

mealy bug that was the offender. Still, as there is a chance for this dangerous intruder to creep in unrecognized, it is well to describe it fully.

It is quite a large insect, usually dark orange, red or scarlet body, with black legs, and a yellowish, mealy powder on the back. The egg-sack is fluted or ridged lengthwise, creamy white, filled with eggs and a cottony mass. Length of insect, including egg-sack, three-eighths of an inch. The bright red and white contrast finely, and its size precludes any chance of failure to notice it. It attacks all vegetation, trees, shrubs and vines, but is especially dangerous to the Citrus family.

I intend soon to introduce and colonize its antagonist, the *Vedalia*, in the hope that it will subsist and thrive on our soft scales (*Lecanium*, *Kermes*), etc., and thus pre-occupy, if possible, the ground.

A very large gray and green scale (*Kermes*) affects oaks and magnolias, but it is usually kept in subjection by insect enemies, notably *Tachina* and *Ichneumon* flies.

SPRAY SOLUTIONS.

Nothing has been done in practical entomology that has shown better results than the use of emulsions containing kerosene or insoluble poison held in suspension, and their application to infected plants in a fine spray by various atomizers and spray pumps. With one of these machines an insecticide can be brought into contact with the insect, and its feeding ground thoroughly impregnated with poison. It is needful that the spray be very fine, and that it be applied with force to reach every infected part, or the hiding places of insects. For cases like infected buildings, as chicken houses, that are usually very difficult to keep clear of mites and tick-fleas, the spray of carbolized white-wash, tobacco, kerosene, oil of tansy, etc., is easily applied.

I append a few formulas that have been tried and found to be valuable:

I. SOLUTIONS

- (1) Tobacco, 1 lb.; boiling water, 3 gallons; strain when cool. Very effective when used as a spray against flea beetles, lice, aphides (plant lice), and ticks.
- (2) Quassia chips, 1 lb.; boiling water, 3 gallons. This very bitter solution is good for prevention rather than cure. Apply as a spray to rose bushes and to kill plant lice.
- (3) Pyrethrum—1 ounce of the "Buhach" powder added to 2 gallons of cold water for cabbage, beets, tobacco, or any plant used for food, as this is not poisonous.
- (4) London purple, Paris green; actively poisonous. Use 1 lb. of the poison to 200 gallons water or other solutions. Dissolve a little flour paste in the water to make it sticky. Stir frequently. Applied to trees, it is a sure cure for all insect plagues.