

2000 mammoths' grinders.* Another portion of the same continuous stratum has yielded at Bacton, Cromer, and other places on the coast, the bones of a gigantic beaver (*Trogontherium Cuvierii*, Fischer), as well as the ox, horse, and deer, and both species of rhinoceros, *R. tichorhinus* and *R. leptorhinus*.

In studying these and various other similar assemblages of fossils, we have a good exemplification of the more rapid rate at which the mammiferous fauna, as compared to the testaceous, diverges from the recent type when traced backwards in time. I have before hinted, that the longevity of species in the class of warm-blooded quadrupeds is not so great as in that of the mollusca, the latter having probably more capacity for enduring those changes of climate and other external circumstances, and those revolutions in the organic world, which in the course of ages occur on the earth's surface. This phenomenon is by no means confined to Europe, for Mr. Darwin found at Bahia Blanca, in South America, lat. 39° S., near the northern confines of Patagonia, fossil remains of the extinct mammiferous genera *Megatherium*, *Megalonyx*, *Toxodon*, and others, associated with shells, almost all of species already ascertained to be still living in the contiguous sea;† the marine mollusca, as well as those of rivers, lakes, or the land, having died out more slowly than the terrestrial mammalia.

I alluded before (p. 131) to certain marine strata overlying till near Glasgow, and at other points on the Clyde, in which the shells are for the most part British, with an intermixture of some arctic species; while others, about a tenth of the whole, are supposed to be extinct. This formation may also be called Newer Pliocene.

Fluvio-marine crag of Norwich.—At several places within five miles of Norwich, on both banks of the Yare, beds of sand, loam, and gravel, provincially termed "crag," but of a very different age from the Suffolk crag, occur, in which there is a mixture of marine, land, and freshwater shells, with ichthyolites and bones of mammalia. It is clear that these beds have been accumulated at the bottom of the sea near the mouth of a river. They form patches of variable thickness, resting on white chalk, and are covered by a dense mass of stratified flint gravel. The surface of the chalk is often perforated to the depth of several inches by the *Pholas crispata*, each fossil shell still remaining at the bottom of its cylindrical cavity, now filled up with loose sand which has fallen from the incumbent crag. This species of *Pholas* still exists and drills the rocks between high and low water on the British coast. The most common shells of these strata, such as *Fusus striatus*, *Turritella terebra*, *Cardium edule*, and *Cyprina islandica*, are now abundant in the British seas; but with them are some extinct species, such as *Nucula Cobboldiae* (fig. 125) and *Tellina obliqua* (fig. 126). *Natica helicoides* (fig. 127) is an example of a species formerly known only as fossil, but which has now been found living in our seas.

Among the accompanying bones of mammalia is the *Mastodon*

* Woodward's Geology of Norfolk.

† Zool. of Beagle, part 1, pp. 9, 111.