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NEOLITHIC ARCHAEOLOGY PH 2

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

The word palaeolithic is derived from two Greek words, *paleos*, meaning old and *lithos*, meaning stone; in other words 'Old Stone-Age'. It covers a very long period beginning with the introduction of the first stone tools by the predecessors of *Homo sapiens* around 2,000,000 years ago and ending in various places between 40,000 and 10,000 years ago.

This was followed by the Mesolithic Period. The word mesolithic is derived from the Greek word *mesos*, meaning middle, and *lithos*, meaning stone; in other words 'Middle Stone Age'. It began in Britain with the end of the last glacial period over 10,000 years ago. At this date temperatures began to rise and Britain was gradually separated from the continent. Mesolithic peoples lived as hunters-fishers. Some sites from this period are known in Britain, including a famous one at Thatcham, Berkshire, although they would only have been inhabited sporadically. Mesolithic cultures lasted in Britain until about 4,500 BC.

The Neolithic (or New Stone Age) Period 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 Period extends from about 4,500 BC to 2,000 BC.

Over this enormous time it is possible that many wooden tools were made and used, but none have survived. Stone tools, on the other hand, have been found in huge numbers. Generally speaking as time moves forward these tools show increasingly sophisticated techniques in their production, becoming finer and more carefully designed. More varied kinds of tools were created to be used for specialised tasks.



Part of the huge henge monument at Avebury, Wiltshire, which was constructed in the Neolithic Period.

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Mesolithic Flint Core



Most of the items in this box are believed to be neolithic, but this is thought to be a mesolithic flint core.

Flint is an ideal stone for making tools as when it breaks it produces very sharp edges. It is found only in chalky areas and where there is no flint other kinds of stone may be used to make tools. Naturally occurring flint nodules can be broken by the action of frost, or by inadvertent human activity such as ploughing. However, a piece of flint which has been deliberately struck has characteristic marks that indicate that this is the case.

This is a flint core - that is, it is the remnant of a larger piece of rock which has been repeatedly struck to produce flakes that can be turned into tools. It would have begun life as an ordinary nodule of flint. The toolmaker would then knock off part of one side to create what modern archaeologists call a *striking platform*. The end of this core which formed the striking platform is marked with a red arrow.

The striking platform would then be hit either by a *hard hammer* (a hammerstone, photo 1), or by a *soft hammer* (antler, or bone punches, photo 2) at approximately 90° to create usable flakes. A hard hammer creates prominent ripples - it is less controlled, and creates a more curved squatter flake. Striking a flake further into a striking platform with a hard hammer, creates thicker flakes - suitable for retouching into scrapers. Skilled use of a soft hammer can create flatter and longer flakes with a flat sharp end.



The process of finishing a blade by shearing off tiny flakes from the edge with a stick is referred to by modern archaeologists as *pressure flaking* (photo 3). This pressure was exerted *inwards* - it was not like the action of sharpening a pencil with a knife!

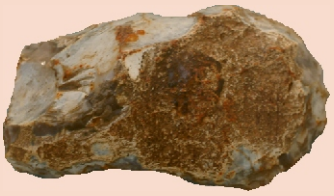
This core is slightly stained and has had its sharp edges rubbed smooth - both of which suggest it has spent some time being tumbled about in water - but ridges which mark where flakes have been removed are clear, as are the ripples which were generated when the core was struck.

Mesolithic or Neolithic Hammerstone



It is thought that this heavy stone, which fits neatly into the hand, was a hammerstone which would have been used to strike flakes from a flint core, as described previously. Some people have also suggested they may have been used to pound up food. It was found at Mapledurham, west of Reading.

Neolithic Flint Hoe



The term 'Neolithic Revolution' is often used to describe the transition from a nomadic hunting-fishing way of life to a more settled society based on agriculture. It is generally accepted that, in Europe, this transition probably first took place in the 'Fertile Crescent' in the Middle East (see map) and then spread into surrounding regions. However, when exacly this process began in different areas and how long it took are debated questions.



This slightly curved blade could have been a hand tool, but another theory is that it was the blade of a hoe or pick. Such tools are not necessarily a sign of agricultural activity - red deer antler picks, for example, were used in the Grimes Graves flint mines in East Anglia. However, it could also be taken as a sign that the toolmaker was living in a society that is moving towards - or which had moved - into a settled, agricultural way of life. It could have been hafted onto a wooden pole and used to break up the soil before planting seeds. A photograph of a modern reproduction flint hoe can be seen on the right. There were no animal-powered ploughs in the earliest phase of the transition into an agricultural society and early clearings would have had to be prepared for crop-growing by hand.





Right: Heads of emmer wheat, one of the first crops domesticated in the Middle East.

Saddle Quern and Rubbing Stone





While the flint hoe in this box *may* indicate the presence of agriculture, this quernstone is a clear sign of a farming society. A quern such as this one is often referred to as a saddle quern. This example has been broken, but a more complete example can be seen in the photograph below right.

Querns are used to grind wheat into flour in order to produce bread. In most societies in which such tools were used only the amount required for each meal was turned into flour. A handful at a time would be placed on the quern and then the smaller stone would be rubbed and rolled over it to transform it into flour. The flour would then, probably, be mixed with water, kneaded and the dough placed onto a hot stone to bake. If bread was eaten with every meal then this procedure was a daily task.





Left: After the emmer wheat is threshed - beaten by sticks - it releases these spikelets which then have to be pounded to release the grains of edible corn. Only then can the grains be ground into flour. It's a long and complicated process!

Neolithic Fabricator



This is believed to be from the Neolithic Period, though it could be earlier. It is thought to be a 'fabricator', but how these tools were used is not particularly well understood. Suggestions for their function include 'strike-a-lights' - a flint which was struck against another flint to create a spark in order to light a fire - or perhaps some kind of leatherworking tool.

Aurochs Horn

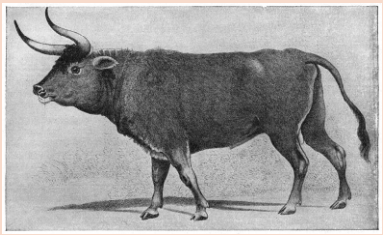


Growing, harvesting and processing food is part of the farmer's craft, the other part is animal husbandry. And just as crops were developed by human beings by gradually breeding suitable plants with a high food content from wild plants, so farm animals were the product of the selective breeding of wild animals to produce manageable and productive animals.



This is the stump of an aurochs horn (*Bos primigenius*). The aurochs was a wild cow and is thought to be the ancestor of the modern domestic cow. It is believed that the aurochs is depicted on the famous wall paintings in the caves at Lascaux, France, which were drawn probably between 13,000 and 15,000 BC (right). Some of these animals survived in Poland until the seventeenth century and the picture shown below of one of them was drawn in the sixteenth century. Aurochs were large creatures, with an aurochs bull standing at between 160 and 180 cm and an aurochs cow around 150 cm. They are thought to have preferred living in swampy woodlands in river valleys and river deltas.

Aurochs bulls had aggressive temperaments. They survived in Poland because they were prized for the hunting they provided for the aristocracy. Where and when the aggression was bred out of them, making them suitable to be farm animals, is a subject of much debate. Some think that modern European cattle are descended directly from a domestication process that took place in the Middle East and that these domesticated animals were brought to Britain in the Neolithic Period, where they existed alongside the wild aurochs, without there being any interbreeding. However, new archaeological and genetic evidence mean that the issue is still much debated. Whatever the case, the wild aurochs seems to have died out in Britain sometime in the early Bronze Age (about 1300 BC).



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Two Neolithic Spearheads

The introduction of agriculture was probably a gradual process and hunting and foraging for food no doubt continued to be an important activity throughout the Neolithic Period.



Two Flint Arrowheads

Like the spearheads, these two arrowheads were probably used for hunting, although they could also have been used for warfare. The body found in the Alps in 1991, usually referred to as Ötzi the Iceman, was found to have an arrowhead lodged in one shoulder when he died - clearly life was not always peaceful in the prehistoric period! Ötzi died about 3300 BC. The small white arrowhead in this box is of a kind that, because of its shape, is often referred to as a leaf arrowhead. This shape of arrowhead is typical of the Neolithic Period. Flint arrows continued to be used in the Bronze age period - Ötzi seems to have been killed by one - but they tend to have prominent barbs, which can be seen developing on the larger grey arrowhead in this box.



Three Scrapers

It is generally assumed that such tools were used to remove meat or hair from animal skins or for trimming wood. They may have been used for a variety of purposes. The smaller of the white examples is from Windmill Hill, Wiltshire. This is the site of a neolithic causewayed enclosure. Causeway enclosures are marked out by a low ditch and bank. They seem to have been meeting places, though what went on inside is unclear. Windmill Hill is the largest example of its type in the British Isles, enclosing an area of 85,000 square metres. The site was first occupied around 3,800 BC and the banks and ditches were dug about 3,250 BC. Archaeological investigation has uncovered numerous items of pottery and flint artefacts. There was also much evidence of farming practices including crop-growing, cattle-rearing and the raising of pig, sheep and goats.



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Three Axes







All three of these would, originally, have had a wooden haft. The rough surface of the smallest of them is similar to that found on Mesolithic axes. The other two have a polished surface. It is thought that such a surface was created by rubbing the rough axe against another hard stone and using a mixture of sand and water as an abrasive. In one of the chambers of the West Kennet Long Barrow, for example, there are grooves in some of the stones which are thought to have been used for this purpose. It would have taken a very long time to achieve such a fine finish. Stone axes are thought to have been highly prized and are known to have been widely traded across western Europe. Some archaeologists also believe that they were better at cutting than the earlier, cruder prototypes. Experiments appear to show that the advantage of ground non-flint stone axes over flint axes is that the edge will not fracture so easily and thus provide a longer lasting tool which would require less maintenance.



The entrance to West Kennet Long Barrow. It is thought that this long barrow was built and used between about 3650 and 3625 BC.