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A NEW SUBFAMILY OF TANYDERID FLIES (DIPTERA).

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The family Tanyderidæ, which includes the most generalized of the four recent families of crane-flies, has hitherto been represented by a single subfamily, the Tanyderinæ. This group has been further subdivided into a number of genera, varying from about six, in the opinion of Dr. Anton Handlirsch and others, to three, in the opinion of the writer. It is with great pleasure that a remarkable new genus and species is here made known, differing so strikingly from all members of the Tanyderinæ that a new group of co-ordinate value is required for its reception.

The distribution of the known recent species of the family, thirteen in number, may be listed.

TANYDERIDÆ (MACROCHILIDÆ).

Subfamily TANYDERINÆ.

Protoplasa Osten Sacken.

P. fitchii Osten Sacken, genotype. Eastern Nearctic Region.

P. vanduzeei Alexander. Western Nearctic Region.

P. vipio Osten Sacken. Western Nearctic Region.

Tanyderus Philippi.

T. annuliferus Hutton. Australasian Region.

T. forcipatus Osten Sacken. Australasian Region.

T. gloriosus Alexander. Southern Neotropical Region.

T. mirabilis de Meijere. Australasian Region.

T. ornatissimus Doleschall. Australasian Region.

T. patagonicus Alexander. Southern Neotropical Region.

T. pictus Philippi, genotype. Southern Neotropical Region.

T. beckeri Riedel. Southern Palaearctic Region. (Turkestan.)

Peringueyomyia Alexander.

P. barnardi Alexander, genotype. Southern Ethiopian Region.

Subfamily BRUCHOMYIINÆ, new.

Bruchomyia, gen. n.

B. argentina, sp. n., genotype. Southern Neotropical Region.

The new genus *Bruchomyia* is based on material sent to the writer by Dr. Charles Bruch, to whom this remarkable fly is dedicated as an appreciation of the kind co-operation he has shown the writer in conducting a study of the Argentinian Tipuloidea.

Subfamily BRUCHOMYIINÆ, subfam. n.

Small flies (Fig. 1), having the general appearance of a *Molophilus* (Tipulidæ); body and wings covered with long, dense hairs. Antennæ setaceous, with 30 segments, the last segment minute. Legs with the coxæ very long; tibiæ spurred; tarsal claws minute. Wings with Sc_1 lacking or apparently so; R and M forking far back near the wing-base, the forks being very deep; crossvein m lacking; anal vein subatrophied; anal angle of the wings lacking, this region fringed with very long hairs. Male hypopygium very small, concealed within the body; a single pleural appendage that is bifid.

The members of the Tanyderinæ are all large flies with the body not conspicuously hairy; antennæ with never more than 25 segments; m present; anal angle present and usually very prominent.

Genus *Bruchomyia*, gen. n.

Body (Fig. 1), very hairy, the head, thorax and abdomen provided with long, dense, erect hairs. Rostrum but slightly produced; palpi very large and conspicuous, very hairy, apparently four segmented, possibly five segmented. Antennæ (Fig. 4), 30 segmented; flagellar segments 28 in number, the last segment minute; scapal segments subequal in size, small, subglobular, the second with a circlet of short verticillate hairs; flagellum setaceous; first segment about as long as the following two taken together; flagellar segments 2 to about 20 subequal, elongate cylindrical; remaining segments gradually shortened, the last segment very tiny, button-like, the penultimate and antepenultimate oval (Fig. 5). Eyes very large, naked; ommatidia moderately large; eyes separated on the vertex (Fig. 3) only by a narrow strip that is from one-fourth to one-half the diameter of the basal scapal segment. Vertex with a dense crest of erect hairs. Legs (Fig. 6) comparatively stout; coxæ very long and slender, like a Mycetophilid; femora shorter than the tibiæ; tarsal segments gradually shortened from the first to the fifth; tibiæ provided with long, conspicuous bristles; tarsal segments with shorter, more flattened bristles; claws (Fig. 7) very small, subappressed to the end of the tarsus, the edges roughened, the rather long apex smooth; two slender tibial spurs. Wings with no anal angle; veins and margins with abundant long hairs that are especially elongate and conspicuous in the region of the anal angle; at the union of $r-m$ with R_5 is a triangular chitinized area that is provided with conspicuous black hairs. Venation (Fig. 2): Sc_1 lacking, Sc_2 ending in R before the fork of R_{2+3} ; Rs originating close to the wing-base, slightly proximad of the fork of M ; Rs with four branches; M forking far back near the wing-base, the upper fork with two branches, the lower fork unbranched;

m lacking; *Cu* forked, the basal deflection of *Cu*₁ without macrotrichiae; a single, semi-atrophied anal vein. Male hypopygium very small, densely covered by hairs; pleurites stout (Fig. 8), each near the apex on the inner face with a dense brush of stout black hairs; the single pleural appendage deeply bifid. Ninth sternite (Fig. 9) produced into a flattened pale appendage, deeply bifid at the apex, the margins provided with a few setae. Penis-guard far within the body; a long, straight rod with the apex a little enlarged.

Genotype. *Bruchomyia argentina*, sp. n. (Southern Neotropical Region).

This remarkable new genus presents such a distinct appearance from all other members of the family that it is necessary to isolate the group. In its general appearance, the fly is strikingly like a large, very hairy *Molophilus*, the resemblance being heightened by the long, hairy wings, the long veins and deep forks, the concealed hypopygium, the elongate antennae, and even the patch of dark hairs on the wing-disk, a character found in many species of *Molophilus*. It should be noted that although the venation is herein interpreted in accordance with the principles of the Comstock-Needham system, the distribution of the branches of *media* and *cubitus* render it highly probable that the contentions of Dr. Tillyard, that in the Diptera *media* is typically four branched, *cubitus* one branched, are correct. The portion of the vein labelled *Cu*₁ appears to be the posterior branch of the last forking of *media*, the basal deflection being without macrotrichiae and very indistinct. This would be the *m-cu* crossvein of Tillyard. The semi-atrophied posterior branch of *cubitus* that was indicated by the writer as possibly being the atrophied first anal vein in Tipulidae (The Crane-flies of New York, Cornell Memoir 25, pp. 867, 868; 1919) is here very weak, but indicated.

Nothing is known of the habits of these flies, but they were associated in collections with *Pectinotipula argentina* (Van der Wulp), *Holorusia jujuyensis* Alexander, *Brachypremna australis* Alexander, *Gonomyia* (*Leiponeura*) *bruchi* Alexander and other species of Tipulidae and *Dixa argentina* Alexander. The genus must be regarded as the most generalized living Tipuloidean fly, this being amply demonstrated by the great number of antennal segments and wing-veins, the forking of all the longitudinal veins far back near the wing-base and the consequent very deep forks and other characters. The discovery of the immature stages would be a matter of extreme interest.

***Bruchomyia argentina*, sp. n.**

General appearance much like a *Molophilus*; antennæ elongate, setaceous, 30-segmented; body and wings covered with long conspicuous hairs; *m* lacking; a patch of dark hairs at *r-m*.

Male.—Length, 4–4.5 mm.; wing, 4.3–5 mm.; antenna about 4 mm.

Frontal prolongation of the head short, brown, margined with dull yellow; palpi dark brown, conspicuous, covered with abundant long dark hairs. Antennæ setaceous, scapal segments dull yellow; flagellum pale brown, clothed with abundant subappressed dark hairs. Head grayish brown; lateral portions of the vertex with sparse black bristles, the median area with a high, dense crest of whitish hairs.

Pronotum brown, the lateral portions of the scutellum pale yellow. Mesonotum brown, the praescutum and scutum with three rather narrow gray stripes, the interspaces and a broad median strip provided with abundant black hairs; remainder of the mesonotum brown with abundant pale hairs. Pleura pale brownish yellow, the episternum more brownish, provided with long whitish hairs. Halteres stout, dark brown. Legs with the coxæ very long and slender, provided with hairs; trochanters comparatively small; remainder of the legs brown, covered with an abundant pale appressed pubescence and scattered erect bristles. Wings pale yellow, a little suffused with darker beneath the end of vein *Sc*; veins pale brown; veins and margin fringed with an abundant, long, dark-colored pubescence, longest at the region of the anal angle; a conspicuous patch of blackish brown hairs at *r-m* and the deflection of *R*₅. Venation, (Fig. 2).

Abdomen brownish testaceous, the tergites margined caudally with darker; surface of the abdomen covered with long whitish hairs.

Habitat: Argentina.

Holotype, ♂, La Granja, Alta Gracia, Province de Córdoba, April 1–8, 1920 (Charles Bruch).

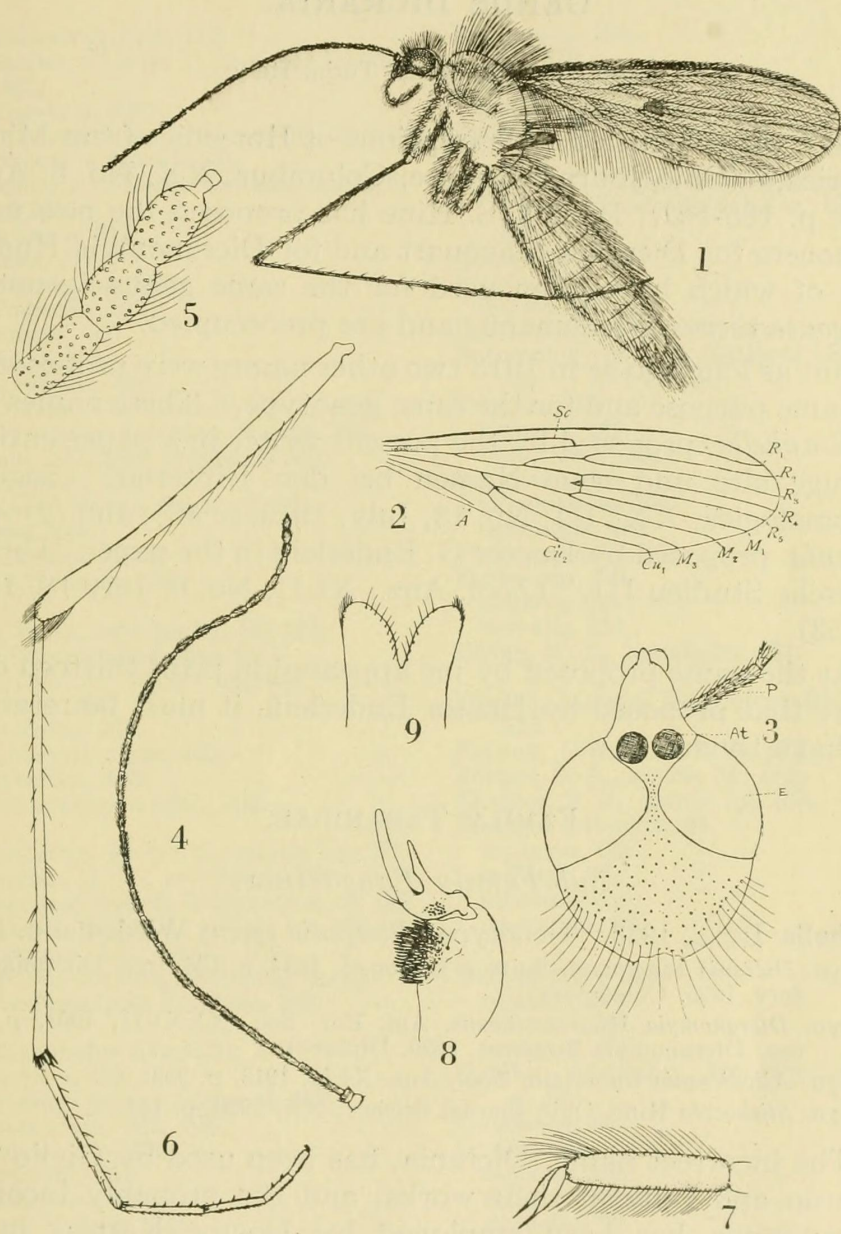
Paratopotypes, 3 ♂'s.

Type in the collection of the writer; paratype and other specimens in the collection of the La Plata Museum.

EXPLANATION OF PLATE XXXII.

Abbreviations—*Sc* = subcosta; *R* = radius; *M* = media; *Cu* = cubitus; *A* = anal vein;
At = Antennal fossa; *E* = eye; *P* = palpus.

- Fig. 1. Sketch of the entire fly of *Bruchomyia argentina*, to show the general appearance.
- Fig. 2. Wing-venation; the hairy covering has been removed to show the venation more clearly.
- Fig. 3. Head; dorsal aspect.
- Fig. 4. Antenna.
- Fig. 5. Four terminal segments of antenna.
- Fig. 6. Leg.
- Fig. 7. Last tarsal segment and claws.
- Fig. 8. Pleurite of male hypopygium.
- Fig. 9. Appendage of ninth sternite of male hypopygium.



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