

the south-eastern portion of England, outside the Chalk, lose themselves in the German Ocean, the dredge has found interesting trace of them far at sea running northwards, to form, apparently, our submarine belt or ring. It is stated by Woodward, in his *Geology of Norfolk*, that the oyster-fishers on that coast dredged up from a tract of oyster-beds near Happisburgh no fewer than two thousand grinders of mammoths in the course of thirteen years. Further, those parts of the Continent which lie opposite our eastern coasts, including Holland, Hanover, and the larger part of Denmark, all consist of deposits of the Tertiary system, which, trending westwards at a low angle, form, it is probable, no inconsiderable part of the bed of the German Ocean. Those beds, however, from which our Scottish amber is derived must lie deep in the sea, outside the Lias, the Oolite, the Greensand, and the Chalk; and our specimens are rare in consequence, because at great depths the bottom is little affected by tempests. Not less than eight hundred pounds weight of this substance has been thrown up on the coast of east Prussia by a single storm.

From the Tertiaries we would naturally pass, in our upward progress, to the Secondary deposits; and of these, the remains of the Cretaceous system, as exhibited in Banff and Aberdeen shires, would, of course, first solicit notice, as representative in Scotland of that portion of the Secondary period nearest our own,—the period with which this great middle division of the earth's history terminated. I must first, however, call your attention to a series of rocks which, without belonging to any of the three great sedimentary divisions, seem in our own country to have been contemporary with them all. I refer to the trap rocks of the kingdom. The Duke of Argyll found in the island of Mull, as has been already shown, thick beds of trap, tuffaceous and basaltic, overlying beds of the Tertiary division. Again, in the Isle of Skye, Professor Edward