

## CHAPTER XXXII.

QUALITIES OF RIVER-WATERS—DISSOLVING OF LIMESTONE  
ROCKS BY SOLUTION.

I HAVE already given a sketch of the chief river areas of Great Britain, but I did not enter upon one important point connected with them, namely, the qualities of their waters. If we examine the geological structure of our island with regard to its watersheds and river-courses, we find, as already stated, that the larger streams, with one or two exceptions, run into the German Ocean; the chief exception being the Severn and its tributaries, which drain a large proportion of Wales, and a considerable part of the interior of England. A much larger area of country is, however, drained towards the east than to the west.

When we examine the qualities of the waters of our rivers, we find that this necessarily depends on the nature of the rocks and soils over which they flow. Thus the waters of the rivers of Scotland are, for the most part, soft. All the Highland waters, as a rule, are soft; the mountains being composed of granitic rocks, gneiss, mica-schist, and the like, a very small proportion of limestone being intermingled therewith, and the other rocks being, for the most part, almost free from carbonate of lime. Only a small proportion of lime, soda, or potash, is taken up by the water that falls upon, flows over, or drains through these rocks,