

mud may be seen in river cliffs eighty feet high, in which they were unable to detect organic remains, a remark which I found to hold equally in regard to the recent mud of the Mississippi.

Dr. Wallich, while confirming these observations, informs me that at certain points in Bengal, farther inland, he met with land-shells in the banks of the great river. Borings have been made at Calcutta, beginning not many feet above the sea-level to the depth of 300 and 400 feet; and wherever organic remains were found in the strata pierced through, they were of a fluviatile or terrestrial character, implying, that during a long and gradual subsidence of the country, the sediment thrown down by the Ganges and Burrampooter had accumulated at a sufficient rate to prevent the sea from invading that region.

At the bottom of the borings, after passing through much fine loam, beds of pebbles, sand, and boulders were reached, such as might belong to an ancient river channel; and the bones of a crocodile, and the shell of a freshwater tortoise imbedded in it, were met with, at the depth of four hundred feet from the surface. No pebbles are now brought down within a great distance of this point, so that the country must once have had a totally different character, and may have had its valleys, hills, and rivers, before all was reduced to one common level by the accumulation upon it of fine Himalayan mud. If the latter were removed during a gradual re-elevation of the country, many old hydrographical basins might reappear, and portions of the loam might alone remain in terraces, on the flanks of hills, or on platforms, attesting the vast extent, in ancient times, of the muddy envelope. A similar succession of events has, in all likelihood, occurred in Europe during the deposition and denudation of the loess of the post-pliocene period, which, as we have seen in a former chapter, was long enough to allow of the gradual development of almost any amount of such physical changes.