

NEOTROPICAL "TETRAGONEURA"
(Diptera, Mycetophilidae, Sciophilinae)¹

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(With 9 text-figures)

This genus has about twenty five species in the Neotropical region, some of them of doubtful status. Except the species described from Chile the others were determined by only one or two specimens so that the authors could not observe variation.

We worked with 126 specimens of which 98 are males. We found that the females with which we worked did not offer characters for a precise identification so that they are not treated in this paper. In the species based on a series of specimens we were able to note variation, chiefly as to the veins which can form the radial cell. We also noted that the most reliable character for identification is the dististyle in the male genitalia.

In this collection five known species are reported and nine described as new. Our specific names are taken from tribes of Indians which exist or existed in Brazil. The numbers of registration are those of our Department. The locality of Boracéa is in a forest preserve in the municipality of Salesópolis, S. Paulo.

This collection is formed by a homogeneous group and, for this reason, we give below characters which we find common for them all or most of them:— palpus and mouth parts yellowish; head black with white pruinosity; thorax black, the mesonotum dull greyish black or dark brown or shining black; scutellum with four setae, the externals weaker (except in *T. iaunai* n.sp.); wing hyaline; haltere yellow; abdomen black.

KEY FOR TETRAGONEURA²

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|----------------------|----|
| 1. Coxae black | 2. |
| Coxae yellow | 5. |

¹ Received for publication August 27, 1952.

² We have not included Chilean species, and also *T. calopus minor* Enderlein, 1911 and *T. peruana* Kertész, 1939.

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| 2. Haltere yellow | 3. |
| Haltere black (Bolivia) | <i>concurrans</i> Edwards, 1933 |
| 3. Femora black | 4. |
| Front coxa yellow; femora largely yellow | <i>eramauai</i> n.sp. |
| 4. From Patagonia | <i>calopus</i> (Bigot, 1888) |
| From Brazil | <i>nocticolor</i> Edwards, 1932 |
| 5. Mid tibia with a sense organ | 6. |
| Mid tibia without a sense organ | 7. |
| 6. Antenna blackish; hind femur blackish on apical fourth | <i>derunei</i> n.sp. |
| Antenna with torus and first three flagellar segments yellow; hind femur blackish on apical half | <i>bacilliger</i> Edwards, 1932 |
| 7. Abdomen shining black; scutellum with four setae | 8. |
| Abdomen with tergite I largely yellow; scutellum with only two setae | <i>iaunai</i> n.sp. |
| 8. Dististyle uniform, slender and without protuberances | 9. |
| Not so | 14. |
| 9. Dististyle strongly sclerotized at apex which is divided in two points | <i>borgueieri</i> Edwards, 1922 |
| Not so | ? <i>beckeri</i> Enderlein, 1911 |
| 10. Dististyle thickened at base | 10. |
| Dististyle not thickened at base | 11. |
| 11. Dististyle very much enlarged at base which is densely spiculate, two long preapical setae, apex serrate | 13. |
| Not so | <i>guajensis</i> n.sp. |
| 12. Dististyle gradually tapering and with short setae | 12. |
| Dististyle strongly attenuated beyond base and with long setae | <i>janipensis</i> n.sp. |
| 13. Dististyle with three long setae at apex | <i>vogeli</i> Edwards, 1932 |
| Dististyle without these setae at apex | <i>arauensis</i> n.sp. |
| 14. Dististyle branched in two arms beyond the middle | <i>simplex</i> Edwards, 1932 |
| Not so | <i>huarpesi</i> n.sp. |
| 15. Dististyle bifide, upper portion spiculate, the lower one with two setae | 15. |
| Not so | <i>flavicauda</i> Edwards, 1941 |
| 16. Apex of dististyle with two protuberances | 16. |
| Apex of dististyle in two arms, the lower one bearing a stout, black seta | 17. |
| 17. Body of dististyle with short spicules | <i>spinata</i> Edwards, 1932 |
| Body of dististyle with long setae | <i>burenari</i> n.sp. |
| | <i>caetensis</i> n.sp. |

Tetragoneura arauensis n.sp.

(Fig. 1)

Male — Head: Antenna with scape and torus reddish brown, first flagellar segment, also second yellowish, chiefly underneath, the rest and other segments blackish.

Wing with radial cell present, variable in shape.

Legs: Coxae yellow except base of hind one which is fuscous. Femora yellow, undersides fuscous, chiefly on hind pair; apex of hind femur blackish its undersides fuscous at base. Mid tibia with 3 dorsal, 4 external and a row of about 10 short ventral setae. Hind tibia with 5/6 dorsal and 7/8 external setae.

Genitalia: Basistyle broad, one and a half times as broad as wide, with a few differentiated setae internally. Dististyle (fig. 1) short, stout, two thirds as long as basistyle, with three stout setae on upper apical margin, basally on dorsum another stout seta and also a few slender and long ones. Tergite ribbonlike. Mesial plate large, triangular, with two stout setae at apex and a very long seta at each corner.

Female — Unknown.

Types — Holotype male; paratypes 15 males; registered under ns. 9194 to 9205. Two paratypes for the British Museum and two for the U.S.N.M.

Type Locality — Holotype from Borac a, VIII.1947 (RABELLO, TRAVASSOS F. & J. LANE col.); eleven paratypes Borac a, VIII.1947 (RABELLO, TRAVASSOS F. & J. LANE); four from S. Paulo, C. do Jord o, VIII.1949 (J. LANE col.) and one paratype from Rio de Janeiro, N. Friburgo, IV.1937 (H. S. LOPES col.).

Tetragoneura burenari n.sp.

(Fig. 2)

Male — Antenna with scape, torus and first two flagellar segments, also base of third mostly yellow, the rest blackish.

Mesonotum dull blackish grey. Scutellum with the external setae less than half as long as the internal.

Wing with a radial cell present in all specimens except one which has the cell formed by two nearly coalescing veins on one sides and absent on the other.

Legs: Coxae yellow. Trochanters of mid hind pairs brown. Femora yellow, the hind one with apical fourth blackish. Mid tibia with 3 dorsal, 4 external and 5 small ventral setae. Hind tibia with 17 dorsal and 9 external setae.

Genitalia: Basistyle stout, nearly twice as long as broad. Dististyle (fig. 2) with two thirds the length of basistyle, more sclerotized at apex where there is a projection, scattered short hairs in the middle. Ninth tergite a narrow band thickened in the middle.

Types — Holotype male; paratypes seven males. Registered under numbers 9253 to 9258. Two paratypes to be sent to the British Museum.

Type locality — Holotype and five paratypes from Borac a, VIII.1947 (RABELLO, TRAVASSOS F. & J. LANE col.); two paratypes from Campos do Jord o, VIII.1949 (J. LANE col.).

Tetragoneura caetensis n.sp.

(Fig. 3)

Male — Scape brownish; torus and base of first flagellar segment yellow, the rest blackened.

Thorax: Mesonotum with dull black integument. Scutellar external setae less than half as long as the internal ones.

Wing with the radial cell present but variable in shape.

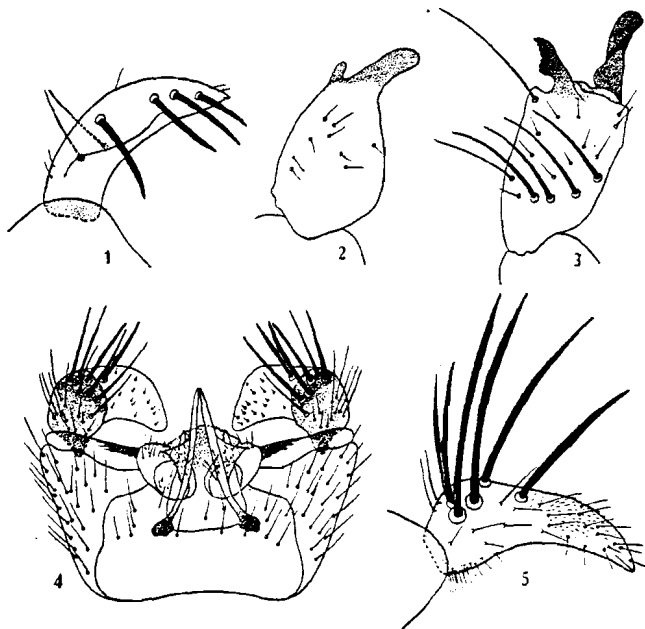


Fig. 1 — *Tetragoneura arauensis* n.sp., dististyle; fig. 2 — *Tetragoneura burenari* n.sp., dististyle; fig. 3 — *Tetragoneura caetensis* n.sp., dististyle; fig. 4 — *Tetragoneura derunei* n.sp., male genitalia, dorsoventral view; fig. 5 — *Tetragoneura eramanai* n.sp., dististyle. E.B. Ferraz del.

Legs yellow; coxae slightly intuscarated at base; trochantères darkened; femora darkened at base of mid and hind pairs, apical fourth of hind femur blackish. Mid tibia with 3 dorsal and 3 external setae; hind tibia with 10 shorter dorsal and 9/10 external setae.

Genitalia: Basistyle rounded and broader than long. Dististyle (Fig. 3) two thirds the length of basistyle and ending in two black, deformed protuberances, its body quadrate with four long setae in a transversal row basally.

Types — Holotype male; paratypes three males. Registered under numbers 9.206 to 9.208. One male to be sent to the British Museum.

Type locality — Brasil, State of S. Paulo, Campos do Jordão (1600-1700 meters altitude), VIII.1949 (J. LANE col.).

Tetragoneura derunei n.sp.

(Fig. 4)

Male — Antenna blackish, including the scape and torus.

Mesonotum dull blackish brown. Scutellum (the setae detached).

Wing with an oblong radial cell.

Legs: Coxae yellow. Trochantères blackish. Femora yellow, fuscous at base of hind mid ones ventrally, more so on the hind pair; hind femur blackish on its apical fourth. Mid tibia with dorsal sense organ before the middle, large, rounded and deforming this organ; 3 dorsal and 3 external setae. Hind tibia with 15/16 dorsal setae and 8 external ones. Spurs yellowish.

Genitalia (fig. 4). Basistyles nearly as broad as wide. Dististyle nearly as long as basistyle, beaklike and with the structures as in the figure.

Type — Holotype male. Registered under number 9258.

Type locality — Brasil, State of S. Paulo, C. do Jordão, VIII.1949 (J. LANE col.).

Tetragoneura eramanai n.sp.

(Fig. 5)

Male — Palpus blackish brown. Antenna with blackish scape, torus and flagellar segments.

Thorax: Mesonotum dull blackish brown, lighter on humeral angles where it is brownish. Scutellum with four setae, the externals slightly more than half as long as the internals.

Wing with a small quadrate radial cell which may be absent.

Fore coxa yellow, mid and hind ones black. Mid and hind trochantères blackish. Femora of mid and hind pairs blackish at base ventrally, the hind one with its apical sixth black. Mid tibia with a sense organ on basal third dorsally; 2 dorsal and 3 external setae. Hind tibia with 6/7 dorsal and 4 external setae. Spurs blackish.

Genitalia. Basistyle stout, subquadrate, twice as long as broad. Tergite broad, setose on upper margin, sparse setae over the rest. Dististyle (fig. 5) two thirds as long as basistyle, elongate, with five or six long, stout setae on dorsal, basal portion, the apical one attenuated.

Types — Holotype male; paratypes five males; registered under numbers 9188 to 9192. One paratype to be sent to the British Museum.

Type locality — Brasil, State of S. Paulo, C. do Jordão, VIII.1949 (J. LANE col.).

Tetragoneura fanipensis n.sp.

(Fig. 6)

Male — Antenna with scape, torus and first flagellar segment yellowish, the rest black.

Thorax: Mesonotum shining black. Scutellum with the external setae less than half as long as the internals.

Wing with a small, quadrate radial cell.

Legs: Coxae yellowish. Trochanteres of mid and hind pairs blackish. Femora yellow, mid and hind ones extensively fuscous at base underneath, more so on the hind pair; hind femur with the apical fifth blackish. Fore tibia with a single seta; mid tibia with 4 dorsal and 5 external setae; hind tibia with 14 dorsal and 15 external setae.

Genitalia: Basistyles long, united at base. Dististyle (fig. 6) nearly as long as basistyle, slender, somewhat thickened at base, with short setae. Ninth tergite slender and ribbonlike.

Types — Holotype male; paratypes three males; registered under numbers 9245 to 9248.

Type locality — Brasil, Boracéia, VIII.1947 (RABELLO, TRAVASSOS F^o & J. LANE col.); one paratype from S. Paulo, Cajuru, II.1947 (M. P. BARRETO col.).

Tetragoneura guajaensis n.sp.

(Fig. 7)

Male — Antenna with scape, torus and base of first flagellar segment yellow, the rest blackish.

Thorax: Mesonotum shining black. Scutellum with the external setae less than half as long as the internals.

Wing with a quadrate radial cell.

Legs with coxae yellow. Trochanteres dark. Femora with base fuscous ventrally. Hind femur with the apical fifth blackish. Mid tibia with 3/4 dorsal; 4 external; 3/4 very small internal and 3 ventral setae. Hind tibia with 8/9 dorsal and 8/9 external seta.

Genitalia: Basistyle elongate, broadened at base, tapering to apex. Dististyle (fig. 7) as long as basistyle, capitate and spiculate at base, protuberant to apex where it is serrate and has two long setae. Mesosome with a pair of long, lamellate structures. Ninth tergite broad, uniform.

Types — Holotype male; paratypes five males. Registered under numbers 9215 to 9219. One paratype to be sent to the British Museum.

Type locality — Holotype from S. Paulo, Cantareira, VIII.1945 (J. LANE col.); three paratypes from S. Amaro, VIII.1949 (J. LANE & E. I. COHER col.); one paratype from Morumbi, XI.1949 (E. I. COHER col.); one paratype from Boracéia, VIII.1949 (J. LANE & E. I. COHER col.).

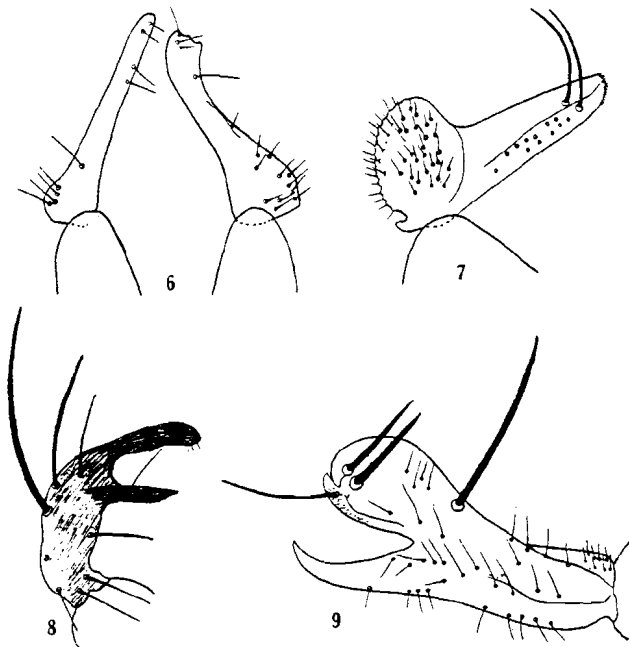


Fig. 6 — *Tetragoneura fanipensis* n.sp., dististyles in different positions; fig. 7 — *Tetragoneura guajaensis* n.sp., dististyle; fig. 8 — *Tetragoneura huarpesi* n.sp., dististyle; fig. 9 — *Tetragoneura inuani* n.sp., dististyle. E.B. Ferraz del.

Tetragoneura huarpesi n.sp.

(Fig. 8)

Male — Antenna with scape, torus and first flagellar segment yellow, the rest blackish brown.

Thorax: Mesonotum grey blackish brown. Scutellum with the external setae less than half as long as the internals.

Wing with a small, longer than broad, quadrate radial cell.

Legs: Coxae yellow. Trochanteres of hind pair darkened. Mid tibia and femur missing. Hind femur fuscous at base ventrally, the apical fifth blackish. Tibia with 10 dorsal and 8 external setae. Spurs blackish.

Genitalia: Basistyles one and a half times as long as wide, broad. Dististyle (fig. 8) two thirds the length of basistyle strongly blackened, and drawn out in two points as in the figure. Other structures not observable.

Type — Holotype male: registered under number 9259.

Type locality — Brasil, State of S. Paulo, Campos do Jordão, VIII.1949 (J. LANE col.).

***Tetragoneura iaunai* n.sp.**
(Fig. 9)

Male — Antenna with scape, torus and first three flagellar segments yellow except for the blackish pedicell, fourth and fifth segments yellow at base, the rest brownish black.

Thorax: Mesonotum shining blackish brown. Scutellum with only two long setae.

Wing with a quadrate radial cell.

Legs: Coxae yellow. Trochanteres blackish underneath. Femora yellow except underside at base of mid and hind ones which are fuscous and the hind one which is blackish on its distal fifth. Mid tibia with 3 dorsal; 2 external; 4/5 very small internal and 2 ventral setae. Hind tibia with 17/19 small dorsal and 11/12 external and longer setae.

Abdomen with first tergite largely yellow, the rest black.

Genitalia: Basistyle with lobes fused and forming a triangular structure at apical angles of which the dististyles are inserted. Dististyle (fig. 9) three fifths as long as basistyle, yellowish and not strongly sclerotized, with apex capitate, notched and bearing four long setae.

Type — Holotype male. To be returned to the U.S.N.M.

Type locality — Costa Rica, San José, V.15.VII (H. SCHMIDT col.).

***Tetragoneura borgmeieri* Edwards, 1932**

1932 *Tetragoneura* Edwards, Rev. Ent., 2 (2) : 142 (fig. 1).

A single specimen. The radial cell is small and quadrate.

Distribution — Brasil, State of Rio de Janeiro, Angra dos Reis, XI.1947 (J. LANE col.).

***Tetragoneura simplex* Edwards, 1932**

1932 *Tetragoneura* Edwards, Rev. Ent., 2 (2) : 143 (fig. 2).

We have a series of 12 specimens from Boracéia. The shape of the dististyle varies when rotated. In figure 10 we illustrate the dististyle of a male determined by EDWARDS.

***Tetragoneura spinata* Edwards, 1932**

1932 *Tetragoneura* Edwards, Rev. Ent., 2 (2) : 144 (fig. 3).

Two of our specimens do not have a radial cell but the third specimen has a small, quadrate radial cell present. We note that the thick spine on dististyle is much longer than EDWARDS figured it.

Distribution — Brasil, State of Rio de Janeiro, Angra dos Reis, XI.1947 (J. LANE col.).

***Tetragoneura flavicauda* Edwards, 1941**

1941 *Tetragoneura* Edwards, Rev. Ent., 12 : 310.

We have 22 specimens. The radial cell is variously shaped, in a few specimens it is quite large but in most of them it is wider than long. In two specimens the veins nearly coalesce.

Distribution — Brasil, State of S. Paulo, Boracéia, VII.1949, VIII.IX.1947, 1949; Cantareira: Campos do Jordão, VIII.1949 (J. LANE col.).

***Tetragoneura vogeli* Edwards, 1932**

1932 *Tetragoneura* Edwards, Rev. Ent., 2 : 144.

In our series of 15 specimens we noted that the radial cell is absent in three specimens, in two it is present in one wing and absent in the other, in the others specimens it is present. Sometimes this cell is quite large but in some specimens it is very small.

Distribution — Brasil, State of S. Paulo, Boracéia, VIII.1949 (LANE & COHER col.); Cantareira, VIII.1947 (M. P. BARRETO col.); Campos do Jordão, VIII.1949 (J. LANE col.).

RESUMO

O autor, trabalhando com uma coleção proveniente, na sua maior parte de Boracéia, Município de Salesópolis e Campos do Jordão, Estado de S. Paulo, encontrou nove espécies que descreve como novas e menciona cinco, já conhecidas. Dá uma chave para a separação das espécies deste gênero para a região neotropical, exclusive o Chile.

Verificou que as fêmeas não oferecem caracteres para uma identificação precisa. Nota que a célula radial é variável e, portanto, de pouco valor taxonômico. O melhor característico para a separação das espécies, por ele encontradas, reside no formato e ornamentação do dististilo da genitália masculina.