ing the moss, showing that the moss has formed since the growth of the trees (see p. 564). In other cases, the roots and trunks occur in the heart of the peat, proving that the trees grew upon the mossy surface, and were finally, on their decay, inclosed in growing peat (Fig. 180). A succession of trees has been observed among the Danish peat-mosses, the Scotch fir (*Pinus sylvestris*) and white birch (*Betula alba*) being characteristic of the lower layers; higher portions of the peat being marked by remains of the oak, while at the

Fig. 180.—Scene in a Sutherland Peat-moss.

top comes the common beech. Remains of the same kinds of trees are abundant in the bogs of Scotland and Ireland.

The rate of growth of peat varies within wide limits. An interesting example of the formation and growth of peat-moss in the latter half of the seventeenth century is on record.[345] In the year 1651 an ancient pine-forest occupied a level tract of land among the hills in the west of Ross-shire. The trees were all dead, and in a condition to be blown down by the wind. About fifteen years later every vestige of a tree had disappeared, the site being occupied by a spongy green bog into which a man would sink up to the armpits. Before the year 1699 the tract had become firm enough to yield good peat for fuel. In the valley of the Somme, three feet of peat will grow in from 30 to 40 years.[346] On a moor in Hanover, a layer of peat from 4 to 6 feet thick

[345] Earl of Cromarty, Phil. Trans. xxvii.

[346] J. Kolb, Proc. Inst. Civ. Engin. xl. 1875, p. 35.