

on the median line, the distal margin with a row of comb-like bristles attached to the ental surface, two long discal and two long lateral setae, the two groups forming a transverse line, and four marginal setae; the mandibles tridentate, the two inner teeth subequal, the outer one much shorter; the thorax and abdomen black above except at the sutures and with fine whitish fuscous lines, dividing the black into distinct areas—there is such a line on the meson of the notum of the three thoracic segments and a line on each abdominal segment dividing it into two parallel transverse bands, the posterior being the longer; at the end of each of these bands a subquadrangular spot, and laterad of each anterior spot another subequal in size which bears the spiracle, and laterad of the spiracle a much larger spot as long as the width of the segment," (bearing two comparatively long hairs; the last abdominal segment bears a row of long fine hairs on the posterior edge and the dorsal black spots on this segment are fused.) "The sternum of the thorax and abdomen pale except a spot on either side of the thorax laterad of the legs and homodynamous spots on each abdominal segment (all of the foregoing spots bearing one or two hairs,) a spot on either side mesad of the spots just described (each abdominal spot bears a short hair,) and a median broad spot; and the last ventral abdominal segment with a well developed proleg, legs blackish except at the sutures." (In many specimens the lines dividing the segments are decidedly yellow giving the larva a banded appearance dorsally. In others these lines and the lines dividing the black areas are indistinct and the entire dorsal surface appears black. The ventral surface is usually yellowish and the median brownish to black spots vary in area.)

*Pupa.* "Length (5 to) 7 mm. Width, (2.6 to) 4 mm. Black except the sternum of the thorax and abdomen, the apical segment of the abdomen which is covered by the cast skin of the larva, the basal segments of the legs, and a median tergal line which are yellowish; the legs, wing-pads and antennae not closely joined to the body; the very young pupae are lighter (yellowish at first) in colour."

*Adult.* This was described by Linnaeus in 1758 (*Syst. Nat.* p. 376). The following redescription is by Blatchley.

"Oblong-oval, narrower in front, subdepressed. Piceous brown, finely pubescent; thorax dull yellow, usually with three piceous spots; side margin, apex and epipleura of elytra yellowish; under surface and antennae piceous, the basal joints of the latter partly dull yellow; legs pale. Thorax twice as wide as long, sides rather strongly angulate; front angles small, prominent, hind angles nearly obsolete; disk with median narrow depression and a larger one each side which is densely punctured and piceous; surface otherwise smooth or with a few coarse punctures. Elytra slightly broader behind, margins distinctly flattened, surface coarsely and rather closely punctate. Length 4.5-6 mm.

DeGeer as early as 1775 gave an account of this insect in *Memoires pour servir à l'histoire des Insects*, vol. V, pp. 326-329, Pl. 10, figs. 1-6, and it has received attention since then from other foreign authors.

Chittenden states that arsenicals are quite effective remedies in checking the beetle on willow and for aquatic plants suggests flooding together with a few drops of oil on the water to destroy the floating insects. If this is not possible

6. Loc. cit.

7. Loc. cit.