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New genera of Psocoptera (Insecta), from Mexico, Belize and Ecuador (Psoquillidae, Ptiloneuridae, Lachesillidae)

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Abstract

Four new species of Psocoptera are described, each in a new monotypic genus: *Rhyopsocoides typhicolus* (Psoquillidae) and *Omilneura circumvittata* (Ptiloneuridae) from Mexico, *Belicania cervantesi* (Ptiloneuridae) from Belize, and *Waoraniella erwini* (Lachesillidae) from Ecuador. Relationships within each family are discussed, and keys to the genera in each family are included.

Keywords: Psocoptera, Psoquillidae, Ptiloneuridae, Mexico, Ecuador, new genera

Introduction

To the end of the year 2000, 4408 species of Psocoptera were described, in 371 genera and 41 families, the period of most rapid description being from about 1970 to the end of 2000 (Lienhard & Smithers 2002, Mockford 2004). By the end of 2005, 103 additional genera had been described, also 1149 new species, so that in only five years the number of species described in the Psocoptera was increased by 26%, a remarkable achievement, resulting from the work of a small number of investigators. It is pertinent that a single author, Li Fasheng (2002), dealt with 1500 species of Chinese Psocoptera, of which 920 species and 64 genera were described as new; for a critical analysis of this work see Lienhard (2003).

In the present work, four new monotypic genera are described, one each in the families Psoquillidae and Lachesillidae, and two in the family Ptiloneuridae. The specimens studied were dissected in 80% alcohol and their parts (head, right antenna, right legs and wings and genitalia) were mounted in Canada Balsam. Color description was made with direct cold light under a dissecting microscope. Drawings were made with a drawing tube, and measurements were taken with a filar micrometer and are stated in μm. Abbreviations of body parts measured are as follows: FW= right forewing, HW= right hindwing, F= right

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femur of hind leg, T= right tibia of hind leg, t1, t2, t3= right hind leg tarsomeres, ctt1= number of ctenidia on t1 of hind leg, f1…fn= flagellomeres of right antenna, IO= minimum distance between compound eyes, D= antero-posterior diameter of right compound eye, d= transverse diameter of right compound eye, PO= d/D. The specimens are deposited in the National Insect Collection, Instituto de Biología, Universidad Nacional Autónoma de México, México City (CNIN by its initials in Spanish: Colección Nacional de Insectos).

Rhyopsocoides n.gen.

Diagnosis. Belonging in the Psoquillidae. Body elongate, dorso-ventrally flattened, *Trogium*-looking. Forewing pterostigma closed basally, M3 branched. With a biramous sclerite associated to spermapore. Spermathecal glands spherical, with pores and "finger print" marks. Differing from *Balliella* in having spermathecal glands spherical, not mushroom-shaped, in having forewing pterostigma closed basally, with a medium sized closed cell, with M1+2 and M3 branched, in having forewing about four times as long as wide, in lacking a small closed cell in hindwing, and in having a biramous sclerite associated to the spermapore. Differing from *Eosilla*, *Psoquilla*, *Rhyopsoculus*, *Rhyopsocus*, and *Rhyopsocidus*, in having a medium sized closed cell in forewing, in having M3 branched, in having forewing about four times as long as wide, in having forewing hyaline, with well defined veins, and in having a large, biramous sclerite associated to the spermapore.

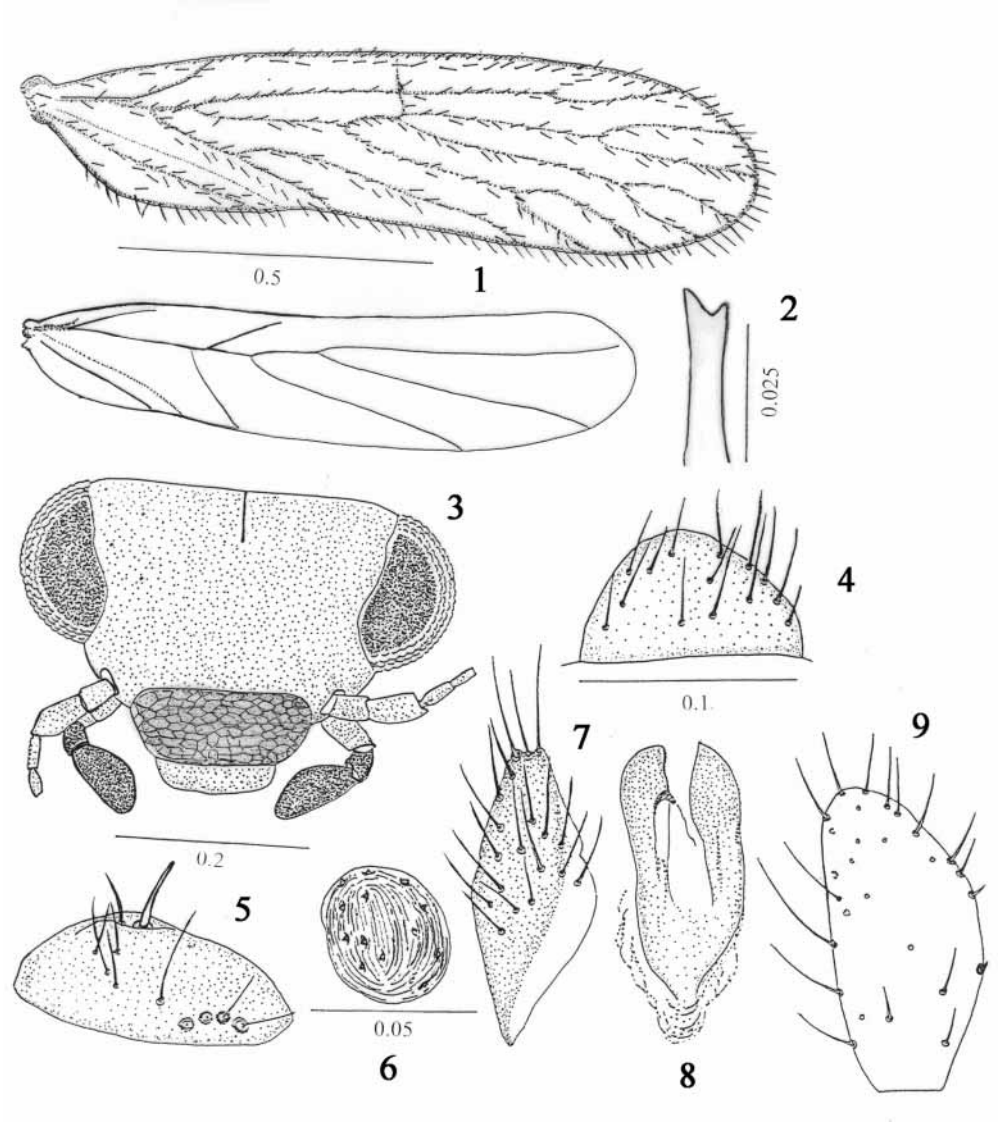
Type species: *Rhyopsocoides typhicolus* **n. sp.**

Rhyopsocoides typhicolus n. sp. (Figs. 1–9)

Color. Straw yellowish. Compound eyes black. Mx3 and Mx4 reddish brown, strongly contrasting with color of rest of the body. Wings hyaline, veins pale brown.

Morphology. Body elongate, dorso-ventrally flattened. Epicranial sulcus well defined, without lateral arms. Ocelli absent. Postclypeus with reticulate pattern (Fig. 3). Lacinial tips bifid, outer tine larger than inner one (Fig. 2). Mx4 apically blunt, wider in the middle, setae as illustrated (Fig. 9). Wings slender, elongate; forewing with pterostigma closed basally, M3 branched (Fig.1). Gonapophyses stout, with three apical setae, other setae as illustrated (Fig. 7). A large, stout biramous sclerite associated to the spermapore (Fig. 8). Spermathecal glands almost spherical, with pores and "finger print" marks (Fig. 6). Paraprocts elongate, with four trichobothria in line in sensory field; setae as illustrated (Fig. 5). Epiproct rounded posteriorly, with setal field as illustrated (Fig. 4).

Measurements. FW: 118, HW: 98, F: 285, T: 347, t1: 88, t2: 36, t3: 41, Mx4: 92, f1: 36, f2:32, f3: 36, f4: 44, f5: 42, f6: 40, f7: 36, IO: 250, D: 170, d: 96, IO/D: 1.46, PO: 0.56.



FIGURES 1–9. *Rhyopsocoides typhicolous* **n. sp.** F. Fore- and hind wings. 2. Lacinial apex. 3. Front view of head. 4. Epiproct. 5. Left paraproct. 6. Spermathecal gland. 7. Right gonapophysis. 8. Spermapore sclerite. 9. Fourth segment of maxillary palp. Scales in mm. Figures 5 and 7–9 to scale of Fig. 4.

Material studied. Holotype F. MEXICO. Colima. 5 km N Manzanillo, 2.XI.1988, on dead leaves of *Typha* sp., on edge of lagoon, A. N. García Aldrete. CNIN.

Etymology. The generic name means "*Rhyopsocus*-like", in reference to the similarity in wing venation to that genus, the specific name refers to the plant on which the insect was found.

Remarks. *Rhyopsocoides* presents two autapomorphies that separate it from the other genera in the family, namely, M3 of forewing branched, and forewing slender, elongate,

four times as long as wide; in addition, the strongly contrasting pigmentation of Mx3 and Mx4 could represent a third autapomorphy, but, as I have not seen all the species of the other psoquillid genera, I have chosen not to consider it, although there are no indications in the literature of that character in any psoquillid species. *Rhyopsocoides* is the sister group to the clade comprising *Eosilla*, *Psoquilla*, *Rhyopsocus*, *Rhyopsocidus* and *Rhyopsoculus* (personal information, unpublished). The relationships among the genera of the family Psoquillidae are presently being investigated, and preliminarily indicate that *Rhyopsocoides* is most similar to *Rhyopsocus* and *Rhyopsocidus*.

Key to genera of Psoquillidae

1. Forewings elytriform, venation not discernible 2
-. Forewings not elytriform, venation clearly visible 4
2. Hindwings absent ..... *Rhyopsocidus* Smithers & Mockford
-. Hindwings present 3
3. Hypandrium simple, epiproct simple, paraprocts broad, phallosome open anteriorly, not projected posteriorly ..... *Eosilla* Ribaga
-. Hypandrium with two slender, columnar, posterior projections; epiproct with a sclerotized, apical apophysis; paraprocts elongate, extended distally to form a sclerotized prong; phallosome open anteriorly, projected posteriorly *Rhyopsoculus* García Aldrete
4. Forewings about four times as long as wide; M3 in forewing branched .... *Rhyopsocoides* **n. gen.**
-. Forewings about three times as long as wide; M3 in forewing simple 5
5. Forewings without areola postica; spermathecal glands mushroom shaped..... ..... *Balliella* Badonnel
-. Forewings with areola postica; spermathecal glands spherical, with pores and fingerprint marks 6
6. Forewings hyaline, with closed cell ..... *Rhyopsocus* Hagen
-. Forewings extensively marked with dark brown areas, lacking closed cell .... *Psoquilla* Hagen

Belicania n. gen.

Diagnosis. Belonging in the Ptiloneuridae. Male hypandrium simple, with two distinct, postero-lateral, slender, acuminate apophyses, curved inward; lacking smaller, side sclerites. Forewing M three branched, hindwing M simple. Five distal inner labral sensilla, a central placoid, flanked at some distance by a pair trichoid-placoid. Phallosome: basal struts robust, V-shaped, joined distally to the external parameres, these sausage-shaped, elongate, bearing pores distally. Two pairs of endophallic sclerites, outer pair wide based,

long, distally acuminate, directed outwards; inner pair strongly pigmented basally, each half with a short, blunt extension directed posteriorly. Male and female paraprocts and epiproct, and female subgenital plate, gonapophyses and ninth sternum as in species of *Triplocania*.

Differing from *Perucania* New & Thornton, and from *Triplocania* Roesler, in having the hypandrium simple, with postero-lateral projections and lacking side sclerites. Differing from *Ptiloneuropsis* Roesler in lacking a triangular areola postica joined to M by a crossvein in the forewing. Differing from *Ptiloneura* Enderlein, *Loneura* Navás, *Euplocania* Enderlein and *Timnewia* García Aldrete, in having forewing M with three branches, and in having the hypandrium simple, with postero-lateral projections. Differing from *Loneuroides* García Aldrete, in having forewing M three branched and with a smooth pterostigma, and in having hindwing M simple. Differing from *Willreevesia* García Aldrete, in having forewing M three branched, in having hypandrium with postero-lateral projections, and in having phallosome with sausage-shaped external parameres without associated sclerites, and lacking a central, three pronged sclerite.

Type species. *Triplocania cervantesi* García Aldrete

Etymology. The genus name is artificial, combining the root of Belize, the country where the species was collected, and "cania", a common generic stem used in Ptiloneuridae (e. g. as in *Perucania* and *Triplocania*).

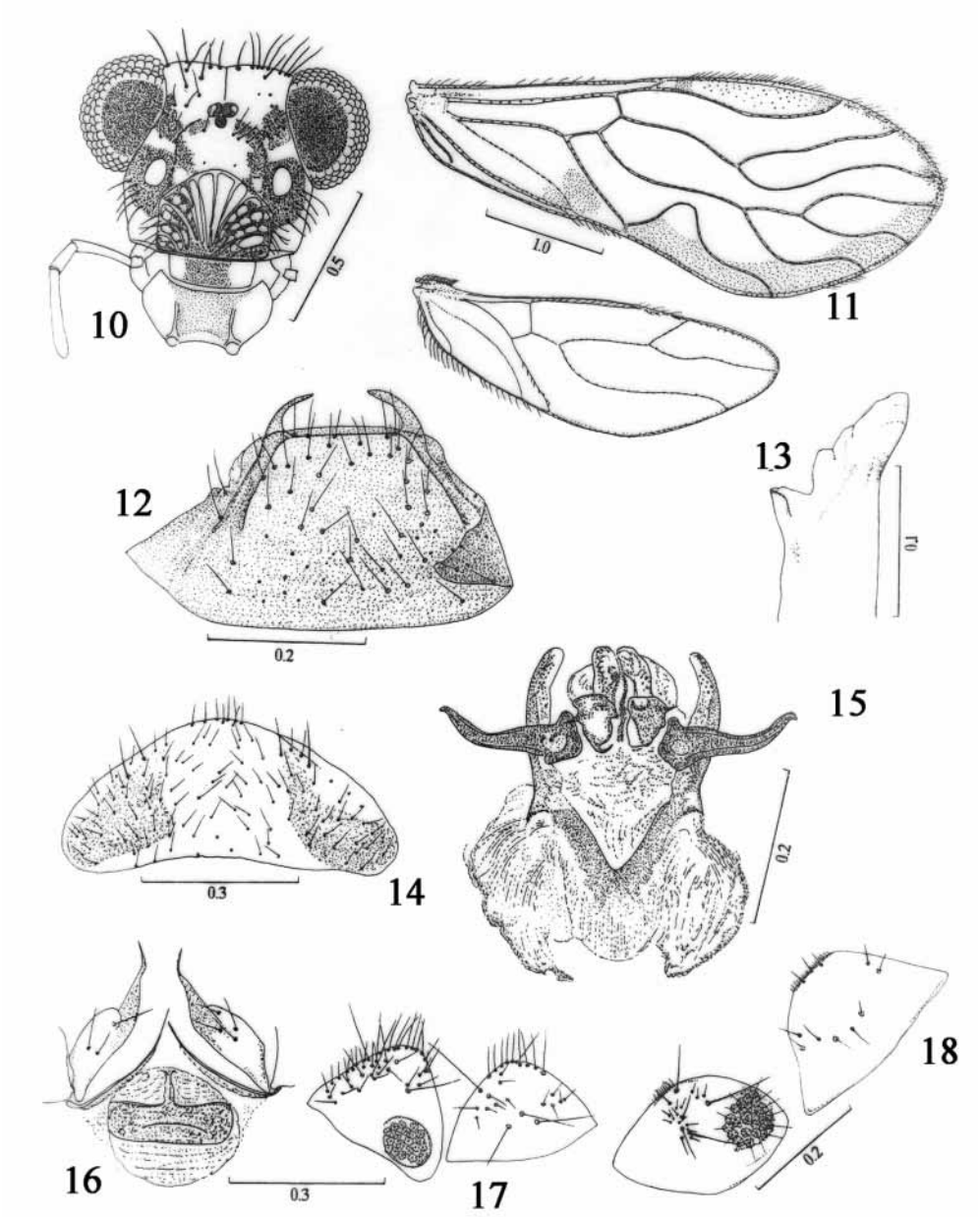
Belicania cervantesi (García Aldrete) n. comb. (Figs. 10–18)

Triplocania cervantesi García Aldrete 1999: 155–156.

In cladograms that show the relationships of the genera of Epipsocetae (Figs. 122, 123, and 124, in Casasola González 2006), *Triplocania cervantesi* (= *Belicania cervantesi*), appears as sister species to *T. brailovskyana*, thus indicating that *Belicania* is closest to *Triplocania*, and possibly the sister group.

Omilneura n. gen.

Diagnosis. Belonging in the Ptiloneuridae. Five distal inner labral sensilla, a central one placoid, flanked at some distance by a pair trichoid-placoid. Forewing M six branched, branch next areola postica unbranched in right wing, forked in left wing. Hindwing M simple. Hypandrium a large, central sclerite, with a smaller sclerite on each side. Phallosome with lateral struts slender, V-shaped; external parameres blunt ended, each with a short stem joined to lateral strut, and a long stem directed mesally; three pairs of



FIGURES 10–18. *Belicania cervantesi* (García Aldrete 1999). 10. Front view of head. F. 11. Fore- and hind wings. F. 12. Hypandrium. M. 13. Lacinial apex. F. 14. Subgenital plate. F. 15. Phallosome. M. 16. Gonapophyses and ninth sternum. F. 17. Right paraproct and epiproct. F. 18. Right paraproct and epiproct. M. Scales in mm.

phallosome sclerites: two pairs central, elongate, curved, blunt ended proximally and distally, and one pair of side sclerites, wide based, narrowing distally, acuminate. It differs from *Euplocania* Enderlein, *Loneura* Navás, *Perucania* New & Thornton, *Ptiloneura* E nderlein, *Ptiloneuropsis* Roesler, *Belicania* García Aldrete, *Triplocania* Roesler, and

Willreevesia García Aldrete on wing venation and genital characters.

Type species. *Omilneura circumvittata* **n. sp.**

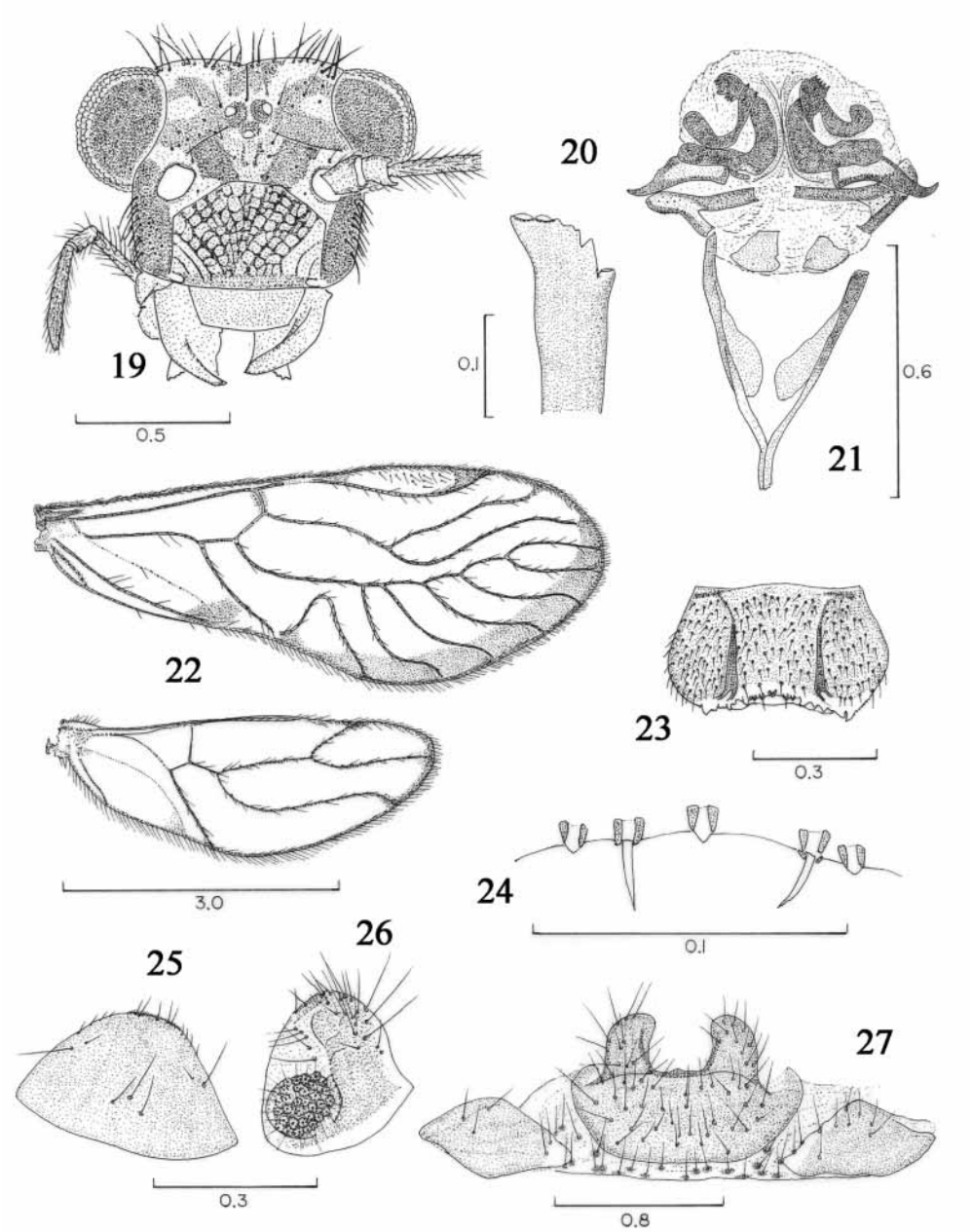
***Omilneura circumvittata,* n. sp. (Figs. 19–27)**

Color. Ground color creamy white, with reddish-brown areas as described below. Compound eyes black, ocelli hyaline, close together, each with an ochre centripetal crescent. Head pattern (Fig. 19); genae deep reddish brown. Maxillary palps and antennae pale brown. Thoracic pleura and tergal lobes of meso- and metathorax reddish brown. Forelegs creamy white from coxae to femora, tibiae and tarsi pale brown. Middle legs pale brown throughout. Hind legs same as forelegs, except for distal brown spots on femora. Wings almost hyaline; forewing pterostigma with proximal and distal brown bands; a brown band running along wing margin from R4+5 to anterior end of areola postica; a brown band from mid Cu to wing margin, anterior to Cu2- A1 junction. Hindwing almost hyaline; a pale brown band from R4+5 to M1, a pale brown spot between Cu and wing margin and on wing base. Abdomen creamy white, with transverse, ochre subcuticular rings. Genital segments reddish brown.

Morphology. Outer cusp of lacinial apex broad, with six denticles (Fig. 20). Forewing pterostigma (Fig. 22) elongate; R2+3 and R4+5 long, sinuous; M six branched, branch next areola postica simple in right wing, forked in left wing. Areola postica wide, high, with apex rounded. Hindwing M simple (Fig. 22). Hypandrium (Fig. 27) a large, central, setose sclerite, with a short, stout, posterior projection on each side, flanked by smaller, rhomboid sclerites. Phallosome complex (Fig. 21), with lateral struts slender, V-shaped, each strut with an elongate, pigmented extension on inner edge; external parameres distally blunt, proximally with a short stem joining the lateral strut, and a long stem directed mesally; three pairs of phallosome sclerites: two central pairs, close to each other, curved, blunt on both ends, and an outer pair with each sclerite wide based, narrowing to end, acuminate; external parameres and phallosome sclerites in a membranous endophallus, anteriorly with two broad, irregular, pigmented areas. Paraprocts (Fig. 26) robust, setose as illustrated, with sensory fields nearly round, each bearing 33–37 trichobothria issuing from basal rosettes. Epiproct (Fig. 25) trapeziform, with five setae along posterior border, a central one and two close together on each side, at a distance, in a field of microspines; a field of setae on each side and a triangular group of three setae mesally, next to anterior border.

Measurements. FW: 5617, HW: 3714, F: 1318, T: 2244, t1: 956, t2: 136, t3: 186, ctt1: 29, Mx4: 292, f1: 999, f2: 838, f3: 756, IO: 535, D: 999, d: 680, IO/D: 1.37, PO: 0.68.

Material studied. Holotype M. MÉXICO. Guerrero. Chilpancingo. Omiltemi Natural Reserve, area “La Perra”, 17°33’42’’N: 99°41’29.9’’W, 2198m. 20.X.1998, on tree trunk, J. A. Casasola & T. Martínez. CNIN.



FIGURES 19–27. *Omilneura circumvittata* **n. sp.** M. 19. Front view of head. 20. Lacinial apex. 21. Phallosome. 22. Fore- and hind wings. 23. Labrum. 24. Distal inner labral sensilla. 25. Epiproct and left paraproct. 27. Hypandrium. Scales in mm.

Etymology. The genus name is a composite word formed with the root of the type locality "Omiltemi" and the last two syllables of the genus name *Loneura*. The specific name refers to the pigmented band that runs along part of the margin of the forewing.

Remarks. The forewing of *Omilneura* immediately brings to mind the forewing of some species of *Loneura*, particularly *L. crenata* Navás, *L. leonilae* García Aldrete, *L. mombachensis* García Aldrete and *L. ocotensis* García Aldrete; but it can not be placed in *Loneura* because M in the hindwing is simple. The hypandrium of *Omilneura* is reminiscent to those of two species of *Triplocania* and one species of *Loneura* (*T. brailovskyana* García Aldrete, *T. vazquezae* García Aldrete and *L. splendida* Mockford), genera that belong in different clades within Ptiloneuridae (Casasola González 2006, García Aldrete 2005). The phallosome of *Omilneura* is unique in the family in that the external parameres are slender, blunt ended and with two anterior stems, a short outer one that joins the lateral strut and a long, inner one directed inward.

Two clades are recognized in the Ptiloneuridae, one, including *Belicania, Perucania* and *Triplocania* is supported by the character state "Male hypandrium…a central sclerite, with posterior projections, flanked by small sclerites". The other clade, including *Ptiloneuropsis, Ptiloneura, Loneura, Willreevesia, Loneuroides, Timnewia* and *Euplocania*, is supported by the character state "FW M…5–8 branched" (Casasola González 2006, García Aldrete 2005). Thus *Omilneura* presents characters of the two clades, although the supporting character of the first clade also appears in the second, supporting the pair *Ptiloneura-Loneura*. On wing venation characters, *Omilneura* is related to *Willreevesia*, with which it shares having vein M of the hindwing simple, but differs from it in the number of branches of vein M of the forewing and in the genital characters indicated above.

Key to genera of Ptiloneuridae
(modified from García Aldrete, 2006).

1. HW M one branched 2
-. HW M two to -five branched 8
2. FW 2A joining wing margin; no crossveins between 1A and wing margin 3
-. FW 2A joining 1A; one crossvein between 2A and wing margin; two crossveins between 1A and wing margin..... *Timnewia* García Aldrete
3. FW areola postica high, with apex rounded 4
-. FW areola postica low, very long..... *Perucania* New & Thornton
4. Labral sclerite incomplete, not reaching anterior margin of labrum 5
-. Labral sclerites complete, reaching anterior margin of labrum .... *Willreevesia* García Aldrete
5. FW M three- branched, occasionally M3 forked 6
-. FW M more than three- branched 7
6. Hypandrium formed by a central sclerite, which may bear central or lateral apophyses, with a smaller sclerite on each side..... *Triplocania* Roesler
-. Hypandrium formed by a single sclerite, with postero-lateral, slender projections.....

..... *Belicania* García Aldrete

7. FW M four- branched..... *Euplocania* Enderlein
-. FW M six- branched..... *Omilneura* García Aldrete
8. FW areola postica free, high, with apex rounded..... 9
-. FW areola postica high, rigidly triangular, joined to M by a crossvein .... *Ptiloneuropsis* Roesler
9. FW 2A simple, pterostigma long, smooth..... 10
-. FW 2A with one crossvein to wing margin, pterostigma long, distinctly spurred..... ..... *Loneuroides* García Aldrete
10. FW M five to -seven branched; HW M two to -five branched; hypandrium a central sclerite with a smaller one on either side, central one with one central or with two lateral posterior projections..... *Loneura* Navás
-. FW M eight branched; HW M five branched; hypandrium a broad sclerite projected posteriorly to form a wide, almost rectangular lobe, with a dense field of setae on each postero-lateral corner; a dense field of setae on each side of central projection..... ..... *Ptiloneura* Enderlein

***Waoraniella* gen. n.**

Diagnosis. Belonging in the Lachesillidae (Eolachesillinae). Tarsi two segmented. Fore- and hindwing membranes with abundant microtrichia. Veins in basal half of forewing (except Cu2), with two rows of setae. Areola postica small. Forewing Rs-M joined by a crossvein. Pterostigma much broader posteriorly. Subgenital plate with sides converging to narrow, truncate apex; pigmented area strongly concave. Ovipositor valvulae reduced, v2 associated to v3, this narrowing distally with a field of stout setae along outer edge.

Type species. *Waoraniella erwini* **n. sp.**

***Waoraniella erwini* n. sp. (Fig. 28–34)**

Color. Ground color reddish brown. Compound eyes black, ocelli hyaline, with ochre centripetal crescents. Maxillary palps more pigmented than rest of the body. Antennae and legs pale brown. Wings with a reddish brown hue. Abdomen with transverse, deep reddish brown subcuticular rings, less conspicuous ventrally.

Morphology. Outer cusp of lacinial apex large, bidentate (Fig. 32). Pretarsal claw with a basal seta and a broad pulvillus (Fig. 33). Forewing pterostigma narrow anteriorly, much wider posteriorly; Rs flexuous, Rs-M joined by a crossvein. Areola postica small (Fig. 29). Hindwing (Fig. 29). Subgenital plate (Fig. 30) setose as illustrated; a pigmented band along sides and posterior margin, this straight. Gonapophyses (Fig. 34): v1 short, stout, associated to ninth sternum, v2 an elongate lobe associated with v3, this wide at

base, narrowing distally, with a field of stout setae along outer margin. Paraproct (Fig. 31), elongate, almost elliptic, with field of setae posteriorly along outer margin, other setae as illustrated; a distinct, bicuspid cone on outer edge, sensory fields with 16–19 trichobothria issuing from basal rosettes. Epiproct (Fig. 31) straight anteriorly, rounded posteriorly, with a row of five macrosetae along posterior border, other setae as illustrated.

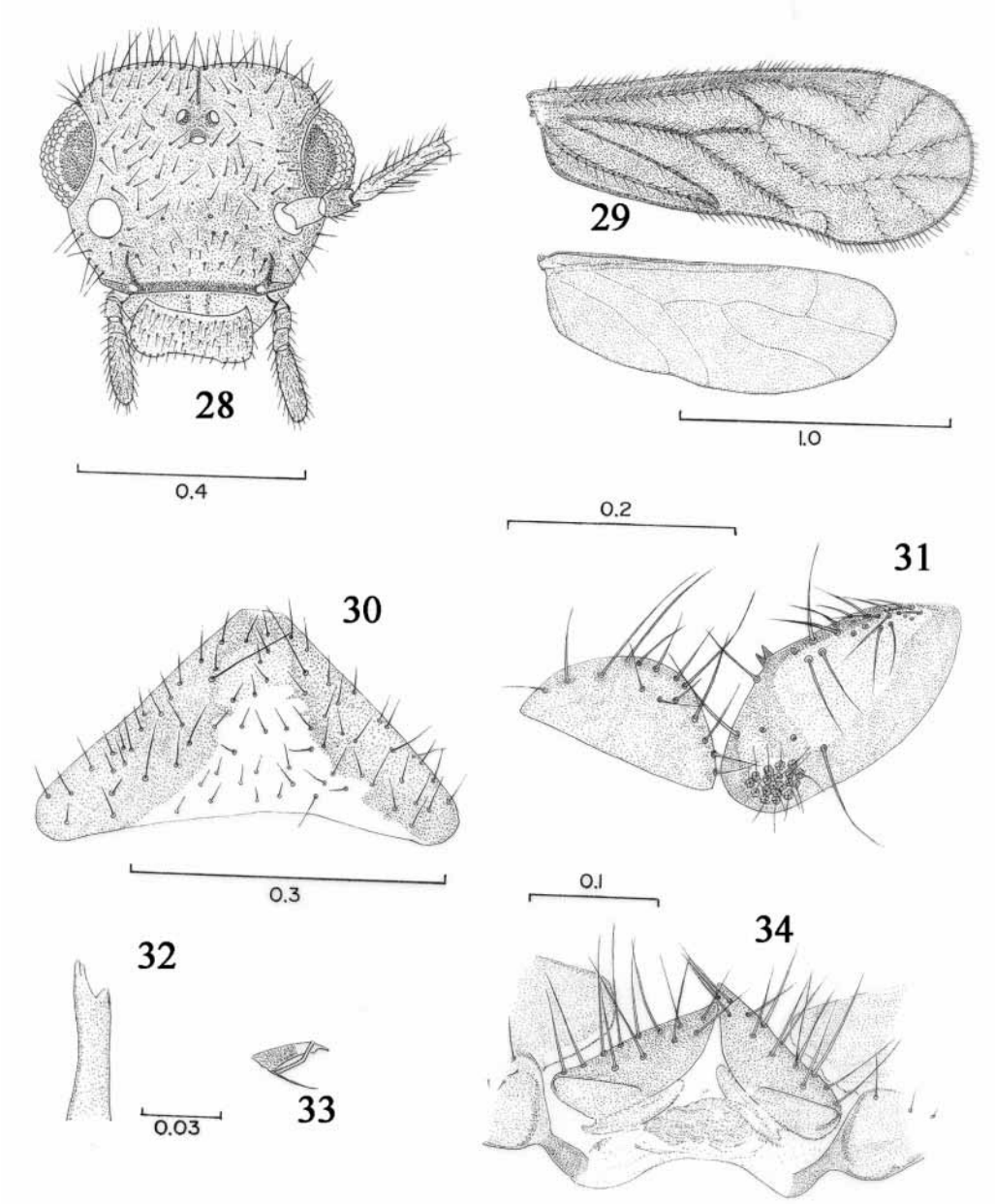
Measurements. FW: 1659, HW: 1338, F: 421, T: 680, t1: 220, t2: 91, ctt1: 13, Mx4: 136, f1: 238, f2: 151, IO: 360, D: 167, d: 87, IO/D: 2.14, PO: 0.52.

Material studied. Holotype F, 1 paratype F. ECUADOR. Napo. Waorani Ethnic Reserve. 1 km S Onkone Gare Camp. 220m. 10.II.1995. 0°30'10''S: 76°26'00''W. Fogging terre firme forest, T. L. Erwin *et al.* The holotype will be deposited in the Smithsonian Institution Collection, Washington, D. C. The paratype is deposited in CNIN.

Etymology. The genus name is a tribute to the Waorani or Auca "the people of the forest". The species is dedicated to Dr. Terry L. Erwin, leader of the Smithsonian Institution team that conducted the canopy fogging episodes in the Waorani Reserve, in recognition of his many, ground breaking academic achievements and as a tribute to his expert work in the taxonomy of the Carabidae.

Remarks. Mockford & Sullivan (1986) proposed a higher classification of the family Lachesillidae, in which they recognized two subfamilies: Lachesillinae, including *Lachesilla* and *Nadleria*, and Eolachesillinae, with two tribes: Eolachesillini including only *Eolachesilla*, and Graphocaeciliini, including *Graphocaecilius, Anomopsocus, Antilachesilla, Prolachesilla, Nanolachesilla, Tricholachesilla, Mesolachesilla,* and *Notolachesilla*. *Eolachesilla* was transferred to the family Elipsocidae by New & Thornton (1981), but Mockford & Sullivan (1986) decided to leave this genus in the Lachesillidae, following Badonnel (1967), and acknowledged that Lachesillidae and Elipsocidae are difficult to distinguish. García Aldrete & Mockford (1997) added *Hemicaecilius* to the Lachesillinae, transferring it from Elipsocidae, where it had been tentatively placed by Smithers (1972, 1990). Li Fasheng (1995) described *Homoeolachesilla* in the Lachesillinae, and in 2002 he described *Cyclolachesillus*, and erected for it the subfamily Cyclolachesillinae; he also described in the Lachesillinae the genus *Dicrolachesillus*, subsequently placed in synonymy with *Lachesilla* by Lienhard (2003), and the genera *Ceratolachesillus, Zangilachesilla* and *Zonolachesillus*. These genera deserve further study, particularly *Cyclolachesillus* which, by the illustrations of *C. ningxiaensis* Li Fasheng (2002), could probably be an elipsocid. As for the other genera, perhaps their creation needs a broader justification; my opinion is that it would be best to include the species involved in *Lachesilla*; Li Fasheng himself (1995) described in *Lachesilla* two species that seven years later he placed in *Zonolachesillus.*

Waoraniella presents a distinct autapomorphy (forewing Rs-M joined by a crossvein), that does not permit placing it in any of the two tribes of the subfamily, hence I propose the following new tribe in the Eolachesillinae.



FIGURES 28–34. *Waoraniella erwini* **n. sp.** F. 28. Front view of head. 29. Fore- and hind wings. 30. Subgenital plate. 31. Epiproct and left paraproct. 32. Lacinial apex. 33. Pretarsal claw. 34. Gonapophyses. Scales in mm. Figs. 32 and 33 to common scale.

Waoraniellini New Tribe

Diagnosis: Ocelli present. Epistomal sulcus developed only laterally, not present dorsally.

Lacinia bicuspid, with outer cusp bidentate. Tarsi two segmented. Rs stem in forewing flexuous. Rs-M in forewing joined by a crossvein. Ovipositor valvulae complete, v2 an elongate lobe associated with v3. Paraprocts with a stout, bifid, sclerotized prong, a field of stout setae along outer edge, and four macrosetae, almost in line, next sensory field.

Genus included: *Waoraniella*.

Key to Subfamilies of Lachesillidae
(modified from Mockford & Sullivan 1986)

1. Tarsi two segmented. Forewings with ciliation on veins, margins and sparsely on membrane. Phallosome open distally, variable. Endophallus apparently absent. V3 variable in shape; setae, when present, distributed over its entire surface. Female paraprocts without field of short, stout setae along median margin in ventral half ....Lachesillinae
   [Included genera: *Hemicaecilius* Enderlein, *Lachesilla* Westwood, *Nadleria* Badonnel & García Aldrete].
-. Tarsi two- or three segmented. Forewings sparsely ciliated on veins and margins. Phallosome a closed frame, endophallic sclerites variable in size, some chelate. V3 elongate, tapering distally; setae primarily along outer margin. Female paraprocts with field of short, stout setae along median margin in ventral half .....Eolachesillinae
   [Included tribes: Eolachesillini, Graphocaeciliini and Waoraniellini].

Key to tribes of Eolachesillinae
(in part from Mockford & Sullivan 1986)

1. Tarsi two segmented. Ocelli present or absent. Epistomal suture developed only laterally, never present dorsally. Lacinia bicuspid, with external cusp bidentate 2
-. Tarsi three-segmented. Ocelli present. Epistomal suture present and complete. Rs-M junctionin forewing short. Hypandrium bearing only short setae. Endophallic sclerites small, some chelate. Ovipositor valvulae complete. Female paraproct with row of long setae from below sense cushion to ventral end parallel to median marginEolachesillini
   [Included genus: *Eolachesilla* Badonnel].
2. Rs-M junction in forewing relatively long..... Graphocaeciliini
   [Included genera: *Graphocaecilius* Enderlein, *Anomopsocus* Roesler, *Antilachesilla* Mockford & Sullivan, *Prolachesilla* Mockford & Sullivan, *Nanolachesilla* Mockford & Sullivan, *Tricholachesilla* Mockford & Sullivan, *Mesolachesilla* Mockford & Sullivan, *Notolachesilla* Mockford & Sullivan]
-. Rs-M joined by a crossvein..... Waoraniellini
   [Included genus: *Waoraniella* García Aldrete].

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