

borne down by the tributary streams into the great rivers, and hurried along by the mighty flood of waters, till arrested in their course they become entangled, and form stationary masses called rafts, which in the Mississippi, and other large rivers of North America, extend over many leagues, and are of great depth: in some instances particular species are associated together, as cedars, pines, and firs, without the intermixture of other trees. Near the mouth of the Mississippi, rafts of great extent, composed of drifted trees brought down every spring, constitute a matted bed of vegetables, which is many yards in thickness, and stretches over hundreds of square leagues. These rafts become covered with fine mud and sand, on which other trees and plants are drifted down the following year; earthy deposits again take place, and thus alternations of vegetables with layers of calcareous matter are annually produced.\*

In the lower plain of the Mississippi, immense inundations continually take place from the melting of the snow, and the flood of water thus suddenly poured into the bed of the river, and that of the Missouri. "The mouths of the large tributary rivers are thus absolutely choaked up, and their waters, being driven backwards, overflow their banks, and inundate the lower parts of the plain, forming lakes of twenty miles or more in length. Here we have the conditions required for the formation of future coal

\* *Vide* Principles of Geology, vol. i.