ventrally to such an extent that its anterior margin has a chisel-like edge, from which project a pair of sharp mandibles. (Fig. 4.)

The young larva is very delicate, but it begins at once to enlarge the cavity in which it hatched, feeding only on the palisade cells of the leaf just under the upper epidermis Throughout its life the larva feeds on these cells only and never attacks the lower layer of cells forming the spongy tissues of the leaf. These latter turn black about 24 hours after the overlying layer of palisade cells have been eaten, and this black colour showing through the transparent upper epidermis causes the unsightly disfigurement of attacked leaves, as shown in Fig. 1, B.

The larva is unable at first to eat through the larger veinlets, but the eggs are always laid within half an inch of the leaf margin, where the veins are very fine, thus assuring an ample food supply before the larva is strong enough to tackle the larger veins, the mid-rib of which will in time be eaten through. Often several eggs are laid in one leaf, in one case as many as 13 were counted, but a large percentage fail to hatch. The larvæ are by no means gregarious.

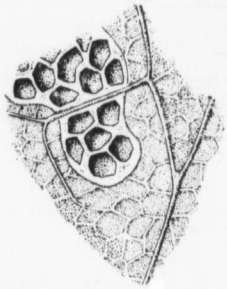

Fig. 2. Old feeding punctures on under side of leaf showing corky tissues developed around punctured area.

Fig. 3. Adult of *Z. scutellaris*, x 7.

When the burrows of two larvæ of approximately equal size join up, these two larvæ may both live if they remain in different areas of the single blister thus formed, but in nearly every case only one survives A large blister covering almost an entire leaf frequently contains one healthy larva only, together with six or seven smaller dead specimens which show no apparent cause for death.

The larvæ are found with the ventral side uppermost. They are legless, and can move as readily on the dorsum as on the venter. While in the blister they are very active and can move rapidly, but when removed from it their progress is very slow

In figure 4 we illustrate a larva of this species in the penultimate stage. The characteristic black markings on the meso- and meta-thoracic and on the abdominal segments are present in all stages of this larva, with the exception of the first and the final stages. They occur both on the dorsum and venter.

By the middle of September the majority of larvæ are mature, measuring 6 mm long. They now break through the thin upper epidermis of the leaf (Fig 1 C) and fall to the ground.

In captivity the escaped larva burrows into the soil to the depth of about 4