

geography. Although the Romans extended their rule over a great extent of coast bordering on the Atlantic, they never organised any voyages of discovery into this outer sea, after the manner of the Carthaginians and Greeks. They have given no definite information concerning the coasts of Africa, and relatively little about the shores of Europe. They were essentially a warlike and practical people, with politicians, jurists, encyclopædists, and historians, but few philosophers who occupied themselves with the operations of nature; the commercial stimulus was wanting to induce them to undertake voyages of exploration. Horace's system of winds, several passages of Virgil on astro-meteorology, the statements concerning geological phenomena in the works of Ovid, and notices of the action of water in modifying the surface of the globe in the work on architecture by Vitruvius, all show a spirit of observation; but, generally speaking, if we deduct what the Romans had received from the Greeks, there is little relating to oceanography that can be regarded as original among the writings of Latin authors. As Vivien de St. Martin remarks, however, never was a period more favourable than the reign of Augustus for the composition of a great work on descriptive geography. The Roman rule, spread as it was over more than half of the then known world, and attached to the remainder by political and commercial relations, created a propitious state of matters for an undertaking of this kind by furnishing to the geographer a ready means of investigation. A man appeared to carry out this work, for which the time was ripe, but this man was a Greek, Strabo,¹ who produced the most important extant geographical work of antiquity.

This celebrated geographer deals in a special way with problems relating to STRABO. oceanography.² All things on the crust of the earth, according to Strabo, are in a continual state of change, and the present relief of the surface of the globe is due to these modifications. Under the influence of earthquakes and volcanic eruptions the land is subjected to movements, oceanic waters invade the land when the bed of the ocean rises, and they retire when the bed sinks; besides, these movements can be more easily produced beneath the sea, where the earth is, as it were, kneaded and made plastic by the water. He states that pelagic islands are of volcanic origin; the greater islands, situated near the land, have been detached from the continents by dislocations; the continents themselves are subject to oscillations, and might have been raised from the bosoms of the various seas. Running water works profound modifications on the surface of the land, but these changes are conditioned by the nature of the country through which streams and rivers pass. Torrents descending from mountains have a great erosive power, and the same is the case with rivers which flow over soft or sandy grounds; both spread out on HIS VIEWS ON THE SCULPTURING OF THE CONTINENTS. the plains and transport to the sea immense quantities of alluvial matter. The sediment

¹ Born about 60 B.C. The year of his birth cannot be determined with certainty.

² In this *résumé* of Strabo's doctrines we have followed H. Fischer, *Ueber einige Gegenstände der physischen Geographie bei Strabon, als Beitrag zur Geschichte der alten Geographie*, Wernigerode, 1879.