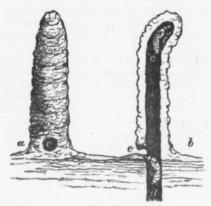
chambers were first noticed by Mr. S. S. Rathvon at Lancaster, Pa., and are from four to



six inches above the ground, with a diameter of one inch and a quarter. (See fig. 85.) When ready to emerge the insect backs down to an orifice which it left in the side of the structure, even with the surface of the ground, issues forth and undergoes its transformations in the usual manner. After pairing the females deposit their eggs in the twigs of different treesoak, hickory, and apple chiefly, but also in many other kinds, and even sometimes in coniferous trees. The eggs are placed at the bottom of grooves bored by means of the ovipositor. The insect settles on a branch of moderate size, which she clasps on both sides with her head towards the end, then bending down the piercer at an angle of 45 degrees, thrusts it obliquely through the bark and fibres into the very centre of the twig; after this nidus is finished she deposits the eggs in two rows with a narrow

strip of wood left between them; there are from ten to twenty eggs in each groove. It takes about fifteen minutes to prepare a groove and fill it with eggs. There are sometimes as many as twenty grooves made in a branch by one insect, and each female has a stock of from 500 to 700 eggs. It frequently happens that these branches bearing the eggs, are so weakened by the operation, that they are broken off by the wind, and fall to the ground; when this is the case the eggs never hatch, for, like those of many of the gall flies the moisture of the living wood is necessary for their proper development, as shown by the fact that they are much larger just before hatching than when first deposited about six

weeks before. When hatched, they throw themselves fearlessly from the tree to the ground, and from their small size, one line in length, they are very light and receive no injury. The newly-hatched insect is shown in fig. 86. They immediately burrow down into the ground and feed on roots. There are numberless stories in the newspapers every year about people being stung by the Cicadas, but none have ever been satisfactorily proved.



If these tales be true the injuries could, of course, only be inflicted by the beak, fig. 87 a, or by the ovipositor b, but I fancy that these tales are about as true as the newspaper accounts of the "frightful poisonings" yearly laid at the door of the larva of the Tomato Sphinx:

"The song of this species is in one uniform musical

key, which is \tilde{C} sharp."

Fig. 87. Of the Fulgoridæ or Lantern flies there is a small species found in the United States called Scolops dulcipes, which has the front part of the head much prolonged and projecting upward like a thin curved horn. Prof. T. Glover found it not uncommon in July and September in the neighbourhood of Maryland Agricultural College. None have so far been recorded from Canada.

Among the Cercopidæ are found several strange genera, including the Tree-hoppers, Frog-hoppers and Leaf-hoppers. The Tree-hoppers (Membracis of Harris) are dullcoloured little insects which are to be found on the stems and leaves of plants during the summer and autumn months. Many of them have very grotesque forms with the face nearly vertical, the thorax tapering to a point behind, and so much enlarged as to cover the greater part of the upper side of the body; it is too frequently ornamented with blotches or stripes of another colour. These insects are well protected from detection by their enemies, both by their habits and by a striking resemblance which frequently exists

between their sh They are mostly a the enlarged tho like processes rese they have of sitting -upwards towar green species which the bark and sten for hours together movement is suffic and they settle a class of insects wh to a certain exten so fugitive that m setting boards, an have several specie those taken in the of which an illustr I may mention th Mr. Harrington, a convenient patterr

Enchenopa bir and most curious l of a partridge with small clusters on mens in all the d birds. Sometimes thorns or excresen of the thorax, the for sucking sap. separated by a bla more than four line One of the most re four anterior tibiæ. found on several tr

Smilia vau, E butternut. It is a crest over the bod It is of a brown col

Entilia carina plentifully on the c families beneath the on the back, the spa colours vary much: the posterior angle broad subterminal v

Ceresa bubalus. beautiful green. It one on each side of which fact it takes i when disturbed. I said to be deposited the female in the bar puncturing the bark

C. diceros, Say .-