

A new Genus and Species of Net-winged Midge (Blepharoceridæ) and an undescribed species of Tanyderidæ (Diptera).

By

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With 2 Figures in the text.

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Among some interesting Diptera from Southern Patagonia and Chile kindly sent me for determination by Dr. SJÖSTEDT, there was included a single specimen of a very primitive Blepharocerid that cannot be referred to any of the known genera. The fly is of especial interest as being apparently the most southern species as yet made known.

The family Blepharoceridæ or net-winged midges is a small group whose members are apparently relicts of a former geological age. Thirteen genera are now known, distributed in the following regions:

Apistomyia BIGOT. — Palæarctic, Oriental, Australasian.

Hapalothrix LOEW. — Palæarctic.

Blepharocera MACQUART. — Holarctic, Oriental.

Philorus KELLOGG. — Holarctic, Oriental.

Hammatorhina LOEW. — Oriental (Ceylon).

Neocurupira LAMB. — Australasian (New Zealand).

Peritheates LAMB. — Australasian (New Zealand).

Elporia EDWARDS. — Ethiopian (Cape Colony).

Bibiocephala OSTEN SACKEN. — Nearctic (Western North America).

Paltostoma SCHINER — Neotropical.

Curupira (MÜLLER) OSTEN SACKEN. — Neotropical (Brazil).

Kelloggina WILLISTON. — Neotropical (Brazil).

Edwardsina, genus novum. — Neotropical (Chile).

Cockerell has recently (1915) described the fossil genus *Paltostomopsis* from the Gurnet Bay Oligocene of England. *Edwardsina*, gen. n.

Antennæ with 15 segments, the second scapal segment shorter than the first; last flagellar segment longer than the penultimate, elongate-conical. Rostrum moderately elongated, a little longer than the vertical diameter of the head. Palpi inserted at the base of the rostrum, long and slender, 4-segmented, the first segment longest, the third shortest, the second and fourth subequal; palpi extending slightly beyond the tip of the rostrum. The mandibles project beyond the other elements of the mouthparts, their outer edge with a comb of slender teeth. Eyes dichoptic (at least in the female), rather small, hairy, the front wide; eyes not divided into two parts by an unfacetted band. Head broad, genæ very prominent.

Legs slender, the fore tibiæ with a single spur, the middle and posterior tibiæ with two spurs; fifth tarsal segment with a patch of long, chitinized spines; claws with about five teeth that decrease in size toward the base. Wings large and ample with a very generalized venation, as follows: *Sc* is lacking; *R*₁ very long; *Rs* short, transverse, near its tip bent at a right angle and here sending a long spur back to about half the distance to the arculus; *R*₂₊₃ very short to almost lacking; veins *R*₂ and *R*₃ distinct, running generally parallel to one another, but cell *R*₂ being broadest at mid-length, vein *R*₂ ending rather close to *R*₁ at the wing-margin; basal deflection of *R*₄₊₅ almost in alignment with the base of the sector; vein *R*₄₊₅ running generally parallel to *R*₃ but diverging from it near its end; *r-m* distinct, long, but considerably shorter than the basal deflection of *M*₃; *M*₁₊₂ long, at about twothirds its length with a strong upward deflection to indicate the course of vein *M*₁, vein *M*₂ being atrophied and represented only by a slight spur; fusion of *M*₃ and *Cu*₁ extensive, the outer deflection of *M*₃ present; fork of *Cu* rather acute, the veins gradually diverging; a single anal vein (the second) attains the wing-margin but the re-

mains of the semi-atrophied *1st Anal* persists immediately behind vein *Cu*; the net-like false reticulation is very distinct.

The female genitalia is represented only by two flattened, strongly compressed valves at the end of the short abdomen. *Genotype*. — *Edwardsina chilensis*, sp. n. (Chile).

This generallized group introduces several new features of wing-venation. From the above generic description it will be seen that this species has four complete branches of radius attaining the wing-margin, this being the only known species of the family where such is the case. The condition of media is likewise very generallized and shows the manner of connection of the distal end of vein M_3 which in many of the genera lies free in the wing-membrane with no indication of its past connections. This insect likewise shows that the vein hitherto interpreted as being the *m-cu* cross-vein by Kellogg (Genera Insectorum, no. 56, Blepharoceridæ, 1907) and others is not this cross-vein but the basal deflection of M_3 before its fusion with cubitus. True *m-cu* is thus lost by the long fusion of Cu_1 and M_3 .

The closest relative of this new genus would seem to be the genus *Bibiocephala* OSTEN SACKEN (Western North America) in which a trace of vein R_2 persists, being represented by a short, transverse element lying in the fork of the sector, and in which the distal portion of vein M_3 lies free in the wing-membrane, its connection with *Cu* having been lost by atrophy. *Edwardsina* agrees with the other South American Blepharocerid genera, *Curupira*, *Paltostoma* and *Kelloggina* in that the eyes are not divided into two parts by an unfacetted crossband. All of these genera, however, have a highly specialized wing-venation and are very different insects.

It is with the greatest pleasure that this remarkable new genus is dedicated to Mr. F. W. EDWARDS, as an appreciation of his careful and instructive work on the South African Blepharocerid genus, *Elporia* EDWARDS (Annales and Magazine of Natural History, series 8, vol. 9, pp. 633—634, June 1912; vol. 16, pp. 203—215, September 1915; vol. 17, pp. 309—311, April 1916).

Edwardsina chilensis, sp. n.

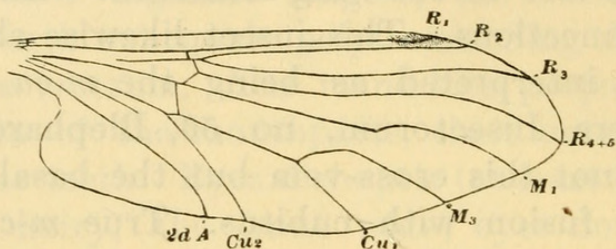
Brown, the head light gray pruinose; mesonotal præ-

scutum with three dark brown stripes; legs yellow; wings broad with a yellowish stigmal region.

Female. — Length about 9,3 mm.; wing, 12 mm.

Rostrum brownish yellow; palpi yellow, with short black hairs. Antennæ with the basal segments orange, the remainder of the antennæ black with the exception of the extreme base of the third segment which is orange. Head orange-brown, heavily light gray pruinose, especially along the inner margin of the eye; ocellar protuberance conspicuous.

Mesonotum large, light gray, with three very broad chestnut-brown stripes; scutum gray, the lobes reddish chestnut; scutellum brownish; postnotum gray. Pleura light gray, the



Wing of *Edwardsina chilensis*, gen. et sp. n.

R = radius; M = media; Cu = cubitus;

A = anal vein.

dorso-pleural membrane dull yellow. Halteres dull yellow, the knobs dark brown. Legs with the coxæ gray; trochanters dull yellow; remainder of the legs light yellow, passing into brown on the tarsi; femora longer than the tibiæ, those of the hind legs being especially long and slender. Wings broad, hyaline, strongly iridescent; a strong yellowish stigmal area between R_1 and R_2 ; veins dark brownish black. Venation as described and figured (Figure) under the generic characterization.

Abdomen strongly contracted in the unique type; tergites rich cinnamon-brown with a more or less distinct dorso-median whitish stripe; sternites more yellowish.

Habitat. — Chile.

Holotype, ♀, Chile (P. DUSÉN).

Type in the Riksmuseum in Stockholm.

The family Tanyderidæ includes the most generalized of the living crane-flies. It is a very small group with but three known valid genera and ten species. An additional undescribed species of this family was kindly sent to me for naming by Dr. SJÖSTEDT. This species belongs to the typical genus *Tanyderus* of which it is the seventh species to be made known. Of these seven species, four are Australasian, the three remaining forms being confined to the southern parts of South America.

The three American species may be separated by means of the following key:

1. No supernumerary cross-veins in any of the cells of the wings.

T. gloriosus, sp. n.

One or more supernumerary cross-veins in the radial cells of the wings. 2.

2. A cross-vein in cell R_4 . *T. pictus* PHILIPPI.
Cross-veins in cells R_3 and R_5 .

T. patagonicus ALEXANDER.

Tanyderus gloriosus, sp. n.

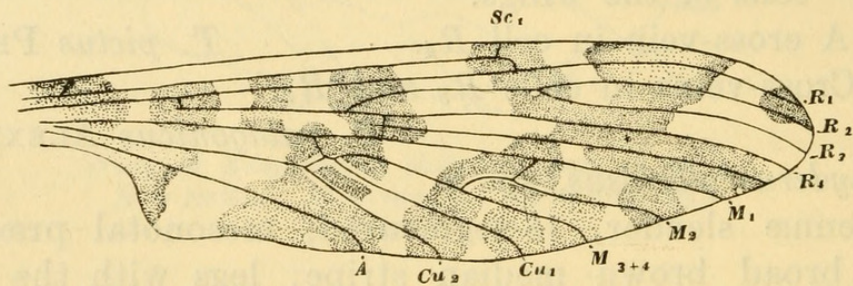
Antennæ slender, 18-segmented; mesonotal præscutum with a broad brown median stripe; legs with the femora and tibiæ tipped with dark brown; wings hyaline with a heavy dark brown transverse pattern; no supernumerary cross-veins in any of the cells of the wing; abdominal tergites black with a large orange-yellow blotch on either side of the median line at the base.

Male. — Length 18 mm; wing, 17,2 mm, Middle leg, femur, 8,8 mm; tibia, 9,5 mm; metatarsus, 7,7 mm. Hind leg, femur, 9,2 mm; tibia, 11,5 mm; metatarsus, 7,5 mm.

Rostrum and palpi dark brown; the mouthparts in general appearance about as in *T. patagonicus* ALEX. (Proceedings of the United States National Museum, vol. 44, no. 1953, pp. 331—335, figs. 1—3; 1913). Antennæ with 18 segments, dark brownish black, the apex of the second scapal and the base of the first flagellar segment more yellowish brown; basal flagellar segments cylindrical but the intermediate and apical segments very long and slender, clothed with a dense pale pubescence and with long verticils; last segment short. Eyes rather narrowly separated by the vertex, densely short-hairy. Head dark brown, the occiput

brighter colored. Neck very long, as in the family, dark brown.

Pronotum dark brown, more cinnamon brown behind. Mesonotum pale brownish white, more distinct on the interspaces behind; præscutum with a broad median stripe that is deep brown, narrowly split by a black capillary median vitta, the stripe narrowed behind but crossing the level of the transverse suture which is indicated only laterally; lateral stripes brown, ill-defined; scutal lobes dark brown; scutellum brown, very dark medially, paler laterally; postnotum grayish. Pleura reddish-brown. Halteres dull yellow, the knobs dark brown. Legs with the coxæ reddish brown; trochanters very small, dull yellow; femora brownish yellow, brightest at the base, the tips narrowly dark brown; tibiæ pale brown, the tips narrowly dark brown; metatarsi brown, more yel-



Wing of *Tanyderus gloriosus*, sp. n. *Sc* = subcosta; *R* = radius; *M* = media; *Cu* = cubitus; *A* = anal vein.

lowish at the base; remainder of the tarsi brown; last tarsal segment shorter than the penultimate; claws simple. Wings subhyaline, with a heavy brown pattern that is sparsely diversified with yellow; costal cell yellow; stigma yellow, encircled by brown; three broad, complete cross-bands as follows: the most basal occupies the cord, extending from cell *Sc* to the wing-margin, beyond the fork of *M* broadening out and becoming slightly paler; the second band begins in the costal cell at the end of vein *Sc* and occupies the level of the outer end of cell 1st *M*₂, passing through the base of cell *R*₂; in the posterior cells it becomes more diffuse and slightly paler, occurring as large rounded spots at the ends of the longitudinal veins; the third cross-band begins at the stigma and continues caudad across the wing, at about midlength being bent basad and becoming confluent with the second band in cells *R*₃ and *R*₄, the whole mark thus formed resemb-

ling an X ; in addition to bands above described there are five isolated spots, as follows: one at h extending down into the bases of cells R and M ; the second at the origin of Rs , the third at about midlength of Rs ; the fourth in the anal angle of the wing and the last at the ends of veins R_1 and R_2 ; the yellowish areas, with the exception of the stigma, are inconspicuous, arranged as follows: in the extreme anal angle of the wing; along vein Cu and its two forks, occurring as narrow pale seams; similar seams along m and the adjoining parts of M_2 at the outer end of cell 1st M_2 ; veins dark brown. Venation (Figure): Sc_2 at the tip of Sc_1 and slightly longer than Sc_1 alone, the latter ending just before the fork of R_{2+3} ; Rs moderately elongated, slightly spurred at the origin; cell R_2 considerably longer than its petiole; a spur at the bend of vein R_5 , jutting into cell R ; m long, arcuate, longer than the deflection M_2 ; $m-cu$ obliterated by the short fusion of Cu_1 on M_{3+4} ; no supernumerary cross-veins in any of the cells as in *T. pictus* and *T. patagonicus*.

Abdominal tergites bright orange-yellow with a large black basal and similar lateral blotches, the caudal margins of the segments more obscure; hypopygium dark brown; sternites more uniformly brownish yellow, the caudal portions of the segments a little darker. Male hypopygium the ninth segment transversely rectangular, the caudal margin broadly concave and fringed with short black hairs; a single pleural appendage that is strongly curved at its tip, provided with a few long setæ, the outer fourth clothed with short yellow appressed hairs that become more numerous at the apex,

Habitat. — Chile.

Holotype, ♂, Rio AYSÉN, South Chile (P. DUSÉN).

Type in the Riksmuseum in Stockholm.

Tryckt den 18 juni 1920.



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