

*Geographical Distribution of the Loess.*

It was stated in the last chapter, p. 302, that at the time of the greatest extension of the Swiss glaciers, the Lake of Constance, and all the other great lakes, were filled with ice, so that gravel and mud could pass freely from the upper Alpine valley of the Rhine, to the lower region between Basle and the sea, the great lake intercepting no part of the moraines, whether fine or coarse. On the other hand, the Aar, with its great tributaries the Limmat and the Reuss, does not join the Rhine till after it issues from the Lake of Constance ; and by their channels a large part of the Alpine gravel and mud could always have passed without obstruction into the lower country, even after the ice of the great lake had melted.

It will give the reader some idea of the manner in which the Rhenish loess occurs, if he is told that some of the earlier scientific observers imagined it to have been formed in a vast lake which occupied the valley of the Rhine from Basle to Mayence, sending up arms or branches into what are now the valleys of the Main, Neckar, and other large rivers. They placed the barrier of this imaginary lake in the narrow and picturesque gorge of the Rhine between Bingen and Coblenz : and when it was objected that the lateral valley of the Lahn, communicating with that gorge, had also been filled with loess, they were compelled to transfer the great dam farther down, and to place it below Bonn. Strictly speaking, it must be placed much farther north, or in the 51st parallel of latitude, where the limits of the loess have been traced out by MM. Omalius D'Halloy, Dumont, and others, running east and west by Cologne, Juliers, Louvain, Oudenarde, and Courtray, in Belgium, to Cassel, near Dunkirk, in France. This boundary line may not indicate the original seaward extent of the formation, as it may have stretched still farther north, and its present abrupt termination may only show how far it was