

included most of the trees in the swamp, were attacked, the disease being evident at some distance away, because of the yellow color of the foliage. Early in September the leaves dropped, and the trees robbed of their foliar organs soon died. No sooner were they dead than various saprophytes began their work, a shelf-fungus, as in Figure 7, being one of the most frequent invaders.

The wide-spread occurrence of these diseases is probably greater than most people imagine. In the instance that I have cited as coming under my own observation a considerable portion of the swamp suffered. In Queen's Park, Toronto, few sound oaks are to be found, nearly all being sapped by a *Polyporus*. Recently a research, instituted by the United States Government in South Dakota, showed that half of the standing timber in the forests of that State, including the Black Hills Forest Reserve, had been killed by a certain disease, and that unless means were speedily taken to check the trouble, the remaining trees would go in the same way.

Happily the effects are not usually as dire as in the last instance mentioned, but even a casual observation of a forest shows that many branches die from one cause or another, and that here and there a tree has succumbed. The direct loss may not be great, but dry fuel is furnished for fires, the results of which may be disastrous. A safe remedy where it can be applied, is to remove mature timber, for it is most liable to disease, and all infected timber, no matter of what age. Unfortunately such a procedure has not yet been found practicable on the reserves in Ontario.

The successful treatment of cut and sawn timber for the prevention of disease, is one of the problems that bids fair to solution. Such timber is very liable to rot, especially if used in a moist place. This is true of wood covered wholly or in part by soil, as in the case of telegraph or telephone poles, fence posts, railroad ties, bridge and foundation timbers, planks for pavements and so on. Frequently, too, timber often discolors, thereby depreciating in market value. Thus "green" and "blue" wood not uncommonly occur, the color in each case being due to the presence of certain fungi, that either contain a pigment within