

great plain, somewhat higher than the summit level of the Carboniferous Limestone plateau. This plain being slightly inclined to the west at the time the Severn was scooping out its valley, as I have already explained at p. 508, the ancient Avon flowed over the top of the plateau of Clifton and Durdham Downs, through a minor inequality of the surface, and, as rivers do, it steadily worked at the deepening of its own channel. As it did this, so in like proportion the river and its tributaries in the upper part of their courses gradually wasted and lowered the hill-sides and valleys through which they flowed, being aided by rains and snows and all the ordinary agents of atmospheric denudation; and thus it happens, that what was once a high slightly-inclined tableland, has been converted partly into flat-topped fragments of a high plain, and partly into undulating hills and vales; while in the great Oolitic plateau, that stretches eastward as far as the Chalk escarpment, we have still remaining a large tract of the ancient plain, with this difference, that the average gentle slope of its surface is now east instead of west.

This naturally leads to the question, Why is it that the Thames, and some other rivers that flow through the Oolites and Chalk, run eastward? The answer seems to be, that after the original valley of the Severn was well established by its river, a new disturbance of the whole country took place, by which the Cretaceous and other strata were tilted eastward, not suddenly, but by degrees, and thus a second slope was given to the Chalk and Eocene strata, in a direction opposite to the dip, that originally led to the scooping out of the present valley of the Severn. This dip lay east of the comparatively newly-formed escarpment of the Chalk indicated by the dark line in fig. 102 marked *e*. The