

XXXIV. EARTH'S DEEPEST GRAVES.

THE EOZOIC ANIMAL.

WE are down now, on the bottom rocks of the earth's crust. This is the home of the vitrified and crystalline boulders which overstrewn the surface. There are fifty thousand feet of later strata resting above these rocks in regions where the series is complete. But here, and over extensive regions, the deep Eozoic beds have been arched up to the surface, and no newer rocks have ever formed over them; or if they were, have subsequently been worn away. Luckily for the geologist, the modern sun-light has been let into them, and we have gained some general knowledge of them, though it must be confessed, a very great amount of ignorance remains. Let us see what has been found out.

In the first place, deep as we have ever penetrated into these Eozoic rocks, they all retain some traces of stratification. In most cases, the stratification is very obscure; in many cases, it is quite obliterated, but rocks of this sort furnish some evidence of their original bedding. Often they differ from stratified rocks in no other particular. Sometimes we can trace them into continuity with stratified rocks. In all cases the crystals which they contain, and the crystalline condition of the rocks indicate solidification from a state of solution or softening which requires the presence of water. Grant us water and heat, and the present condition would be produced from ordinary ocean sediments. We must look upon all these rocks as ocean-born. Hard and crystalline as they now are, we must think of them as at one time in the condition of ocean-slime. These rocky beds have been successively ocean bottom. These rocks too, have successively rested as sediments upon an ocean-bottom preëxisting. There must have been an ocean-bottom for the very first sediments to rest on. Let us remember this.

In the next place, the very oldest rocks known are granites, syenites, gneisses, and hornblendic schists. Not having seen the bottom of this series, we can not state its thickness. At a higher level, have been found, in the north-west, conglom-