

upon us with great suddenness. It has escaped observation until it has appeared in such extent as to cause alarm. The Ontario Department of Agriculture has had extensive investigation as to the distribution of the insect, and the Minister submitted a Bill at the recent session of the Legislature which was passed and is now in force. This Act appears elsewhere in this bulletin. The hearty co-operation of all fruitgrowers is asked in the enforcement of this Act. Legislation as to this scale has been passed in most of the eastern and northern States.

WHEN AND WHENCE IT CAME.

The general consensus of opinion after much investigation is, that it came originally from California, where it was noticed as a pest in the San José Valley as far back as 1873. In 1880 Prof. Comstock described it, and named the insect *Aspidiotus perniciosus*, on account of its serious character as a scale. It is believed to have been introduced into the East in 1886-7 by two New Jersey nurseries, one at Burlington, the other at Little Silver. These firms imported from the San José Valley a variety of Japanese plum, the Kelsey, which was claimed to be curculio proof. In 1889 or 1890 the first scaly stock from this importation began to be distributed, and in August of 1893 the San José Scale was first observed on the eastern side of the Rocky Mountains. It was located in an orchard of Charlottesville, Virginia, and since then each season has extended the list of infested districts.

WHY THE INSECT CAUSES ALARM.

1. It possesses marvellous powers of reproduction. A single female that has wintered over may be the progenitor of millions in a single season; some have computed that her progeny may reach the incredible number of 3,000,000,000. There may be four generations in a season, the adult females of each giving birth to living young for five or six weeks, the progeny of these bearing young when about thirty days old. Each female brings into existence 100 to 500 insects during her lifetime. Thus it will be seen that a great confusion of generations will soon exist, as there may be upon a plant at one time the young of several generations.
2. Infested young trees perish in two or three years.
3. The range of food plants is extensive, and all parts of the plant may be attacked—leaf, stem, twig and fruit. The scale has been found upon the peach, pear, plum, apple, cherry, apricot, quince, currant, gooseberry, raspberry, rose, hawthorn and even elm.
4. The insect and scale are exceedingly minute. The scale is often much the same color as the bark of the infested trees. Most are less than one-sixteenth of an inch in diameter, and are thus almost invisible to the naked eye.
5. It is readily introduced by nursery stock and fruit from infested trees.

HOW IT MAY BE DISTRIBUTED.

In the work of distribution, the insect itself can do but little, as it is quite helpless to move from place to place. Its life of active movement is very brief—

a few hours in each place, the remains of the old scale becoming the male wingless. The male gets upon the other tree often more than they present may have that appearance. Thus birds all be improved.

The new scale. About June like yellow most a day become attached sedentary life wings. The adult condition centre. The scale and may be the bark; The scale of distinguished and does not shell and seen the six weeks. The male about five winged, fly-like sion of gener-