ulating, however, on the manner in which the valleys of the Mississippi and its tributaries may have been affected by subterranean movements, we are at least authorized by analogy to assume that the downward movement may have been greater in the more inland part of the continent, just as we have seen in 1811–12, that the "sunk country" west of New Madrid subsided, while the level of the delta at New Orleans underwent no sensible change. If, then, the vertical movement in the interior, in and near the valley of the Ohio, for example, were greater than near the Gulf, as, if, in the former case, it were two and a half feet in a century, and near the sea only half that amount, it would follow that the general fall of the rivers would be lessened. They would deposit all their heavier, and some even of their finer sediment, in their channels, instead of having power to carry it to the sea. They would fill up their beds, and often overflow the adjoining plains, raising their level by repeated layers of fluviatile matter or silt, frequently containing the shells of land and amphibious mollusks.

If, even now, the Mississippi, when flooded, dams up the mouths of its great tributaries, and transforms them for months into temporary lakes, it must have produced the same effect to a far greater extent if at any time the general fall of the country toward the sea was less rapid.

In narrow valleys bounded by ancient rocks 500 or 600 feet high, such as that of the Ohio, the alluvial formation could never acquire great breadth. Its thickness would depend entirely on the length of time throughout which the subsidence was prolonged. But nearer the sea, where the continent falls with a gentle slope toward the Gulf, the encroachment of the fresh-water deposits (No. 2, fig. 11, p. 196), of the great river on the tertiary strata (No. 3), constituting the original bluffs on its eastern and western boundaries, might be very great.

If we then suppose the downward movement to cease, and to be at length converted into an ascending one, the rate of upheaval being greatest in the more inland country, the fall of every river, and consequently its velocity, would begin immediately to augment. Their power of carrying earthy matter seaward, and