

existed, we can hardly believe nor even conceive the immensity of our planet's age. Yet how much vaster still will this antiquity appear to man when he shall have been able to form a just conception of the origin of living creatures, as well as of the causes of their gradual development and improvement, and above all when he shall perceive that time and the requisite conditions having been necessary to bring into existence all the living species now actually to be seen, he himself is the final result and actual climax of this development of which the ultimate limit, if such there be, can never be known."¹

With such a limitless vista of past time to contemplate, Lamarck could indulge in unfettered speculation on the secular displacement of the ocean basin, and the concomitant submergence of the land. Inappreciably slow though the mutation might be, he believed it to be part of the regular order of nature, proceeding without interruption until every part of the dry land had in succession become the bed of the sea. In this slow westerly movement, the ocean seemed to him to have travelled round the globe, not once but perhaps many times, every part of the land becoming first the shore, and then passing under the scour of the great oceanic waters until at last reduced to form the bottom of the marine abysses. He thought that this displacement of the basin of the sea, by producing a constantly variable inequality in the terrestrial radii, causes a shifting of the centre of gravity of the globe as well as of the two poles, and that as this variation, markedly irregular though

¹ *Op. cit.* pp. 67, 88, 89.