

pare them with the examples afforded by the modern beach ; and perhaps no locality could have afforded better opportunities for this than the immense tidal flats of the finest mud left bare by the great tides of the Bay of Fundy in Nova Scotia. At a more recent period still, the subject has come into great prominence in Europe, and if we are to gauge its importance by the magnitude of the costly illustrated works devoted to it by Delgado, Saporta, Nathorst, and others, and the multitude of scattered papers in scientific periodicals, we should regard it as one of the most salient points in Geology.<sup>1</sup>

It may be well further to introduce the subject by a few extracts from Lyell's work above referred to.

“The sediment with which the waters are charged is extremely fine, being derived from the destruction of cliffs of red sandstone and shale, belonging chiefly to the coal measures. On the borders of even the smallest estuaries communicating with a bay, in which the tides rise sixty feet and upwards, large areas are laid dry for nearly a fortnight between the spring and neap tides, and the mud is then baked in summer by a hot sun, so that it becomes solidified and traversed by cracks caused by shrinkage. Portions of the hardened mud may then be taken up and removed without injury. On examining the edges of each slab we observe numerous layers, formed by successive tides, usually very thin, sometimes only one-tenth of an inch thick, of unequal thickness, however, because, according to Dr. Webster, the night tides rising a foot higher than the day tides throw down more sediment. When a shower of rain falls, the highest portion of the mud-covered flat is usually too hard to receive any impressions ; while that recently uncovered by the tide, near the water's edge, is too soft. Between these areas a zone occurs almost as smooth and even as a looking-glass, on which every drop forms a cavity of circular or oval form ; and if the shower be

<sup>1</sup> *Journal of London Geological Society*, vol. vii. p. 239.