

8. THE APPLE APHIS (*Aphis mali*).—During winter small shining black eggs may be found on the twigs. From these, early in spring, green plant-lice hatch and cluster on and in between the young leaves of the opening buds. They also occur in large numbers beneath the leaves in autumn. *Remedies*: Tobacco and soap wash (Formula IV.), whale-oil soap (1 lb. in 8 gallons of water, Formula III).

ATTACKING THE WOOD.

9. BORERS: FLAT-HEADED BORER (*Chrysobothris femorata*), ROUND-HEADED BORER (*Saperda candida*).—The above named are the two commonest kinds of borers which attack the apple. They vary somewhat in their habits, but the best remedy for both is undoubtedly a regular treatment every June just before the time the eggs are usually laid, with deterrent washes, such as Formula V or the same with crude carbolic acid added in the proportion of 1 pint to 4 gallons of the wash, to be applied with a large brush to the bark of the trunks and larger limbs. When a tree is infested, the presence of the grub may be detected by the borings which it pushes out of its burrows and by the sunken discoloured appearance of the bark. By cutting through the bark the grub can be destroyed. If it has penetrated into the wood, it can be killed with a piece of stout pliable wire.

OCCURRING ON THE BARK.

10. THE SAN JOSÉ SCALE (*Aspidiotus perniciosus*).—Minute almost circular scale-insects, one thirtieth of an inch wide, shaped like an inverted saucer with a depressed ring around a central point. Inside this ring, black or dark-coloured. This very inconspicuous insect, when in small numbers, is easily overlooked, but when abundant gives to the bark a dirty, scurfy and grayish colour as though dusted with ashes. *Remedy*: This is by far the most difficult insect to eradicate which the fruit growers have ever had to deal with. In cases of bad infestation the destruction of infested trees with fire will be found the most economic course. The two treatments which have given the best results, are the spraying of trees in winter or before the buds burst with whale-oil soap solution (2 lbs. in 1 gallon of water) or with a 25 to 30 per cent application of crude petroleum and water. Experiments are now being carried on to discover a more effective safe remedy for this insect.

11. THE OYSTER-SHELL BARK-LOUSE (*Mytilaspis pomorum*).—Small scale-insects furnished with a beak and protected by a waxy scale one-tenth of an inch in length shaped somewhat like an elongated oyster shell. The young lice hatch in spring about 1st of June, when they possess legs and are active for a few days only; at this time they are soft and unprotected. There is only one brood in the year. *Remedy*: Spray the trees during winter with lime wash (1 or 2 lbs. of fresh lime to a gallon of water), or, when the young scale-insects hatch, spray with kerosene emulsion (Formula I) or whale-oil soap (Formula III).

There are several other kinds of scale-insects which occur upon the apple, which may be treated in the same way as the Oyster-shell Bark-lice.