

TWO HUNDRED AND EIGHTY-EIGHTH MEETING,  
OCTOBER 7, 1915.

The 288th regular meeting of the Society was entertained by Mr. E. A. Schwarz at the Saengerbund Hall, October 7, 1915. There were present Messrs. Barber, Burgess, Caudell, Crawford, Ely, Gahan, Greene, Heinrich, Howard, Knab, Kotinsky, Marlatt, Middleton, Pierce, Quaintance, Rohwer, Sanford, Sasseer, Schwarz, Shannon, Turner, and Walton, members and Max Kisiulik, visitor.

The Corresponding Secretary presented a communication inviting the Society to send a delegate to participate in the deliberations of the Second Pan-American Scientific Congress to be held in Washington, D. C., December 27, 1915, to January 8, 1916. The Society named as delegate to the Congress, President A. N. Caudell; alternate, First Vice-president C. R. Ely.

Mr. Rohwer announced the death of Mr. H. M. Russell, a member of the Society and moved that a committee be appointed to draw up suitable resolutions. The motion prevailed and the President appointed as a committee Messrs. Quaintance, Hyslop, and Walton.

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The following program was presented:

Parasitic Work of the Hawaiian Sugar Planters' Association,  
Dr. L. O. Howard<sup>1</sup>

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**THE TACHINID FLY MAUROMYIA PULLA COQ. AND ITS  
SEXUAL DIMORPHISM.**

BY W. R. WALTON,

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In describing this fly<sup>2</sup> as the representative of a new genus and species Mr. Coquillett had before him but two specimens of the insect. These he considered as belonging to opposite sexes. Quite recently Mr. E. Daecke of Harrisburg, Penn., submitted to the writer several specimens of Tachinidæ selected from a large series collected by himself at Carlisle Junction, Penn., which

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<sup>1</sup> Withdrawn for publication elsewhere.

<sup>2</sup> Revision of the *N. A. Tachinidæ*, p. 51.

I believe to represent the undescribed male of *Mauromyia pulla* Coq., and, after a careful study of the material in the U. S. National Museum, I am convinced that Mr. Coquillett never saw the male of the species.

Since considerable dimorphism is apparent, especially in some characters which have been considered as of prime specific and even of generic index, it seems well to describe the male and also to note some of the more remarkable variations in structure peculiar to this rather extraordinary form.

### *Mauromyia pulla* Coq.

*Male.* Head (fig. 1, 1.) quadrangular in side elevation, its anterior border distinctly concave. Cheeks nearly as wide as eye-height. Inferior occiput swollen. Front produced directly forward, not sloping downward to base of antennæ. First antennal joint unusually long, fully as long as second, produced upward at an angle of  $45^\circ$ , its tip projecting distinctly above the level of the front. Third antennal joint five times as long as second, distinctly short pilose, its lower three-fourths strongly concave on anterior border. Arista thickened on at least the basal three-fourths, first joint slightly longer than broad, second joint at least three times as long as broad. Facial ridges bristly on lowest third. Vibrissæ multiple, the larger pairs subequal, not cruciate, situated on oral margin. Facial depression enormous in width, nearly twice as wide as in female; genovertical plates at narrowest part not more than one-fifth its maximum width. Eyes small, bearing sparsely scattered hairs visible only upon minute examination. Frontal bristles descending to base of arista, the uppermost pair pointing distinctly outward. Front one and one-half times width of eye, vitta occupying considerably more than one-half width of front, brown. Sides of front cinereous, pollinose sprinkled with coarse black hairs; orbital bristles absent. Face on lower half bearing two or more irregular rows of small macrochætæ, the lowest ones reaching below lower border of eye. Ocellar bristles rather weak, directed forward, the postocellar pair well developed and directed vertically. Wings brownish hyaline, broad, rather short, costal spine obsolete. Apical cell long-petiolate, ending very slightly before wing tip. Bend of fourth vein variable, forming an angle of  $45^\circ$  in some specimens (fig. 1, 2), in others bent considerably inward in a distinct curve (fig. 1, 3). A short stump present or occasionally entirely absent. The longitudinal and cross veins bordered with a light but distinct brownish stain. Hind cross-vein usually bisinuate. Sterno-pleural macrochætæ varying in arrangement and number from two to five. Abdomen flattened ovate, slightly more slender than in female but otherwise quite similar. First segment bearing a weak marginal pair, the remaining segments with both discal and marginal macrochætæ. Hypopygium prominent, bent forward, its basal ring shining black, the remainder nearly opaque.

The female differs as follows: in the very much shorter antennæ, length of second arista joint (figs. 1, *1a*, *1b*), shape and extent of facial depression, extent of thickening of arista (figs. 1, *1a*, *1b*), presence of orbital bristles, absence of discal and sometimes marginal bristles of abdominal segments.

These facts show how inadvisable is the practice of proposing genera upon scanty material representing but one sex.

Mr. Daecke, to whom I am indebted for specimens and notes, states the flies were taken in large numbers from the trunk of

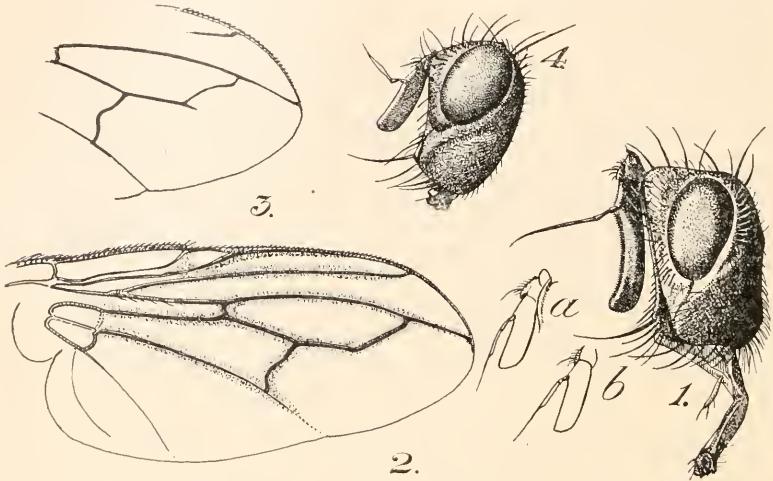


Fig. 1. *Mauromyia pulla* Coq.

1. Head of male lateral view. 1a. Antenna of female showing elongate second arista joint. 1b. Antenna of another female showing second arista joint abbreviated. 2. Wing of male showing bend of fourth vein destitute of appendage. 3. Wing of another specimen of same sex with the bend appendiculate and the vein beyond bent inward.

4. Head of male *Paradmontia brevis* Coq.

a tree about which they were running with the prominent antennæ held in a porrect position. Mr. Chas. T. Greene has also loaned specimens, both male and female, which have been of much value in the study of the species. These were collected at Lehigh Gap, Penn.

Some doubt has heretofore existed regarding the distinctness of the two species, *Mauromyia pulla* Coq. and *Paradmontia brevis* Coq., although the former has a bare and the latter a bristly first longitudinal vein. This uncertainty is now happily elimi-

nated by the discovery of the male of *Mauromyia pulla*. A drawing of the head of *Paradmontia brevis* (fig. 1, 4) is provided herewith for the purpose of comparison.

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### DUNG-BEARING WEEVIL LARVÆ.

By FREDERICK KNAB, *Bureau of Entomology.*

The habit of covering themselves with a coating of their own excrement occurs in the larvæ of several genera of Chrysomelidæ. Of these *Blepharida* and certain species of *Lema* and *Crioceris* are familiar examples. No such habit has been recorded for the weevils and its occurrence is the more remarkable when one considers that in this group but a small proportion of the species have externally feeding larvæ. The writer has observed the dung-carrying habit in the larvæ of two species of Ceutorhynchini, *Cælogaster lituratus* Dietz and *Perigaster obscurus* LeConte.

The first observation was made in 1902. On August 5 of that year Mr. J. O. Martin and the writer were collecting on the slopes of Mount Holyoke, Massachusetts. Mr. Martin called my attention to some small groups of larvæ of different sizes on the leaves of a plant of *Enothera biennis*. The larvæ were of the characteristic form of those of *Lema*, robust and much thickened medially, and were covered with moist dung. The color of the body was a pale translucent yellowish tint and the head was reddish brown. The body was covered with a slimy secretion in which the excrement was imbedded and this latter was distributed so well that only the prominent lateral callosities were visible. The slimy secretion probably is a product of the malpighian tubes.<sup>1</sup> The larvæ were kept alive for rearing and on August 8 the largest of them had enclosed themselves in cocoons of dry dung. The body of the larva, now divested of its coating of slime and dung, had changed to opaque yellow and the head showed a brighter ferruginous tint. The pupæ were bright yellow. The beetles reared from this material were kindly determined by Dr. W. G. Dietz as *Cælogaster lituratus* Dietz.

The following year, 1903, on July 14, Dr. Geo. Dimmock again found the larvæ in the vicinity of Westfield, Mass., and as before on *Enothera*. Some of these larvæ were reared and produced imagos of the same species. Others of the larvæ were boiled in alcohol, for preservation, and it was found that the thick coating of slime hardened and detached in the form of a shell which still retained the imbedded excrement.

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<sup>1</sup> See discussion of the secretions of weevil larvæ, this volume, pages 154-158.