

Life-history and Habits of *Z. scutellaris*, Suffr.

On about June 15, the adults are found for the first time in the year feeding on cottonwood leaves. From then on to the end of the month their numbers increase rapidly. Although these beetles are apparently strong fliers they do not take readily to wing, but if disturbed they fall to the ground, feigning death. They are usually present in the largest numbers on the smaller leaved varieties of cottonwoods, and are always more numerous on the lee side of the tree than on the exposed. Trees sheltered by houses also suffer more than others.

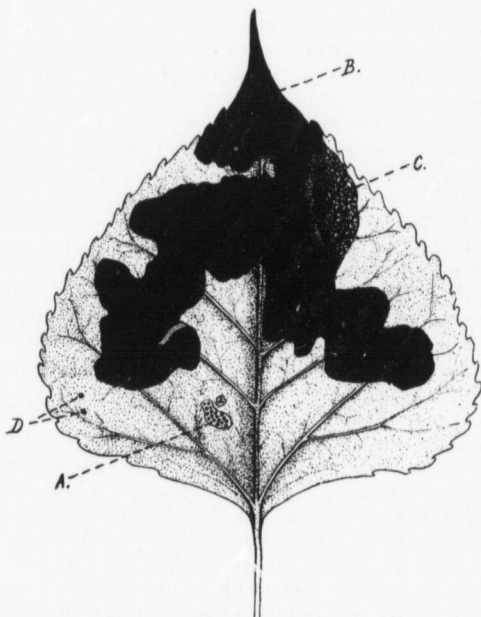


Fig. 1. Cottonwood leaf, upper side, attacked by *Z. scutellaris*, natural size.

- A. Old feeding punctures of adult.
- B. Blackened blister made by larva.
- C. Epidermis torn away where larva escaped.
- D. Darkened areas over eggs which failed to hatch.

By June 26, the sexes are mating freely on the leaves, the female browsing peacefully meanwhile. Before the end of the month numerous eggs can be found in the leaves of trees where the beetles have been feeding. These eggs are yellow or green in colour, elliptical, 1 mm long by 5 mm wide. They are laid in a small cavity close to the upper epidermis of the leaf. This is connected to a hole on the underside of the leaf by a short diagonal tunnel.

Soon after the egg has been laid the tissues above the cavity turn brown, thus the location of each egg is marked on the upper side of the leaf by a small brown spot about 1 mm in diameter (Fig. 1, D).

From the egg hatches a small, flat larva with a broad head, flattened dorso-