

solve the problem of the elimination of the noxious gas which unfitted the atmosphere for respiration. Till this was done the progressive series of animal forms must here be arrested, and the last term of the series, man, toward which all the steps of the previous preparation had converged, must remain a distant and unattainable hope, and Nature fail of her completeness and her crown.

The development history of the American continent had been conducted through a succession of vertical oscillations, extending eastward to the still subaqueous ridges of the Appalachians, and westward to the corresponding nascent ridges of the Pacific slope. The valleys of the two great oceans had been continually deepening beneath the pressure of the superincumbent masses of waters, and, as a consequence, the intervening continental space had suffered a corresponding vertical uplift, so that the waters had been poured off from the site of the future continent, and a mere shallow lagoon occupied the present area of the Middle and Southern States and Territories. The oscillations of the submarine soil down to the dawn of the period now under consideration—sometimes increasing and sometimes diminishing the depth of the waters—left it at last but little sunken beneath the general surface of the sea. [See the areas marked C, Fig. 58.]

Now a state of more than usual uneasiness began to manifest itself. The ocean bed heaved and sank as in the breathings of a mortal agony. Surges mountain-high rolled up the sterile strand, and, wasted with their own violence, fell back upon their ocean couch. This, of course, was not the period for an abundance of animal life. But, if the usual fecundity of Nature was for a time suspended on our continent, some other continent may have been the theatre of its display. In America the crumbling margins of the sea were worked up into cubic miles of sand and