

1.6 million to 12,000 years ago

Pleistocene

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Either side of doorway

Handaxes

Made around 230,000-290,000 years ago

Found at the Broom gravel pits near Axminster

Handaxes are multi-purpose tools – the Stone Age Swiss Army knife. They are useful for cutting, chopping and digging, and make the ideal tool for butchering an animal carcass. With one of these and a wooden spear, the early humans of Devon would have been able to hunt or scavenge for food. Hundreds of handaxes have been found at Broom, making it an important site for studying early humans in Britain.

Who made the handaxes at Broom?

Homo heidelbergensis

The oldest human remains found in Britain were found at Boxgrove in Sussex, dating to around 500,000 years ago. These people were adapted to living in the warm periods between the ice ages. None of their bones have yet been found in Devon.

Homo neanderthalensis

The Neanderthals are often portrayed as shambling, club-wielding brutes – the caveman of popular imagination. In truth, they were well adapted to life in a cold climate, allowing them to live in Britain for much of the ice ages.

Amongst the range of stone tools that Neanderthals made were handaxes like those from Broom.

Homo sapiens

The first modern humans, our direct ancestors, arrived in Britain around 30,000 years ago. They may have lived alongside Neanderthals, but left Britain during the extreme cold of the last ice age. They returned around 12,000 years ago. They were hunters and gatherers, much like *Homo heidelbergensis* and Neanderthals before them, but used a very different tool kit which can be seen in the next gallery.

1 - Fossilised bone, straight-tusked elephant

Elephas (Palaeoloxodon) antiquus

Smerdon's Passage, Kents Cavern, Torquay

This extinct species of elephant was closely related to modern elephants.

2 - Fossilised rib bones, elephant or hippopotamus

Honiton by-pass, Honiton

3 - Fossilised tooth, straight-tusked elephant

Elephas (Palaeoloxodon) antiquus

Smerdon's Passage, Kents Cavern, Torquay

The straight-tusked elephant lived in the warmer interglacial periods. They had slightly longer legs than the modern Asian elephant, to which they were closely related.

4 - Young woolly mammoth's upper milk molar tooth

Mammuthus primigenius

Kents Cavern, Torquay

The woolly mammoth was about as large as a modern Asian elephant but heavier at about eight tonnes. It was covered with long shaggy hair.

5 - Pengelly's glass ink bottle

19th century

Made in England

This ink bottle belonged to William Pengelly, the distinguished geologist and archaeologist. His pioneering recording work at Kents Cavern has enabled modern investigators to locate exactly where the specimens that he collected came from.

6 - Memoir of William Pengelly of Torquay, F.R.S. Geologist

Edited by Hester Pengelly

1897

A published memoir of William Pengelly by his daughter.

7 - Fossilised jaw fragments and teeth, deer

Kents Cavern, Torquay

8 - Fossilised leg bone, horse

Equus ferus

Kents Cavern, Torquay

9 - Fossilised rib bone, wolf

Canis lupus

Kents Cavern, Torquay

Wolves probably arrived late in the Pleistocene in Devon. As the climate warmed and the countryside became more wooded, they adapted to the changes in the vegetation cover and displaced the hyena.

10-11 - Fossilised bones, giant deer (Irish elk)

Megaloceras giganteus

Kents Cavern, Torquay

12 - Fossilised antler base, giant deer (Irish elk)

Megaloceras giganteus

Kents Cavern, Torquay

13 - Fossilised reindeer antler

Cervus tarandus

Kents Cavern, Torquay

Today reindeer live near the North Pole. During the late Pleistocene, tundra-like Arctic conditions suitable for reindeer extended into southern Britain. Today reindeer have been reintroduced to parts of the Highlands of Scotland.

14-15 - Fossilised jaw fragments, red deer

Cervus elaphus

Kents Cavern, Torquay.

Red deer are depicted in Palaeolithic cave art as far back as 40,000 years ago. They were sufficiently hardy to survive in the last interglacial and glacial period and up to the present day.

16 - Leaf fossilised in glacial clay

Brannam's Pit, Fremington

The deposit includes boulder clay and lake-deposited clay from which the leaf has come. The boulder clay is of great importance in indicating that ice reached the north coast of Devon during the Wolstonian glacial advance.

17 - Raised beach

Saunton Down, North Devon

The raised beach at Saunton lies on a wave-cut rock platform 5-20 metres (16-65 feet) above present sea level. The cemented shelly beach and dune sand may date from the last interglacial about 70-130,000 years ago, known as the Ipswichian, when the warmer climate caused higher sea levels. Equally it may relate to the Hoxnian interglacial of 370-400,000 years ago. The beach also carries erratic granitic and other boulders brought in by ice.

18-19 - Sub-fossil barnacles

Balanus species

Saunton Down, North Devon

Partly fossilised barnacles from the raised beach.

20-21 - Fossilised lower leg bones, horse

Equus ferus

Horses moved northward into southern Britain during the last interglacial.

22 - Fossilised canine teeth, fox

Vulpes vulpes

Kents Cavern, Torquay

These date to the last glacial period of the ice ages, known as the Devensian, about 12-70,000 years ago.

23 - Fossilised fox jaw bone

Vulpes vulpes

Levaton Cave, near Newton Abbot

24 - Fossilised fox jaw bones

Vulpes vulpes

Kents Cavern, Torquay

25 - Fossilised badger skull

Meles meles

Smerdon's Passage, Kents Cavern and Levaton Cave, Torquay

The badger probably lived much like its modern descendants, using the caves as ready-made sets.

26-37 - Fossilised hippopotamus bones

Hippopotamus amphibius

From Honiton by-pass site

A peaty deposit overlain by a 'glacial head', or sediments moved down slope by the freeze-thaw cycles, was uncovered during the construction of the Honiton by-pass in 1965. It contained a remarkable deposit of mammal bones including those of 17 young and old hippopotamuses dating to the Ipswichian interglacial, about 70-130,000 years ago.

26-27 Lower hind limb

28 Lower jaw and teeth

29 Upper hind limb

30 Upper fore limb

31 Scapula or shoulder bone

32-34 Vertebrae or back bone

35 Canine tooth

36 Tusk

37 Molar tooth

38 - Fossilised bear teeth and bones

Kents Cavern, Torquay

Bears, including the ancestral cave bear, *Ursus deningeri*, and occasionally the cave bear, *Ursus spelaeus*, used Kents Cavern for hibernation. The accumulation of bones in the caves probably resulted from the death of sick or poorly nourished animals during hibernation.

39 - Fossilised horse teeth

Equus ferus

Kents Cavern and Levaton Cave, Torquay

Horses moved into southern Britain during the last interglacial, known as the Ipswichian. They might have looked similar to Exmoor ponies in size. The presence of horse teeth and bones in Devon caves is probably the result of scavenging and hunting by hyenas.

40 - Fossilised mammoth tooth

Mammuthus species

The woolly mammoth was about as large as a modern Asian elephant but heavier at about eight tonnes. It was covered with long shaggy hair with a woolly undercoat. The curved tusks could be five metres (16 feet) long. The teeth were adapted to a diet of coarse tundra grasses. They died out in Europe about 10,000 BC, but a dwarf variety weighing only two tonnes lived on Wrangel Island in the Arctic Ocean until about 1730 BC.

41 - Fossilised molar tooth, mammoth

Mammuthus species

This tooth has been sliced across and shows clearly the vertical layers of hard enamel and softer dentine. This enabled the animal to chew coarse tundra grasses.

42 - Hair from a woolly mammoth

Mammuthus primigenius

Elephant Point, Escholtz Bay, Alaska

The hair came from a mammoth found frozen in a river cliff in Alaska. The bodies of mammoths have been found preserved in the permafrost of the Arctic regions of both Siberia and North America.

43 - Fossilised hyena jaw

Crocota crocuta

Kents Cavern, Torquay

Hyenas inhabited Kents Cavern and other Devon caves in the warmer interglacial periods. Many hyena teeth, jaws and bones have been found. Like its modern African descendants, it was probably a pack animal acting both as hunter and scavenger. Its powerful jaws and teeth are able to crush bones. Bones of other animals from the caves show tooth marks made by the hyenas gnawing them.

44 - Fossilised hyena teeth and jaw fragments

Crocuta crocuta

Kents Cavern, Torquay

45 - Fossilised vertebrae, hyena

Crocuta crocuta

Kents Cavern, Torquay

46 - Fossilised hind limb bones, hyena

Crocuta crocuta

Kents Cavern, Torquay

47 - Fossilised teeth of European bison

Bison bonasus

Kents Cavern, Torquay

The European bison was present in southern Britain and Europe during the last glacial phase of the Pleistocene. It was hunted to extinction in the wild, but has been rebred from a small number of animals in zoos and returned to the wild in parts of central Europe.

48 - Fossilised badger bones

Meles meles

Smerdon's Passage, Kents Cavern, Torquay

This badger, from the Ipswichian interglacial, probably lived much like its modern descendants, using the caves as ready-made sets.

49 - Fossilised badger jaw and skull

Meles meles

Smerdon's Passage, Kents Cavern, Torquay

50 - Fossilised teeth, woolly rhinoceros

Coelodonta antiquitatis

Kents Cavern, Torquay

The woolly rhinoceros could grow to over four metres (13 feet) long and two metres (6 feet) tall. This is larger than a modern white rhinoceros. It had long thick hair and two horns, the front horn up to one metre (3 feet) long. It probably grazed on grasses, sedges and dwarf shrubs. In the UK it lived through the glacial periods of the ice ages until about 15,000 years ago, but survived until about 8,000 years ago in western Siberia.

51 - Fossilised teeth, woolly rhinoceros

Coelodonta antiquitatis

52 - North Devon harvest jug

1798

A jug with a brown earthenware body and cream slipware panels, scribed ornament of flowers, birds and verses with the date 9 May 1878. The potteries of North Devon used local clay sources including the glacial clays from Fremington.