

the exact height above the level of the sea, of the fossil cypress swamp at Port Hudson, I presume it is less than thirty feet; and in order to explain the superposition of 150 feet of fresh-water sediment, we must imagine the gradual subsidence of fluviatile strata to a depth far below the level of the sea, followed by an upward movement to as great an amount. The depression must have taken place so slowly as to allow the river to raise the surface by sedimentary deposition continually, and never permit the sea to encroach and cover the area. It is quite conceivable, for example, that the present delta and alluvial plain should sink 150 feet without the salt water coming up even to New Orleans, provided the land went down only a few feet or inches in a century, and provided the ground was raised vertically to the same amount by fluviatile mud, sand, or vegetable matter. But if the land should go down even ten or twelve feet at once, the whole delta would be submerged beneath the sea. Were the downward movement here supposed to be followed by an upheaval to the extent of about 150 feet, and should the river then cut a channel through the upraised mass, we might expect to see the modern formation exhibit appearances similar to those of high antiquity above described at Port Hudson.

I shall endeavor, in the sequel, to show that oscillations of level, like those here assumed to account for the phenomena at Port Hudson, will explain other appearances, observable, not only in cliffs bounding the valley of the Mississippi, but in ancient alluvial terraces bordering the Ohic, and other tributaries of the great river.