

# New African Tipulidae

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*Canadian Entomologist* 44:83-88 (1912) <http://biostor.org/reference/13783>

Keywords: Chalcidoidea; Cornigera; Mongoma; Mymaridae; Petaurista; Sterna; Styringomyia; Styringomyia didyma; Styringomyia howardi; Toxorhina



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1909. Idem.—Genera Insectorum (dirigés par P. Wytsman), Bruxelles, 97 me fascicule, Family Chalcididæ. pp. 427, 464, 465, 468.

Table to the genus as in Ashmead (1904); brief diagnosis of the genus, listing *colliguayæ*, *melleus*, *persimilis* and *viridicyaneus*, *Euderus columbianus* (p. 427).

(See also Kieffer, bionomic note on *colliguayæ*, *Révista Chilena de Historia Natural. Órgano del Museo de Valpaiso*, VII, p. 111.)

### NEW AFRICAN *TIPULIDÆ*.

BY C. P. ALEXANDER, ITHACA, N. Y.

The following species were given by Mr. Chas. W. Howard to Prof. Needham, and later turned over to me for examination. There were four specimens, representing three species, of which two are herein characterized as new. Mr. Howard's remark, that "the species were as thick as gnats," is interesting.

*Styringomyia howardi*, n. sp.

Holotype.—♂, brown and gray; length, 5.25 mm.; width, 4.75 mm.

Mouthparts dark brownish black; palpi, first segment very short; second segment large, oval, brown, apical third black; third more slender, brown, apical two-thirds black; terminal segment about as thick as the penultimate. Antennæ: first segment elongated, gray; second oval, enlarged at the distal end, remaining segments oval, gradually becoming more elongated to the tip; segments with a short pubescence and long irregular hairs, which are scarcely verticillate; first segment gray, second dark brown at tip, yellowish at base; remaining segments pale brownish yellow, the hairs darker; ommatidia large, coarse, black; front, vertex, genæ and occiput gray, with stout, scattered black bristles.

Pronotum large and prominent, showing an unusually generalized condition; the scutellum U-shaped, encircling the cephalic margin of the mesothoracic præscutum, with about three prominent bristles on the lateral margin; the scutum is narrower, running to an obtuse point cephalad, with a group of bristles along the lateral margin. Mesonotum: præscutum with a row of bristles along each side of the median line and a row along the lateral margin, this row incurving near the cephalic margin of the sclerite; scutum with four bristles on each half; the scutellum with a bristle on either side of the median line; postscutum and metanotum unarmed. Pronotum brown, pale apically, with an inverted U-shaped pale mark on the scutum; mesonotum præscutum, middle line pale, remainder

brown; scutum grayish brown, yellow along the cephalic margin passing around the black bristle; scutellum yellow medially, brown laterad of the bristle, postscutum brown; metanotum brown; sterna yellow; epimera and episterna reddish brown, forming a narrow longitudinal band.

Halteres pale brown, subapically darker brown; tip yellow. Legs short and stout, thickly covered with appressed hairs; coxæ short, cylindrical, in the fore leg about as long as the trochanter; in the middle leg shorter than the prominent trochanter; in the hind leg prominent, much exceeding the shorter and narrower trochanter. Femora rather short, slender proximally, soon thickening so as to become almost clavate distally; the fore femora have stout, long hairs, which are scattered irregularly amongst the appressed hairs, becoming very numerous near the apical portion of the lower surface of the segment. Tibiæ slender throughout, tibiæ and metatarsi with a few prominent hairs regularly disposed; the other tarsal segments with a single hair at the tip. The fore femora are as long as the succeeding segments combined; the hind legs are longer than the others. Fore legs lacking (in the holotype); middle leg, coxæ and trochanter light yellow; femora yellow, with a medial and subapical brown band; tibiæ yellow, with a dark band before the middle and at the tip; tarsi yellow-tipped with dark brown; fifth segment and claws dark brown. Hind legs, coxæ, trochanters and femora as in the fore leg; tibiæ and tarsi yellow, excepting the last tarsal segment, which is darker.

Abdomen with numerous scattered hairs, yellow; the apical margins of the segments brown.

Wings with a faint yellow tinge; costal border and radial veins yellow; remaining veins darker; a dark suffusion around cross-vein *r-m*, at the union of  $M_3$  with  $M_{1+2}$  and along the basal deflection of  $Cu_1$ . Venation (see fig. 2):  $S_c$  short, approximated with R basally; its tip opposite the origin of  $R_s$ ; R short, the tip of  $R_1$  before the middle of the

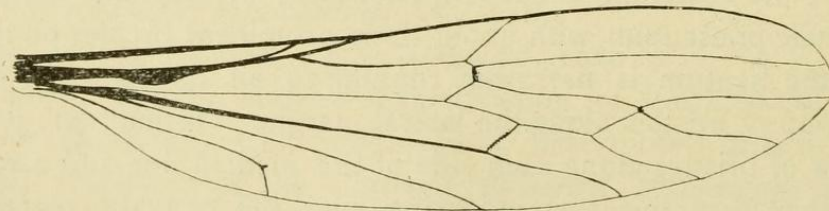


FIG. 2.—*Styringomyia howardi*, holotype.

wing, the sector originating a short distance back from the tip;  $R_s$  straight, rather long;  $R_{2+3}$  very short, oblique; deflection of  $R_{4+5}$  very short, scarcely equal to the *r-m* cross-vein;  $R_{4+5}$  long. M forks anterior to the

fork of  $R_s$ ; deflection of  $M_{1+2}$  rather long;  $M_3$  in a line with  $M$ , strongly deflected cephalad toward  $M_{1+2}$ , nearly, if not quite, obliterating the cross-vein  $m$ . Basal deflection of  $Cu_1$  under the middle of cell 1st  $M_2$ . First anal fused with  $Cu$  at extreme base; 2nd anal strongly curved at tip with a spur at the curve, which may be a remnant of a forked anal.

*Paratype*.—♂. This specimen is much darker than the type; the first six antennal segments are dark, remainder yellowish; thoracic dorsum dark brown, where it is light brown in the type; yellow of abdomen replaced by dark brownish gray, etc. This is but an extreme in colour.

This species is remarkably similar to the species mentioned by Osten Sacken (Mon. Dipt. N. Am., IV, p. 102, 103). The main differences are in the venation, the elongated cell 1st  $M_2$  and incurved second anal with a spur at the curve being peculiar to *S. howardi*.

*Holotype*.—♂, Queliniani, Zambesi R., Dec. 20, '08; coll. Mr. C. W. Howard.

*Paratype*.—♂, with the type.

The only species described from Africa is *S. cornigera* Speiser (Dipt. aus Deutschland Afrikanischen Kolonien, p. 130-132, fig. 1\*). This insect differs so remarkably from the remaining species of the genus, which otherwise form a homogenous compact group, that I propose to set it off in a new subgenus.

*Neostyringomyia*, subgen. n.

*Char.*—Radius long, its tip beyond the middle of the wing;  $R_s$  remarkably shortened, no longer than the  $r-m$  cross-vein;  $R_{2+3}$  sinuate, leaving cell  $R_1$  very different in shape from that which obtains in the subgenus *Styringomyia*; cross-vein  $m$  long and prominent; basal fusion of  $Cu$  and 1st  $A$  very long; prothorax narrow, scarcely one-fourth as wide as the head; above the antennæ a short, bent spatulate horn.

*Type*.—*S. cornigera*, Speis.

*Cornigera* is obviously of more recent derivation than the members of the subgenus *Styringomyia*, and its venation is almost normal; the retreat of  $R_{2+3}$  toward the base of the wing may give a hint to the manner in which the remarkable venation of *Toxorhina* came about, perhaps by the fusion of  $R_{2+3}$  with some other vein, such as  $R_1$ .

A species was described from the Pacific Islands by Grimshaw in 1901, as *S. didyma* (Fauna hawaiiensis, Vol. 3, pt. 1 (Dipt.), pl. 1, figs. 14-16), from Honolulu, Oahu De Meijere, in his recent paper, "Studien

\*Berl. Ent. Zeitschr., 52 (1907).

uber Süd-ostasiat. Dipteren, V,"† records the species from much farther west (Batavia, Java, etc.). *Styringomyia didyma* belongs to the typical subgenus, and is extremely similar to the fossil species described by Löew\*\* and Osten Sacken, as well as to the species under consideration. All of the species of the subgenus *Styringomyia*, as here limited, are very similar to one another in venation, and the coloration is inclined to be variable. *S. didyma* differs from the new species as follows: The wings are shorter in *didyma*;  $R_{4+5}$  is in a direct line with  $R_s$ , whereas there is a deflection at the origin of  $R_{4+5}$  in *S. howardi*. *Didyma* has no spur at the curve of 2nd anal. The coloration of the thorax of the two species is different. The male genitalia of the species have not been studied critically, and must furnish the ultimate criterion. It is, of course, possible that when further collections are made, intermediate stations for the genus will be discovered, and then it may be proved that *S. howardi* is merely a variant of *S. didyma*. However, I prefer to describe it as distinct at present.

In the end of Vol. III of the Monograph, p. VII, Osten Sacken came forward with the surprising intelligence that the genus *Styringomyia* still existed. He says: "During my passage through Stockholm in 1872, I made the interesting discovery that the genus, besides its occurrence in amber and copal, is found living in Africa. I saw several specimens among the unnamed Diptera from Caffraria (from Wahlberg's voyage) in the Stockholm Museum. The species was apparently different from that included in the copal, which I possess." Later, in "Studies on Tipulidæ,"\* he states, "This singular genus, originally described from specimens included in copal from Zanzibar, and also in amber, has been discovered since as still living in South Africa. In the museum in Stockholm I have seen recent specimens brought from Caffraria by Wahlberg."

Despite Prof. Speiser's statement (l.c., p. 132), that Osten Sacken probably referred to *Elephantomyia wahlbergi* Bergr., when he made the last-quoted statement, I have no doubt but that Osten Sacken saw specimens of a true *Styringomyia* in Stockholm; an error of this calibre was not customary with Osten Sacken.

*Mongoma zambesiæ*, n. sp.

Holotype.—♀, brown; length, 5.75 mm.; width, 5.5 mm.

Rostrum and palpi dark brown; antennæ, first two segments dark

†Tijschr. voor Entomol., April, 1911, p. 40.

\*\*Löew, H. Dipteren Beiträge, I, p. 7, with f. (1847).

\*Berl. Ent. Zeitschr., Bd. XXXI, 1887; Heft., II, pp. 185, 186.

brown, third light brown, remainder lacking. Front, vertex, genæ and occiput dark brown.

Thorax: Mesothoracic præscutum strongly produced cephalad, entirely covering the pronotum; cervical sclerite elongated, prominent; transverse suture scarcely V-shaped; mesothoracic præscutum, dark brown anteriorly, posteriorly with a pale brown median line, which extends back across the scutum, remainder of thoracic dorsum dark brown. Sterna, episterna and epimera brownish yellow; halteres pale; legs long, dull brown, at the joints somewhat darker; no processes on the fore femora, as described for *M. fragillima* and *M. curtipennis*.

Abdomen uniform brown.

Wings hyaline, costal margin yellow, stigma rather indistinct. Venation (see fig. 3), Sc very long, as in all members of the genus; R long, cross-vein *r* near its tip.  $R_s$  gently arcuated, forking far before the tip

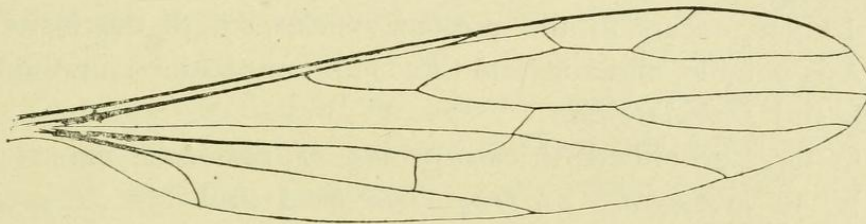


FIG. 3.—*Mangonia zambeziæ*, holotype.

of  $Sc_1$  and in a line with  $R_{4+5}$ ; the cross-vein *r* far before the fork of  $R_{2+3}$ ;  $R_2$  short, oblique;  $R_3$  long, in a line with  $R_{2+3}$ .  $R_{4+5}$  fusing with  $M_{1+2}$  to form the proximo-anterior border of cell  $M_2$ , thus obliterating the *r-m* cross-vein. M forks at the lower corner of cell  $M_2$ ,  $M_{1+2}$  departing cephalad, fusing with  $R_{4+5}$  for a distance and finally separating, free at the margin;  $M_3$  in a line with M.  $Cu_1$  short, its fork far back, the free position of  $Cu_1$  very long, fusing with  $M_3$  at the fork of M, and continuing to the margin so fused.  $Cu_2$  fuses with 1st A far back from the wing-margin, so that 1st A +  $Cu_2$  is over twice the length of the free portion of  $Cu_2$  alone. 2nd A is very short, suggesting the condition found in *Petaurista*.

Holotype.—♀, Queliniani, Zambesi R., Dec. 20, '08; Mr. C. W. Howard.

The genus *Mongoma*, of which ten species have been described, has a world-wide distribution in the tropics; two species have been described from the West Indies, five species from the East Indies and Australia, and three species from Africa. The genus is distinguished by the excessive length of Sc, the obliteration of the *radio-medial* cross-vein by the long

fusion of  $R_{4+5}$  with  $M_{1+2}$ , and the decided tendency of  $Cu_2$  to fuse with 1st A.

The West Indian species (*manca* and *pallida* Will., Dipt. St. Vincent, p. 291-293, figs. 6, 7, of *pallida*) and possibly *M. albitarsia* Dol. (E. Ind.), also, which I have not seen, are the most generalized members of the genus, in that  $Cu_2$  and 1st A are distinct to the wing-margin. The intermediate group, containing *trentepohlii* Wièd. (see Wièdemann, Aussereur. Zweifl. Insekt., I, 551; 18, tab. VIb, fig. 12; a better figure in De Meijere, Tijd. voor Ent., 1911, pl. IV, fig. 42), *fragillima* Westw. (see Westwood, Trans. Ent. Soc. Lond., 1881, pl. 17, fig. 1; also Needham, 23rd Rept., N. Y. St. Ent., pl. 21, fig. 6), and *exornata* Bergr. (Bergr., Entomol. Tidskrift, 1888, opp. p. 130, fig. 3), has  $Cu_2$  fused with 1st A for a short distance back from the tip ( $Cu_2 + 1st A$  less than one-half  $Cu_2$ ). A third stage in the specialization of this part occurs in *M. pennijes* O. S. (E. Ind.). (See De Meijere, l.c., pl. IV, fig. 39.) The maximum of specialization, as far as I know, occurs in the present species, where the fusion of  $Cu_2$  with 1st A is notable, and suggests the condition obtained in the families *Empididæ* and *Dolichopodidæ*.

Of the three described African species, *M. zambesiæ*, comes closest, apparently, to *exornata*. *M. fragillima* (and probably *M. curtippennis* also, according to Speiser, who compares it with *fragillima*), has vein  $M_3$  separating from  $Cu_1$ , and continuing distinct to the wing-margin; both of these species possess a curious spur-like structure at the base of the fore femora, which does not occur in *M. zambesiæ*.

I have a ♂ of *M. exornata* Bergr., taken at Queliniani, Zambesi R., Dec. 20, '08, in which the fore legs are lacking, and I am unable to state whether or not this structure occurs there. *M. exornata* has been recorded from Delagoa Bay, Portuguese East Africa; Caffraria, E. Cape Colony, and Amani, German E. Africa. It is apparently widely distributed throughout Eastern Africa.

#### ON THE OCCURRENCE OF A EUROPEAN SPECIES OF MYMARIDÆ IN NORTH AMERICA.

BY A. ARSENE GIRAULT, BRISBANE, AUSTRALIA.

Up to the present I have been successful in finding but a single species of the family Mymaridæ, common to Europe and North America. This species is *Anaphes pratensis* Foerster, which I have captured in Illinois, and of whose characteristics I write of in a paper on Chalcidoidea, to be published soon in Germany; the species is recorded from America