

FIG. 2035.



FIG. 2036.

fungus plants, apparently aware of the necessity of providing a thicker walled spore for the winter, cease to grow uredospores and instead produces a crop of teleutospores. In the Asparagus Rust the uredospores are not multiplied by reproduction; that is, they do not become plants producing more rust, more uredospores, but, shortly after the yellow rust appears on the stalks, the black teleutospores are to be found in the same pustules, thus completing the cycle.

What this parasite accomplishes in the way of mischief is done by the power of



FIG. 2037.

numbers. Shall we count the spores to be found on a piece of asparagus stalk not more than three inches long as presented in Fig. 2035 and interpreted by Fig. 2037, and tell how many they be? Such is the host with which we have to contend now on the war path: infinitesimal in size, infinite in number, "horsed upon the sightless couriers of the air" it comes as destructive, if not as "terrible as an army with banners," and we are powerless to stay its coming. Spraying with fungicides is in this instance of doubtful utility, for such is the foliage and smoothness of the epidermis of asparagus that it is well nigh impossible for the fungicide to effect a lodgement. Nevertheless we should be able to stamp out the enemy by united action of asparagus growers in cutting off at the ground every affected stalk, as soon as, by its change of color it is shown to be no longer of service to the plant, and burning them forthwith; for, if the teleutospores are destroyed before they are dislodged from the stocks where they are formed, then there can be no sporidia in the spring to breed Rust. The importance of *united action* should be apparent to all, and the importance of burning the teleutospores *while yet in the stalk* will be seen when it is understood that the teleutospores produce sporidia without reference to any particular place, but do so wherever they chance to be if only there be the requisite atmospheric conditions.

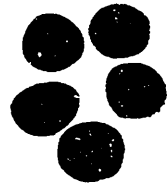


FIG. 2038.

The writer desires to acknowledge his indebtedness to Professor Byron D. Halsted, of the New Jersey Experiment Station, whose valuable paper on the Rusts of Horticultural Plants has been largely drawn upon, as published in the Transactions of the Massachusetts Horticultural Society for 1900, and the accompanying figures copied to illustrate this paper.

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