the fabric of the history of the earth was so happily erected. The important geogenetic research of Alexander Humboldt, Leopold Buch, Gustav Bischof, Edward Süss, and other geologists, were wholly based on the empirical foundation and the speculative principles of Karl Hoff and Charles Lyell. They cleared the way for purely rational science in the field of geology; they removed the obstacles that had been put in the path by mythological fancy and religious tradition, especially by the Bible and its legends. I have already discussed the merits of Lyell, and his relations with his friend Charles Darwin, in the sixteenth and seventeenth chapters of my *Natural History of Creation*, and must refer the reader to the standard works on geology for a further acquaintance with the history of the earth and the great progress which dynamical and historical geology have made during the century.

The first division of the history of the earth must be a separation of inorganic and organic geogeny; the latter begins with the first appearance of living things on our planet. The earlier section, the inorganic history of the earth, ran much the same course as that of the other planets of our system. They were all cast off as rings of nebula at the equator of the rotating solar mass, and gradually condensed into independent bodies. After cooling down a little, the glowing ball of the earth was formed out of the gaseous mass, and eventually, as the heat continued to radiate out into space, there was formed at its surface the thin solid crust on which we live. When the temperature at the surface had gone down to a certain point, the water descended upon it from the environing clouds of steam, and thus the first condition was secured for the rise of organic life. Many million years — certainly more