

Pennant, in the introduction to his *Arctic Zoology*, describes these cliffs as being very lofty; as extending from near the village of Hornsey on the south of Bridlington bay to Spurn Head, as consisting of brown clay, and containing amber; these particulars seem to indicate the formations of either London clay, or Plastic clay.

Dr. Alderson, in a paper on the geology of the neighbourhood of Hull and Beverley, published in the third volume of Nicholson's *Philosophical Journal*, considers the hills of Holderness as alluvial accumulations heaped upon the sub-marine forest before mentioned; which, from its level on both sides, he thinks must extend beneath them, and mentions a spot on the coast (at Seathorm and Withernsea) where that forest may now be traced within 100 yards of the cliff; which, from its rapid wasting away by the sea, must he thinks formerly have covered it; but this observation seems scarcely strong enough to warrant his conclusion: he describes the district as composed partly of gravel, partly of clay, variously mixed with *shells*, with here and there particles of *culm or powdered coal*; a description much resembling that of the Plastic clay strata. The superficial gravel, however, is most probably an alluvium resting on these strata, since it is said to contain fragments of older rocks, apparently brought by a current from the north.

In boring beneath the marshes, they are found to rest on a stratum of sand; beneath this occurs a bed of clay, which finally reposes on the chalk. There we undoubtedly have the lower members of the Plastic clay formation—these beds are horizontal, the chalk beneath dips slightly to the east, five yards in the mile—the springs which percolate through the chalk rising, on penetrating the clay, to the level of the marshes. There can be no doubt that the substrata concealed beneath the marshes along the adjoining coasts of Lincolnshire, are similar to the above.