

of bituminization has been found considerably advanced in the beds of peat.

Peat bogs are remarkable for their antiseptic power, or the power of preserving animal substances from putrefaction; some remarkable cases of which are on record.

Peat bogs sometimes burst their barriers in consequence of heavy rains, and produce extensive inundations of black mud.

The increase of peat varies so much under different circumstances, that it is of no use to attempt to ascertain its rate of growth. On the continent of Europe, it is stated to have gained seven feet in thirty years.

Where peat is formed in, or transported into estuaries, it is sometimes covered with a deposit of mud; over this another layer of peat forms, and in this way several alternations may occur.

In some peat bogs large trees have been found standing where they originally grew, yet immersed to the depth of twenty feet, as in the Isle of Man.

#### DRIFT WOOD.

Large rivers, which pass through vast forests, carry down immense quantities of timber. When these rivers overflow their banks, this timber is in part deposited upon the low grounds. But much of it also collects in the eddies along the shores, or is carried into the ocean. After a time it becomes *water-logged*, that is, saturated with water, and sinks to the bottom. Thus a deposit of entangled wood is often formed over large areas. This is subsequently covered by mud; and then another layer of wood is brought over the mud; so that, in the course of ages, several alternations of wood and soil are accumulated. The wood becomes slowly changed into what Dr. Macculloch terms *forest peat*; that is, peat which retains its woody fiber.

The Mississippi furnishes the most remarkable example known of these accumulations. In consequence of some obstruction in the arm of the river called the Atchafalaya, supposed to have been formerly the bed of the Red river, a raft had accumulated in thirty-five years, which in 1816 was ten miles long, 220 yards wide, and eight feet thick. Although floating, it is covered with living plants, and of course with soil. Similar rafts occur on the Red river; and one on the Washita concealed the surface for seventeen leagues. At the mouth of the Mississippi, also, numerous alternations of drift wood and mud exist, extending over hundreds of square leagues.

Similar deposits of wood and mud are found in the river Mackenzie, which empties into the North Sea, and in the lakes through which it passes. At the mouth of the river, which is almost beyond the region of vegetation, are extensive deposits brought from the more southern region through which the river passes.

A part of the drift wood which is brought down the Mississippi and other rivers, along the coast of America, is carried northward by the Gulf Stream and thrown upon the coasts of Greenland. The same thing happens in the bays of Spitzbergen and on the coasts of Siberia.