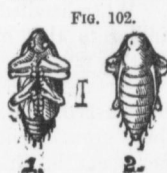


than a fifth of an inch in length, of a whitish colour, and the extremity of the abdomen ending



in two longish spines. Fig. 102 represents the front and back view of the pupa enlarged. After remaining in this condition about a fortnight, the perfect beetle is matured, and after a short period works its way out of the cell, and seeks the light of day.

FIG. 103.



Colours—Yellow and black.

The beetle (fig. 103) is about one quarter of an inch long. Its colour is a bright yellow, with a black head and broad stripes of black on the wing covers. The underside of the abdomen and the feet are black. There are, at least, three successive broods in each year. The last brood hibernates in the pupal state. Dr. Shimer has found the larvæ boring in the muskmelon and squash vines as late as October 1st. Dr. Harris states "that great numbers of these little beetles may be obtained in the autumn from the flowers of squash and pumpkin vines, the pollen and germs of which they are very fond of. They get into the blossoms as soon as the latter are opened, and are often caught there by the twisting and closing of the top of the flower, and when they want to escape they are obliged to gnaw a hole through the side of their temporary prison."

Various means have been suggested to prevent the ravages of these beetles, but the best remedy both for this and the cucumber flea beetle is to cover the young vines with boxes open at the bottom and covered on the top with millinet. Such boxes can be obtained at a very low cost. Sprinkling the vines with Paris green and flour, as for the potato bug, is also recommended.

4. THE CUCUMBER FLEA BEETLE (*Haltica cucumeris*, Harris).

Same order and family as the preceding.

This is another member of the leaf-eating family of beetles, and derives its popular name of Flea Beetle from its active jumps, for which it is peculiarly fitted by the great size of the hind thighs. Fig. 104 shews the perfect insect, the hair line at the side giving the true size.



Dr. Harris, who originally described it, says, "that it is only one-sixteenth of an inch long, of a black colour, with clay yellow antennæ and legs, except the hindmost thighs, which are brown. The upper side of the body is covered with punctures which are arranged in rows on the wing cases; and there is a deep transverse furrow across the hinder part of the thorax." These beetles do not confine their attacks to the cucumbers and melons, but feed on various other plants, including, as we have seen, the potato.

The larvæ burrow into the leaves, and eat out the soft, juicy pulp under the skin, making winding passages through the centre of the leaf, and thus causing considerable damage. They are little, slender grubs, tapering at each end. The perfect beetles nibble little holes in the leaf, which become thus materially affected in proportion to the extent of the attack. In some of the Western States whole fields of potatoes are often very badly injured. The beetles conceal themselves during the winter in some dry sheltered spot, and make their appearance early in the spring. There are several broods of them during the season. Bearing as they do a close relationship to the English Turnip Flea Beetle *H. nemorum*, it has been suggested that watering the leaves with a solution of lime might have a good effect, as that remedy has long ago been employed in England with great benefit to the turnip crops. The larvæ are believed to go underground to enter the pupal state.