

Sci. Phil., III, 126), says: "The larva inhabits detached branches of the genus *Carya* (hickory), the perfect insect appearing in May in S.E. Pennsylvania." Glover states that it also infests walnut. Although half a century has elapsed since the insect was described, it is still extremely rare. It has been recorded also from southern New Jersey; my specimen was obtained on the Virginia shore of the Potomac, and we may safely infer that the species also inhabits the intervening territory of Maryland, Delaware, and the District of Columbia.

—Mr. Howard presented the following paper, illustrating it by black-board drawings:

NOTE ON THE MOUTH-PARTS OF *STENOPELMATUS*.

By L. O. HOWARD.

Dr. Packard, in his "Review of the Systematic Position of the Orthoptera in Relation to other Orders of Insects," gives, with some detail, the relative characters of the typical insects throughout the order Orthoptera, but does not seem to have examined *Stenopelmatus*, a striking and somewhat aberrant form. A recent examination made of the mouth-parts of a single specimen indicates that the sclerites approach most nearly to those of *Anabrus*, as might have been expected. The submentum is represented by a transversely oval chitinous sclerite in the membranous wall of the gula. The mentum is a large rhomboidal sclerite whose transverse diameter exceeds its length. The ligula is slightly divided at tip and the paraglossæ are hairy and movable. The palpiger is indistinctly differentiated. The maxillæ in particular resemble those of *Anabrus*. The cardo is large and proceeds at right angles from the ligula. The stipes is inserted at right angles upon the tip of the cardo. The palpifer is small and indistinctly separated by a suture. The subgalea is narrow and weak. The lacinia is very large and strong and furnished with two teeth, the apical one being still further dentated into one large and one small tooth. The inner edge of the body of the lacinia is densely bristly. In the galea was exhibited a strange asymmetry which is my main object for referring to this insect. The right galea is stout, well rounded, and its tip is evidently functional as a masticating or piercing organ since its point is composed of dense dark-brown chitin. The left galea, on the contrary, becomes flattened and subfoliaceous at its tip, which appears almost membranous, is yellowish in color and evidently not at all fit for the same purpose as its mate. The labrum is very large and very movable, almost half as long as

the mandibles, and reaches quite to the tip of the mandibles when closed, capping them, in fact.

An examination of the collection of the National Museum shows that this galear asymmetry is abnormal. The normal galea is apparently midway between the two which I have described. It lacks the piercing black tip of the right one, and is rounder and solidier than the left one.

—Prof. Fernow called the attention of the Society to a new insecticide which has appeared within the last year and is being extensively advertised under the name Antinonnin. He gave a brief description of the composition of the substance and mentioned the range of its use as an insecticide agent, as claimed by its manufacturers. He stated that as diluted for application it would cost about one cent per gallon, and that it was held to be a specific for practically all forms of insect life, subterranean insects included, as well as vermin, field mice, etc.

Mr. Marlatt said that the Division of Entomology of the Department had been familiar with this substance for upwards of a year, and that samples of it had been placed on exhibition with the other patented insecticides at the recent exposition at Chicago. In answer to a question by Prof. Riley, Prof. Fernow stated that the only insects against which experiment had actually proved it to be effective were *Lophyrus pini* and *Liparis monacha*, and that for extensive forest use it was in the case of these and other species impracticable on account of the impossibility of obtaining sufficient water to dilute it with; but that for more limited operations, as for garden or orchard work, this objection would not apply.

Prof. Riley thought that some of our insecticides, of which practical use had demonstrated the usefulness and general availability, such as kerosene emulsion, would be found preferable to, and much less expensive than, the substance mentioned by Prof. Fernow, and he stated as a further argument for the use of kerosene emulsion the fact of its very stimulating effect on the root-growth of plants, in the case of subterranean applications. He said that similar stimulating action seemed also to follow the application of the Bordeaux mixture, which fact he had particularly noticed in the treatment of the grape and the potato. Mr.