INTRODUCTION TO PETT LEVEL
Thank you for enrolling on our fossil hunting event.

This section of coast between Pett Level and Fairlight provides an opportunity to explore the rocks and fossils from the Early Cretaceous epoch of between 143 and 139 million years ago.

The rock sediments, exposed in the highly unstable cliffs and on the foreshore, are evidence of when this area formed part of a very large lagoon, or inland lake, fed by many streams and rivers, into which were deposited sands and silty sediments. These accumulated on the lake bottom, to form the Wealden Group of rocks, found across Sussex, Kent and the Isle of Wight.

In Cretaceous times, the climate would have been sub-tropical, as Britain would have been part of a larger European landmass situated 40° north of the Equator, close to the present day Mediterranean Sea and where lush plant life flourished. Here, both herbivorous and carnivorous dinosaurs walked along the shoreline. Dinosaur footprints and bones and fossil plants are commonly found along this section of coast.

The foreshore will provide you with opportunities to find rocks and fossils which have fallen from the cliffs. The cliffs themselves are highly unstable and you will be advised to stay well away from the cliff base at all times. You have a much higher chance of finding fossils on the foreshore, in any case and it is considerably safer.

THE GEOLOGY
The rocks at Pett Level and Fairlight comprises layers of clay and sandstone from the Berriasian stage (145-140 mya) and Valanginian stage (140-136 mya) of the Lower Cretaceous. Moving along the coast from Pett Level towards Fairlight Cove, the geology becomes increasingly older, assisted by two noticeable faults in the rocks: Haddock’s Fault and Fairlight Fault

The first cliffs you will come to consist of the Cliff End Sandstone, which is made up of a series of sands and silts. This is part of the Wadhurst Clay Formation. Above the sandstone is the ‘Cliff End Bond Bed’, which contains fish scales, teeth and bones, and shark and reptile remains.

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WHAT FOSSILS MIGHT YOU FIND?

At any fossil hunting event, you cannot be guaranteed to find fossils. The frequency of fossils depends on the rates of erosion of the cliffs, by the sea and weather and of course, if others have already scoured the site beforehand!

The most common fossil here is of the freshwater bivalves, Neomiodon (photo below) and Unio which are to be seen in rocks and boulders on the beach.

There is an abundance of fossils of the plants that grew on the Cretaceous lake shoreline to be found here. At the time, conifers were the dominant trees and the ground was covered with cycads and the horsetail Equisettites. Fossil wood is a frequent find, whereas a conifer cone is much rarer. (See photos below)

Remains and evidence of dinosaurs are a common occurrence at Pett Level and Fairlight, such as the theropod footcast and the bone (photos below).

Look out for pieces of the Cliff End Bone Bed, which have a distinct appearance and often contain fish scales and bones, pterosaur bones and the bones and teeth of crocodiles.

We hope you enjoy your day at Pett Level and Fairlight Cove. Please visit our website for further events which might be of interest to you at https://ukafh.com/