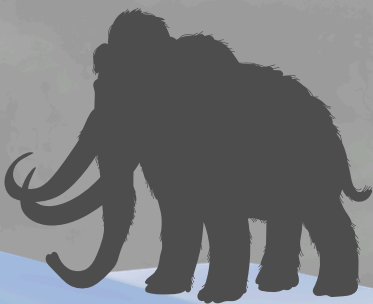


Chatteris Fossils



Amalia Robertson BSc (Hons) MSc

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*For Richard Forrest for always supporting and
inspiring the next generation of palaeontologists*

Contents

The Project	2
About the Museum	3
Our Collection	4
Geological Time	5
Geological Map	6
Jurassic Chatteris	7
Ice Age Chatteris	14
Children's Activities	25

Acknowledgements

I would like to thank everyone who has helped in any shape or form with my project at Chatteris Museum. To all the volunteers that have helped and supported me. A special thanks to Chloe for being by my side and Andrew for his guidance.

Thank you to all the visitors who attended the fossil themed events throughout 2025, without you there would not have been a project.

Thank you to the **Geologists' Association Curry Fund** for funding the project.

Chatteris Fossils Project

A project to help make Chatteris Museum's fossil collection more known and accessible to everyone.



During 2025, the museum offered four public events, two volunteer training sessions, and three outreach events. Through these over 600 people interacted with Chatteris' prehistoric past. Most had not seen or known about the fossils at the museum beforehand.

This booklet and online resource will ensure Chatteris Museum's fossil collection continues to be seen.

Amalia Robertson BSc (Hons) MSc Chatteris Museum's Palaeontologist

I grew up in Chatteris and developed an interest in fossils in my early teens. I studied Palaeontology and Museum Studies at Portsmouth and Leicester University.

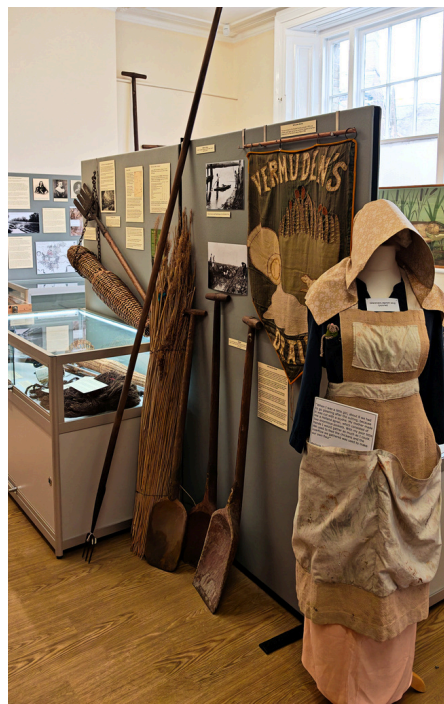
Since returning home in 2024, I have been a regular volunteer at the museum. Working with the fossil collection, I developed the project in 2025.



About the Museum

Chatteris is a small Fenland town in Cambridgeshire, with a small local museum that focuses on the stories and history of the town and surrounding villages.

The museum is completely volunteer led. The volunteers help with looking after approximately 13,000 artefacts, as well as conducting research, setting up displays, and opening the museum to the public.



Chatteris Museum
Grove House (Left), Park Street (Right)
©Chatteris Museum

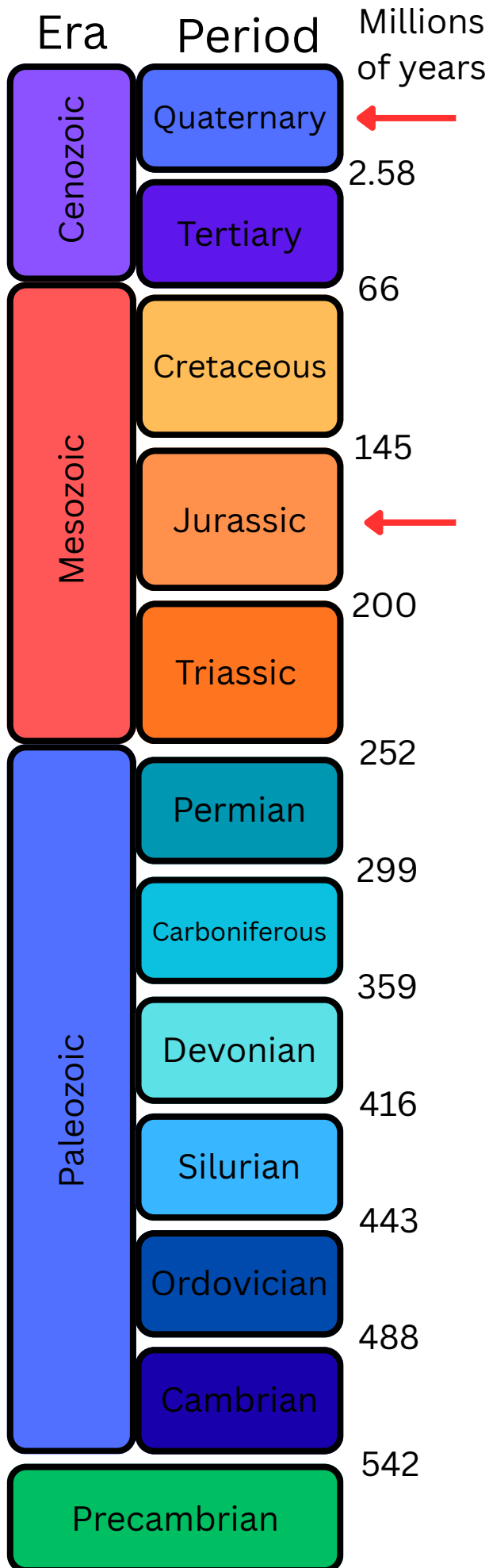
The museum was created in 1942 by Mr. Charles Dobb, Clerk to the Council, in a single glass cabinet. By 1963, it had expanded to a complete room of displays and was officially opened as Chatteris Museum in a building known as Grove House. In 1995, the museum moved for the first time to the east side of town at Church Lane. In 2023, the museum moved for a second time into the old Barclays bank building. The move has been the focus for the volunteers over the last three years.

Our Collection

The museum holds approximately 150 geological specimens from rocks to fossils, consisting of mainly Jurassic and Ice Age material. The majority of these specimens were collected and donated to the museum during the 1960s, therefore many lack documentation and are missing details such as a source location. However, they were formally accessioned by Simon Timberlake, an Archaeomaterials Specialist, in the 1990s.



Fossil Display, Chatteris Museum, 2022
©Chatteris Museum



Geological Time

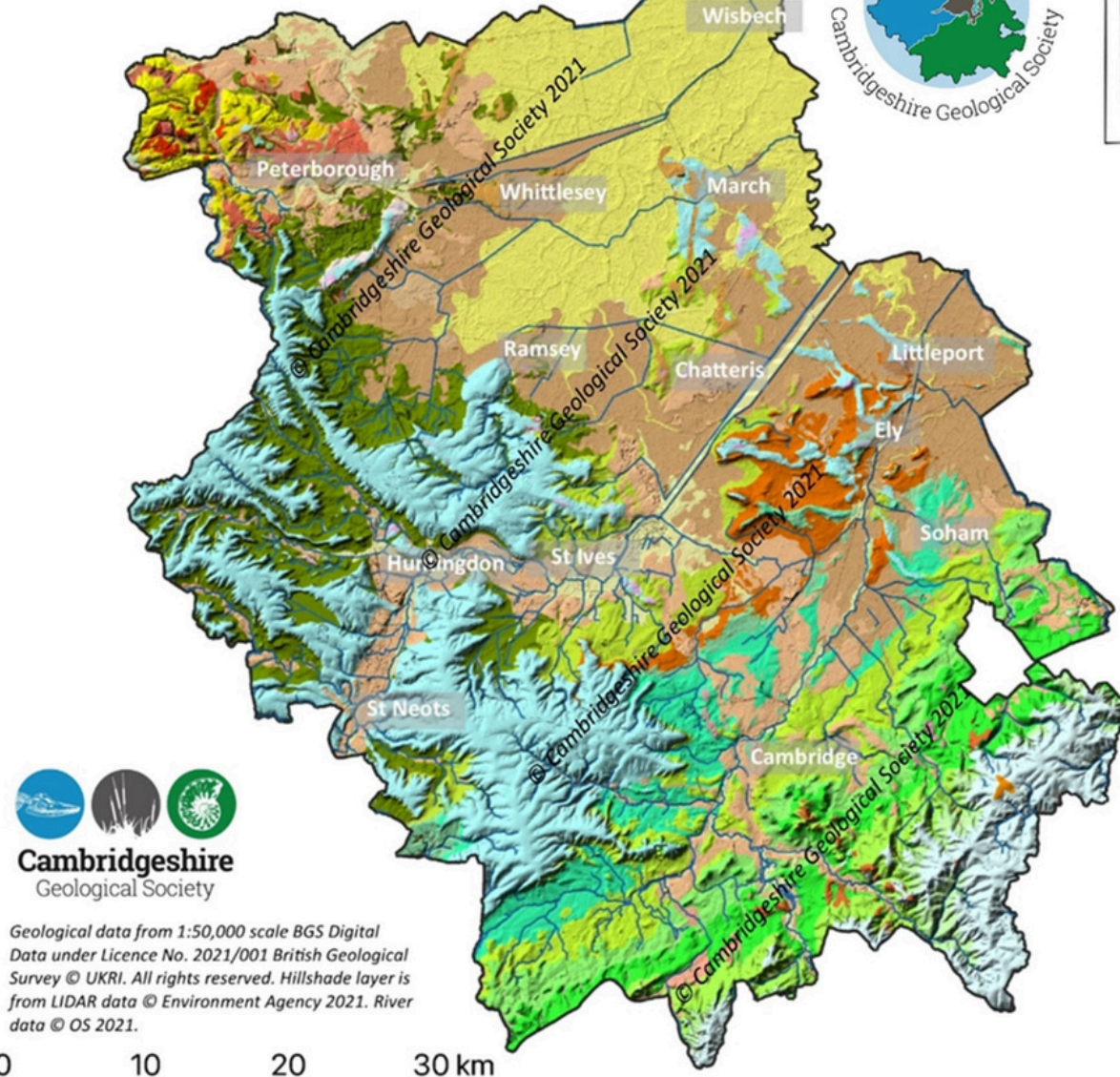
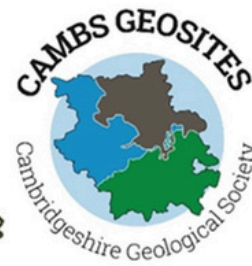
Geological time is how Palaeontologists and Geologists split up Earth's history. The boundaries for each era or period are defined by events like extinctions.

Here in the Fenland we have rock formations from the Middle **Jurassic** Period, about 160 million years ago, in the form of dark grey clays known as the Ampthill Clay and Oxford Clay.

Overlaying the clays in areas are **Ice Age** gravels dating from the Pleistocene epoch 2.58 million years ago to 11,700 years ago.

Throughout the decades, the clays and gravels have been quarried revealing many hidden fossils.

CGS Map of the Geology of Cambridgeshire



Geological data from 1:50,000 scale BGS Digital Data under Licence No. 2021/001 British Geological Survey © UKRI. All rights reserved. Hillshade layer is from LIDAR data © Environment Agency 2021. River data © OS 2021.

0 10 20 30 km

© Cambridgeshire Geological Society 2025

Key		Bedrock	
Superficial	Alluvium	Upper Cretaceous	Lewes Nodular Chalk
	Peat		New Pit Chalk
	Lake marl/clay/silt	Lower Cretaceous	Holywell Nodular Chalk
	Tidal flat clay/silt		Zig Zag Chalk
	River Terrace sand/gravel	Upper Jurassic	Totternhoe Stone
Pleistocene	March Gravels		West Melbury Marly Chalk
	Oadby Till		Gault fm
	Lowestoft sand/gravel		Woburn Sands
	Lowestoft Till		Kimmeridge Clay
	Glacial slope deposits		Amphill Clay/West Walton fm
	Glacial river sand/gravel		Oxford Clay
	Glacial lake clay/silt/sand		Kellaways Sand
			Kellaways Clay
			Cornbrash Limestone
			Blisworth Clay
Middle Jurassic			Blisworth Limestone
			Rutland fm
			Upr Lincolnshire Limestone
			Lwr Lincolnshire Limestone
			Grantham fm
Lower Jurassic			Northampton Sand
			Whitby Mudstone

The museum holds a geological map of the area dated 1938, above is the current version.

Website: www.cambsgeology.org

Jurassic Chatteris

During the Jurassic Period, dinosaurs would have been roaming the earth, but not in Chatteris.

At that time, this part of Britain was completely underwater and located closer to the equator.

This sea was full of life, from fish to shrimp, as well as larger creatures, such as giant marine reptiles.



Above, the position of continents during Jurassic Earth.

Chatteris Museum has examples of many of these creatures.

These form the bulk of the collection at the museum, found during excavations or farming and mostly from the local area.

Ammonites

Ammonites are one of the most common fossils found globally.

They are a part of the mollusc family and had a squid-like creature living within a shell.

Their shells were formed of chambers, which the creature was able to fill with water or gas to sink or float.

Ammonites range in size, from as small as a 5p coin to the size of a tractor tyre! Our largest ammonite at the museum is the size of a dinner plate.

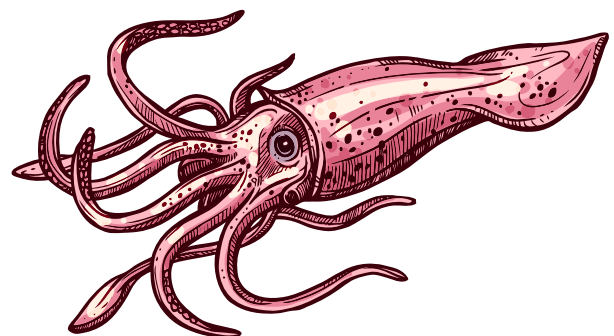


Belemnites

Unlike modern day squids, which are completely soft, belemnites had a hard internal 'guard' at the point/cone of its body. This is often found as a fossil, it resembles a tooth or bullet.

Belemnites are a part of the mollusc family and are related to the modern squid and octopus. It is thought the 'guard' was used as a counterweight to keep it balanced.

Some of the belemnites within the museum were donated by Mrs. Meeks, whose father ran Meeks Cemetery, New Road. They were likely found whilst digging graves.

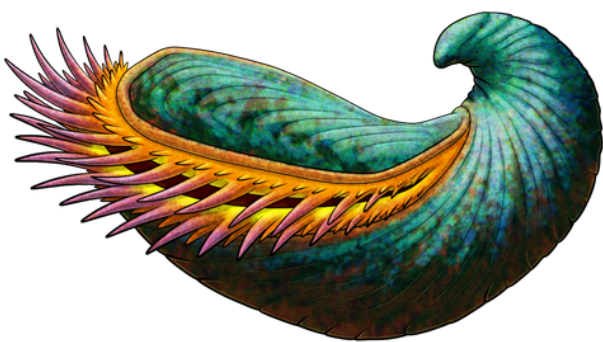


Bivalves and Gryphaea

Bivalves are similar to modern mollusc shells, which have two halves. Shells that you find on the beach such as mussels, clams and oysters are all different types of bivalves.

Gryphaea is an extinct genus of bivalves. They are related to modern oysters and lived between the Jurassic Period and Eocene Epoch in large colonies along the seabed.

Bivalves and gryphaea are very common fossils within Cambridgeshire, we have several examples within the museum. They are so common you can even find small ones in garden gravel.



Reconstruction of a Gryphaea ©Nix Illustration



5cm

The unusual shape of gryphaea is to help them live on very soft clay or sand. The larger curled shell acted like a boat, to stop them from sinking.



Some people called these fossils a 'Devil's Toenail' because they resembled a large toenail, but no creature matched the size. They were found in the ground and people came to the conclusion that they must have been from the devil himself!

Plesiosaurs

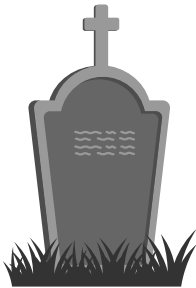
Name meaning: 'Close to Lizard'

Size: 4-6 Metres long

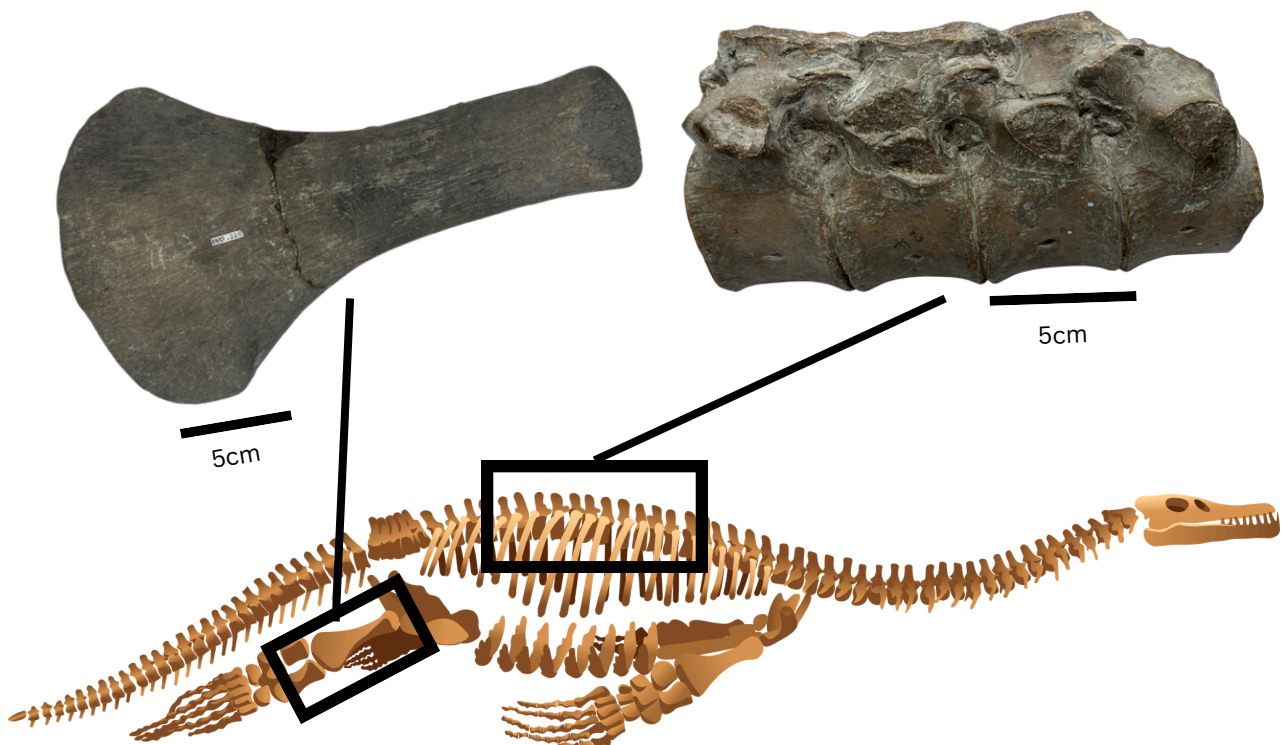
Diet: Fish, cephalopods (ammonites, belemnites) and crustaceans

Plesiosaurs were marine reptiles, not a dinosaur. They are known for having long necks, small heads, and four flippers. Much like whales, they had to surface to breathe.

Plesiosaurs long necks helped them to ambush fast moving creatures like fish and squid. It is thought the long neck allowed a small, less threatening head to approach prey without the big, bulky body intimidating them.



In the 1970s, at Chatteris Cemetery, a grave was being dug. When the digger was 6ft (2m) down they found part of a plesiosaur flipper. It is entirely possible most of the remains are still there!



Pliosaurus

Name meaning: 'More Lizard'

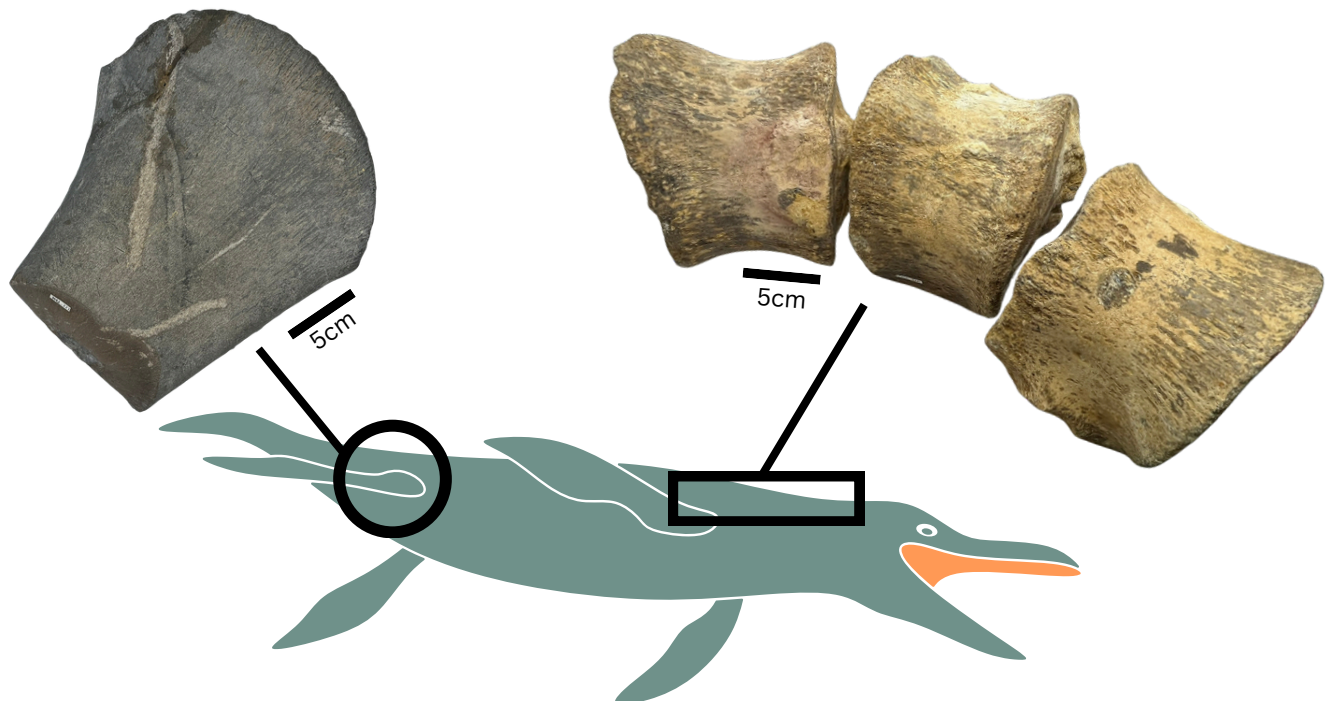
Size: 6-15 Metres long

Diet: Fish, squid and other marine reptiles

Pliosaurus and plesiosaurs are a part of the same family. Plesiosaurs typically had long necks and small heads, whereas pliosaurs had small necks and big heads.

Pliosaurus were the apex predator in the sea, eating plesiosaurs, ichthyosaurs and marine crocodiles. They would use their big skulls and teeth to break bones and tear flesh.

In 1952 a pliosaur was found near Stretham, Cambridgeshire, during the digging of drainage works. Experts from the Sedgwick Museum were called to excavate. The specimen is now at the Sedgwick Museum in Cambridge.



Within the museums' collection, we hold a very large vertebrae and a limb bone (humerus or femur) from a pliosaur.

The limb bone was found whilst digging a drainage ditch in Manea.

The marks are damage from where it was hit with the tools.

Ichthyosaurs

Name meaning: 'Fish-Lizard'

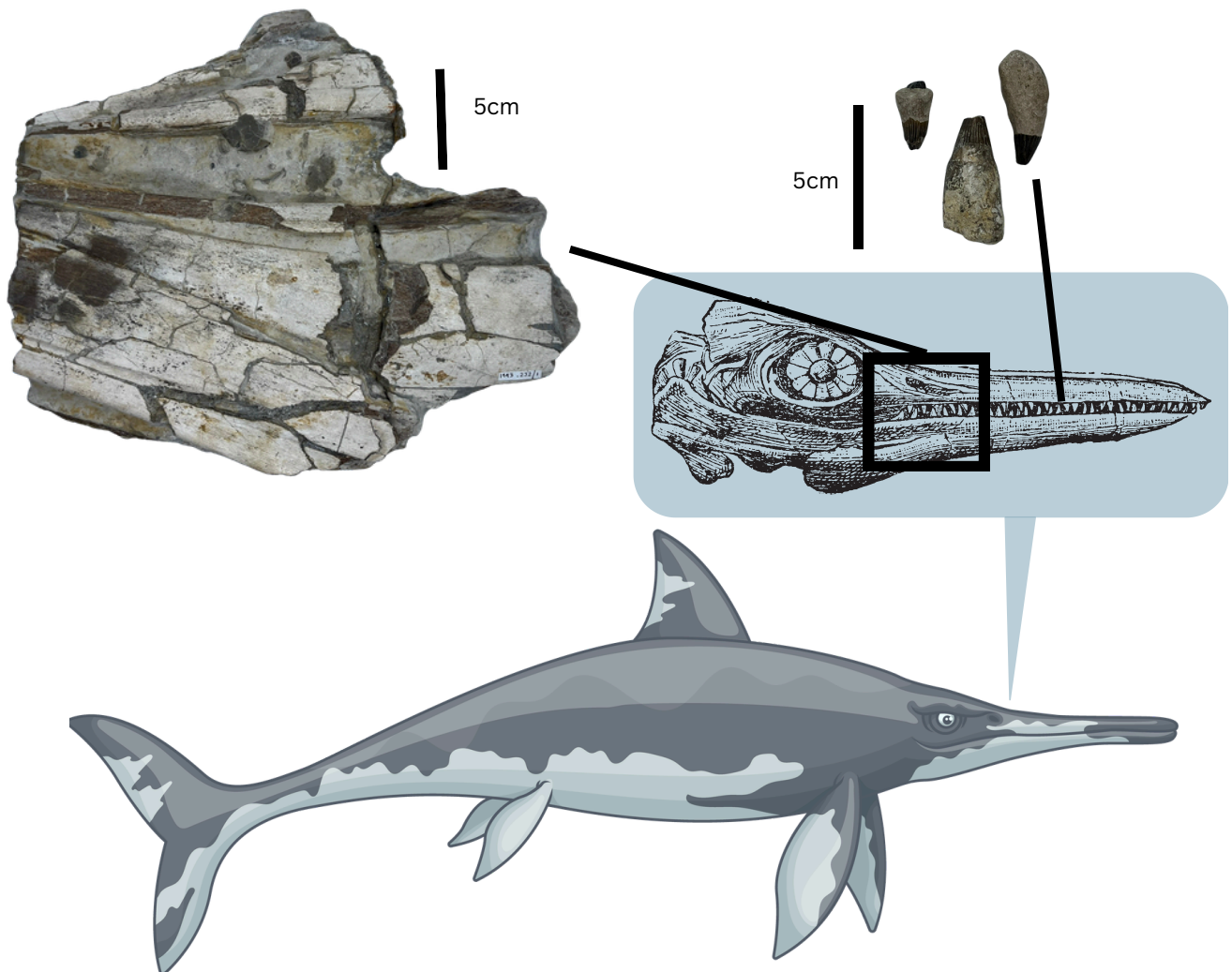
Size: 4-6 Metres

Diet: Fish, squid and belemnites

Ichthyosaurs were a type of marine reptile, again not a dinosaur. Although they look similar to dolphins today, they are not related.

Ichthyosaurs bodies were built for hunting, being streamlined with large eyes to help them hunt deep in the sea. They needed to surface to breathe air. Ichthyosaurs also gave birth to live young, like dolphins do today.

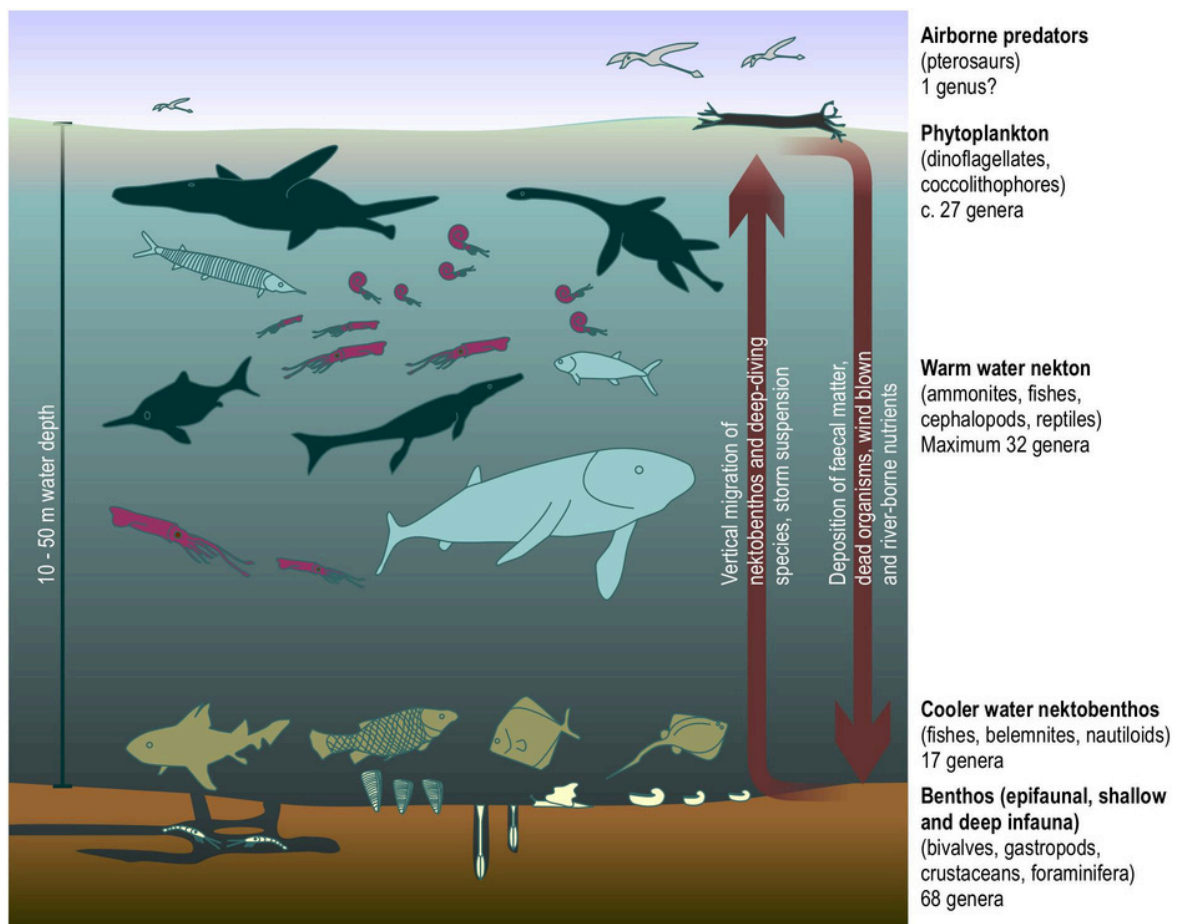
The museum's collection holds four teeth and a large section of skull. The skull is thought to have come from the Ampthill Clay and has a few loose teeth.



Jurassic Sea Diversity

The Jurassic Sea of Fenland and Cambridgeshire was very diverse, the museum only holds a handful of fossils from these creatures.

Different types of fish, shark, shrimp and snails have been found within the Jurassic Sea. Sometimes drift wood and rare pterosaur remains are also found. The most impressive find is the *Leedsichthys*, a whale-size filter-feeding fish.



Reconstruction of life within the Oxford Clay
©Mark Witton

This ancient ocean was so diverse in life but only a fragment of this past world is preserved for us to discover today.

Ice Age Chatteris

During the Ice Age not everything was always covered in ice. There were periods known as glacial, meaning 'ice' and interglacial, meaning 'little or no ice' periods.



Did you know we are still in an Ice Age today?

In Fenland there were three periods, two glacial, with one interglacial in-between. The interglacial period was warmer than current day and creatures such as hippos and straight-tusked elephants roamed. In the final glacial period the famous woolly mammoth existed alongside the woolly rhino, horse, deer, bison, wolves and many others.

The majority of the museums Ice Age specimens were found in local gravel quarries, such as Block Fen, Somersham and Manea.

Palaeoloxodon

Straight-Tusked Elephant

Name meaning: 'Ancient Lozenge-Shaped Tooth'

Size: 4-5 Metres at the shoulder

Diet: Leaves and grass

Palaeoloxodon was an elephant, not a mammoth, and originated from Africa. They would have lived in wooded areas during the warmer periods of the Ice Age. It might have even been the largest land mammal at the time.

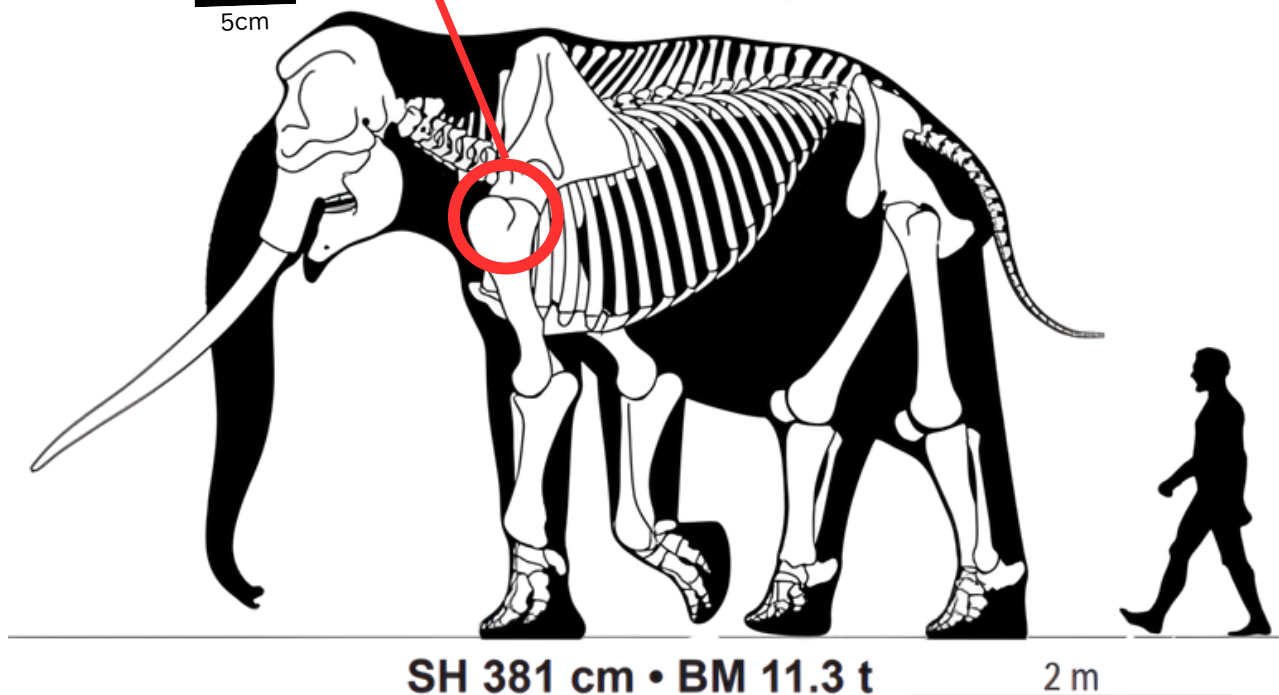
They are known for their long straight tusks and large foreheads.



5cm

The museum is very lucky to hold part of the ball and socket joint from a *Palaeoloxodon*.

The specimen was found in a quarry near Somersham, a worker spotted it, saved it and 20 years later donated it to Chatteris Museum (2025).



SH 381 cm • BM 11.3 t

2 m

©Asier Larramendi

Hippopotamus

Name meaning: 'River Horse'

Size: 1.3-1.4 Metres at the shoulder

Diet: Short grass, soft water plants

Hippos lived in Britain during the Ipswichian interglacial stage, between approximately 120,000 years and 11,500 years ago. They would have retreated south when the ice advanced.

They submerged themselves in the warm rivers during the day and grazed at night. Hippos lived alongside woolly mammoths and rhinos but today are confined to Africa.



The museum holds a rare canine tooth, found in Turf Fen.



Mammoths

Name meaning: 'First Elephant'

Size: 2.7-3.4 Metres at the shoulder

Diet: Grasses, shrubs, flowers and mosses

Woolly mammoths lived on cold tundra during the Ice Age, using their tusks to dig through snow for food, strip bark from trees and to help defend their territory. They were double coated to keep them warm.

The museum collection consists of several teeth, a small section of tusk and fragments of leg bones. Most of these specimens were found at Block Fen.



Horses

Name meaning: 'Wild or Untamed'

Size: 1-1.6 Metres

Diet: Grasses and shrubs

Horses were very common during the Ice Age, particularly towards the end of the period. It is thought they were a top food source for early humans, with horses being depicted in cave art.

These horses were smaller than the average horse now, but had hardy bodies with thick haired coats to keep them warm. They lived on the open plains and tundra during the warmer periods.

The museums collection of Ice Age horse consists of their leg bones. Including a cannon bone and a long pastern bone.

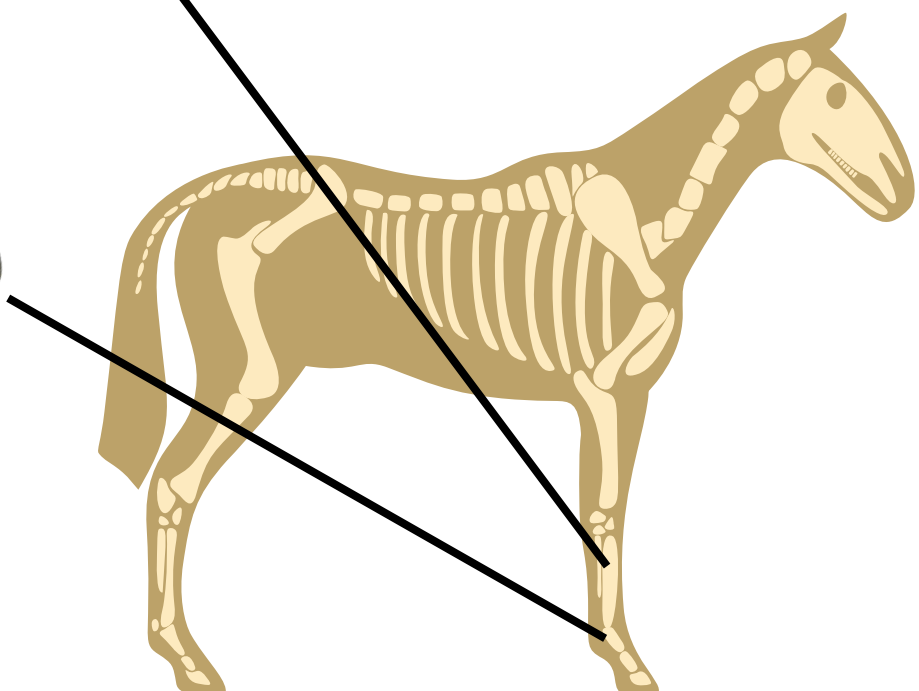


5cm



5cm

These specimens were found in local gravel pits, such as Block Fen.



Woolly Rhino

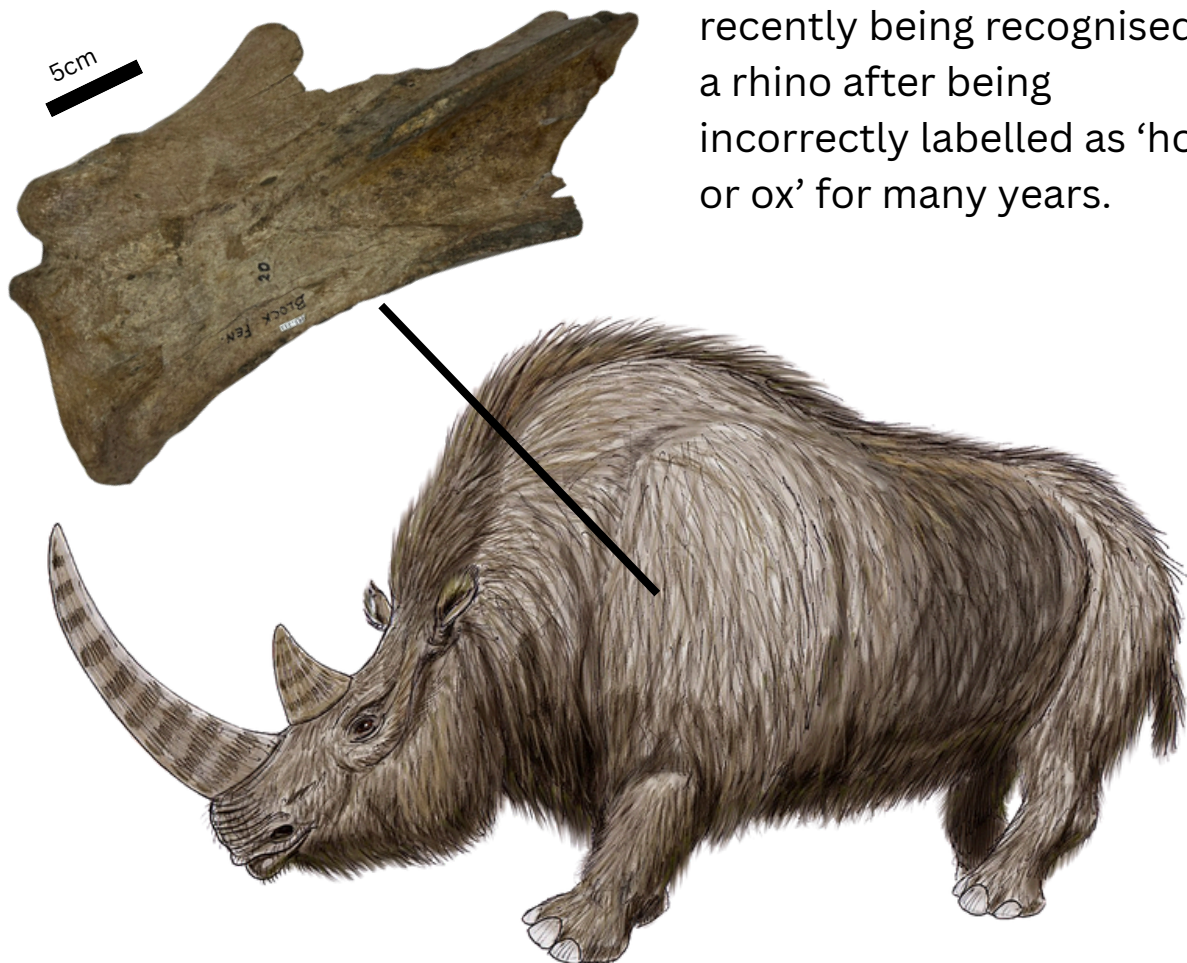
Name meaning: 'Hollow Tooth'

Size: 3-4 Metres long, 2 Metres high

Diet: Grasses, sedges and woody plants

Woolly rhinos are related to the modern day white rhino, in size and general appearance. The biggest differences were thick fur, bigger horns and large shoulder humps, all of which helped them live in a harsh cold environment. The fur kept them warm, the horn was used to clear snow for grazing and the hump was fat storage.

The museum holds a scapula (shoulder blade) from a rhino found at Block Fen, only recently being recognised as a rhino after being incorrectly labelled as 'horse or ox' for many years.



Early Man

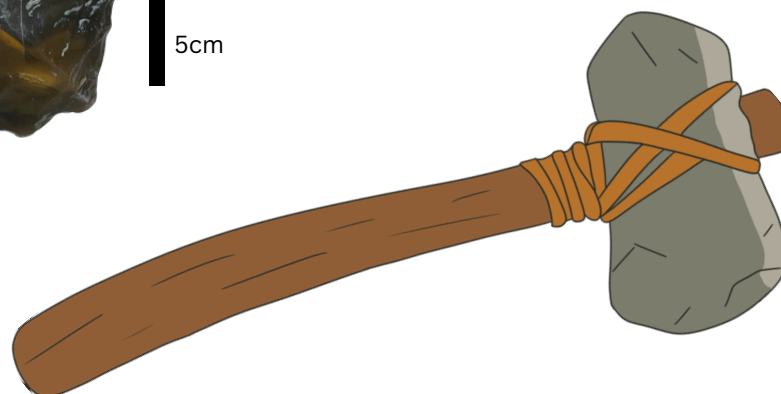
Paleolithic man, also known as Stone Age humans, included *Homo erectus* and *Homo sapiens*. These humans lived in small groups moving around as hunter gatherers. Living in caves and temporary shelters creating stone tools by flint knapping. They would have hunted mammoth, deer, bison, rhino and horse.

Flint knapping: shaping flint and other types of rocks by striking and pressing with stones and bones to shape the flint into a sharp tool.

**Paleolithic
Hand Axe**



Axe Head



Ice Age



This picture shows what parts of Europe might have looked like during the Ice Age. It has the tundra, or grasslands, along with forests and mountains in the background.

Europe



A panoramic landscape view of Central Europe 25,000 years ago
©[Adam Midzuk](#)

From left to right there are mammoths, wolves, bison, human, horses, deer, elk, rhino, hyenas and cave lions.

All of these creatures lived in Britain during various stages of the Ice Age.

Bog Oak



The photograph shows a large piece of Bog Oak found just below the surface of a farmers field.

They can easily cause damage to farming equipment.

After the last Ice Age, a forest spread across Fenland in the warmer climate. But as sea levels rose it flooded the fen lands and killed the forest growth in a short span of time. As the sea retreated, a layer of peat buried the fallen trees. The shrinking fen land and peat brings these preserved logs back to the surface, causing problems for farmers.

This example is
4-5000 years old



Children's Activities

Have fun with these prehistoric activities!



Make your own Belemnite squid

Belemnites are creatures that are very similar to squids, make your own using the following instructions.

You will need:

- A toilet roll or cardboard tube
- A piece of coloured paper
- Wool cut to 20-30cm
- Googly eyes
- Scissors
- Items to decorate



Instructions

1. Cut two slits opposite to each other at one end of the toilet roll
2. Poke 8-10 holes all around the other end of the roll
3. Cut a triangle out of the coloured paper and insert into the slits
4. Fold each piece of wool in half and thread it through the holes you created. Put the tail ends through the loop and pull to tighten
5. Decorate with eyes, colour and other items

Create Mammoth Poop

Mammoths would have eaten a lot of grasses and shrubs, much of it would not have been easily digested.

You will need:

- Clay, salt dough or play dough
- Fresh compost
- Leaves and sticks
- Hay or straw



Instructions

1. Mix your clay, compost, leaves, sticks and straw together to create what you think a mammoth's poop would look like



Finding Fossils in Gravel

Did you know you can find fossils in garden gravel?



Section of belemnite
'Ancient squid'



Worn bivalves
'Ancient oysters or clams'



Chatteris Museum

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