



EAST BEACH (STONEBARROW), CHARMOUTH, DORSET

INTRODUCTION TO EAST BEACH

Thank you for enrolling on our fossil hunting event. UKAFH return to Charmouth, nestled on the West Dorset coast and a popular location for fossil collectors, particularly children. Despite the tall cliffs under Stonebarrow Hill, which are continuously being eroded by the sea, the beach is safe and fossils washed from the clay can be picked up from along the foreshore.

Charmouth has access to two main fossil collection areas; beneath Black Ven cliffs in the west and East Beach (often referred to as Stonebarrow) to the east of the car parks. The section from the start of the beach, as far as Golden Cap (the tallest point on the south coast of England) is a fossil hunters paradise. The clays and shales reveal a Jurassic world, with ammonites, belemnites, bivalves and gastropods and ichthyosaur vertebrae being the commonest finds.

Indeed it was Mary Anning, the 'mother of palaeontology' who regularly walked from Lyme Regis, her home town, to Charmouth, collecting a vast array of fossils from along the coast, to sell and to help further scientific knowledge of the past.

Today, spectacular finds are still made here and the discovery of new species of animals from the Jurassic era is still evident. The Charmouth Heritage Centre on the seafront is a 'must visit' and displays show a good range of the fossils to be found here. Try to incorporate this into your day with UKAFH.

THE GEOLOGY

The cliffs and foreshore between Charmouth and Seatown, between the car park at East Beach, onwards under Stonebarrow towards Golden Cap, represent two stages within the Early Jurassic (or Lias) period known as the Sinemurian and Pliensbachian, dating from approximately 190-185 million years ago.

During this time, an enormous, generally shallow epicontinental sea (less than 100m deep), spread over this area of the world, and laid down alternating layers of clay and limestone. At that time, Charmouth lay closer to the equator, roughly where North Africa is today. Overlying the Jurassic sediments are younger Cretaceous deposits, including the Gault and golden coloured Upper Greensand, deposited around 106-102 million years ago.

Rocks are from the parent unit of the **Charmouth Mudstone Formation** containing:

The **Black Ven Mudstone Member** (comprising the former Shales-with-Beef and the Black Ven Marls) is the lowest and oldest bed present beneath Stonebarrow and is the first to be encountered travelling east towards Golden Cap. The **Stonebarrow Marl Member** (formerly Belemnite Marls) deposits are seen towards the top of the cliffs, but are best examined beneath the eastern side of Golden Cap. The **Seatown Marl Member** (formerly Green Ammonite Beds) rests above and ammonites are abundant including species of Aegoceras, Oistoceras, Liparoceras, Tragophylloceras and Androgynoceras.



WHAT FOSSILS MIGHT YOU FIND?

Charmouth is a great place for fossils and especially ammonites, which appear daily from the mudstone cliffs, washed out by the sea. Below are some typical pyritised fossils often found.



Cruciloboceras



Promicroceras



Echioceras



Gleviceras



A selection of pyritised ammonites (above) and crinoid stems (below) from Stonebarrow, Charmouth,



Nautiloid, (Cenoceras striatum)



Ichthyosaur vertebra

We hope you enjoy your day at Charmouth. Please visit our website for further events which might be of interest to you at <https://ukafh.com/> Our book, with over 50 other sites across England & Wales, can be purchased at £16.95 here: http://www.ukge.com/en-GB/A-guide-to-fossil-collecting-in-England-and-Wales_p-3439.aspx

