

The Jurassic Coast

300 million years ago Charmouth was part of one enormous continent, Pangaea, which formed most of the land on Earth.

Hensleigh House was in an arid desert near to the equator. As the continental plates shifted, the land that we now know as Devon and Dorset disappeared below the waves into a warm tropical sea.

Many different types of creature lived and died in this sea 180 million years ago. As they died they sank into the silt where many were preserved until they eventually fossilised.

Over millions of years the pushing and shoving of the continental plates caused Devon and Dorset to tilt. Sea levels also fell leaving what had previously been the sea floor now above the new sea level, but at an angle.



Wind, rain, and rivers (Dorset has lovely weather so we never had glaciers) gradually eroded and flattened much of the surface taking away the newer layers of sediment. Because the land had been tilted, this left the oldest (and previously the deepest) rocks exposed at sea level in the west, and the youngest in the east.

Today the sea is gradually eroding the cliffs and exposing the fossilised remains of the creatures that stayed at Hensleigh House 180 million years ago.

As these fossils would otherwise be broken up by the sea and washed away, the local Charmouth Fossil Code allows you to collect and keep them as long as you do not dig in the cliffs for them. If you discover anything rare or significant please report it to the Charmouth Heritage Coast Centre.



For more information about the Jurassic Coast see: www.jurassiccoast.org

Stay Safe

- ✓ Do check the tides and weather forecast
- ✗ Don't climb on the cliffs
- ✓ Do wear warm and suitable clothing
- ✗ Don't hammer or dig in the cliffs
- ✓ Do take care on the slippery rocks
- ✗ Don't walk on the mud flows
- ✓ Do use your eyes – they are your best tool!
- ✗ Don't sit or stand at the base of the cliffs

Help and advice

A little help & advice can save hours of wasted effort. Please consult the following for expert help, advice and details of guided fossil walks:

DISPLAYS & GUIDED FOSSIL WALKS

Charmouth Heritage Coast Centre

www.charmouth.org/chcc 01297 560772

Lyme Regis Museum

www.lymeregismuseum.co.uk 01297 443370

GUIDED FOSSIL WALKS & COASTAL WALKS

Martin Curtis

www.jurassiccoastguides.co.uk 07900 257944

GUIDED FOSSIL WALKS

Brandon Lennon

www.lymeregisfossilwalks.com 07854 377519

Chris Pamplin

www.fossilwalks.com

Nigel Clarke

www.lymeregisfossils.net 01297 561577

This leaflet is intended as an introductory guide. We accept no responsibility for any inaccuracies, or actions taken by you. We recommend that you consult the experts listed above for more detailed advice, and use common sense to stay safe when on the beach

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No fossils were harmed in preparing this leaflet

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Hensleigh House



Beginners guide to fossil hunting in Charmouth



Hensleigh House, Charmouth

Family run Bed & Breakfast

Double, twin and family rooms

Close to the beach, shops, pubs & cafes

www.hensleighhouse.co.uk 01297 560830

An adventure for everyone

With patience, and by adopting the correct approach, anyone can find fossils in Charmouth.

Regretfully many visitors rush onto the cliffs with their hammers, which is dangerous, prohibited, and very unlikely to result in success. Meanwhile the more perceptive visitor, the locals, and many professional collectors will be found further down the beach closer to the water's edge, searching in the stones and gravel.

Where to start

Contrary to popular belief you don't need any special equipment, just your eyes, warm and suitable clothing, and details of the tides and weather.

The ideal time to go fossil hunting is around 2 hours before low tide (winter is best!). Tide timetables are available at Hensleigh House, or you can visit www.tidetimes.org.uk and search for Lyme Regis. Remember they change daily!

Fossils appear on both the East and West beaches at Charmouth. They can be found anywhere as the wind, cliff erosion, the size of waves, the tides, and many other factors change the beach every day. Generally it is best to walk up to 400 metres on the beach to find the best areas.

Find a good spot to search between the high and low water marks (not up at the cliffs). Closer to the low water, but before the flat sand, is usually best. Look for where debris from the cliff has been washed down the beach. For example collections of large grey stones, dirty looking grey sand, and particularly knobby dark brown lumps of Iron Pyrite. Here the fossils will have been washed out of the mud and clay. Lovely golden smooth sand is great for building castles, but less likely to contain fossils.

Having found your spot it's then a case of getting down on hands and knees and searching between the stones and gravel. Try to look for regular shapes, or regular patterns.

Finding your first fossil can be thrilling, and usually leads to many more hours of discovery!

Fossils you may find at Charmouth

Ammonites

Ammonites were creatures with a hard shell, and squid like body. They used chambers in the shell to store gases which gave them buoyancy and helped them swim through the sea.



There were many different species of ammonite, and many can be found at Charmouth. Those formed of 'Fools Gold' or Iron Pyrite are the easiest to find, although there are also Calcite ammonites in the rocks. The clarity varies depending on how the creature fossilised and conditions at the time.



Belemnites

Another creature with a squid like head, Belemnites had a straight body of which the tail section (or 'Guard') is the section that we most often find as fossils. These tend to break very easily, so shorter pieces of the guard are most common.



Fossilised Bone

Ichthyosaurs and Plesiosaurs lived in the sea around Charmouth. The Ichthyosaur closely resembled a modern day dolphin, although they are not related. The Plesiosaur is thought to be the reptile the Loch Ness Monster legend was based on.

Often the creatures were damaged by scavengers before they fossilised, and so only pieces were fossilised. Sections of vertebrae are the most commonly found bone.



Jurassic Sea Shells

There were a wide variety of shell inhabitants, many of which can be found fossilised on the beach.



Crinoids

Whilst having the appearance of a plant, Crinoids are in fact animals which can still be found in our seas today. Parts of their stems can be found in rocks as star shapes, and sometimes on their own.



Tube worms

Many marine worms had hard shells which can be seen in some of the stones found on the beach.



If you are not sure what you have found, take it to the Charmouth Heritage Coast Centre where they will help identify it.