

head, posterior angles of eyes, and posterior margin of thorax fuscous. Anterior margin of thorax and inner edge of wing pads with rather dense brownish-black hairs. These together with the pigmented posterior margin of the thorax form a square; a median patch of brown hair joining the band on the anterior margin. General surface of thorax smoky brown with narrow median clear line, and a paler transverse band in the middle. Head pale brown with a darker shading on vertex. Whole dorsal surface of thorax and abdomen sparsely hairy, the abdominal segments faintly indicated by transverse brown stripes. A median longitudinal white stripe  $\frac{1}{3}$  the body-width in diameter runs the length of the dorsal surface of the abdomen. Within this is a series of large pale brown blotches, one on each segment, the third and fourth of these with a distinct crescent of chestnut brown,<sup>8</sup> marginal third of abdomen smoky, fringed with cilia, but these less conspicuous because of the general hairiness of the body. The wing-pads hardly extend beyond the thorax.

Tarsi all one-jointed. *First legs* as before. *Second leg* with femur as long as width of head, equal to tibia and tarsus together. Claws  $\frac{1}{5}$  longer than tarsus. *Third leg* with tarsus equal to width of head, feathered with dense hairs. Antennæ  $\frac{1}{2}$  the length of tarsus of first leg. Interorbital space  $\frac{2}{3}$  the width of head, and equal to  $\frac{3}{4}$  the length from vertex to tip of beak.

#### Fifth Instar. (Fig. 4).

Length 3.8 mm. Width 1.4 mm. Dorsal marking as in previous instar, but more intensified. The two median dark brown marks of third and fourth abdominal terga oblong surrounded by a larger oblong of smoky brown. Hairy covering of wing-pads and thorax conspicuous, the median patch of the anterior border extending more

8. These conspicuous markings are found on the dorsal surface of older nymphs of all species of Corixids that I have examined. I have considered them of glandular nature, and they are so considered by Kunckel d'Herculais (Comptes Rendus, cxx, p. 1,002, 1895), who remarks that the dorsal position of the "scent glands" differentiates the Corixids from Nepa and Notonecta, and put them phylogenetically nearer the Cimicids. J. Gulde, however, in an elaborate monograph published later ("Die Dorsaldrüsen der Larven der Hemiptera Heteroptera" Ber. Senckenb. Ges., 1902, p. 85-136), describes the dorsal glands in all the various families of Rhynchocha, including the aquatic families, and denies the presence of such glands in any waterbugs. The Corixids examined were *Corixa geoffroyi* (Leach), *Aretocoris linnei* (Fieb.) and *Cymatia coleoptrata* (L.). He claims that the conspicuous markings are merely the site of the insertion of certain abdominal muscles. It would seem worth while to investigate the matter further.