

Perkins, Bul. 1, pt. 1, Exp. Sta. Hawaiian Sugar Planters' Association). Perhaps the Rhopalosomidæ and the Dryinidæ had a common origin, as the larvæ would indicate, and the adults have specialized along different lines though retaining certain characters in common.

It may be interesting to add that the family Rhopalosomidæ is now represented by four species, one of which has been placed in a genus of doubtful standing. Three species have been reported only from the Neotropical region, and one which is known to occur in India and Ceylon from the Oriental region. The *Rhopalosoma poeyi* Cresson was originally described from Cuba but since has been reported from Jamaica; San Domingo; Hayti; St. Louis, Missouri; North Carolina; St. Augustine, Florida; Louisville, Kentucky; and now from the environs of Washington, D. C. Lest some marvel at this remarkable distribution it may be added that great care was used in making the determination of Mr. Hood's specimen and unless there are characters which have escaped both Ashmead and myself this species has the wide distribution given above. An excellent figure of this species is given on plate 24 (figure 9) of *Thesaurus Entom.* Oxon. 1874.

NOTES ON THE FEEDING HABITS OF TWO ADULT SAWFLIES.

By S. A. ROHWER, *Bureau of Entomology.*

The feeding habits of adult sawflies are very incompletely known, although a few European species have been observed feeding either on the pollen of plants or on certain insects. From the literature which has been published on this subject it is a rather accepted opinion that the species of *Tenthredella* and *Tenthredo* feed, in the adult stage, on other insects. The following observations will show that this is not always the case. As far as I have been able to learn the records refer to feeding habits of the female only. Do the males feed?

TENTHREDELLA LINEATA (Provancher).

On July 4, 1907, I found a female of the species devouring an adult Perlid which has been determined by Mr. Banks as *Alloperla signata* Banks. The adult sawfly was sitting on the foliage of *Heracleum lanatum*.

TENTHREDO ARCUATUS (Foerster).

On August 8, 1909, at Sonnenberg, Lucerne, Switzerland, I had the opportunity to make the following observations on the feeding habits of an adult which belonged to this species. This adult had only one antenna, but as far as could be observed behaved in a perfectly normal manner, and was so docile that it could be observed under a half inch lens. This female would fall, alighting heavily on the head of one of the common Umbellifers and, due to the momentum of the flight, would fall beneath the head of the Umbellifer. After recovering itself and righting itself on the flower, it would bite a stamen off near its base and fall beneath the crown of flowers holding itself downward by the four posterior legs. In this position it proceeded to devour an entire stamen, using the maxillary palpi, mandibles and labrum, but the labial palpi did not move. After the entire stamen had been devoured the sawfly would repeat the operation until it had completely devoured four stamens. After devouring four stamens it walked over the head of the flower and by use of the palpi obtained the small drops of liquid adhering to the base of the receptacle. After visiting all the flowers on the head, the insect took flight. To make sure of the species it was captured before it had the opportunity to alight on another flower. The species of Umbellifer was not determined.

In commenting on this species in the *Entomologist* for February, 1913, Morley states that he has seen it chase flies and has known of one female found masticating a female *Empria pennipes*.

TWO ABNORMALLY DEVELOPED SAWFLIES.

By S. A. ROHWER, *Bureau of Entomology*.

Although the sawflies often have abnormal venation, it is very seldom that a sawfly with abnormal body characters is ever collected. As far as I am able to learn only seven gynandromorphic sawflies have been reported upon. In view of the fact of the usual stability in the bodies of sawflies the following notes may be interesting.

XENAPATES TERMINALIS (Say).

On May 13, 1911, along with other sawflies collected at East Falls Church, Virginia, an abnormal female of this species was collected. The abnormality occurs in the abdomen which does not have the gonapophyses developed except slightly, and the nates are abnormal. The cerci are normal as is the rest of the insect. The abnormal development of the eighth ventral and the entire