

when sleeping on the ground, and the bite grew worse for two weeks and was not cured for about four weeks. He himself had found larvæ filled with his blood in his bed-clothes when camping out. The insects were always numerous when rats were about, when he and Mr. Hubbard had found larvæ and imagoes in rats' nests. The larvæ did not enter houses, though the adults do. The latter on entering a house seem to fly immediately to the beds.

Mr. Currie stated that Mr. G. N. Collins had shown him a Liberian Reduviid which had bitten him most painfully. It was the most painful bite he had ever experienced. The bug was nearly an inch long and had variegated colors.

—The first paper of the evening was by Mr. Heidemann and was entitled :

#### REMARKS ON THE SPITTLE INSECT, CLASTOPTERA XANTHOCEPHALA GERM.

By OTTO HEIDEMANN.

About the middle of August last year I noticed some white frothy masses clinging to the stems of Chrysanthemums, which I had planted early in spring at my home. Observing the plants more closely, I found that the white froth was the secretion of a "spittle" insect, commonly known to be produced by the larva of a Homopterous insect, belonging to the family *Cercopidæ*. Being interested in ascertaining what species attacks the Chrysanthemum, I cut off some infested plants and placed them in a glass jar in order to rear the insect. Unfortunately, I had not much success in observing the insect in its several stages of development, because most of the immature ones had left their liquid coverings and perished; others ceased to suck the sap and did not form the frothy mass again for concealment, which consequently evaporated and dried up, and most of the insects shriveled and died. I obtained only one perfect adult, which proved to belong to the species *Clastoptera xanthocephala* Germ. var. *glaucus* Ball. This species occurred also, as I had observed at the same time, in very great numbers on the common weed, *Ambrosia artemisiæfolia*. This weed is perhaps the original food plant, and the insect may have attacked the Chrysanthemum accidentally, as the ragweed grows profusely on the fields in my neighborhood. However, I know that the same

insect has been found infesting *Chrysanthemum* and *Aster* at other places in the District.

Dr. J. A. Lintner, in his 4th and 5th Reports on the injurious and other insects of the State of New York, gives an account of his observations of *Clasoptera obtusa* Say living on the black alder and also cites some other genera of "spittle" insects. I have noticed the secretions of the same species on the black alder very abundantly last year around Washington.

Much attention has been paid to the spittle insects by the naturalists of former days. Swammerdam called it "*Locusta pulex*", Linnæus placed it amongst the Cicadidæ. De Geer, in his *Memoires pour servir à l'Histoire des Insects* (Tom. 3, 1741), has given a most accurate description of the manner in which the young insects produce their frothy coverings. There is also a very interesting statement on the same subject in "*Insecten Belustigungen*," by A. Joh. Ræsel v. Rosenhof, Part III, pp. 139-144, 1749. This author corroborates the same facts that De Geer had observed, namely, that the so-called "spittle" is the secretion of immature insects, issued from the terminal part of the abdomen from the anus. He observed four distinct molts before the imago emerged from the pupa state. As a curiosity he refers to the common belief and superstition which the people held about the origin of the peculiar spittle masses on plants. Some believed it to be the spittle of the stars, or the evaporation of the earth; others presumed the spittle was caused by the perspiration of the plant itself. The frothy accumulation often is called "cuckoo-spittle," and Ræsel states, as a fact that the cuckoo preys on the young insects; he had found them in the stomach of the bird.

By carefully brushing off the frothy substance from the stem of the *Chrysanthemum*, I observed several larval insects in different stages of development in one spittle, some sitting head downwards, others head upwards, sucking the sap of the plant. The insect thus disturbed would soon select another place and begin sucking again. After a while it begins to move its abdomen vigorously, raising the terminal part high and by quick motions discharges from the anal segment small globules of liquid, continuing this process until it has covered itself all over with the white secretion. In the course of time the globules of the secretion diminish in size and number as the air in them slowly evaporates. Then the insect renews its liquid covering. Further, I observed that when the pupa is ready for the last molt, it comes out of the secretion, running around on the plant animately. Remaining at last in one place, but constantly moving its hind body, it begins to shed the skin, emerging from the pupa state as a winged adult.

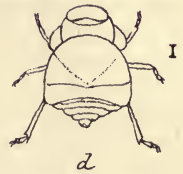


PLATE VI.

## EXPLANATION OF PLATE VI.

CLASTOPTERA XANTHOPHALA, *var. glaucus*.

- a. Chrysanthemum branch showing the spittle.
- b. Terminal part of abdomen of Clastoptera with the anal segment open and in action.
- c. The same in repose and closed.
- d. Young larva.
- e. Grown larva.
- f. Pupa with wing pads.
- g. Winged adult.
- h. Front part of head of adult.

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—Mr. Cook read the following paper :

## DUOPORUS, A NEW DIPLOPOD FROM MEXICO.

By O. F. Cook.

As part of a small but interesting series of Mexican Diplopoda collected by Mr. O. W. Barrett, this peculiar member of the order Merocheta is worthy of special mention. It agrees with *Stenodesmus* Saussure and *Biporodesmus* Attems, and differs from all other known Diplopoda in the possession of but a single pair of repugnatorial pores, located on the fifth segment. But notwithstanding the resemblance in this particular, it is evident that the new form has little, if any, affinity with either of the above genera. *Stenodesmus*, also a native of Mexico, is a large animal (65 millimeters) with a granular-tuberculate dorsal surface and a spine on the second joint of the legs, which last feature has been supposed to ally it with *Fontaria*. The South American genus *Biporodesmus* is also an animal of considerable size (45 millimeters), with a flat or concave, granular dorsum, a vertex sulcus, and complex, three-pronged copulatory legs, to say nothing of minor discrepancies. The new genus, to be called *Duoporus*, has a small, rather slender body, much narrower behind than in front, and gradually tapering from near the head. The dorsal surface is strongly convex, smooth and shining, and the posterior corners of the carinæ are long and spiniform. The copulatory legs are remarkably simple, the second joint consisting of a simple falcate process; they thus bear a much greater general resemblance to those of *Sphæriodesmus* than those of *Biporodesmus*.

The existence of three such distinct types with the same pore-formula is, however, but one of many evidences that pore characters, though of great systematic utility in the Diplopoda, do not