



SEAHAM, CO. DURHAM



INTRODUCTION TO SEAHAM

Thank you for enrolling on our fossil hunting event.

Seaham is a Carboniferous Coal Measures spoil heap, which was dumped, over the cliff, in front of the natural magnesium limestone cliffs, near the old Dawdon Colliery. The reserves are so extensive that they have provided years of interesting collecting from the spoil, which is gradually being washed away by the sea. The colliery closed in 1991, but the tall cliffs of spoil continue to yield well-preserved plants. The fossils and Coal Measures rock found here are 309 to 312 million years old.

This is the last remaining area of spoil (there were several in the area). At Nose's Point, to the south of Seaham, which extends south towards Chourdon Point, there are still plenty of plant remains to be found and the sea often washes fresh fossiliferous material from the cliffs.

Look for fossiliferous shale with plant remains. Once you find a block, you can then work on it by splitting it finely. The best preserved plants are found in the red rocks, which come from the so-called 'Red Band'. These are extremely hard, but splitting them is worth the effort.

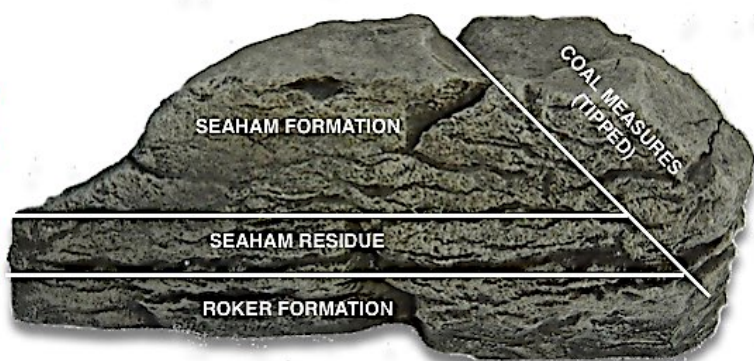
Make sure you wear safety goggles if splitting these, as they easily splinter and sharp fragments can cause injury.



THE GEOLOGY

The south-eastward dipping rocks at Seaham are the highest Permian strata exposed on the Durham coast. The sequence exposed comprises the uppermost part of the Roker (Dolomite) Formation (8 metres+), the Seaham Residue (up to 9 metres) and, at the top, the Seaham Formation (about 31 metres). Fossils abound in the Seaham Formation and comprise two species of bivalve and the supposed alga *Calcinema permiana*, displayed as tiny stick-like tubular remains of present in enormous numbers in much of the rock.

Seaham provides an Upper Carboniferous Coal Measures spoil heap at Nose's Point, which was dumped in front of the Seaham Formation cliffs. The colliery closed in 1991, but the tall cliffs of spoil continue to yield well-preserved plant fossils, wood and stems. This coastal site is the type locality and by far the best surface exposure of both the Seaham Formation and the Seaham Residue. It is also the best surface exposure of the highest beds of the Roker Dolomite Formation.



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!



Above: Pieces of the horsetail, *Stigmaria* and *Lepidodendron*, or scale tree



Below: Leaves from various plants, occur in the shales with frequency. Carefully split the shale with a hammer and chisel along the bedding plane. Even pieces of shale with no plant noticeable on the surface, may well conceal a fine specimen.



Above: Two specimens of plants typically found at Seaham. The top is the fern *Neuropteris*

We hope you enjoy your day at Seaham. 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

