

is described as being fifty miles long, by two or three broad ; and the great marsh of Montoire, near the mouth of the Loire, is mentioned, by Blavier, as being more than fifty leagues in circumference. It is a curious and well-ascertained fact, that many of these mosses of the north of Europe occupy the place of forests of pine and oak, which have, many of them, disappeared within the historical era. Such changes are brought about by the fall of trees and the stagnation of water, caused by their trunks and branches obstructing the free drainage of the atmospheric waters, and giving rise to a marsh. In a warm climate, such decayed timber would immediately be removed by insects, or by putrefaction ; but, in the cold temperature now prevailing in our latitudes, many examples are recorded of marshes originating in this source. Thus, in Mar forest, in Aberdeenshire, large trunks of Scotch fir, which had fallen from age and decay, were soon immured in peat, formed partly out of their perishing leaves and branches, and in part from the growth of other plants. We also learn, that the overthrow of a forest by a storm, about the middle of the seventeenth century, gave rise to a peat-moss near Lochbroom, in Ross-shire, where, in less than half a century after the fall of the trees, the inhabitants dug peat.* Dr. Walker mentions a similar change, when, in the year 1756, the whole wood of Drumlanrig in Dumfries-shire was upset by the wind. Such events explain the occurrence, both in Britain and on the Continent, of mosses where the trees are all broken within two or three feet of the original surface, and where their trunks all lie in the same direction.†

It may however be suggested in these cases, that the soil had become exhausted for trees, and that, on the principle of that natural rotation which prevails in the vegetable world, one set of plants died out and another succeeded. It is certainly a remarkable fact that in the Danish islands, and in Jutland and Holstein, fir wood of various species, especially Scotch fir, is found at the bottom of the peat-mosses, although it is well ascertained that for the last five centuries no Coniferæ have grown wild in these countries ; the coniferous trees which now flourish there having been all planted towards the close of the last century.

Nothing is more common than the occurrence of buried trees at the bottom of the Irish peat-mosses, as also in most of those of England, France, and Holland ; and they have been so often observed with parts of their trunks standing erect, and with their roots fixed to the subsoil, that no doubt can be entertained of their having generally grown on the spot. They consist, for the most part, of the fir, the oak, and the birch : where the subsoil is clay, the remains of oak are the most abundant ; where sand is the substratum, fir prevails. In the marsh of Curragh, in the Isle of Man, vast trees are discovered standing firm on their roots, though at the depth of eighteen or twenty feet below the surface. Some naturalists have desired to refer the imbedding of timber in peat-mosses to aqueous transport-

* Dr. Rennie's Essays, p. 65.

† Ibid. p. 30.