

THE APPLE SCAB.



PROBABLY nothing has acted more powerfully in overcoming the prejudice of the farmer against agricultural education, than the specific aid to the successful pursuit of his work, which has been given by the chemist, the botanist and the etomologist. Just now fruit growers are under special obligation to the student of microscopic botany, called a mycologist, for the useful results of his investigations into the life history of such fungi as black knot, pear blight, apple scab, and a host of others.

This latter has been known to botanists on the continent of Europe for some fifty years, but, since the year 1869, its habits have been more carefully observed by mycologists, who have named it *Fusicladium dendriticum*. We gave some space to its description in Volume X, page 103, and since that time have endeavored to keep apple growers posted concerning the progress of the evil and the success of the various remedies proposed for its destruction. At that time it had reached Australia : now we have reports of its presence even in New Zealand.

An important step in advance was made when it was shown that the fungus causing the leaf blight of apple, and resulting from its early dropping from the tree, was identical with that known as the scab on the fruit itself.

On the leaves, the scab appears first as small olive-green spots, of a definite and rounded outline (Fig. 29). These increase in size, and assume a velvety appearance, with a less regular border ; sometimes two or more spots will coalesce, as it were, forming one large and

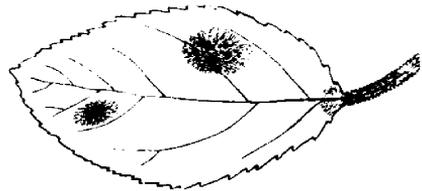


FIG. 29.

irregular one. Sometimes even the petioles and the young twigs become affected ; thus in every possible way the fungus tries to rob the tree of its vigor.

The most favorable conditions for its growth are the cool, moist weather of spring and fall, while its spread is retarded by the drouth and heat of mid-summer. Owing to the dry, warm weather prevailing in the early part of last summer, our apples were much freer from scab than usual.

The fungus appears to retain its vitality during the winter season, being known to spread even in barrels from apple to apple ; and it remains in a living condition through the winter on the twigs of the apples, ready to begin its work of devastation in spring-time. The loss caused to the country is alarming. The Secretary of the Illinois State Horticultural Society places the annual loss due to this parasitic growth at \$400,000, but this is very small compared with the annual loss to apple growers in Ontario.