

IV.

NOTES ON THE AGE OF THE SETTLEMENTS ON THE SANDS OF CULBIN.

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The object of this short paper is to assign a definite period to the metal-work found so abundantly over a certain area of the Culbin Sands, near the mouth of the Findhorn, Morayshire, first discovered by Mr Hercules Linton, F.S.A. Scot., and described by him in a paper read to the Society in June last, and printed in the Proceedings of that date.

It is extremely probable that the sands of Culbin were inhabited at a very early period, from finding on them so many flint implements, such as arrow-heads, scrapers, &c., many of which are of very rude workmanship. Besides the cairn mentioned by Mr Linton, I found another when at Culbin in the summer of 1876, nearly at the west end of the Sand-Hills. It was a much smaller one, being only about 4 feet in height, and 8 to 10 feet diameter at the base, and situated about half a mile from the sea. The stones of which it was composed are very similar to those of the large ones, and I do not think that they have undergone the action of fire, as has been asserted, but rather that they have got their worn vitrified appearance from the action of the sand upon them.

About ten yards east from the small cairn, there was a very interesting example of burial by cremation. There had been no cist, and if there had been a mound, it must have been blown away by the wind.

In a radius of 20 yards round the cairn, a large number of rude flint arrow-heads, scrapers or thumb-flints, and flakes were found. But evidences of a much more recent occupation of the district are seen in the so-called bronzes, which are found scattered over the sands. They have been described as belonging to the Bronze Age; but I know of no

celts, daggers, swords, or other implements characteristic of the Bronze Age, or any object undoubtedly of bronze, having yet been obtained from the Culbin Sands. The articles found have always been of a class not usually associated with the Bronze Period.

I have had a portion of the Culbin metal analysed by my friend Mr F. W. Young, F.C.S., Dundee, with the following result :—

Copper,	77·2
Zinc,	21·166
Tin,	·916
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	99·282
	·718 traces of iron and other impurities.

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This analysis shows that undoubtedly the articles do not belong to the Bronze Age, and also that they are not made of bronze, but of brass.

The presence of zinc in so large a quantity proves that the metal is of comparatively recent manufacture ; and the tin, which is present in so small a quantity, seems as if it had been the result of accident or impurity. The metal very closely resembles the variety of brass known as pinchbeck metal, which consists of three parts copper and one part zinc, and very probably was made in imitation of gold, to which it has a good resemblance, when freed from its incrustation of oxide of copper.

About half a mile west from the mouth of the river Findhorn, there is a piece of ground about 100 yards long by 50 yards broad, which seems to have been the place where these articles of brass were manufactured. They are found here in great numbers, and of a great variety of forms, such as brooches, brooch-tongues, rivets of two kinds, pins, needles, buckles, clasps, &c. The articles found are not entirely confined to those of brass ; there are also a great number made of iron, such as fish-hooks, rivets, pins, &c. Along with pieces of pottery, pieces of the crucibles were found in which the metal had been melted, many of which had the metal still adhering to them, also coins of Mary of Scotland, Francis and Mary, James VI., and Charles II.

That this was the place of manufacture is suggested by finding there, and in no other part of the sands, the parts of the crucibles, brass and

iron slag, cuttings of both metals, and a number of large blocks of sandstone fused on one side as if the fire had been built on them.

Immediately to the north of this manufactory there is a large stratified shell-heap, and my opinion is that these shell-heaps were formed at the same time, probably by the same people, and that they are not necessarily of an earlier time than the coins found in the manufactory.

Shell-mounds are found in great numbers along the north border of the sands, but the large one before mentioned appears to be of a more recent date than any of the others that I met with. They are nearly all situated on old sea-beaches, and in none of them but this one did I observe any pieces of metal. Also, in the others, the shells of which they are composed are very much more worn by the action of the sand, and the pottery found in them is of a much ruder type and ornamentation.

The explanation given by Mr Linton of the coins being found in the manufactory is, "that the flints and bronzes were deposited first, and then covered by the alluvial soil, the iron articles occupying a higher stratum, and the coins the highest of all." The soil being now carried away by the wind, flints, bronze and iron articles, and coins are now found on one common level. If this was the case, why are the coins found only within the area of the manufactory? I know of very few cases where coins have been found in any other part of the sands. Supposing that they had been deposited separately, in all probability they would not now be so strictly confined to the same small area.

The presence of so many coins in so small a space cannot satisfactorily be accounted for, unless there be proof of a number of people inhabiting it, as must have been the case in the manufactory or settlement.

The brooches were at first thought to be Scandinavian, from having on them what seemed to be Runic inscriptions. They were afterwards declared not to be Runic, but made after the time of, and in imitation of the Runic by people who had seen, but not understood, the Runic characters. This seems a probable enough explanation; but to me the so-called inscriptions on the rings of the brooches seem to be but a simple and rude form of ornament, the four divisions or panels which occur in all of them that I have seen being introduced merely to diversify or break the monotony of the pattern.

The pins are very similar to those in use up to the end of last century.

They are made of one piece of wire with another piece twisted round one end of it. From finding a number of pieces of iron-ore (hæmatite) along with iron fish-hooks and rivets, another proof is obtained of the recent date of the manufactory. Hæmatite occurs in the heights of Morayshire, in the north-west of Caithness, and in parts of Sutherlandshire. About the year 1630 the natives of the latter county made rather good iron from native ore. Remains of their workings may be seen yet in various parts of the county. The iron articles are all those of use and not of ornament, while the brasses comprise many ornamental articles. This seems to warrant the inference that they were made and used by the same people; indeed, there is direct evidence of this, as one of the brass buckles had an iron rivet through it.

They seem to have been in use by the inhabitants of the estate of Culbin before it was destroyed by sand about the year 1695, as I found numbers of them round about the ruins of one of the houses which was uncovered from the sand.

The dates of the coins would imply that they had been in general circulation when the estate was destroyed.

That the manufactory and the large shell-mound were formed at the same time is, I think, proven from finding the brass and iron articles in both. The pottery found in them is the same in material, form, and ornamentation, many of the pieces being partially glazed and coloured. For these reasons I believe that the so-called bronze found on the sands of Culbin is not bronze, but brass; that the brass and iron articles are of the same age as the coins found with them; and that the large shell-mound to the north of the manufactory is of the same age as the manufactory itself, and was probably formed by the same people, being the refuse of the shell-fish and animals which constituted their food.