

disappeared, under the encroachments of the growing marsh. These are geological changes, and the geologist's eye looks about for the causes. It is not a far-fetched solution to see in the hillside wash a source of silt, which annually diminishes the depth of water to a certain extent. And it requires but ordinary sagacity to notice each decaying crop of grasses, sedges, and rushes as the source of the dark peaty deposit which displaces the last water, when other causes have produced the requisite shallowness. We have caught the marsh-making business in the midst of its accomplishment. Short as our lives are, each life falls within the geologic age in which vast results are actually working out. All these marshes have been lakes. If we dig in them we find the bleached relics of the very shells which held animated tenants of the vanished lakelet. Thus, gathering sediments add sheet after sheet to the deposits which are filling the larger as well as the smaller bodies of water which rest on the earth's surface.

All great rivers are enormous mud-carriers. The Nile, the Amazons, the Ganges, the Hoang Ho, the Mississippi, are great vehicles for the transport of earthy substances from the higher to the lower levels. Like the Tiber, their waters are all "yellow." The Chinese have surpassed all other nations in making a proper name of the generic description of muddy rivers. What a potion is a glass of Mississippi water, placed by the side of one's plate in the cabin of the steamer! In thirty minutes it holds a deposit of impalpable sediment, which is simply mud. Think of the entire breadth and depth of this mighty stream charged with earthy materials to such an extent. What must be the total amount of matter carried down to the Gulf annually? The engineers of the United States have attempted to answer this question. They say that if the annual discharge of mud were brought together and dried, it would form a block a mile square and two hundred and seventy-eight feet high. Imagine that block lying on the surface of some level township. Then think another block on the top—the result of another year's transport. Recall the fact that the Mississippi has been at this business at least five