

to the silting up of estuaries, and not to upheaval. Thus Horsley insists on the difficulty of explaining the position of certain Roman stations, on the Solway, the Forth, and the Clyde, without assuming that the sea has been excluded from certain areas which it formerly occupied.*

On a review of the whole evidence, geological and archæological, afforded by the Scottish coast-line, we may conclude that the last upheaval of twenty-five feet took place not only since the first human population settled in the island; but long after metallic implements had come into use, and there seems even a strong presumption in favour of the opinion that the date of the elevation may have been subsequent to the Roman occupation.

But the twenty-five feet rise is only the last stage of a long antecedent process of elevation, for examples of recent marine shells have been observed forty feet and upwards above the sea in Ayrshire. At one of these localities, Mr. Smith of Jordanhill informs me that a rude ornament made of cannel coal has been found on the coast in the parish of Dundonald, lying fifty feet above the sea-level, on the surface of the boulder-clay or till, and covered with gravel containing marine shells. If we suppose the upward movement to have been uniform in central Scotland before and after the Roman era, and assume that as twenty-five feet indicate seventeen centuries, so fifty feet imply a lapse of twice that number, or 3400 years, we should then carry back the date of the ornament in question to fifteen centuries before our era, or to the days of Pharaoh, and the period usually assigned to the exodus of the Israelites from Egypt.

But all such estimates must be considered, in the present state of science, as tentative and conjectural, since the rate of movement of the land may not have been uniform, and its

* *Britannia*, p. 157. 1860.