

CHAPTER II.

PHYSIOGRAPHICAL GEOLOGY.

THE subject of physiographical geology coincides in essential features with that of geophysics (or physical geography). The only distinction that may be drawn is that while physical geography deals more with the description and exact determination of the physical properties of the earth's body, physiographical geology concerns itself more with the causes and effects of these relations. It is, however, impossible to define a strict line of division between the studies of geography and geology.

Certain questions about the physiography of the earth had been discussed by the Greek philosophers, and the knowledge of the ancients in this domain had in all probability been comprised in a book of Theophrastus. Unfortunately the book has been lost, and is known to us only through excerpts from it that appeared in the works of later geographers.

The first work that merits the name of a physical description of the earth is the famous *Geographia Generalis* of Bernhard Varenius (Amsterdam, 1672). In 1661 the comprehensive work of Riccioli, and in 1664 that of Kircher, appeared; nearly a hundred years later followed the important geographical and physiographical text-books of the Dutchman Lulofs (1750) and the Swede Tobern Bergman (1769). Bergman's work was taken as a model by the famous Werner in his teaching of geognosy, and thus its style and general treatment came to be handed down in the later text-books published by pupils of Werner. All the text-books of the Wernerian school, especially those of Fr. Ambros Reuss, F. R. Richter (Freiberg, 1812), and K. A. Kühn (Freiberg, 1833), contain a full account of physiographical geology.

In France, Buache had in 1756 kept physical geography