

are supposed to cover one-tenth of the surface of the island. The thickness of the peat varies from 12 to above 40 feet; the upper layers being very fibrous, and showing clearly the structure of the component plants; the lowest, a close dense mass, much resembling coal, and breaking with conchoidal fracture.

Most of the Irish peat bogs contain trees, which in some cases lie at the bottom; and it may be thought that the whole deposit is little else than the accumulated ruins of a long succession of forests; in other cases the vegetable mass, whether thus accumulated or aggregated by drifting, has served as the basis of a new race of trees, whose roots remain at the surface. And it is observed, in the "Reports" on the bogs of Ireland, that in that country it is common to find trees, in the place and attitude of growth, rooted on peat seven feet thick. This is especially the case with fir trees (so at Waghen, in Yorkshire), but oaks are commonly found to rest on the gravelly basis of the bog. Shelly marls frequently lie under the peat, and indicate that, in such cases, the origin of the bog is to be ascribed to the same process which is constantly going on to extinguish some modern lakes. This is the view adopted by the ordnance surveyors, in their Report on the County of Londonderry.

Antiquity of Subterranean Forests.

Closely connected with the determination of the question whether the trees of the "submarine forests" grew where now they lie enveloped in peat, are facts ascertained regarding the antiquity of certain of these deposits. De Luc, who looked on phenomena of this nature with great interest, on account of their important bearing on two capital points to which his mind was continually turning, viz. the origin of coal, and the antiquity of our continents,—notices, a few leagues from Winsen (near Hamburg), the occurrence of four or five inches of vegetable earth (*terre végétale*) above