

of the breaking forth of originally closed seas ; of the general level of the sea, which was already recognized by Archimedes ; of oceanic currents ; of the eruption of submarine volcanoes , of the petrifications of shells and the impressions of fishes ; and, lastly, of the periodic oscillations of the earth's crust, a subject that most especially attracts our attention, since it constitutes the germ of modern geognosy. Strabo expressly remarks that the altered limits of the sea and land are to be ascribed less to small inundations than to the upheaval and depression of the bottom, for " not only separate masses of rock and islands of different dimensions, but entire continents, may be upheaved." Strabo, like Herodotus, was an attentive observer of the descent of nations, and of the diversities of the different races of men, whom he singularly enough calls " land and air animals, which require much light."* We find the ethnological distinction of races most sharply defined in the Commentaries of Julius Cæsar, and in the noble eulogy on Agricola by Tacitus.

Unfortunately, Strabo's great work, which was so rich in facts, and whose cosmical views we have already alluded to, remained almost wholly unknown in Roman antiquity until the fifth century, and was not even then made use of by that universal collector, Pliny. It was not until the close of the Middle Ages that Strabo exercised any essential influence on the direction of ideas, and even then in a less marked degree than that of the more mathematical and more tabularly concise geography of Claudius Ptolemæus, which was almost wholly wanting in views of a truly physical character. This latter work served as a guide to travelers as late as the sixteenth century, while every new discovery of places was always supposed to be recognized in it under some other appellation.

In the same manner as natural historians long continued to include all recently-discovered plants and animals under the classifying definitions of Linnæus, the earliest maps of the New Continent appeared in the Atlas of Ptolemy, which Agathodæmon prepared at the same time that, in the remotest part of Asia among the highly-civilized Chinese, the western provinces of the empire were already marked in forty-four divisions.† The Universal Geography of Ptolemy has indeed the advantage of presenting us with a picture of the whole world represented graphically in outlines, and numerically in determinations of places, according to their parallels of longi-

* Strabo, lib. xvii., p. 810.

† Carl Ritter, *Asien*, th. v., s. 560.