

shiny black or bronzed in color, sometimes ornamented with broad, pale stripes along the back; they all possess enormously developed thighs on the hind legs (Fig. 12), by means of which they are enabled to jump with great agility and hence have acquired the name of Flea-beetles. They appear in early spring, often in large numbers, and eat small holes in the foliage of young plants (Fig. 13), preferably the thick seed-leaves. The larvæ, as far as known, feed for the most part on the roots of weeds, as well as upon some garden vegetables; clean cultivation, especially of fence corners and bits of waste land, is therefore of much importance in the control of these and many other kinds of insects. The beetles may generally be found all through the summer when they especially attack the foliage of potatoes, turnips, beets, tomatoes, and many other plants. In many cases, fungus diseases, such as potato blight find suitable places for the growth of their spores in the holes made in the leaves by these beetles.

Cheese-cloth screens are very effective in warding off attacks upon young plants, such as cucumbers, etc., but where their use is not convenient or practicable the beetles may be controlled by the use of the poisoned Bordeaux mixture, the combination being effective against both the insects and the fungus diseases. For tender foliage arsenate of lead is preferable to Paris green as it is not so likely to cause injury by burning.

GRASSHOPPERS (or LOCUSTS as they should be called)—Fig. 14—are often very destructive in the later summer months, especially if the weather should be dry and hot. They are general feeders, few kinds of vegetation coming amiss to them when they are numerous and the supply of food at all scanty. Usually they are most abundant in dry pastures and the neighboring grain fields; this is due to the fact that their eggs are laid in grass lands, especially where the soil is dry and sandy, and the young nymphs grow there to maturity. They do not pass through any chrysalis stage, but gradually become bigger after each moult till the fully-winged adult state is reached. Many mechanical devices have been employed for their destruction, but the use of these troublesome methods can now be dispensed with since the discovery of the "Criddle mixture," a poisoned bait which derives its name from Mr. Norman Criddle, of Aweme, Manitoba, who proved its complete efficiency after a series of experiments. It is made and applied as follows: Take a three-gallon patent pail and fill it with fresh horse droppings, then empty into a barrel; repeat this five times. As each pailful is poured in, mix thoroughly with the manure about a quarter of a pound of Paris green and half a pound of salt which has been dissolved in water. There would thus be used about one pound of Paris green and two pounds of salt to half a barrel of manure. The mixture may be drawn in a cart to the infested places and scattered broadcast with a trowel or wooden paddle. The grasshoppers are attracted to it from considerable distances and are killed in large numbers. It has been found most