Farm and Garden

A bulletin issued by the Ontario Department of Agriculture gives the following information. This is one of the most destructive mascet that ever was found in Ontario. Fruit growers and entour-logists have been much concerned during the past few years to whether it would be not converted united the season. It has come and it has survived, and in 18-7 it was definitely located in several ordinario. In three or four cases the trees infected are numbered by hundreds. The danger must be the season. It has econe with great suddenness. It has escaped observation until it has appeared in such oxtent as to cause alarm. The Ontario Department of Agriculture has had extensive investigation as to the distribution of the insect, and the Minister aubranted a Bill at the recent season of the Legislature which was passed and is now in force. The hearty occupantion of all fruitgrowers is asked in the enforcement of this Act. Legislation as to to this scale has been passed in most of the eastern and northern States.

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 Jose Valley as far back as 1873. In 1880 Prof. Comstock described it and named the insect Aspudotus permoiosus, on account of its serious character as a scale. It is believed to have been introduced into the East in 1880 7 by two New Jersey nurseries, one at Burlington, the other at Little Silver. These firms imported from the San Jose Valley a variety of Japanese plum, the Kelsey, which was claimed to be curcullo proof. In 1880 or 1890 the first scaly stock from this importation began to be distributed, and in August of 1893 the Ban Jose Sale was first observed on the eastern side of the Rocky Mountairs. It was located in an orchard of Charlotteaville, Virginia, and since then each season has extended the list of infested districts.

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 feweral generations. Infested young irree perish in two or three years. The range of food plants is extensive, and all parts of the plant may be atacked—leaf, stem, twag and fruit. The scale has been found upon the peach, pear, plum, apple, cherry applerty, rose hawthorn and even elim. The insect and scale are exceedingly minute. The eacle 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 eya. It is readily introduced by nursery stook and fruit from infested trees.

stock and fruit from infested trees.

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; at most a day or two. It moves only a few inches from its birthplace, then settles, becomes covered with a scale, and in the case of the female, remains fixed for life, and begins producing young in about thirty days. After becoming fixed, it lives by sucking the sap of the plant upon which it is ocated. The males have wings and may fly about at maturity, but the females are always wingless. During the few hours or days the tiny lice are moving about, they may get upon birds and such insects as ants and small bestles, and by them be carried to other trees. One observer has noticed that in infested districts the scale is often more common near a bird's nest. As trees in a nursery grow closes together, they present the scale is often more common may assist in spreading these insects. Fruit from infested trees may have the scale upon it; even wind may assist in spreading these insects that appear at first so comparatively helpless to travel by their own efforts. Thus birds, insects, fruit, scions from infested trees, infested trees, and wind may all be important factors in the distribution of this scale.

The nearly fully grown insect passes

The nearly fully grown insect passes se winter beneath its wax-like scale. The news, the winter beneath its wax-like scale. About June the young begin to appear, as exceedingly minute, six-legged insects, like yellowish specks, moving about. They creep about only for a few hours, at most a day or two, then settle but a few inches from their birthplace, and become attached to the

spot from which the females never move During their sedentary life the females lose their feelers and legs, and have neither eyes nor wings. The males, however, have legs, feet, at (antenna) eyes and winge in the salt outductor. The scale of the female is (antenna) eyes and winge in the adult on adution. The scale is from a twelfth control. This scale is from a twelfth to one twentieth of an inch in diameter, and may be of a light or dark grey color, and usually is much the same color as the back, the implement of the centre may be a pade yellow or blackesh color. The scale of the made is ching, with the implement color and is thus readily distinguished from that of the female. The female brings ferth living young, and does not lay eggs, as is usually the case with scale insects, such as the oyster shell and scurry scales. She may bring into his from the to 600 young during the six weeks of her existence after reaching the adult stage. The males develop about a week somer than the females, the latter taking abou, five weeks, and energy from their ossles as exceedingly minute two-winged, fly-like insocts. From June, when the young appear, a constant succession of generations is observed. a constant succession of generations is observed.

The scale of these insects is formed from a waxy secretion which com-mences soon after they come into existence, and forms a protective cov-ering as development proceeds. In the earlier stages of growth the scale

ering as development proceeds. In the carlier stages of growth the scale presents a somewhat greyish-yellow color, and gradually becomes darker. The general appearance on twigs is that of a greyish, slightly roughened scurfy deposit. This Judes the natural reddish color of the young limbs of the peach, pear and apple. They sometimes even look as if sprinkled with sahes. If the scales are crushed, as yellowish only liquid will appear from the crueled soft yellow insects beneath the scales. Examined in summer many show orange-colored larve, snowy-white young scales, mingled with old brown or blackened matured scales. This insect produces a peculiar reddening effect upon the skin of the fruit and of tender twigs. An encircling band of reddish discoloration around the margin of each formale scale is very marked on the fruit of pears. The cambium layer of young twigs where scales are massed is usually stained deep red or purplash. Where the scales are few the purplish where the scales are few the purplish ring surrounding each is quite distinguishable.

It is certain that the scale was introduced on infested nursery stock. The same danger is to be feared again. Every person who buys stock should have it perfectly examined before setting it out. The examination should be thorough, as the scales are minute and are easily overlooked. There is one method of treating stock that is sure to destroy all kinds or insect life,—but it is applicable only in nurseries and not by the farmer or fruit grower—I, is the treatment with hydrocyanic acid gas. Nurserymen will do well to consider the advisability of treating all stock handled by them in this way. We give the following for their benefit:

When the trees are at all badly infested there is only one treatment to be recommended with safety, and that is to root up the trees and burn them at ones. Even when only slightly infested the work of washing and spraying may not be done thoroughly enough to destroy every scale, and as the insect multiplies so rapidly the greatest care must be taken not to allow even one seals to remain. The advice given is to throughly destroy all stock and all trees found to be infested. During the winter and early spring, before the insects appear. some may desire to treat the trees before the inspector arrives to destroy under the Act. In that case the two remedies or methods are with soap wash and with kerosene. Soap wash and with kerosene. Soap wash and with kerosene some soad of the so

gallous of kerosene will spray three hundred to four hundred trees, depending on size, and ought not to cost over ton cente a gallon in barrel quantities. This does not make it very expensive treatment. It should silways be used on a bright, warm day, when the plants are dry, and just as little applied as com be made to wet properly every part of the plant.

There are two enemies to the scale among insects, both of which are reported to aid very materially in acquired the read in check. One, the law establed Ladyburd (Chidoconsorulaerus, is very common on refacted trees, apparently feeding upon the scale, the other is a chident paraente (Aphelmus fuscipenius.)

FIRESIDE FUN,

"Why do you lean over the empty sek?" "I am mourning over decaek i parted spirits."

What English River has the most outed course? The Trent for es of its course it is altogether in

crooked course ? The rrent for mules of its course it is altogether in Notts.

Hejack. "I hear that you are building a new house?" Tomdike. "Yos; I couldn't very well build an old one, you known.

"Say, masea, where did de Mexicans suffer de most?" "Why, in defect (defeat), to be sure. What you ask such sully questions for?" "Would you take me for twenty?" said a young lady, who looked much younger. "Bless you, my child," sad an admiring bachelor, "I would take you for life.

Office Boy: "Please, sir, I've a complaint to make. The book-keeper knoked me." Boss: "Of course he knoked you. You don't expect me to attend to everything, do you?"

He (desgreeable): "What the mischief is the matter with this dinner?" She (mildly): "I cooked it, denr." He: "Well, I was wondering what made it so much better than usual."

Mamma: "Ethel, what do you mean by shouting in that diagracoful fashion? See how quiet Willie is." "Of course he's quiet: that's our game. He's papa coming Lome late, and I'm you."

"What sent that dog away howling so?" asked the oposaum. "Oh,"

"What sent that dog away howling so?" asked the opossum. "Oh," said the porcupine, "he was looking round for information, and I kindly supplied him with a few points, that is all."

na ali."

Little Dick: "Papa, didn't you tell
mamma we must economies?" Papa:
"I did, my son." Little Dick:
"Well, I was thinking that if you'd
get me a pony I wouldn't wear out so
many shoes."

many shoes."

First Baby: "I shouldn't like to be a baby up in the Arctic regions."

Second Baby: "Why not?" First Baby: "The nights are six months long there, and I don't believe I could cry for so long without stopping."

Teacher: "Now, leather comes from the cow, and wool from the steep, and wool is made into cloth, and cloth into coats. Now, what is your coat made of—yours, Tommy?"

Tommy (with hesitation): "Out o' feythers."

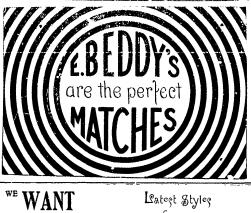
A sentleman met a half-witted lad.

A gentleman met a half-witted lad in the road, and, placing in one of his hands a sixpence and a penny, asked him which of the two he would choose. The lad replied that he would'nt be greedy he'd keep the lit-ties."

tiest."

The Dear Child: "Oh, Mrs. Brown, when did you get back?" Mrs. Brown: "Bless you, dear, I was not sawy anywhere. What made you think so?" The Dear Child: "I heard my mamms say that you were at Loggerheads with your husband for over a week."





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