THE EVOLUTION OF THE WORLD

than a hundred—have passed since this important process of the formation of water took place, introducing the third section of cosmogony, which we call *biogeny*.

III.—MONISTIC BIOGENY

The third phase of the evolution of the world opens with the advent of organisms on our planet, and continues uninterrupted from that point until the present day. The great problems which this most interesting part of the earth's history suggests to us were still thought insoluble at the beginning of the nineteenth century, or, at least, so difficult hat their solution seemed to be extremely remote. Now, at the close of the century. we can affirm with legitimate pride that they have been substantially solved by modern biology and its theory of transformism; indeed, many of the phenomena of the organic world are now interpreted on physical principles as completely as the familiar physical phenomena of inorganic nature. The merit of making the first important step in this difficult path and of pointing out the way to the monistic solution of all the problems of biology must be accorded to the great French scientist, Jean Lamarck; it was in 1809, the year of the birth of Charles Darwin, that he published his famous Philo-In this original work not only is sophie Zoologique. a splendid effort made to interpret all the phenomena of organic life from a monistic and physical point of view, but the path is opened which alone leads to the solution of the greatest enigma of this branch of science-the problem of the natural origin of organic spe-Lamarck, who had an equally extensive emcies. pirical acquaintance with zoology and botany, drew the first sketch of the theory of descent; he showed