

ON THE RARE OCCURRENCE OF CERTAIN AMERICAN MUSCOID FORMS OF STRIKING CHARACTER

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It is worthy of note how few individuals of certain very striking species of American muscoid flies have been turned up. The following are some of the more outstanding cases:

Cephenemyia phobifer Clk.

One male was taken by J. Abbott about the beginning of the past century in the southern Appalachians of central Georgia and described in 1815. The next specimens taken were five males, discovered by F. E. Watson and W. T. Davis in 1913 and 1914 in the Adirondacks of New York. The species remained undiscovered for a hundred years. No American females of this genus are known in collections. *mk*

Talarocera nigripennis Wd.

This very remarkable Brazilian species was described in 1830 from a single female. H. H. Smith took both sexes in 1886 at Santa Anna da Chapada in Matto Grosso. Doctor Zuercher took a male in Paraguay in 1915. No other specimens are known. Until recently I had never examined a specimen. I had the Zuercher specimen in my keeping for a year before I discovered its identity, never having suspected its presence in all that time, though I had often looked at it as one amongst a lot of pinned specimens. The genus is an aberrant member of the tribe Larvaevorini.

Bibiomima handlirschi BB.

This most interesting and bizarre member of the Phasiidæ was described in 1889 from a specimen in the Winthem collection, taken in Bahia, Brazil, many years before. H. H. Smith took a

single specimen at Santa Anna da Chapada in 1886 and I published a note on it in 1916. Only these two specimens are known.

one in n. m. - Greene

***Polistiopsis mima* TT.**

This wonderful wasp-counterfeit is so far known in a single specimen taken by Sumichrast in Tehuantepec in the sixties of the past century. It evidently belongs in the tribe *Cylindromyiini*. The specimen stood undescribed in the U. S. N. M. collection all through Coquillett's time. I believe he regarded it either as a monstrosity or as a humbug—a wasplike hybrid or a syrphoid body with muscoid head etcetera—and was afraid to describe it! One can hardly blame such distrust, for its likeness to a brown *Polistes* and to certain wasplike syrphids is so faithful as to be positively startling. I almost doubted my own judgment when I described it.

***Tricharaea brevicornis* Wd.**

This *Scatophaga*-counterfeit was described in 1830 from Montevideo. In 1858, Walker described a specimen from the Amazons as *Dexia albicans*. In 1868, Thomson described a third specimen from Rio de Janeiro as *Tricharaea scatophagina*, new genus and species. In 1925, Doctor Aldrich erected *Mallonotum*, new genus, on the Wiedemannian specimen. These three specimens are the only ones known.

***Cryptocladocera prodigiosa* Bzz.**

This fissicorn form was described in 1923 from a single male that Bezzi had found in his collection amongst a lot of material purchased from Staudinger many years before. Evidently he was ignorant of its presence for many years until he happened to turn a lens on its head. It is from Dutch Guiana. No other specimen is known. It apparently belongs in the *Frontinini*. Bezzi erred in his supposition that *Talarocera* and *Cryptocladocera*, "having lost the plumosity of the arista, are replacing it by feathering the third antennal joint" (page 649, *Fissicorn Tachinidae*); for, were such the case, the females would also possess the feathering. Aristal plumosity is always the same in

the two sexes. In my opinion, the splitting of the third antennal joint is initiated for the purpose of affording greater olfactory or other sensory surface, analogous to the involutions of the brain surface, and may later be carried to extremes in the male by sexual selection.

Ucayalimyia antlerata TT.

This most astonishing of all fissicorn flies was described in 1926 from a single male that I took on September 13, 1925, at Canchahuayo on the lower Rio Ucayali in eastern Peru. While collecting, it is my nearly invariable custom to glance with a lens at the head of each fly as soon as I bottle it. Only when it seems quite unmistakably to be one of the common forms that I have taken repeatedly do I neglect this examination. I did not turn the lens on this fly till after I had pinned it, which is sufficient commentary on its appearance to the naked eye. The same thing happened on August 2, 1927, when I was fortunate enough to take a second male in a patch of rain-forest at Oxapampa in the Peruvian montanya, at 5600 feet altitude. No other specimens are known. This is without doubt the most marvellous muscoid fly yet discovered. It bears a remarkable analogy to what would be termed in big-game parlance a many-point buck, hence the specific name. The Ucayali specimen is in the 90-point class. The Oxapampa male shows many less points. The genus appears to belong in the Phoriniini. In view of my experience, I recommend all muscoid students and collectors to examine separately with a lens the head of every fly in their collections. Doubtless there are to be discovered in collections fissicorn specimens of whose presence the possessor is ignorant.

Dichocera lyrata Will.

Various specimens of this species were taken by Doctor Aldrich in Idaho in 1895. It has not been met with elsewhere. This and its close allies, *Dichoceropsis* and *Neodichocera*, seem to belong in the Germariini. *Dichoceropsis orientalis* Cq., from Massachusetts, known only in the female, may or may not have a fissicorn male.

Neodichocera tridens Wlt. *= orientalis*

Two males of this species were taken by V. L. Wildermuth or associates in northern New Mexico in 1913. I took a female in 1917 on the East Verde river in central Arizona. No other specimens are known. The female was taken September 30 on a drift log stranded on a big rock in midstream. It looks almost exactly like a common sarcophagid. The forenoon was showery and I was fishing. Not suspecting its identity, I caught it in my hand with the intention of using it for fishbait, but recognized its rare nature in time to save it from the hook. The incubating uterus is gutlike, quite thick, in four or five coils, not straplike; eggs in four to eleven rows, fairly regularly disposed but not with precision; no maggots were yet developed; capacity a thousand or over. Preuterus present, as long as the elongated macrotype egg.

Acronarista mirabilis TT.

This was described in 1908 from a male taken by H. G. Dyar in southern Florida. It has not been recovered. Like most of the small fissicorn forms, this goes in the Actiini. *Acronaristopsis bahamensis* TT, known only in the female, is a member of the same tribe and may or may not have a fissicorn male; its three bristled veins signify nothing in this connection, as this character occurs in widely diverse forms. *Acronarista* had 39 *Acronarista*.

Imitomyia sugens Lw.

This interesting form was described by H. Loew from Illinois in 1863. It was never found again until about 1915, when numerous specimens were collected in Saskatchewan.

Euthera tentatrix Lw.

This was described by H. Loew in 1866 from New York. Isolated specimens have been found since in a half dozen separate localities, ranging from Massachusetts to Georgia and Texas. A male was taken on wet muddy soil May 14, 1915, at Chevy Chase, Maryland, by G. E. Quinter. The species is thus not a late-summer form, as was imagined by Bezzi.

A single male specimen of *Euthera*, described by Bezzi in 1925 as *E. barbiellini*, was taken by Count A. A. Barbiellini some years since in Sao Paulo, Brazil. It is the only specimen of the genus as yet known from the entire continent of South America.

As the late Paul Stein has aptly remarked, the affinities of *Euthera* have caused much brainwreck over a period of many years. Brauer and Bezzi have favored *Schineria* as the nearest ally; Stein, *Trixa*; Osten Sacken, *Scopolia*; Williston, *Acemya*; Mik, Villeneuve and Townsend, *Phasia*. The diversity of views obtaining indicates the complexity of the affinities in question. With Villeneuve and Stein, I have always considered *Schineria* to belong in the vicinity of the Larvaevorine Series of tribes (supertribe Larvaevorini), with which *Euthera* has little special affinity, yet both Brauer and Bezzi considered it to possess *Cylindromyiine* and thus *Phasiid* affinities. *Trixa* and *Scopolia* appear to fall in the *Calirroidae*. *Acemya* is classed by Stein in the *Phasiidae*, by others in the *Calirrhoidae*. *Euthera* presents certain affinity with the *Calirrhoidae* but appears better placed in the *Phasiidae*, along with *Imitomyia* and *Hesperophasia*. The female internal reproductive-system characters are still unknown, but the male characters appear to approach most nearly those of *Cenosoma*. The vasa efferentia are mere necks in *Euthera* and practically absent in *Cenosoma*, while the other characters are very similar in the two genera. But *Cenosoma* itself is rather on the borderline between the *Calirrhoidae* and the *Phasiidae*.

Hermya afra RD.

Described from Brazil in 1830 and not rediscovered. Seems near *Penthosia*.

Icelia flavescens RD.

Also described from Brazil in 1830 and not yet rediscovered. Evidently came from Minas Geraes. Seems close to *Hemyda*.

Macromya depressa RD.

This, also described from Brazil in 1830, must be a very striking form. Despite the discrepancies in Desvoidy's description,

one might easily jump at the almost irresistible conclusion that *Paradejeania rutilioides* is *Macromya depressa*, but he would certainly be wrong. In favor of this conclusion there are the following facts: Desvoidy states that *Macromya* differs from *Rutilia* only in the somewhat longer third antennal joint and absence of facial carina; that it is wide, depressed, yellowish, etc.; Jaennicke named his species *rutilioides*; the measurements of *depressa* and *rutilioides* are the same, 16 to 18 mm, and no other similar flies are known of this size. Against the conclusion is the fact that coloration, length of second antennal joint and abdominal chaetotaxy all conflict. *Macromya depressa* remains still to be rediscovered. Since the description of *M. analis* RD almost tallies with *Tropidopsis pyrrhaspis* Wd., it is most probable that *Macromya* belongs in the *Hystriiini*.

***Leschenaultia cilipes* RD.**

Described in 1830 from Dutch Guiana and not yet rediscovered. It seems to be a *Harrisia* with spinelike machrochaetae and tomentose arista.

***Olinda brasiliensis* RD.**

Described in 1830 from Brazil. *Olinda* is the name of a seaside suburb of Pernambuco, which would indicate that this species was collected near there. The genus appears allied to *Xiphomyia*, which is a *Lydella*-like form with a piercer as long as its abdomen. It remains to be rediscovered.

***Spathipalpus philippii* Rdi.**

Described in 1863 from Valdivia, Chile, and not yet rediscovered. It is probably either a *Leskiine* or an *Aphriine*.

***Dumerillia rubida* RD.**

Described in 1830 from Brazil and not yet rediscovered. It seems to come near *Jurinia*.

***Chætogyne vexans* Wd.**

Described from Sao Paulo, Brazil, in 1830 and not yet rediscovered.

***Pachymyia macquartii* TT.**

This was identified by Macquart in 1843 from Sao Paulo as *vexans* Wd. Brauer & Bergenstamm state that it is quite distinct. It has not been rediscovered.

***Myiophasia australis* TT.**

This was described by Wiedemann in 1830 as *Tachina aenea*, from Montevideo, and has never been rediscovered. The combination, in male, of deeply yellowish wings, rust-yellowish wing-veins and deep yellowish squamae, with strongly oblique cross-veins, as per Wiedemann's description, is known in no North American specimen. I believe that the locality label of Montevideo is correct, that the Wiedemannian specimen came from Uruguay and that the species will eventually be rediscovered. If it came from Uruguay, it can scarcely be the same species as *metallica* TT from a range far removed with no specimens in between. Aside from the wing differences, the first two antennal joints are reddish-yellow and the third black, while in *metallica*, the first two joints are not so contrasted in color with the third, which is usually an important character. There are a number of minor differences in both color and structure.

***Sophia filipes* RD.**

Described in 1830 from Brazil and not yet rediscovered. For a long time I could not place this form, but I finally concluded that it must be congeneric with *Euantha liturata* Ol. I still incline to that view, but may be wrong.

***Cordyligaster analis* Mcq.**

Described in 1851 from the Amazons, on a single male. In recent years Parish took a female in British Guiana which Aldrich has provisionally referred to this species. No other specimens are known.

***Cordyligaster tipuliformis* Wlk.**

A single female described in 1857 from South America and the species not yet rediscovered.

Xystotrixa anthracina Wd.

Described in 1830 from Brazil and not yet rediscovered. It appears to be related with Therobia and Trixa.

Sumichrasti aurea GT

Described in 1893 by Giglio Tos from a specimen collected by Sumichrast in Mexico in the sixties of the past century. Some twelve or fifteen years ago, H. T. van Ostrand rediscovered it in a single female at Real del Monte in the State of Hidalgo, 9000 feet. *One more in n.m.*

Lasiopalpus flavitarsis Mcq.

Described by Macquart in 1847 and three specimens taken by Lindig in Venezuela in 1864. It has not been rediscovered since.

Argyromima mirabilis BB.

Described in 1889 on a single specimen from South America and not rediscovered. It is a dolichopodid-counterfeit.

Exopalpus.

Described by Macquart from Colombia and not rediscovered.

Gonistylum.

Described by Macquart from Brazil and not rediscovered.

Gnadochaeta.

Also described from Brazil by Macquart and not rediscovered.

Pterotopeza tarsalis Sch.

Taken by Lindig in Venezuela in 1864 and described in 1868. Not yet rediscovered.

Jaenimyia albicincta TT.

Taken in Jaen province, eastern Peru, in 1911. No other specimens known before or since.

Euscopiopteryx nebulosa TT.

Described in 1917 from a single specimen taken by H. H. Smith on the Rio Cuyabá in 1886. No other specimen known.

Chiricahuia cavicola TT.

Taken in the Chiricahui Mountains of Arizona in 1917, in a single female. No other specimen known.

Bezzimyia busckii TT.

Taken by Busck in Panama about 1912. Only one specimen known.

Anametopochaeta olindoides TT.

A single specimen taken in 1910 in eastern Peru. No other known.

The foregoing species are rare in both sexes; the following may be rare in only one sex, usually the female:

Trixodes obesa Cq.

The males of this species are common on living pine trunks in the mountains of southeastern Arizona, southwestern New Mexico and northwestern Mexico. I have taken forty-four males but only two females. These two females are the only ones known and were taken in 1894 on the West Fork of the Rio Gila in New Mexico, and in 1899 on the Head of the Rio Piedras Verdes in the Sierra Madre of western Chihuahua. In 1917 I took forty-two males in Arizona.

Charapemyia calida TT.

Only males are known. I have taken numerous males in three separate localities of the Peruvian montanya (Rio Charape, Uruhuasi, Oxapampa) and at Itaquaquecetuba in southern Brazil, but never a female. On Aldrich's identification, I have also taken males of the genus in the White Mountains of New Mexico. This genus is entirely distinct from *Neotrafoia* TT, of which I have taken various specimens of both sexes in three localities of the Peruvian montanya (Cuzco, Uruhusia, Oxapampa). There are no less than thirteen important generic distinctions between *C. calida* and *N. incarum*, the two most striking being in the ocellar bristles and the proboscis. Throughout the Muscoides, the direction in which the ocellars are inclined is

always practically the same in the two sexes. The proboscis of *Charapemyia* is much stouter and shorter than that of *Neotrafoia* and of quite distinct type. The wings of *N. incarum* are conspicuously blackish on costa from stigma to tip of R3, while in *C. calida* they are perfectly clear. This last character easily separates the two species.

***Xylocopodes semiatra* Wd.**

At Petropolis, Brazil, Foetterle has taken about 100 males of this remarkable fly during a period of years within the past decade or two, always in summer and mostly in February, and only on a certain particular tree trunk, until the collecting of further specimens was summarily stopped by the owner of the tree ordering it cut down. Two or three females were taken elsewhere near Petropolis. No other females are known. The species was described in 1830 from a male taken near Rio de Janeiro. Another male has been taken in the State of Espirito Santo.

***Pseudogametes hermanni* Bsch.**

Only three specimens known. The holotype, a male, is from Minas Geraes. Two other males have been taken in northwestern Sao Paulo, on a tree trunk. No females are known.

***Atrypoderma* spp.**

I have taken about 100 males of this genus sitting on rocks and twigs in wet and dry canyons and washes of southwestern North America, with never a female in their company. Occasional females are found flying, on the scout for hosts. The males take their stations while awaiting the females, as in the case of *Xylocopodes*, *Trixodes* and *Pseudogametes*, but, unlike these three genera, they never frequent tree trunks.

The above facts illustrate the danger of falling into serious error in attempting to force conclusions of identity of forms that closely approach each other on most characters but show certain differences. One form may occur commonly and the

other be of very rare occurrence, the two being quite distinct. Or one sex may be common and the other rare. Long series of a given form may not be the same as a single specimen described a century ago or yesterday, despite their close agreement in all but certain minor characters. No matter how large and full a collection, we can not hope to find all forms represented in it. We must remember further, that only about one-fifth of the existing forms are so far named and described. It may seem strange that a given form was collected a century ago in a certain locality and that intensive collecting today in the same general region or district fails to reveal anything like it. Yet such is the fact in numerous cases, as above pointed out at length. Nor is any vital change in the environment to be held responsible for their disappearance, since suitable refuge has always been open to all of the above-mentioned forms. Quite certainly none of these forms is extinct. The fact is that many of the rarer species may not be met with once in a century. Furthermore, consider the vast number of forms still unknown, that nearly two centuries of collecting has so far failed to turn up!



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