

## Garden and Orchard

(Conducted by Mr. Geo. Moore)

### THE SAN JOSE SCALE.

In view of the peril which threatens us from the ravages of this peculiarly destructive insect, Professor Fletcher did well to call attention to it at the last meeting of the Fruit-Growers Association.

There are numerous scale insects which attack vegetation, so called because they are protected by a hard scale or shell, and this renders them exceedingly difficult enemies to overcome.

A good deal of alarm is being felt by growers of fruit as to the destruction being wrought by one in particular, a most pernicious fellow as its name implies (*Aspidiotus perniciosus*). It made its first appearance on this continent in California, and is



Scale Insects

familiarly known as the San Jose Scale; it is supposed to have been imported from Japan. It has spread with alarming rapidity over the Western and some other of the United States, making its progress from the Westward, as did the Colorado beetle, and is as destructive to all fruit trees, and, indeed, to all trees and shrubs, as that loathsome insect is to the potato—It really is a much greater evil; first, because its presence is more difficult to detect, and next, because it does not succumb to any but severe treatment on account of the coat of mail with which it is covered, and the peril appears still greater in cold climates because the scale is thicker.

Another difficulty as to its annihilation exists in the fact that it fixes itself upon all parts of the tree or plant. Young and tender limbs, leaves, and fruit do not escape its ravages, and not only are the individual insects set so closely to each other as to prevent respiration, but they also prey upon the vital nourishment of the tree, its sap, or cambium. It will therefore be evident that plants cannot long survive under these circumstances, and even if they do, they will be made unhealthy by the scurfy deposit remaining on them, and the injury done to the bark.

Another dangerous characteristic of the "San Jose Scale" is its minuteness while in the embryo state; the almost microscopic young scales might elude the observation of the most careful scrutiny were it not for a peculiarity which they possess which makes their presence distinguishable on the stem, leaves, twigs and fruit of their victims: round each individual is a bright red ring, which thus encircling it, makes the real enemy a conspicuous object to the close observer.

So great is the damage to be feared from the incursion of this pest into our nurseries, orchards, gardens, and forests, that scientific men, who are aware of it, are