

INTRODUCTION

1) Which [ARTEFACT] did you choose and why did you choose it?

Bronze Age Hoard – BRONZE AGE AXES. A material and tool that I have not looked at in any detail before. I tend to be more interested in “sites” and earlier periods. [This hoard is dated to the ‘transition period’ and could also be classed as Iron Age].

2) What was the most interesting thing you found out about the [ARTEFACT]?

That they were apparently made in stone moulds.

Pick one fact or story connected with it?

My searches could not find any evidence of stone moulds for the South Wales Axe type being found in Wales and therefore at present the inference is that they were not.

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THE BRONZE AGE (2,300 – 800 BC)

The Bronze Age is so called as bronze tools started to replace stone and wooden ones.

2300-1500BC - A period marked by burial and funerary monuments. Important people are marked within individual graves.

2200-2100BC - Appearance of bronze in Wales (tin from Cornwall).

2200-1800BC - Beaker burials in Wales and the great stone circle at Stonehenge erected.

2100-2000BC - Introduction of cremation burial rites.

1600BC 2000BC - Beginning of copper mining in West and North Wales.

1700-800BC- Increasing deposition of metalwork in hoards in rivers, lakes and bogs.

1000BC - Forts with high wooden posts (palisaded) are built. 1



The Great Orme Copper Mine, Llandudno, North Wales: Photo by D Simmons

INFORMATION ON THE EXHIBIT AND THE BRONZE AGE

The Cardiff Hoard

Part of the now called Cardiff Hoard found near the River Ely and contained two socketed axes, four socketed chisels and two socketed sickles, two razors and the cap of a chariot pole.

A chariot pole is a round section of wood that is connected to the body of a chariot and connect to the pole is a wooden cross member which connects to the horses harnesses.

Sickles would be used to harvesting grain and to cut other vegetation such as rushes and reeds and some may have had a ceremonial purpose. 8

HOW BRONZE WAS MADE.

Bronze was made by melting together copper and tin. The resulting molten metal was then poured into either baked clay or stone or bronze moulds to make the object.

The object chosen to represent the Bronze Age in this display was the five South Wales Type Bronze Axe Hoard found in Plymouth Woods in Ely Cardiff.

A Hoard is where a number of objects have been found in the same place.

During this time Copper was mined in Anglesey and Ceredigion and Tin was mined in Cornwall and Dartmoor. Some form of trade must have existed. These metals could also be imported from and to nearby European countries.

Investigations at the Great Orme Copper mine revealed that since excavation of the old site began in 1987, over 30,000 bone tools and fragments, along with 2,500 stone hammers have been unearthed. Little evidence of bronze implements had been found and it had been long assumed that bronze was not used as a tool due to its value or lack of hardness. However, in 2016 over 1,000 fragments of bronze, mostly tiny but with some larger pieces suggesting bronze mining tools were found.

Miners working on the Great Orme in 1831 found the tip of a bronze pick that would have been about 30mm long. The pick tip contained approximately 85% copper and 15% tin. The extra tin made the bronze more brittle (so more likely to break).¹



Photo by D Simmons

Lump of copper ore before being broken down into small pieces by using stone hammers.



Examples of the hammer stones found in the Great Orme Copper Mine

Photo by D Simmons

The lumps of each metal would then have to be taken from where they were produced to the "metal-worker" to make the object.

THE BEAKER CULTURE

Around 2500BC a number of immigrant entered Britain and brought with them a bell shaped beaker or cup. It is thought that they also brought with them the knowledge of how to make bronze.

A study of the DNA from 400 pre-historic skeletons from western and central Europe before and after the arrival of the beaker people found that the DNA of the people before the Beaker Culture to that following was significantly different and claims that there was a significant amount of immigration into Britain whereas in Europe the new ideas/technology spread without a significant amount of migration.²

THE DESIGN OF THE SOUTH WALES TYPE AXE

Unfortunately the only in-depth study of all South Wales/Welsh Type of Bronze Age axes found in Britain was undertaken in 1978. It is not known how many more have been found since.

The evidence presented in the paper showed:-

There was an equal number of axes found in Southern England as was found in Wales. Ten were found in Western Europe.

All were apparently made in stone moulds.

AREA	In HOARDS with other objects	SINGLE FINDS
S.E. Wales Valleys	12	25
Rest of Wales	2	5
Southern England	9	23
Abroad	8	1

The South Wales Type Axes have 3 ribs on each face which are either parallel or converging.³

Example of both are contained within the hoard on display. The ribs are merely decorative. Another similar design exists where there is a small round blob at the bottom of the rib closest to the blade end. The sizes of the axes vary (particularly in length)

Matthew Guiseppe Knight, (National Museum of Wales) said:-

“South Wales's axes have also been found across England, and as far away as northern France. This implies these products were traded and exchanged over long distances.

The function of these axes is unclear. These axes may have been left in a rough condition because they were used in agricultural activities, such as cutting roots and breaking plough soil. The South Wales Bronze Socketed Axe date from (1100-800 BC)” . 4

WHY THE THREE RIB DESIGN?

It is possible that the maker has chosen to mark his axes with his unique design and that other makers / family members have a slightly different mark to identify the tools that they have made. One design has three ribs converging. The other type's ribs are parallel.

A greater degree of skill is required in making a stone mould than a clay type.

The stone mould could be used many times whereas the clay mould is broken to reveal the axe once the metal has cooled.

By 1978 only six stone moulds had been found - all in England so it could be argued that the axes were not made in Wales. 5

However, it could also be argued that the “maker” travelled to each area and made his type of axe where it could be traded.

The design appears to show an improvement in how the bronze axe is attached to a wooden or a bone handle. The handle would be shaped to have a section that fits into the rear of the axe and secured in place by bindings of leather around the head of the handle. However the blade is not very wide and the earlier made flat axe was a much better shape for cutting large pieces of wood or chopping down trees. Some of the examples in the hoard have sections of damage that show they were used and not merely decorative or ceremonial.

HOARDING

Some very large hoards have been found across Britain and several reasons have been given for this hoarding.

The items may have been buried for safe-keeping to stop them being stolen, and would have been recovered later.

In a religious or ritual celebration of a good harvest or associated with a burial of an important person or on a site that was special to the community.

The hoard on display was found in woods which are on the west side of the River Ely on the eastern side in 1928, at the old pre-barrage tidal reaches of the River Ely, a hoard of bronze-age tools dating to 600BC was discovered, containing one rib and pellet socketed axe, one socketed axe fragment, four leatherworking knives, two socketed

sickles, two razors and a chariot pole cap⁶. Whether this area was a special place for ritual or chosen for some other reason is not known.

The biggest hoard found in Britain in Cambridgeshire contained 6,500 objects.

One in Sussex contained 79 objects some made locally others from different parts of Europe.

In East Anglia one area of water contained items that had been deposited there over a 1200 year period.⁷

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