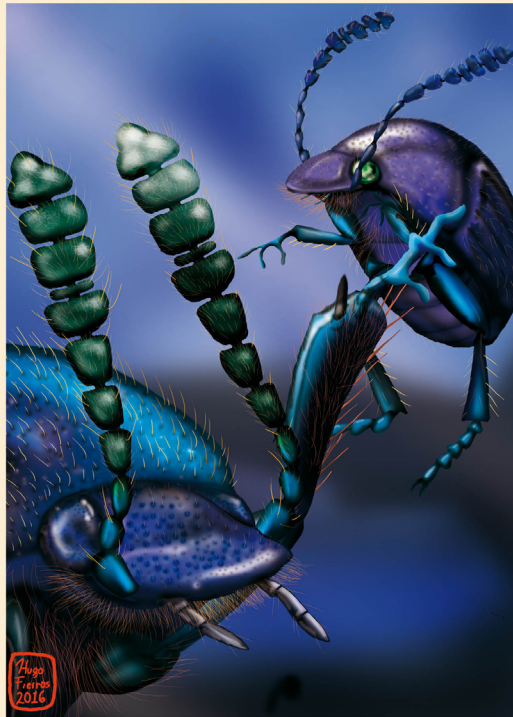


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A new *Lachesilla* species, in species group *Texcocana*, endemic to the Sierra Juárez, Oaxaca, México (Psocodea: 'Psocoptera': Psocomorpha: Lachesillidae)

Una nueva especie de *Lachesilla*, en el grupo de especies *Texcocana*, endémica de la Sierra Juárez, Oaxaca, México (Psocodea: 'Psocoptera': Psocomorpha: Lachesillidae)

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ABSTRACT

A species of *Lachesilla* in species group *Texcocana*, is here described and illustrated, it is endemic to the Sierra Juárez, Oaxaca. Although it is macropterous, it shows brachypterous characters in both sexes, such as wing length, missing or interrupted veins, and few trichobothria in the sensory fields of the paraprocts. The types are deposited in the National Insect Collection (CNIN), Instituto de Biología, Universidad Nacional Autónoma de México, CdMx, México.

Key words: Taxonomy, neotropics, endemism.

RESUMEN

Se describe e ilustra una especie de *Lachesilla* en el grupo de especies *Texcocana*, endémica de la Sierra Juárez, Oaxaca. Aunque esta especie es macróptera, presenta caracteres asociados al braquipterismo, como la longitud de la alas, venas faltantes o interrumpidas, y pocas tricobotrias en los campos sensoriales de los paraproctos. Los tipos están depositados en la colección Nacional de Insectos (CNIN), Instituto de Biología, Universidad Nacional Autónoma de México, CdMx, México.

Palabras clave: Taxonomía, neotrópico, endemismo.

Species group *Texcocana*, of the genus *Lachesilla*, was diagnosed by García Aldrete (1985). It includes nine species, predominantly Mexican; two species are shared with Guatemala, one species is shared with the U. S. A., and two species are only known from Guatemala. Of the Mexican species, *L. monticola* García Aldrete, and *L. texcocana* García Aldrete, have been recorded in the Sierra Juárez, Oaxaca, Mexican Priority Terrestrial Region 130 (Arriaga *et al.*, 2000), an area of high endemism.

The purpose of this paper is to describe and illustrate a species of *Lachesilla*, belonging in group *Texcocana*, recently collected in the Sierra Juárez, and endemic to it.

MATERIAL AND METHODS

Three males and eight females were available for study. Two males and two females were dissected in 80% ethanol, and their parts (head, right wings and legs and genitalia), were mounted on slides in Canada balsam. Color was recorded by observing whole specimens in 80% ethanol, under a dissecting microscope illuminated with cold white light at 50X. Parts on the slides were measured with a filar micrometer mounted on the microscope. The measurements are given in microns. Abbreviations of parts measured are as follows: FW and HW: lengths of right fore- and hind-wings, F, T, t1-t2: lengths of femur, tibia and tarsomeres 1 and 2 of right hindleg, ctt1: number of ctenidobothria on t1,

Mx4: length of fourth segment of right maxillary palpus, fl...fn: lengths of flagellomeres 1...n of right antenna, IO, D and d respectively: minimum distance between compound eyes, antero-posterior and transverse diameter of right compound eye in dorsal view of head, PO: d/D.

The specimens studied are deposited in the National Insect Collection (CNIN, Instituto de Biología, Departamento de Zoología, Universidad Nacional Autónoma de México, CdMx, México).

RESULTS

Family Lachesillidae Karny, 1930
Lachesilla Westwood, 1840
Species Group *Texcocana* García Aldrete, 1985

Lachesilla casasolai n. sp.
(Figs 1-6)

<http://zoobank.org/54DF7523-585D-4F3B-BDB6-FE90752F1211>

Diagnosis. Differing from the other species in the group (García Aldrete, 1985), by the males having the posterior processes of the hypandrium acuminate and curved out distally, by having the arms of the phallosome apodemes distinctly dilated mesally, by the females having the gonapophyses narrowing distally to a blunt apex, and by having the sheet underlying the subgenital plate with a crescent-shaped area on each side of the longitudinal

midline. Also differing from the other species in the group by having the fore- and hindwing lengths about half as long, in having missing or interrupted veins, mostly of the forewings, and in having about half as many trichobothria in the sensory fields of the paraprocts.

Description. Male. Color (in 80% ethanol). Body pale brown. Compound eyes black, ocelli hyaline, without pigmented centripetal crescents. Maxillary palps dark brown, antennae brown. Legs: coxae, trochanters, and femora pale brown, tibiae and tarsomeres brown. Wings hyaline, veins pale brown.

Morphology. Forewings and hindwings with some veins incomplete (Fig. 1). Phallosome apodemes fused basally, each arm proximally slender, widening distally, distinctly bulged posteriorly; distal fifth, from the bulge to the end, slender, acuminate (Fig. 2). Paraprocts (Fig. 3) with stout, strongly pigmented mesal prong, sensory fields with seven trichobothria on basal rosettes. Epiproct (Fig. 3) with a posterior projection in the middle, obtusely concave.

Measurements. FW: 1609, HW: 1092, F: 571, T: 952, t1: 286, t2: 113, ctt1: 16, Mx4: 134, f1: 417, f2: 406, f3: 318, f4: 298, IO: 331, D: 171, d: 106, IO/d: 3.12, PO: 0.61.

Female. Color (in 80% ethanol). Same as in the male.

Morphology. Forewings and hindwings as in the male, also with some veins incomplete (not illustrated). Subgenital plate broad, almost rounded posteriorly, with setae as illustrated (Fig. 4). Sheet underlying the plate broad, with sides almost parallel, anteriorly straight. Paraprocts (Fig. 5) almost semi-circular, wide, setose; sensory fields with seven trichobothria on basal rosettes. Epiproct (Fig. 5) broadly trapeziform, setal field on distal half. Gonapophyses (Fig. 6), proximally wide, narrowing distally to a blunt apex, setae as illustrated; a sclerotized band along proximal ends, extended into ninth sternum, this unpigmented.

Measurements. FW: 1545, HW: 1021, F: 553, T: 918, t1: 293, t2: 113, ctt1: 16, Mx4: 133, f1: 374, f2: 364, f3: 294, f4: 212, IO: 379, D: 173, d: 114, IO/d: 3.32, PO: 0.65.

Material studied. Holotype male. MÉXICO. Oaxaca. Sierra Juárez. 6 km SW Santa Catarina Lachatao, on trail towards the locality "La Virgen", 17°14'58.5"N: 96°29'35.2"W, 2028 m. 29.X.2013, beating dead leaves of *Hechtia* sp., J. A. Casasola. 2 paratypes female, same data as the holotype. 1 paratype male, 6 paratypes female, "Terrenos del General", 20.5 km SW Santa Catarina Lachatao, 17°30'59.5"N: 96°27'37.4"W, 2831 m., 30.IX.2013, beating dead, hanging leaves of *Nolina* sp., J. A. Casasola.

Etymology. This species is dedicated to Dr. José Arturo Casasola González, of the Universidad de la Sierra Juárez, Ixtlán, Oaxaca, in recognition to his efforts to survey the 'Psocoptera' of the Sierra Juárez, Oaxaca.

DISCUSSION

L. casazolai n. sp., clearly belongs in species group *Texcocana*, as diagnosed by García Aldrete (1985). *L. mathieui* García Aldrete, and *L. monticola* García Aldrete, also have the phallosome apodemes distally dilated; in the former, the dilation is in the distal fourth of the phallosome apodemes, only in the inner border of each arm; in the latter, the dilation is slight, anteapical.

It is remarkable that *L. casazolai* presents a trend towards brachypterism, manifested by the forewing and hindwing lengths, which are about half as long as in the other nine species in the *Texcocana* species group; also, both wings of both sides, predominantly the forewings, show missing or incomplete veins. The sensory fields of the paraprocts in both sexes have about half as many trichobothria as in the other species in the group; it is the only species in the group to present the brachypterous characters above indicated, and no clue at present about the reason for it.

L. monticola García Aldrete, and *L. texcocana* García Aldrete, have been recorded in Santa Catarina Lachatao; *L. casazolai* differs from them, besides the brachypterous characters, in having the hypandrial processes distally acuminate and slightly directed outwards, in having the phallosome apodemes distally dilated as described above, and in having the gonapophyses narrowing distally to the apex, an autapomorphy for this species.

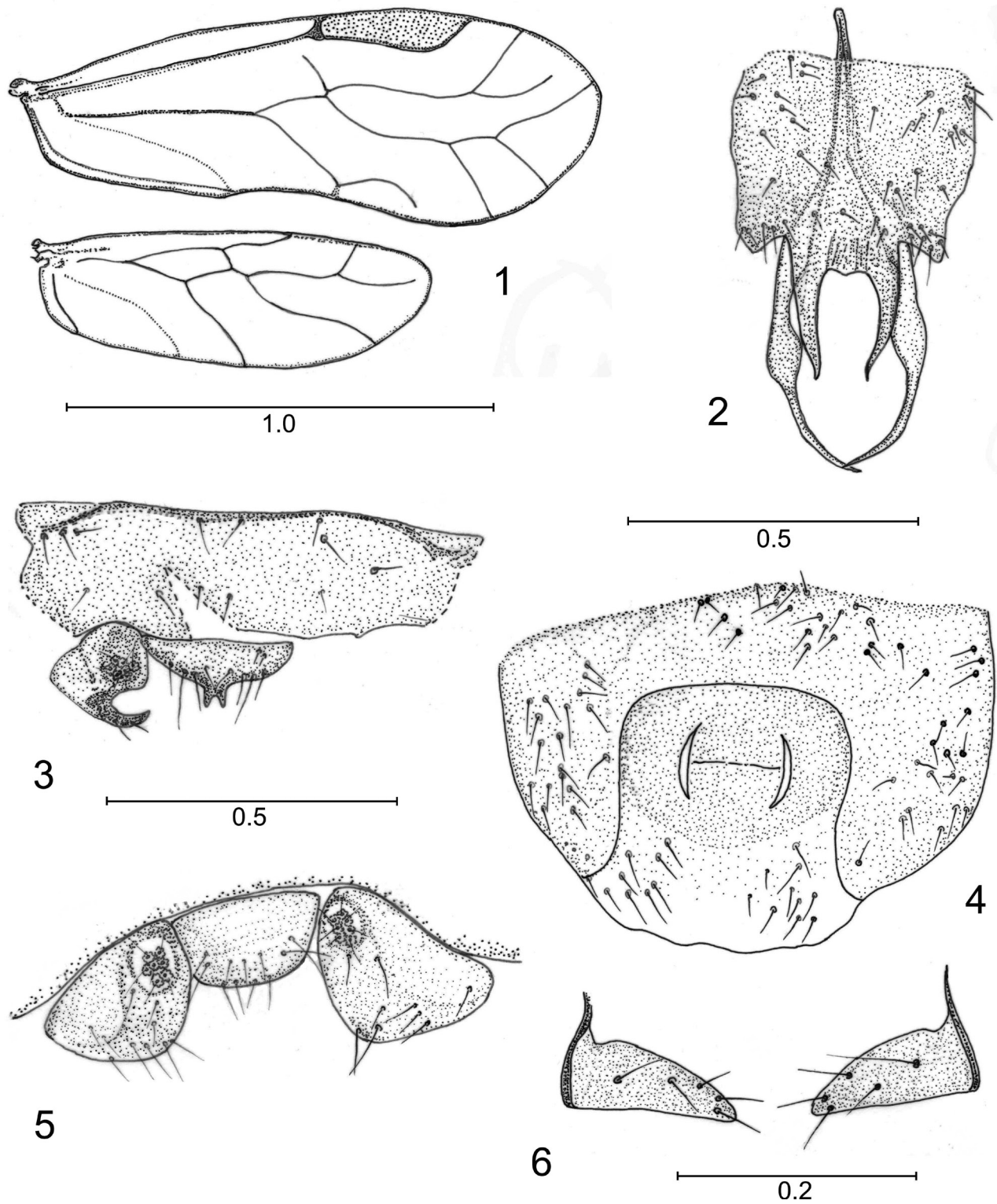
L. casazolai adds to the list of *Lachesilla* species endemic to the Sierra Juárez [*L. ixtlanensis* García Aldrete & Casasola, *L. lachataoensis* García Aldrete & Casasola and *L. unsijensis* García Aldrete & Casasola (2012)], all belonging in species group *Corona*.

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Figures 1-6. *Lachesilla casasolai* García Aldrete. 1. Fore- and hind- wings. Male. 2. Hypandrium and phallosome apodemes. Male. 3. Clunium, left paraproct and epiproct. Male. 4. Subgenital plate. Female. 5. Paraprocts and epiproct. Female. 6. Gonapophyses. Female. Scales in mm. Figures 4 and 5 to same scale as Figure 3.