

sea.¹ He further points out that the detritus of separate river-basins may greatly differ, and that materials may be carried into districts where the rocks are entirely distinct from those in the areas whence the transport has taken place. He refers to the practical value of this observation in questions regarding the source of minerals, ores and useful stones.²

He is thus led to give, from his wide knowledge of France, a sketch of the character of the rocks in the different river-basins of the country, and the nature of the materials which the rivers have in each case to transport. He passes in review all the large streams that enter the Atlantic from the Rhine to the shores of Gascony, and considers, likewise, the Rhone with its tributaries on the Mediterranean side of the watershed.³ He infers that all the debris derived from the waste of the land is not carried to the sea, but that a great deal of it is deposited along the borders of the streams, and that though it may be removed thence, this removal must require many ages to accomplish. He thinks that the levels of the valleys are at present being raised owing to the deposit of detritus in them.⁴ The plains watered by the rivers are one vast sheet of gravel, the streams having changed their courses again and again, so as to flow in turn over every part of these alluvial tracts. The thickness of detritus brought down by the rivers gradually increases towards their mouths. Near their sources, on the other hand, any sediment which is deposited is in a manner superficial, and is

¹ P. 222.

³ P. 225-324.

² P. 223.

⁴ P. 326.