ends simply overlapped, and cut, welded, or soldered, and measures $1\frac{3}{8}$ by $\frac{3}{16}$ and $\frac{1}{16}$ by $\frac{1}{20}$ inch.

9. *A Bronze Pendant* of a unique kind has been figured in Proc. vol. xiv. p. 140.

10. *Loops of Twisted Wire*.—There are four of these. Two are from the same spot; the loop of fine wire is about $\frac{5}{16}$ of an inch long, and $\frac{1}{4}$ inch

wide in one, and $\frac{5}{8}$ by $\frac{5}{16}$ inch in the other, and in both is broken off after the second turn. Another has a small loop $\frac{1}{2}$ an inch long and the twisted part is $\frac{1}{8}$ of an inch long. They seem to have been a kind of ornament.

11. *Linked Wire with Hooked Ends*.—An object of this kind is figured in Proc. vol. xiv. page 141. Another, with the terminal hooks perfect, measures four and a half inches in length.

12. Objects like paper fasteners, which seem to have been used as rivets for fastening plates of bronze. There are eighteen of these, some ready for use and others already used.

13. There are twenty-five small mountings of various forms, and several flat fragments with ornaments. One has a pattern of small punched triangles, another (fig. 13) has a waved band with a kind of trefoil in the spaces and is inlaid with what looks like niello.

Some of the articles now described are probably of brass, that is of an alloy of copper and zinc; but others are true bronze, that is an alloy of copper and tin.

14. There is one *jet* from a *casting of bronze*, and another which from its weight appears to be of *tin*: each with a single runner.

A *Silver* bar of irregularly quadrangular cross section measures $\frac{7}{8}$ by $\frac{1}{8}$ by more than $\frac{1}{8}$ of an inch.

Lead.—There are five spindle whorls of lead, two flat, the others thick; and a hook-shaped object, with two specimens of lead ore, all from the sand-hills. There are also fragments of two tokens of some kind, one with a capital R in relief, the other with same pattern.

Coins.—There is a long cross penny with the legend "HENRI ON LVNDE," which is, of course, very common. But in a sand hollow beside it were three halves of another, which seem to have been cut for small change. Mr Sim points out that the edge of one of them is worn by circulation, and states that they are the first of their kind reported to have been found in Scotland.

15. *Bronze Bell*.—This very curious bell was picked up in a sand hollow at Clachsiant, Stoneykirk, by my friend John Thomson, Esq., of 17 Strathearn Place, Edinburgh, and presented by him through me to the

Museum. It is a fragment of elliptical section, with an open angular handle cast along with the bell, but set on rather aside from the longer axis. The fragment is covered with green patina, and on some parts with rough green oxide, and is nearly 2 inches long, $1\frac{5}{8}$ inch wide, and 1 inch deep, with the remains of two nails, $\frac{1}{4}$ of an inch apart, where a tongue seems to have been attached. Two small grooves, $\frac{1}{4}$ of an inch apart, run round the outside, the first being about $\frac{5}{16}$ inch from the handle at its ends, and $\frac{1}{2}$ inch opposite the opening. The opening in the handle is nearly $\frac{5}{16}$ inch wide and about $\frac{1}{16}$ inch more in height. On the outside of the handle, close under one angle, are two shallow grooves about $\frac{1}{8}$ of an inch apart. This bell seems to be of a type hitherto undescribed.

Glass Beads.—One of $\frac{1}{4}$ inch diameter, from Knockdoon, is blue; another from Gillespie, $\frac{3}{4}$ of an inch in diameter, is a clear light yellow.

Paste.—There are two small beads of a bright yellow paste. A star-shaped object with nine rays is figured in Proc. vol. xiv. page. 141. It is of roughish blue paste. Another, which seems to have had the same number of rays, is broken across, and is hollow within. A third has five irregular and blunted rays. These objects seem to be very rare in Scotland. A small square piece of bright blue roughish paste appears to have been set in some metal ornament, and I have a similar piece of smooth yellow paste with waved lines of faint green. A drop-shaped object, hollow within and smooth on the surface, is of dark blue.

There are two beads of a different kind. One, a little broken, is of a dullish drab clay colour and measures $\frac{9}{16}$ by $\frac{5}{8}$ of an inch, the drilled hole $\frac{9}{16}$ and $\frac{1}{8}$ inch at the two ends. The other, of which only half remains, has the surface polished as if by rubbing on many small facets with blunt edges, is slightly ridged at the periphery, measures 1 inch in diameter and $\frac{5}{8}$ inch in thickness, and has the hole smoothly drilled from each side, $\frac{1}{4}$ inch in diameter at the surface, and $\frac{3}{16}$ inch at the narrowest part, which is $\frac{1}{8}$ inch from the centre. It is of a whitish and pink colour, looks as if it had been under the action of fire, and is very like a flint scraper I picked up. If it is of flint it is of course a very rare article; but I think it best to class it here in the meantime.