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NEOLITHIC ARCHAEOLOGY PH 2/B

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 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.

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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 Caversham.

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. Another suggestion is that they may have been used as a punch to finish-off the serrated edge of a fling blade. This example appears to have been found at St Mary Bourne, near Andover, Hampshire.

Two Scrapers



It is generally assumed that such tools were used to remove hair or meat from animal skins or for trimming wood. They may have been used for a variety of purposes.

Axe



This axe would originally have had a wooden haft. It has 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. Such 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 stone axes over flake axes is that the edge will not fracture so easily and thus provide a longer lasting tool which would require less maintenance.

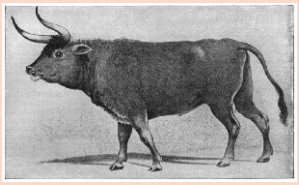
Cow Horn (*Bos longifrons*)



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, exacly when this process began in different areas and how long it took are debated questions.



Growing, harvesting and processing food is part of the farmer's craft, the other part is animal husbandry. Just as crops were developed 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.



The wild cow (*Bos primigenius*), also called the aurochs, 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 probably drawn between 13,000 and 15,000 BC. Some of these animals survived in Poland until the seventeenth century and the picture on the right 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 at around 150 cm. They are thought to have preferred living in swampy woodlands in river valleys and river deltas.

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Right: A painting of an aurochs (wild cow) on the walls of the famous caves at Lascaux, France.



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. The wild aurochs seems to have died out in Britain sometime in the early Bronze Age (about 1,300 BC). This skull/horn fragment is listed in the museum records as *Bos longifrons*, a term which is no longer widely used, but which was intended to refer to an early form of domesticated cow. It may date from the Bronze Age, rather than the Neolithic Period.

Flint Hoe



The purpose of this rough blade is unclear, but it may have been intended as a hoe blade. If this is the case, it could be interpreted as a sign that the toolmaker was living in a society that was moving towards - or which had moved - into a settled, agricultural way of life. As a hoe blade it would 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.

Far right: After the emmer wheat is threshed - beaten by sticks - it releases these spikelets. The spikelets 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!



Left: A neolithic saddle quern, used for grinding grain into flour.

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Neolithic Blade

This blade was presumably used as some form of cutting tool.



Neolithic Arrowheads



Arrowheads were designed to kill, either animals or fellow human beings. The tang helps to fix the arrowhead to the arrow shaft. In the Bronze Age arrows often have long barbs to make it difficult for the victim to remove the arrow from their body. These two examples, without barbs, are typical of the Neolithic Period.

No doubt most arrows were used for hunting, but there is also evidence of aggression between human beings. The most famous example of this comes from the Bronze Age. 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 when he died, matching a small tear on his coat. 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. DNA tests revealed traces of blood from four other people on his gear: one from his knife, two from the same arrowhead, and a fourth from his coat. There has been much speculation about how exactly Ötzi may have died, but the evidence suggests he did not live in a very peaceful society.

There is also evidence of conflict in the Neolithic Period. For example, two skeletons have been found in Saxony, Germany, dating from about 2,500 BC, which show signs of being killed by arrows. One had a flint arrow lodged in his backbone, while the other may have died from an arrow in the intestines.



Right: X-ray image of Ötzi's shoulder. The yellow circle picks out the arrowhead.

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Neolithic Mace-head





Only half of this mace-head survives. A photograph of a more complete example can be seen on the lower right. The hole which ran through the centre of this quartzite pebble 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! Unlike fancy mace-heads such as that from Knowth, it shows signs of being used as a hammer on the surviving tip. It was found at Mapledurwell, near Basingstoke.



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