NOTES ON AMERICAN TRYPETIDÆ (*Diptera*) II.

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The species considered in this paper all belong to groups which have the "*Aciura*" wing pattern—black, with hyaline indentations. The various genera have little else in common, and belong to widely separated sections of the family, although they are sometimes placed together. The group of species placed in *Aciurina* by Curran (1932, p. 9) will be considered in a separate paper. I am indebted to Mr. E. T. Cresson, Jr., of the Philadelphia Academy of Sciences, and to Mr. C. H. Curran, of the American Museum of Natural History, for part of the material on which this work is based.

Genus BLEPHARONEURA Loew

Loew, 1873, p. 272 (type, *B. poecilogastra* Loew, sole species)

The front is about as broad as one eye, less than twice as high as broad. There are two pairs of upper, and two of lower orbital bristles; the verticals and ocellars are well developed. The third antennal segment is about as long as the second, rounded. The face is excavated, with the oral margin projecting. The dorsocentrals are behind the anterior supra-alars; there are three pairs of scutellars. The venation is shown in Fig. 2; the third and fifth veins are spinose above.

The above notes are based on the genotype, with which the following new species agrees closely in structure, despite the very different wing pattern.

***Blepharoneura hirsuta*, sp. nov.**

Figs. 1, 2.

♀ The head is brown, lighter just above the antennæ, with

the ocellar triangle black; the bristles are all dark brown. The thorax above is brown, shiny, covered with fine hairs, which appear yellowish or dark, depending on the light. The thoracic bristles are dark brown. The sides of the thorax and the legs are lighter, yellowish, the legs covered with yellow spines and hairs. The scutellum is yellow. The abdomen is marked above by two broad black subdorsal longitudinal bands, in sharp contrast to the yellow medio-dorsal area and under-surface. The ovipositor sheath is broad, flat, trapezoidal in outline, black; it is covered with fine hairs.

Fig. 1. *Blepharoneura hirsuta*, sp. nov., profile of head.

The wing is dark brown, lighter in the costal cell and toward the posterior margin, with the following hyaline indentations: a triangular area in the marginal cell at the tip of the first longitudinal vein, which reaches the third vein below; an elongate band which opens on the lower half of the first posterior cell, and extends above to the second vein; two similar bands opening in the second posterior cell, the first of which reaches the third vein above, while the second stops at the fourth; two other bands in the third posterior cell, the outer of which extends across the discal cell above to the fourth vein, the inner reaching beyond to the third vein. There is a small hyaline spot in the second basal cell, and another in the anal cell.

Total length, 6.1 mm.; length of wing, 6.3 mm.; length of ovipositor sheath, 0.8 mm.

Type, one female, from Aroa, Venezuela, in the American Museum of Natural History.

Genus HEXACHAETA Loew

Loew, 1873, p. 219 (type, *Trypeta eximia* Wied., by design. of Coquillett, 1910)

The front is narrow, about half as wide as one eye; there are three lower and two upper pairs of orbitals; the ocellars are rather weak, the verticals well developed. The third antennal segment is moderate to long, rounded; the face is slightly excavated beneath the antennae. The dorsocentrals are behind the anterior supra-alars; there are pairs of scu-

Fig. 2. *Blepharoneura hirsuta*, sp. nov.

tellars. The third vein is spinose for most of its length; the fifth vein is spinose at the base in the genotype.

Some of the species assigned to this genus have a rather "*Aciura*-like" wing pattern. The group is very likely heterogeneous as at present listed.

Genus EULEIA Walker

Euleia Walker, 1836, p. 81 (type *Musca caesio* Harris, as *onopordinis*, sole sp.)

Myoleja Rondani, 1856, p. 112 (type *Tephritis lucida* Fall.)

Philophylla Rondani, 1870, p. 9 (type *Musca caesio* Harris)

Eucosmoptera Phillips, 1923, p. 131 (in part; no type designated.)

Myiolia Hendel, 1927, p. 100.

Aciura and *Acidia* auctorum, in part.

The front is narrow, one and one half to two times as high as wide, sparsely hairy. There are three pairs of

lower orbital bristles, two of upper; the ocellars are moderately developed or weak; the occipitals are black, fine. The third antennal joint is moderate to long, rounded; the face is almost flat, the lower edge projecting only slightly if at all. The dorsocentrals are behind the anterior supra-alars; there are two pairs of scutellars. The third vein is spinose above on the lower half at least.

I can find no basis for the oft repeated statement that *Euleia* Walker is preoccupied, except that Hübner had previously used the variant spelling *Eulia* in the Lepidoptera.

***Euleia limata* (Coquillett)**

Aciura limata Coquillett, 1899, p. 263.

This species, from the Eastern United States, seems to be strictly congeneric with the European *cæsis*. It is a Ceratitine form, in no way related to either *Aciura* or *Xanthaciura*.

***Euleia nigricornis* (Doane)**

Aciura nigricornis Doane, 1899, p. 183, pl. III, f. 7.

Despite the peculiar sex characters of the male, this species seems to fit here better than anywhere else.

Genus POLYMORPHOMYIA Snow

Snow, 1894, p. 165. (type, *P. basilica* Snow, sole species).

The front is higher than wide, hairy. There are three lower orbitals, one upper orbital; the ocellars are well developed. The third antennal joint is long; the face is retreating; the occipitals are white and stumpy. The dorsocentrals are in front of the anterior supra-alars; there are two pairs of scutellars. The third vein is spinose; the wings broad.

Two species have been described in this genus.

Genus PSEUDEUTRETA Hendel

Hendel, 1914, p. 86. (type, *Trypeta adspersa* Wiedemann)

The front is higher than wide, hairy. There are three lower orbitals, one upper orbital; the ocellars are well de-

veloped. The third antennal joint is short; the face projects slightly; the occipitals are white, stumpy. The dorso-centrals are in front of the anterior supra-alars; there is one pair of scutellars. The third vein is naked above; the wings are broad.

The above notes are based on the following new species; the only other species that I have seen is *P. anteapicalis* Hendel, in the National Museum collection. Six South American species have previously been placed in the genus.

***Pseudeutreta ligularis*, sp. nov.**

Fig. 3.

♂ ♀ The front is a little broader than one eye, slightly higher than broad, brown, with a few scattered white,

Fig. 3. *Pseudeutreta ligularis*, sp. nov.

stumpy, hairs. The thorax is dark reddish brown, almost black, finely pollinose, with a few scattered stumpy white hairs on the dorsum, lacking on the sides. The scutellum is concolorous with the thorax. The head and thoracic bristles are all black. The abdomen is black, thickly covered with fine hairs. The genitalia of the male are lighter, brown, as is the ovipositor sheath of the female which, however, is narrowly tipped with black. The legs of the female are a rather uniform light brown except the somewhat darker posterior tibia; in the male, however, the fore femur is darker also, and somewhat swollen.

The wing pattern is shown in figure 3. There are two hyaline indentations in the costal cell, both of which have narrow extensions across the first longitudinal vein. A similar indentation in the stigmal cell is yellowish rather

than hyaline. A hyaline band borders the wing tip from about the middle of the marginal cell to the fifth vein, separated from the distal margin of the wing by a narrow brown area which begins just beyond the second vein, and extends to about a third of the distance between the fourth and fifth veins. A hyaline indentation in the third posterior cell opens on the lower half of the cell margin, and extends about two thirds of the way up the cell to end on the fifth vein. There is a round hyaline spot in the first basal cell, just before the small cross-vein, another in the very base of the third posterior cell, and some rather indefinite clear spots along the posterior margin of the wing.

Total length of female, 5.5 mm.; length of wing, 5.0 mm.; length of ovipositor sheath, 0.6 mm.

Described from one male (the holotype), and one female (allotype), in the Museum of Comparative Zoology, from Sara Prov., Bolivia (Steinbach); one male paratype from São Paulo, Brazil.

This species seems close to *Aciura falcigera* of Kieffer, described from Argentina. It differs from Kieffer's description and figure in several ways, most notably in the wing pattern. The apical narrow hyaline spot of *falcigera* is lacking in *ligularis*; the sickle-shaped hyaline band which parallels the wing tip does not reach the costa above in *falcigera*, and so forth.

Genus TETREUARESTA Hendel

Hendel, 1928, p. 368 (type, *Trypeta obscuriventris* Loew)

This genus is included here because of the wing pattern of the following new species; the described species of the group all have a typical "Euaresta" pattern. The genus is sufficiently well characterized by Hendel, *l.c.*

Tetreuaresta bartica, sp. nov.

Fig. 4.

♂ ♀ The front is yellowish, slightly elevated on its lower half, strongly narrowed toward the base, about two-thirds as wide at the vertex as high. There are three pairs of

brown lower orbitals, two of upper orbitals; the vertical and ocellar bristles are well developed. The antennae do not quite reach the oral margin; the third joint is about twice as long as the second; the cheeks, face and mouthparts are proportioned much as in *T. obscuriventris*.

The thorax is probably black, overlaid with greyish pollen in all of my specimens. The bristles are well developed, yellow, arranged much as in the genotype, *T. obscuriventris*. The scutellum is yellowish, with both pairs of bristles well developed; the legs are yellow, with light colored hairs and spines.

The wing pattern is shown in figure 4. The ground color is a uniform dark brown, with various hyaline indentations

Fig. 4. *Tetreuaresta bartica*, sp. nov.

and spots. The costal cell is mostly hyaline, with some brown lines; the stigmal cell includes a yellowish spot which occupies about half of its area. There are two triangular hyaline indentations in the marginal cell, the tips of which extend over the second longitudinal vein, almost reaching the third vein. A small hyaline spot is sometimes present just below the tip of the second vein. The spots in the first hind marginal cell are variable in number and position, and may be different on the two wings of one specimen. Most commonly three are present, sometimes only the two basal spots are present; sometimes the apical spot splits into two, as in the figure, or even three smaller spots. The first basal cell includes a single round hyaline spot. In the second hind marginal cell there are three hyaline indentations: the distal one is small, round, and may be absent; the two proximal ones are elongate, always present. The third hind marginal cell includes two elongate hyaline areas which reach the fifth vein above; there is a small round spot in the discal cell, usually about midway between these two marginal in-

dentations. There are various hyaline spots on the base of the wing. The cross-veins are approximated, parallel; the third vein is spinose for almost its entire length.

The abdomen is brown, sparsely covered with brownish hairs. The ovipositor sheath of the female is dark brown, trapezoidal in shape.

Total length, female, 4 mm.; length of wing, 3.4 mm.; length of ovipositor sheath, 0.6 mm.

Described from 10 ♂♂ and 7 ♀♀ from Bartica, British Guiana, March, April, May and September, from the Johnson Collection in the Museum of Comparative Zoology, and the collection of the Academy of Natural Sciences of Philadelphia. The types are distributed as follows: holotype ♂, and allotype ♀, and 5 paratypes in the M.C.Z.; 5 paratypes in the A.N.S.P.; 2 paratypes in the United States National Museum; 2 paratypes in the American Museum of Natural History; one paratype in the collection of H. K. Munro.

This very interesting species agrees closely in structure with *Tetreuaresta obscuriventris*, except that it has two well developed upper orbitals, while only one pair is present in Loew's species. The wing pattern is very like that of *Xanthaciura*, and there are some structural similarities.

Genus XANTHACIURA Hendel

Hendel, 1914, p. 86. (type, *Trypeta chrysura* Thomson).

Tetraciura Hendel, 1914, p. 90. (type, *T. quadrisetosa* Hendel).

Eucosmoptera Phillips, 1923, p. 131 (in part; no type designated).

The front is very narrow, naked; there are three pairs of lower orbital bristles, but only one fully developed pair of upper orbitals; the ocellars are well developed. The face is retreating; the occipitals are white, stumpy. The dorsocentrals are in front of the anterior supra-alars; there may be one or two pairs of scutellars. The wings are narrow, the third vein naked.

Eucosmoptera tetraspina Phillips may be taken as the type of her genus, as it was the species with which she was most familiar. There really seems to be no good reason for

separating the species with two scutellars from those with four, in this case, as the species are all very close, and form a compact, well defined group when arranged together.

BIBLIOGRAPHY

- Coquillett, D. W. 1899. Notes and descriptions of Trypetidæ. Journ. N. Y. Ent. Soc., VII, pp. 259-268.
- Curran, C. H. 1932. New species of Trypaneidæ, with key to the North American genera. Am. Mus. Nov., No. 556, 19 pp., 9 figs.
- Doane, R. W. 1899. Notes on Trypetidæ with descriptions of new species. Journ. N. Y. Ent. Soc., VII, pp. 177-193, pl. 3, 4.
- Hendel, F. 1914. Die Gattungen der Bohrfliegen. Wiener Ent. Zeit., XXXIII, pp. 73-98.
- 1927. Trypetidæ, in Lindner, Die Fliegen der palæarktischen Region, 49. 221 pp., 17 pl., 79 textfigs.
- 1928. Neue oder weniger bekannte Bohrfliegen meist aus dem Deutschen entomologischen Institut Berlin-Dahlen. Ent. Mitteilungen, XVII, pp. 341-370.
- Loew, H. 1873. Monographs of the Diptera of North America, pt. III. Smiths. Misc. Coll., 256. 351 pp., 4 pl.
- Phillips, V. T. 1923. A revision of the Trypetidæ of North-eastern America. Journ. N. Y. Ent. Soc., XXXI, pp. 119-155, pl. 18, 19.
- Rondani, C. 1856. Dipterologiæ italicæ prodromus. I. Parma, 228 pp.
- 1870. Orthalidinæ italicæ, collectæ, distinctæ et in ordinem dispositæ. VII, fasc. 4, Tephritoidi. Bull. Soc. Ent. Ital., II, pp. 4-31; 105-133.
- Snow, W. A. 1894. Descriptions of North American Trypetidæ, with notes. Paper I. Kans. Univ. Quart., II, pp. 159-174, pl. 6, 7.
- Walker, F. 1836. Descriptions of the British Tephritites. Entomological Mag., III, pp. 57-85.