

climates. Again between Guelph and the Niagara district the difference in climate is sufficient to lessen the length of the breeding season by about a month, so that this factor along with the greatly lessened number of days of optimum temperature and the other facts mentioned above all lead to the hope that most of the parts not infested to-day in Ontario will remain free. Time alone, however, will tell whether this hope will be verified, and until we are certain the best course is as I have said above, to "Take no chances."

PLANTS ATTACKED BY SAN JOSÉ SCALE.

We have found the scale attacking the following orchard trees and shrubs severely: *Apple, crab, pear, plum (both European and Japanese), peach, sweet cherry, red currant and black currant*. It very seldom attacks sour cherry; in fact we have never found it on any of the sour cherry varieties. Kieffer pears, though occasionally attacked, are seldom much infested even when near other trees badly attacked. Quince, apricot and gooseberry in our experience are not commonly or severely attacked, though it is very probable that we may find exceptions in the future, as some writers include these among the severely or commonly infested plants. Of apple trees, the Spy, though by no means immune, seems usually to be less severely attacked than most other varieties.

In addition to the above plants we have found the scale on the following ornamentals or forest trees and shrubs: *Mountain ash, hawthorn, Japanese quince, Japanese flowering crab, rose, wild red cherry or pin cherry, American elm, European elm, dogwood (Cornus alternifolia and C. sibirica), willow (Salix vitellina), poplar (species not certain, but probably Carolina poplar (Populus deltoides), juneberry, lilac, sumach (Rhus typhina), Japanese walnut and honey locust (Gleditsia triacanthos)*. The first four of these plants are often very severely attacked, and sometimes killed. The elms, when small, may be destroyed; but once they have become fifteen feet or more in height the scale does not seem to be able to kill them, though it may cause some of the smaller branches to die.

Dr. W. E. Britton* in his carefully compiled list of plants commonly attacked by the scale includes the following additional Ontario trees and shrubs: *Chokecherry, Lombardy poplar, flowering currant (Ribes aureum), osage orange and several species of willow*.

San José Scale may also be found in very limited numbers on almost any tree that is close beside or beneath badly infested trees; for instance I have found it on the following young trees: *maples of several kinds, catalpa, birch, oak, tulip, basswood and horse chestnut*, situated alongside very badly infested pears and plums, but it is doubtful whether it winters on such trees.

The above lists of ornamental and forest trees and shrubs might give the impression that our forests are likely to harbor the scale in great numbers and so become a dangerous source of infestation, but this does not seem to be the case. We find that scale-infested trees are usually situated in the orchard or else along the roadside, in fence corners or on lawns, and, while susceptible species of the outer trees of a forest bordering on an infested orchard may be attacked, there is usually little danger from the forest trees as a whole.

*Report of the Connecticut Agricultural Experimental Station, 1903, Part II., second report of the Entomologist, pp. 132-133.