

of the forest. But, with all their great differences, they have, of course, certain points in common, which separate them from higher plants, although some of these characteristics are shared by ferns and lycopods. I refer to their mode of reproduction.

Before entering upon the discussion of the separate kinds, it may be well to review the characteristics of this function. The organs of reproduction—that is the spores, analogous to seed—in the higher fungi, as the toadstool, are contained in the most conspicuous part of the organism, which we see above ground. That which answers to the stem and root of the plant combined is below ground, or feeding on the object that supplies its nourishment by sending its minute threads through the tissues, is known as mycelium.

To become a true resting spore, which, like the seed, can remain dormant for seasons, until favorable conditions for its development are offered, a certain process, analogous to the fertilization of the pollen on the egg of the flowering plant, is necessary. But these resting spores are not necessary during the time of the most active growth of the fungi. Then spores, which may be compared to bulblets such as are produced by the onion and lily, are developed, and these seem to possess the power of indefinite multiplication. It is this power which explains the very rapid development of fungi, and renders them particularly destructive. It seems evident that nearly all of the blights, so called, troubling our fruit trees, are due chiefly to some sort of fungus which has gradually spread. This will account for the fact that orchards of certain varieties of fruit, once bearing sure crops, are now very uncertain and often failures.

SOME OF THE FUNGOID DISEASES AFFECTING OUR DECIDUOUS FRUITS.

Fusicladium dentriticum.—The first species of fungus to be discussed, because, perhaps, one of the most serious, is the black pear and apple smut, the *fusicladium dentriticum*. Mention of this can be found in older horticultural works, although nothing very definite.

Robert Hogg, in his "Manual of Fruits," says of the so-called Fox Whelp apple, that it may be known by its peculiar scabby spots (a figure in the book shows this), but adds that this is not a distinguishing mark of this apple, being in reality the effect of a species of fungus, *spilocæ pome* (this is the old name of the *fusicladium dentriticum*.) which affects other apples as well. The disease then cannot have been considered anything formidable, as no further mention of it is made.

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Comparing hardly be any and apples, and to an aggravat more than ot endeavoring to this blight.

Ten years a bore and matur being abandone experimental or extreme southw becoming smok smut-like fungu this was badly dissipated near next season tha as well as on latter in precise ing the foliage a to find, after a d appearance in al severely, others the blight of t