

year, and as Mr. Henry Edwards informed us, proved a positive nuisance in collecting in the neighborhood of New York city. Professor Lintner has published a full account of it in the *Elmira Husbandman* for Sept. 14, 1881, in a paper presented to the N. Y. State Agricultural Society. He has also obtained the eggs, and from them a second brood of larvæ. We found the egg-shells quite common in the earth from some sward sent September 12th, by Mr. Adams, from a field that had been devastated by the larva, and we have since readily obtained fresh eggs from moths captured in Washington. The eggs are pale yellow when laid, but become orange afterward; they are elongate-oval, very slightly broader at base than at top, and ribbed as in those of various butterflies, there being about twenty longitudinal, rather sharp ridges and about thirty less marked transverse ones. The average length is  $0.7^{\text{mm}}$  and diameter  $0.3^{\text{mm}}$ . They are dropped singly among the grass and on the ground.—*C. V. R.*

LARVAL HABITS OF SPHENOPHORI THAT ATTACK CORN.—For many years several species of the genus *Sphenophorus* have damaged the corn crop in various parts of the United States, more particularly at the south, where they are all known as "bill bugs." Glover, in 1855, spoke of their injuries, but did not determine the species. Walsh, in 1867 (*Pract. Ent.*, II, 117), described a species damaging corn in New York as *S. zeæ*, but which subsequently proved to be *S. sculptilis* of Uhler. *S. sculptilis* also occurs in the South and West, being common in Illinois and Missouri. It has also been received at the Department of Agriculture from Florida and Alabama, *S. robustus* from South Carolina, and *S. parvulus* from Missouri, all as injuring corn. The larval habits of all these species are unknown. Walsh surmised that *S. sculptilis* would be found to breed in decaying driftwood washed by water, the adults migrating to neighboring corn-fields, and some subsequent facts that have come to our knowledge lend weight to his hypothesis so far as this particular species is concerned.

In reference to one of the larger species (*S. robustus* Horn), which has done considerable injury to corn this year in South Carolina, Mr. L. O. Howard, whom we recently sent down there to study it, found that it actually breeds in corn. On the plantations along the bottom-lands of the Congaree and neighboring streams, as soon as the corn appears in the spring it is attacked by numbers of the adult beetles. Stationing themselves at the base of the stalk, and also burrowing slightly under the surface of the earth, they pierce the stalk and kill many plants outright, leaving others to grow up dwarfed and distorted. The whole field has frequently to be plowed over and replanted. The eggs are probably laid at this time or a little later, at or near the surface of the ground. The young larva, hatching, works downwards, and may be found at almost any age in the tap-root. A few individ-

uals work upwards into the first section of the stalk, but only, it would seem, after having consumed all available pith below ground.

At full growth the larva will have consumed the pith of the stalk for from four to five inches, dwarfing the stalk, preventing the make of the ear, and causing the lower leaves to turn brown and wither. The larva has the general characters of other described larvæ of the genus. The pupæ are found in cavities opposite the first suckers, surrounded by excrement compactly pressed so as to form a sort of cell.

The beetles make their appearance in the fall (one specimen issued as early as August 30), and hibernate as adults mainly in the stalks. The remedy then of cutting the stalks in fall or early winter and of plowing up and burning the stubble is obvious.—*C. V. Riley.*

EFFECT OF DROUGHT ON THE HESSIAN FLY.—It has long been known that the Hessian fly flourishes most when the Chinch bug flourishes least; in other words, that wet weather favors it. Moisture seems essential to the well-being of the larva. The prejudicial effect of drought has not hitherto been observed, that we are aware of, but was very noticeable the present year in parts of Ohio, where the puparia literally dried up. Our attention was first called to the fact of the general death of the insect in the "flax-seed" state by Mr. E. W. Claypole, of Yellow Springs, O., and our observations subsequently confirmed his experience. The intense heat had not only desiccated the *Cecidomyia*, but, what is still more remarkable, in most cases the parasites also. We should like to hear from Prof. Cook, of Michigan, and others, whether a like result followed the severe heat and drought in other parts of the West. The presumption is that the mortality was general and that farmers may expect immunity from injury for some years to come.

SIMULIUM FROM LAKE SUPERIOR.—In regard to the *Simulium* from Lake Superior, which we mentioned on p. 313, current volume of this magazine, Dr. Hagen remarks in the *Canadian Entomologist* (Vol. XIII, pp. 150–151), that upon examination of larvæ and pupæ, sent to him by Mr. H. G. Hubbard, they did not appear to differ materially from those of *S. pictipes*, but that the imagines from Lake Superior (which were not raised from the pupæ collected by Mr. Hubbard) differ from *S. pictipes* in their much smaller size and in the color of the legs.

COLEOPTEROUS CAVE FAUNA OF KENTUCKY.—Mr. H. G. Hubbard has carried on during the past summer a careful investigation of the insect fauna of the different caves in Kentucky, especially near Cave City, and it is now pretty safe to say that the Coleopterous cave fauna of Kentucky comprises but two general viz: *Adelops* and *Anophthalmus*. Of the former genus only one