PART I.

PHYSIOGRAPHIC GEOLOGY.

THE systematic arrangement in the earth's features is an indication of system in the earth's development. The orderly arrangement in the continents and oceans, island chains and mountains, is an outcome of the most fundamental movements in the forming sphere. An appreciation of the earth's physiognomy is hence the first step toward an investigation of its laws of origin. This subject is therefore an important one to the geologist, although its facts come also within the domain of physical geography. They are the final results in geology, and thence become the arena of the physical geographer.

The following are the divisions in this department: —

I. The earth's general contour and surface subdivisions.
II. System in the reliefs or surface forms of the continental lands.
III. System in the courses of the earth's feature lines.

These topics are followed by a brief review of, —

IV. Oceanic and atmospheric movements and temperature.
V. Geographical distribution of plants and animals.

I. THE EARTH'S GENERAL CONTOUR AND SURFACE SUBDIVISIONS.

The subjects under this head are — the earth's form; the distribution of land and water; the true outlines and features of the oceanic depression; the subdivisions, positions, and general features of the land; the height and kinds of surface of the continents.

(1) **Spheroidal form.** — The form of the earth is spherical, with the poles flattened, the distance from the center to the pole being about $\frac{1}{294}$ shorter than that from the center to the equator. The length of the equatorial radius is 3963 miles, and that of the polar about $13\frac{1}{3}$ miles less. The form approaches closely that of an ellipsoid of revolution. The mean density is about 5·5 times that of water, which is a little more than twice that of the two most common minerals, calcite (2·72) and quartz (2·65), and more than two thirds that of pure iron (7·75).

http://www.geology.19thcenturyscience.org/books/1896-Dana-ManGeol/README.htm