

second, the treatment of wood products to ensure reasonable service.

The parts of the trees attacked and the immediate effects produced are various. In some cases the disease works in the roots, rendering treatment extremely difficult. In other cases the fungus may grow in the soil at first, and then entering by the roots work its way up through the stem, its presence becoming apparent only when the tree begins to die or the fruiting bodies of the fungus are found at its surface. More frequently the spores of the parasite infect the host at some wounded spot or region of careless pruning, and as in the last instance may live in the host unsuspected for years. Such a case is represented in figures 1 and 2, in which the fruiting bodies of a polyporus are shown upon the surface of the trunk of a red oak. The removal of these plague spots should be attended to promptly when they make their appearance on trees in streets and parks. The carelessness displayed in the treatment of shade trees is lamentable, people and animals being allowed to wound and maltreat them, thereby exposing them to the almost certain entrance of destructive fungi. The smallness of the number of undiseased and undeformed trees along the streets of most cities is deplorable, and altogether inexcusable. Illustration 3 tells its own story.

Sometimes the disease reveals its presence by swellings, or other malformations. Even in the case of the red oak in Figure 1, it is observable that the base of the trunk is abnormally enlarged. This local stimulation to growth is not at all uncommon. A rather interesting example of deformity is to be seen in the so-called witches' brooms of the balsam fir (photograph 4), the cherry, alder, some of the birches, and a few others. Generally the infected area becomes swollen, and all of the buds, including the dormant ones, develop, forming a dense mass of distorted and stunted branchlets. Another manifestation of disease and its effects is represented in Figures 5, 6 and 7. The host in this particular example was black spruce, and the parasite a rust that attacked the leaves. In Figure 5 there is one uninfected leaf, and the spore cups of the rust are shown growing upon all of the rest. Nearly all of the leaves on the diseased trees, which