

published in 1887 by Daubrée,¹ under the titles of *Les eaux sous-terraines à l'époque actuelle*, and *Les eaux sous-terraines aux époques anciennes*. They treat in a comprehensive and scientific manner the origin, the geological occurrence, the physical and chemical properties of normal springs, underground waters, mineral and thermal springs. In an earlier work, Daubrée had described the results of his experimental researches on the permeability of different kinds of rock. The famous author was not content with a record of his own wide knowledge and experience of springs, but exhausted all geological and geographical literature on the subject, and even referred to special technical estimates and journals. In the first volume, Daubrée devoted a chapter to Artesian wells, which he classified according to the geological age of the particular water-bearing strata. He distinguished common or *normal* springs and *thermal* springs whose water moves according to hydrostatic laws, from the *underground* waters forced onward by carbonic acid and other gases, or by vapour. The second volume contains an account of the chemical composition and the temperature of springs and underground water, and this is followed by a discussion of the Earth's heat and the possible significance of the circulation and ingress of water in deep horizons of the crust as a means of inducing volcanism. The last volume treats of the geological

¹ Gabriel August Daubrée, born at Metz, studied at the Polytechnic School in Paris; began his career as a mining engineer in 1834, and was sent to England, Sweden, and Norway on a commission from the Government. As mining engineer and Professor of Mineralogy and Geology in Strassburg, he devoted his time to the geological relations of Alsace, and published in 1849 a geological map of Lower Alsace, following it in 1852 by an excellent geological description of this neighbourhood. During the years 1857-61 Daubrée was engaged in leading and collecting the springs of Plombières, and had opportunities of making important observations on the chemical action of thermal water. These were the basis of his subsequent experimental attempts to determine the geological action of superheated aqueous vapours. In 1861 he became Professor of Geology at the Museum in Paris, and displayed untiring energy in this capacity, at the same time carrying out a brilliant series of experimental researches for which his name will ever remain famous in the annals of geology. From the year 1862 Daubrée also taught mineralogy at the School of Mines, and in 1872 he was made Director of that institute. During the last twenty years of his life, he was a member of the Commission for the publication of the special geological map. Daubrée died in Paris on the 29th May 1896. He was throughout his long and active career greatly revered and loved for his amiable disposition and noble, conscientious character.