

There was a time in the very remote past, when tidal action on the earth must have been vastly more efficient than at present. I have already remarked that the moon, if disengaged from the earth, as we argue, was once near enough to produce an enormous tidal effect. When the moon was but forty thousand miles from the earth, its tidal efficiency was two hundred and sixteen times as great as now. The oceanic tide, accordingly, would have risen six hundred feet twice during each revolution of the earth, with a similar subsidence in the interval. We can hardly conceive the effects of such an occurrence. Think of such a mountain of water rolling in. Think of the collision with the beach; think of the inundation which would bury the beach and sweep inland; think of the terrific erosion which would ensue; think of the same flood tearing back into the sea to repeat its invasion in a few hours. How rapidly the land must have disappeared; how coarse the fragments hurled into the sea, and how remote their distribution. If these events occurred during the accumulation of any sediments which in our age have become rocks, what vast beds of conglomerates must there be. Do we find them in the series of Eozoic formations? No. There are conglomerates, but not more bulky or coarse than in most of the later formations. The conjecture was expressed by Professor R. S. Ball that such high tides had occurred during Palæozoic time; but we find no evidence of it—nor even of their occurrence during Eozoic time. As they must have occurred, however, we may place them in an æon earlier than that which witnessed the laying down of any sediments which have been preserved to human times.

The end of the Eozoic Æon approached at last. Life had appeared in the form of humble sea-weeds; and life had throbbled into conscious being in the forms of the humble Eozoön which I have before described. I can not admit that no other forms of life found fitting home in the Eozoic sea; but no demonstration of it has been discovered. We know, however, that a vast thickness of rock-sediment was accumulated, and that now very considerable areas were upraised to