

On turning over numerous flat stones I found the pupæ of this species (*Hydroporus septentrionalis* Gyll.) rather abundant in some places. They were found abundant under stones lying on soft, damp, fine sand overlying the broad flat rock-bed now above the water. These were abundant on August 7, 1913, when I discovered this insect, and I at first despaired of finding the larvæ, but on turning over numerous stones I was soon rewarded by finding all stages, larvæ, pupæ and adults. The larvæ construct rather peculiar pupal chambers. These pupal chambers consist of the fine, damp sand, lying over the red sandstone rock which forms the river channel, built into peculiar mounds, usually with a small opening at the top. These mounds are turret-shaped, measuring 6-7 mm. wide at the base, 5-6 mm. high, with an apical diameter of about 2.5 mm. One of these is shown on pl. 1, fig. 2. They are rather beautiful, and when abundant, as they often are under

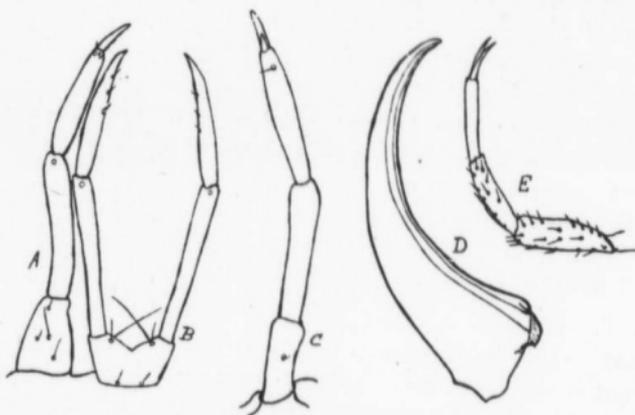


Fig. 9.—*Hydroporus septentrionalis*, larval structures.

flat rocks, they present, grouped thus together, the appearance of a miniature mud village (pl. 1, fig. 4). I was fortunate enough to observe through the opening in the top one of the larva construct part of its domicile. Round and round it moved within, gradually deepening, and at the same time widening, the interior of the future pupal home. It would turn over and over, smoothing out the sides. I did not observe the beginning of any of these pupal chambers, but I presume the larva began at first to