

Article XXVII.—THE DIPTEROUS GENUS *BIBIODES*.¹

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In the 'Proceedings' of the Entomological Society of Washington, D. C., volume VI, number 3 (July 30, 1904) Mr. D. W. Coquillett erected the genus *Bibiodes*, describing one species, *B. halteralis*, from California specimens. No other species of the genus has since been described, and the genus seems not to have been again recognized. Even Williston's 'Manual' includes it with a query.

Recently on reviewing the Bibionidæ in my collection I noticed two other species of *Bibiodes*. As some of the specimens belong to the American Museum, and it is desirable to return them at this time, I will present their description herewith.

Bibiodes resembles a small *Bibio*, but it can be at once recognized by its peculiar venation. The third vein bends down meeting the fourth where the anterior cross vein is usually located, and then both continue coalesced for some distance before separating. Thus the small cross vein is absent. The costa, first and third veins are distinct, blackish, the base of the auxiliary and of the fourth vein brownish, the other veins faint. Discal cell emitting three posterior veins, of which the anterior two sometimes are joined forming a short petiole to the second posterior cell. The anal cell open. Eyes of the male contiguous between the ocelligerous tubercle and the antennæ, the upper facets moderately coarse, the facets of the lowermost sixth, below the level of the antennæ, fine. Antennæ short, 9-jointed. Palpi 4-jointed, moderately long; proboscis rudimentary. Front tibiæ with a sharp exterior edge and ending in a strong spur, within with a minute spur, also. Empodium broad; pulvilli absent.

The three species at present known are western. Evidently like other members of the family, they are locally common. The following summary of characters will help to identify them.

Costa extending half way from the stigma to the apex of the wing; front femora robust; hind metatarsi short; halteres and legs black; pubescence conspicuous; hypopygium large; second posterior cell petiolate. **femorata** sp. n.
 Costa extending more than half way from stigma to apex of wing; legs less robust; hind metatarsi much longer than the following joint; legs of ♀ reddish; pubescence more sparse; second posterior cell sessile or short petiolate. 2.

¹ Contribution from the Zoölogical Laboratory of the State College of Washington.

2. Legs ♂ black; halteres yellow; eyes hairy; hind tarsal joints rounded; pleuræ strigose; hypopygium moderate; stigma oval. . . . **halteralis** Coquillett.
Legs ♂ variegated; halteres black; eyes bare; hind tarsal joints cylindrical; pleuræ smooth; hypopygium closed; stigma excised above. . . . **æstiva** sp. n.

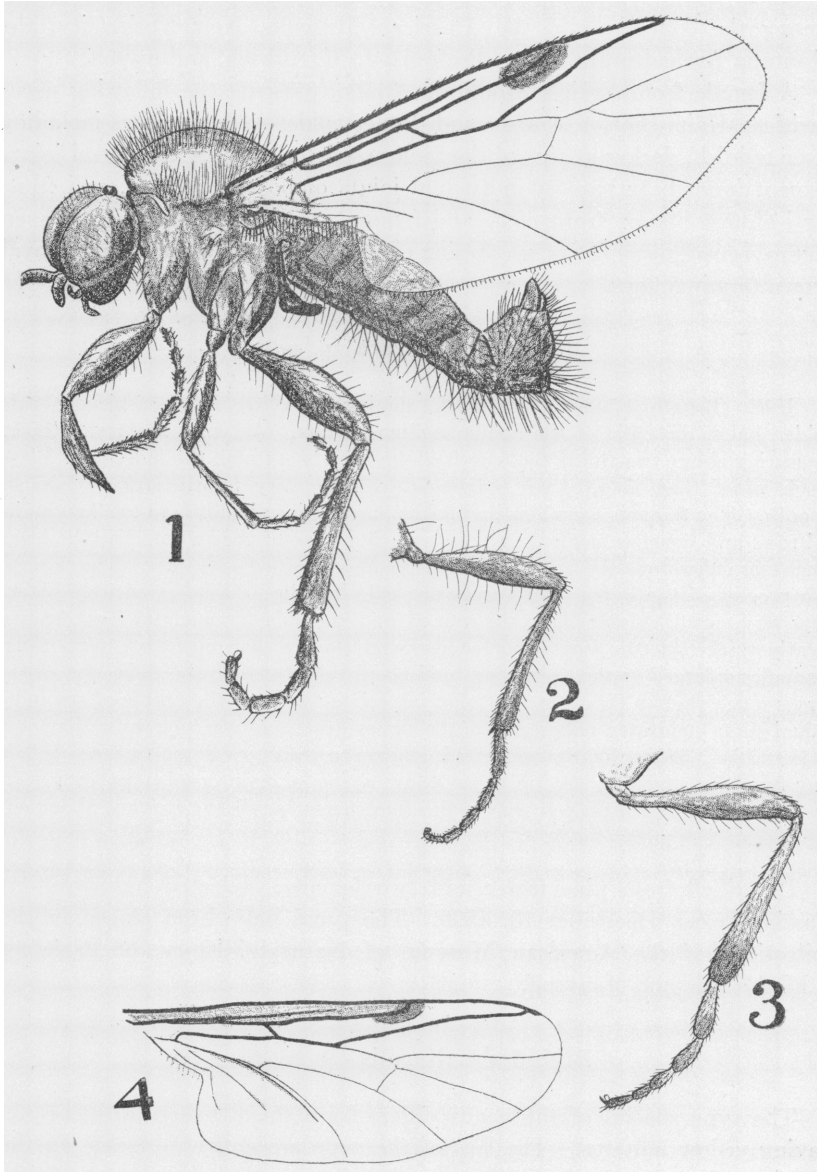
Professor J. M. Aldrich has called my attention to a genus *Synneuron* described by Carl Lundström from Finnland.¹ A reference to this genus occurs in the 'Wiener entomologische Zeitung' for January, 1911, page 18, but the paper is not listed in the 'Zoological Record' for 1910. I have been unable to secure a copy of Lundström's article and cannot therefore state what relationship the Finnland genus bears to our forms. The name *Synneuron* is suggestive of the essential characteristic of *Bibiodes*, the fusion of the third and fourth veins, but may, of course, not refer to this peculiarity.

***Bibiodes æstiva* sp. nov.**

Male. Length 2.5 mm. Jet black, shining, sparsely covered with comparatively short, golden hairs, the hairs of the abdomen whitish. Antennæ comparatively long, measuring about equal to the front metatarsus, the individual joints but little wider than their length. Eyes bare. Pleuræ and front femora plainly strigose. The thoracic hairs are arranged in two single rows dividing the mesonotum into thirds, and in loose bunches above the root of the wings and on the scutellum: pleuræ bare. Hypopygium with a pair of laterally moving forcipate valves, the lower inner edge of which is provided with a fuscous thumb-like process, the two interlocking. Knob of halteres black, the pedestal fuscous. Legs shining black, except that the spur of the front tibiæ, the basal half of the posterior tibiæ, and the base of the individual tarsal joints, rufous. All the femora moderately incrassate, the front ones but little more thickened than the others: front legs comparatively longer than in *femorata*: outer edge of the hind tibiæ a little sinuate so that the widest part of the tibia is before the tip: hind tarsi nearly as long as the hind tibiæ, the metatarsus nearly as long as the following two joints together, the outline of the individual joints rounded: pubescence of the legs short, in length less than one-half the diameter of the tibia. Stigma oval saturate fuscous, costa extending three-fourths the distance beyond the stigma to the wing-tip, second posterior cell often broadly sessile with the discal cell, the faint veins broad and brownish.

Sixteen males. Alмота, Washington, June 24, 1911. Craig's Mountain and Lewiston (June 11, 1904), Idaho, from Professor Aldrich. Carbon County, Wyoming, received from Mr. William Beutenmüller from the collection of the American Museum of Natural History. Copperopolis, Montana, July 23, 1902, elevation 5400 feet; and Gallatin Valley, Montana, July 6, 1903. The last two were received from Professor R. A. Cooley,

¹ Beitrage zur Kenntniss der Dipteren Finnlands. V. Bibionidæ. Acta societatis pro Fauna et Flora Fennica, vol. 33, nr. 1, 15 pag., 1 pl. Helsingfors, 1910.



EXPLANATION OF PLATE.

Fig. 1. *Bibiodes femorata* ♂.Fig. 2. *Bibiodes halteralis* hind leg.Fig. 3. *Bibiodes æstiva*, hind leg.Fig. 4. *Bibiodes halteralis*, wing.

of the Montana Agricultural College. These types have been distributed among the collections of the American Museum, New York City, the Montana Agricultural College, Professor J. M. Aldrich, and myself.

A female from Craig's Mountain, Idaho, presents the following peculiarities: Hairs shorter, coarser and deeper golden-yellow. Legs including coxæ reddish, darker at tips of the femora, posterior tibiæ and tarsal joints (except immediate base of individual joints of posterior tarsi), and front tarsi almost black; front coxæ and femora greatly thickened. Abdomen plump, broad, nearly bare, possessing eight tergites, and with a pair of oval brown terminal flaps.

***Bibiodes femorata* sp. nov.**

Male. Length 2.5 mm. Jet black, shining, provided with conspicuous pale golden hairs, the hairs of the abdomen almost white. Antennæ short and thick, measuring about two-thirds the length of the front metatarsi, the individual joints much wider than long. Eyes pubescent. Pleuræ very faintly strigose, almost smooth. The thoracic hairs long and golden, arranged as in *æstiva* in two longitudinal rows and bunches along the sides, front and back of the notum, but the hairs much more numerous and also longer: pleuræ also provided with hairs. The thumb-like process of the hypopygial valves not pale in color. Halteres entirely black. Legs very robust, shining black, the spur of the front tibiæ fuscous: the front femora greatly thickened, the front tibiæ shorter and stouter than in *æstiva*: hind tibiæ gradually enlarged to the end: hind tarsi plainly shorter than the tibiæ, the metatarsus much shorter than the two following joints together, the profile of the individual joints quadrate; pubescence of the legs evident, nearly as long as the diameter of the tibiæ. Wings lightly infumated, stigma brownish, oval; costa extends half way from the stigma to the tip of the wing; veins faint, inconspicuous, brownish.

Female. Like the male except for the differences of sex in the eyes and abdomen. the legs are less purely black.

Described from nine males and two females, collected by myself at Austin, Texas, December 13, 1899. The types have been placed in the collections of the American Museum of Natural History, of Professor J. M. Aldrich, and of myself.

***Bibiodes halteralis* Coquillett.**

The type species of the genus differs from the two here described in having yellow halteres. The legs of the male are entirely black. In the female the front coxæ, all the femora, and the front and hind tibiæ are reddish.

This, like *femorata*, is a winter species. Mr. Coquillett's specimens came from California, and were taken December 19 to March 18. I have two males before me from Professor Aldrich's collection, caught by Professor

C. F. Baker at Claremont, California. These specimens permit the following additions to Mr. Coquillett's characterizations.

Mesonotum provided with rather long hairs, becoming sparse on the abdomen. Eyes conspicuously hairy. Antennæ comparatively slender, as in *æstiva*. Pleuræ smooth, polished, and hairy. Hypopygium small, not open, nor enlarging the end of the abdomen. Hairs of femora very fine, some of them longer than the femoral diameter; the hind tibiæ gradually enlarged to the end; the hind tarsi comparatively slender, their joints cylindrical, and with the upper side less rounded in outline, the hind metatarsus but little longer than the following joint. Wings not at all infumated, the faint veins milky white, inconspicuous; the strong veins blacker than in the other species, the costa curves around the tip of the wing ending four-fifths the distance beyond the stigma to the tip; the blackish stigma does not include the end of the marginal cell: the second posterior cell touches the discal cell or else is very short petiolate.

