

Bay, in Yorkshire, we have the actual marine representatives of the continental Neocomian strata. These Yorkshire beds were formerly called Speeton Clay, and lie between the uppermost Oolitic strata of the district, called by Mr. Judd, Portlandian, and the Red Chalk or Hunstanton Limestone, which, according to that author, cannot be of later age than the Upper Greensand, and may be as early as the Gault.<sup>1</sup>

The area occupied by the Purbeck and Wealden strata underwent a long period of slow depression, during which these fresh-water strata with occasional marine interstratifications were deposited; and by sinking still further, the purely marine beds of the Atherfield Clay began to be formed. In fact, but for the presence in it of marine fossils, it is hard to draw any line between the Wealden and the Atherfield Clays, and no doubt the mud that formed the latter was at first carried seaward by the same great river, in the manner, for example, that muddy sediments are now deposited at and near the mouth of the Amazons on the east coast of South America.

The *Atherfield Clay* takes its name from Atherfield, on the south-west coast of the Isle of Wight, where it is well seen overlying the Weald Clay, and is overlaid by the *Lower Greensand*. Its lowest beds form a kind of passage from the fresh-water strata of the Weald into the overlying marine beds of the Lower Greensand, both in the Isle of Wight and in the Wealden district, round which it circles at the edge of the Lower Greensand; for at Atherfield there seems to have been a depression of the fresh-water area and an influx of the sea, accompanied by the appearance of *Cerithium carbonarium*, accompanied by *Pinna* and *Panopæa* standing vertically in the position in which they lived. Many other shells

<sup>1</sup> 'Journal of the Geological Society,' 1868, vol. xxiv., p. 218.