

buried forest is covered by a bed of clay, twelve feet thick, and is followed by another superimposed bed of vegetable matter, four feet thick, containing logs and branches, half turned into lignite, and erect stumps, among which there are none of the large cypresses, as in the lower bed. Among the logs, the water-oak (*Quercus aquatica*) was recognizable, and a pine with a great deal of bark, and the strobiles of the *Pinus taeda*.

“ This upper forest points to the former existence, on the spot, of one of those swamps, occurring at higher levels, in which the *Cupressus disticha* (*Taxodium*) does not grow. Above the upper layer of erect stumps are various beds of clay, in all more than fifty feet thick, with two thin layers of vegetable matter intercalated ; and above the whole more than twenty feet of sand, the lower part of which included siliceous pebbles derived from some ancient rocks, and containing the marks of encrinites and corals (*Favosites*),” &c.

Dr. Carpenter, when he published this account in 1838, thought he had detected the distinct marks of the ax\* on some of the logs accompanying the buried stumps ; but he informed me, in 1846, that he was mistaken, and that the apparent notches were caused by the gaping open of the bituminized wood, probably after shrinking and drying, of the truth of which I was myself convinced, after seeing the specimens. That the lowest bed had originally been a real cypress swamp, was proved beyond all doubt by the stumps being surrounded by those peculiar knobs or excrescences called cypress knees, which this tree throws out from its base, when it grows in a submerged soil. These knees sometimes rise up through the water from a depth of six or eight feet, and are supposed to supply the roots with air, as they are never formed when the cypress grows on dry ground.

At the time of my visit, the river was unfortunately too high to enable me to see the lowest deposit containing the memorials of this ancient forest, the geological interest of which is much enhanced by its having been seen by Bartram, and again by Carpenter, extending horizontally over a considerable area. I learnt from several residents at Port Hudson, and from Captain

\* Silliman, *ibid.* p. 119.