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BRONZE AGE ARCHAEOLOGY PH 4/B

Neolithic & Bronze Age Archaeology

The term 'Stone Age' was used by archaeologists to designate the vast prehistoric period during which humans used stone for toolmaking. In 1865 John Lubbock subdivided the Stone Age into the Palaeolithic, Mesolithic and Neolithic *P*eriods. These three periods were further subdivided. In reality, the succession of phases differs enormously from one area of the world to another.

The Neolithic (or New Stone Age) is traditionally the last part of the Stone Age. It is thought of as beginning with the start of farming and ending when metal tools became widespread, depending on geographical region. In Great Britain the Neolithic extends from about 4,000 BC to 2,000 BC.

The Bronze Age is the next period. In Great Britain, the Bronze Age is considered to have been from around 2,000 to 700 BC. During this period the techniques for smelting copper and tin from naturally occurring outcroppings of ore and then making tools from the resulting alloy became common. However, it should be remembered that stone tools continued being used in the Bronze Age - there was no neat break between the two periods!



Above: A miscellany of Bronze Age weapons and ornaments.

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Flint Arrowheads



Archaeological experiments have taught us a lot about how such finely crafted flint arrowheads were made. The procedure is thought to involve two stages, generally referred to as percussion chipping and pressure flaking. In percussion chipping the core or block of flint is hit with a hammer-like blow to detach the flint flake. This is usually done with a stone hammer to rough out a lump of stone that may be made into some specific artefact. The next step is pressure flaking. Pressure flaking is achieved by placing a pointed tool such as an antler tine on the edge of the stone and applying an inward pressure to the tool. This pressure removes a small, thin flake from the stone. Pressure flaking shapes and refines the projectile point. This leaf-shaped arrowhead is a beautiful example of the craftsmanship that could be achieved in the late Neolithic and early Bronze Age periods.



No doubt most arrows were used for hunting, but there is also evidence of aggression between human beings in the Bronze Age. For example, in 1991 a well preserved body of a man was found in the Alps (nicknamed Ötzi, after the Ötzal area where he was found). The man is believed to have lived about 5,300 years ago. Various items were found with the body including a copper axe, a flint knife, a quiver full of flint-headed arrows and an unfinished yew longbow that was taller than he was. A scan of the body revealed an arrowhead lodged in one shoulder, matching a small tear on his coat (right, circled in yellow). The shaft of the arrow had been removed, but the head remained stuck in his flesh. He also had bruises and cuts on his hands, wrists, and chest. There has been much speculation about how exactly Ötzi may have died, but the evidence suggests he did not live in very peaceful society.



In 2002 archaeologists found the grave of a man dating back to around 2,300 BC, at Amesbury in Wiltshire, England. The grave lay three miles south-east of Stonehenge and contained the richest array of items ever found from this period. Around 100 objects were found, including the complete skeleton of a man, three copper knives, two small gold hair tresses, two sandstone wristguards to protect his wrists from the bow string and 16 flint arrowheads - one of them can be seen on the right. The man was quickly dubbed the 'Amesbury Archer'.

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Bronze Axes

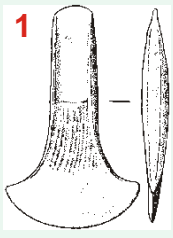
Bronze is an alloy of copper and tin. It is harder than pure copper, more suitable for casting and also resists corrosion. Bronze may contain as much as 25% tin, together with small amounts of other metals, mainly lead. It is one of the earliest metal alloys known, and was used in the Middle East from about 5,000BC. Knowledge of bronze was slow to spread, and depended on the availability of tin, a scarce metal. The Aztecs did not discover the alloy until the fifteenth century, and in sub-Saharan Africa, Australasia and much of America there was never a Bronze Age at all.

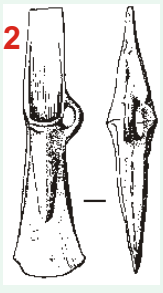


There are carvings of bronze axes on one of the stones at Stonehenge, all with the blade upwards with no handles (right). No one knows what they mean, but such tools were obviously highly valued. In 1998 a timber henge was discovered just off the coast of Norfolk. Axe marks on the timbers indicated that at least 51 different bronze axes were used in working the timbers. No stone tools were used. Was this because such an important religious structure had to be made with only the best tools? The largest axe was used to cut the central tree and not any of the other timbers. The excavators interpreted each unique axe as representing a different individual and that Seahenge (as the structure was nicknamed, see image on left) was a community endeavour. Again, though, such suggestions can never be proved.

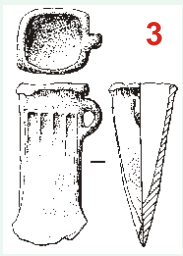


The development of bronze axes is more clearly understood. The earliest type (1) was based on the same shape as the previous stone axes, with the working edge hammered out to create the cutting edge. Hammering also had the effect of hardening the metal, but taken too far, the bronze could break. These axes would have been hafted onto a stick and bound with cord.





Later the 'palstave' axe head developed (2), which had a ridge at the end of the blade to help anchor it in place.



Finally, socket axes developed (3). These blades were hollow and could be fitted onto a projection on the haft, fixing it even more securely.

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Palstave Axe

The very earliest bronze axes were flat, but it became apparent that if the sides were hammered out to form flanges then the blade could be even more securely attached to the haft. Palstave axes like this one have a stop-ridge running between the flanges to hold them even more securely in place. This ridge in this case is rather insignificant. It may have been attached to the haft in the way suggested by the photograph below.





Two Socketed Axes

The socket axe marks a further refinement in design. Many have moulded decorative patterns on the sides, although these ones are relatively plain. Both have a loop on the side which would have been used in binding it to the haft. This feature is found on many axes from the period.





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Spearhead



Bronze spearheads show a similar development to that of axes. The earliest forms had tangs which slotted into the shaft and were held in place with pins. Socketed types, like these, were a later development. As with the axeheads, the loops on the side of the smaller one would have been used to help bind it securely. The larger one has holes for rivets. Spears may have been used for hunting or for warfare.

The Bronze Age period also saw the development of many other metal technologies, including gold. In 1960 a gold torc was discovered in a field at Moulsford, Berkshire, dating from about 1,200 BC, which is currently on display at the Museum of Reading (see photograph below). Perhaps, despite the violence, the period should be known as the Golden Age?



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Neolithic Macehead

The hole through the centre of this stone would probably have been made by using a smaller stone (perhaps even a stick) and a mixture of sand and water to act as an abrasive. As with polishing the sides of an axe, this process would have taken hours to complete. The hole would have been used to attach a wooden haft.





There is no agreement on the function of these tools. They have been found in great numbers and a variety of sizes and shapes. Sometimes they are referred to as hammers, which implies they were used as tools, although not many show signs of wear or abrasion at the end. Another possibility is that they were used as weapons. Some are very finely made and it is thought they may have had a purely status or ceremonial significance. The most spectacular such macehead (left) was found in the long barrow at Knowth in Ireland. This example is much more ordinary!



Above: The entrance to West Kennet Long Barrow in Berkshire. The construction of this Barrow commenced about 3,600 BC, which is some 400 years before the first stage of Stonehenge and it was in use until around 2,500 BC.