

Some Effects of Parasitic Fungi on Leaf Tissue

By E. S. REYNOLDS, University of Tennessee.
(*Abstract.*)

A considerable amount of information has been gathered in the past upon the general effects of parasitic fungus invasion upon the cell contents of leaf cells. It was found by numerous microtome sections that the cells are affected in quite diverse ways, depending upon the particular disease and the particular host studied. In some cases the cell organs are killed, evidently by a very strong poison, while in others the organs are stimulated into excessive growth, resulting in enlarged nuclei or an increase in their number. In still other cases the nuclei are greatly changed in form, from crescentic to obovoid or irregularly dumb-bell shaped. Some of these latter forms seem to precede or to be the result of direct division of the nucleus. The chloroplasts most often are reduced in size or are missing entirely. The general cytoplasm seems often to be changed into, or replaced by, oil drops, or at times a granular deposit, the composition of which was not determined. These changes are equivalent to those which have been previously reported by others as occurring in other kinds of parasitic tissue.