

rise to a second and to subsequent generations of caterpillars which infest fruit. By their feeding the late caterpillars sometimes destroy large amounts of marketable fruit (fig. 12). Where this pest is serious it may be controlled by spraying with liquid lime-sulfur, 9 gallons to 100 gallons water, before the buds swell. Where Bordeaux mixture is preferred combine with arsenate of lead, 3 pounds to 100 gallons of spray. Nicotine sulfate, $\frac{3}{4}$ pint to 100 gallons of water, will also kill this insect if applied at the time the caterpillars are present on the surface.

Leaf Eating Caterpillars.—There are various kinds of chewing insects which eat peach foliage, including cankerworms, red-humped caterpillars, tent caterpillars and leaf rollers. Different methods of control may be used, but in general, spraying with basic arsenate of lead, 3 pounds to 100 gallons of water, at the time the insects first appear will give good results. Pyrethrum or buhach powder, 2½ to 5 pounds soaked over night in 5 gallons of water, and then enough water to make 200 gallons of spray, has been effective in the control of cankerworms. Pyrethrum is non-poisonous to humans and may, therefore, be used in preference to arsenate of lead when spraying the fruit near harvest time.

Black Peach Aphis, *Anuraphis persicae-niger* Smith.—This is a shiny black plant louse that appears in great numbers on tender shoots and fruit in the spring. They are easily controlled by spraying with 1 pint of nicotine sulfate and 4 to 5 pounds of fish oil soap to 100 gallons of water, or by dusting with nicodust, as soon as the insects appear. This insect also sometimes infests the roots and may be killed by the paradichlorobenzene treatment.

Scale Insects.—Various scale insects such as San Jose scale (*Aspidiotus perniciosus* Comst.), the black scale (*Saissetia oleae* Bern.), the peach scale (*Lecanium persicae* Fab.), the brown apricot scale (*Lecanium corni* Bouché) and others may become serious pests on the peach. The lime-sulfur sprays which are applied for other pests will generally keep these insects under control. However, if they become severe, oil sprays applied in the winter months (December–January) may be necessary.

Red Spiders.—There are two forms of red spider which may infest peach trees; namely, the brown mite (*Bryobia praetiosa* Koch) and the common red spider (*Tetranychus telarius* Linn.). The former hibernates in the egg stage on the trees, adults appear in early spring, and may become numerous during the summer. It is rarely troublesome but when it is serious one of the heavy oil sprays applied in the winter months will control this form. The common red spider, on the other