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A new species of *Lachesilla* (Psocodea: Psocomorpha: Lachesillidae), in species group *Corona*, from Chiapas, Mexico

Una nueva especie de *Lachesilla* (Psocodea: Psocomorpha: Lachesillidae), en el grupo de especies *Corona*, de Chiapas, México

Alfonso N. García Aldrete¹ & Alberto Moreira da Silva Neto²

¹Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México, CdMx, MÉXICO. E-mail: anga@ib.unam.mx; ²Instituto Nacional de Pesquisas da Amazônia-INPA. CPEN- Programa de Pós-Graduação em Entomologia. Campus II. Caixa Postal 478, CEP 69011-97, Manaus, Amazonas, BRASIL. E-mail: bio.alberto@gmail.com

ABSTRACT

A new species of *Lachesilla*, from the Mexican state of Chiapas, is described and illustrated, it is assigned to species group *Corona* on basis of the paraprocts, epiproct, and phallosome apodemes; the hypandrium and claspers do not seem to fit well into species group *Corona*.

Key words: Taxonomy, neotropics, 'Psocoptera', southeastern Mexico.

RESUMEN

Se describe e ilustra una nueva especie de *Lachesilla*, del estado de Chiapas, México, asignada al grupo de especies *Corona*, con base en los paraproctos, epiprocto, y apodemas del falosoma, aunque el hipandrio y los clásperes no parecen encajar bien en el grupo de especies *Corona*.

Palabras clave: Taxonomía, neotropical, 'Psocoptera', sureste de México.

With 341 species described, and at least 100 species undescribed, but already available in collections, the spectrum of morphological variation in the psocid genus *Lachesilla* is flabbergasting.

In an attempt to organize that enormous diversity, the 341 described species have been assigned, based on their phenetic similarity, to 19 species groups. In addition, 10 undescribed species are included in species group *Q* (García Aldrete, 1974, 1981, 1982, 1983, 1985, 1986, 1990, 2009, 2010, 2011a, 2014; Mockford, 1993; García Aldrete & Mockford, 2011).

Chiapas is one of the five Mexican states most species rich for psocids (Mockford & García Aldrete, 1996). In 2011b, García Aldrete recorded 210 species, which is equivalent to 28.1% of the total for Mexico, and of these 57 corresponded to the genus *Lachesilla*. One of those species, represented by a single male, is here described and illustrated, it is assigned in species group *Corona*, although the hypandrium and claspers do not fit well into that group.

MATERIAL AND METHODS

One male specimen was available for study. It was dissected in 80% ethanol, and its parts (head, right antenna, right wings and legs, and genitalia), were mounted on a slide in Canada balsam, following standard procedures. The parts on the slide were measured with a filar micrometer; abbreviations of parts measured are the following: FW, HW: lengths of right fore- and hind- wings, F, T, t1 and t2: lengths of femur, tibia, and tarsomeres 1 and 2 of right hind leg, 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: minimum distance between compound eyes, antero-

posterior diameter and transverse diameter, respectively, of right compound eye, on dorsal view of head, PO: d/D. The type is deposited in the National Insect Collection (CNIN), Zoology Department, Instituto de Biología, Universidad Nacional Autónoma de México, in Mexico City.

RESULTS

Family Lachesillidae Pearman

Lachesilla cibriani n. sp. Male

(Figs 1-4)

<http://zoobank.org/D691D35C-37B5-4F25-B5C3-4DE7940A8B20>

Diagnosis. Hypandrium of one small, rectangular, almost glabrous, transverse sclerite, strongly sclerotized along posterior border, flanked by large claspers, each rounded proximally, with a field of setae, narrowing posteriorly, curved inwards, articulated distally to a slender, curved outwards, acuminate process. Phallosome Y-shaped, the stem of 27% of the total length of the phallosome, arms stout, bow-shaped, blunt ended. Paraprocts with curved, sclerotized mesal prong, with a sclerotized band on inner border, partially limiting the sensory fields. Epiproct posteriorly bilobed, each lobe setose.

Color (in 80% ethanol). Body chestnut brown. Compound eyes black, ocelli hyaline, without pigmented centripetal crescents. Wings hyaline, with slight orange hue. Legs and antennae pale brown. Abdomen creamy, with pale brown subcuticular rings, more pigmented dorsally.

Morphology. Pterostigma elongate, wider posteriorly. Rs-M fused for a short distance. Rs convex distal to M junction, M concave before forking. Areola postica wide, rounded apically (Fig. 1) Hindwing Rs-M fused for a medium distance (Fig. 2). Hypandrium, claspers and

phallosome as illustrated in Fig. 3. Paraprocts (Fig. 4) broad, with setae as illustrated, sensory fields round, with 11 trichobothria on basal rosettes. Epiproct (Fig. 4) wide, transverse, almost straight anteriorly, posteriorly bilobed.

Measurements (in μm). FW: 2169, HW: 1527, F: 467, T: 889, t1: 328, t2: 88, ctt1: 18, f1: 296, f2: 267, f3: 216, f4: 172, f5: 99, f6: 90, f7: 78, f8: 84, f9: 83, f10: 79, f11: 75, 10: 352, D: 192, d: 120, IO/d: 2.93, PO: 0.62.

Type locality. Holotype male. MEXICO. Chiapas. Lagunas de Montebello, 60 km SE Comitán, 16°08'39.34" N: 91°43'06.91" W, 1580 m. 11.VIII.1975. Beating *Quercus* branches with dead leaves, A. N. García Aldrete.

Etymology. This species is dedicated to Dr. David Cibrián Tovar, of the Universidad Autónoma Chapingo, in recognition of his important contributions to the study of forest insects in Mexico.

Remarks. *Lachesilla cibriani* García Aldrete & Silva Neto, is assigned to species group *Corona*, on account of the paraprocts, epiproct and phallosome apodemes; the hypandrium and claspers, however, do not fit well in the structural plan of species group *Corona*: the hypandrium is a medium sized, almost glabrous rectangular sclerite, quite different from the hypandrium in the known species of *Lachesilla* in that group, and the claspers are well separated from the sides of the hypandrium, each clasper is a proximally rounded structure, bearing a setal field, narrowing distally, with the end clearly articulated to a curved, slender process directed outwards; in none of the species of the *Corona* group are the claspers separated from the hypandrium, and in none is there a distal process articulated to the distal ends of the claspers (see García Aldrete, 2017a, b). The hypandrium and claspers in *L. cibriani* are reminiscent to those in the *Forcepeta* species group (see García Aldrete, 1974; Mockford, 1993) but they are distinct; in the species of the latter group, the hypandrium is a broad, setose sclerite, flanked by the claspers, of one piece, in which a proximal half and a distal process are recognized, but these are never articulated, and the proximal half is never as wide and rounded as in *L. cibriani*; also, the phallosome apodemes in species of the *Forcepeta* group are fused to form a rod that only forks distally and extend into membranous, laminar sheets or other processes, absent in *L. cibriani*, where the phallosome is distinctly Y-shaped. Furthermore, in *L. cibriani* the hypandrium is small, almost glabrous, lacking setae posteriorly in the middle, therefore, the species can not be assigned to species group *Forcepeta*. For stability, it is best to assign *L. cibriani* in species group *Corona*, because we do not know if it could be the male of one of the many species in the group described from females.

The *Simojovelensis* species group, also known from Chiapas, some 150 Km NW from the type locality of *L. cibriani*, includes only *L. simojovelensis*, known from two females (García Aldrete, 2014). *L. simojovelensis* might be the female of *L. cibriani*, but the possibility seems to be ruled out, as the female *L. simojovelensis* has gonapophyses and ninth sternum of the type found in species group *Sclera*. A definitive decision could only be taken when *L. cibriani* and *L. simojovelensis* were found together.

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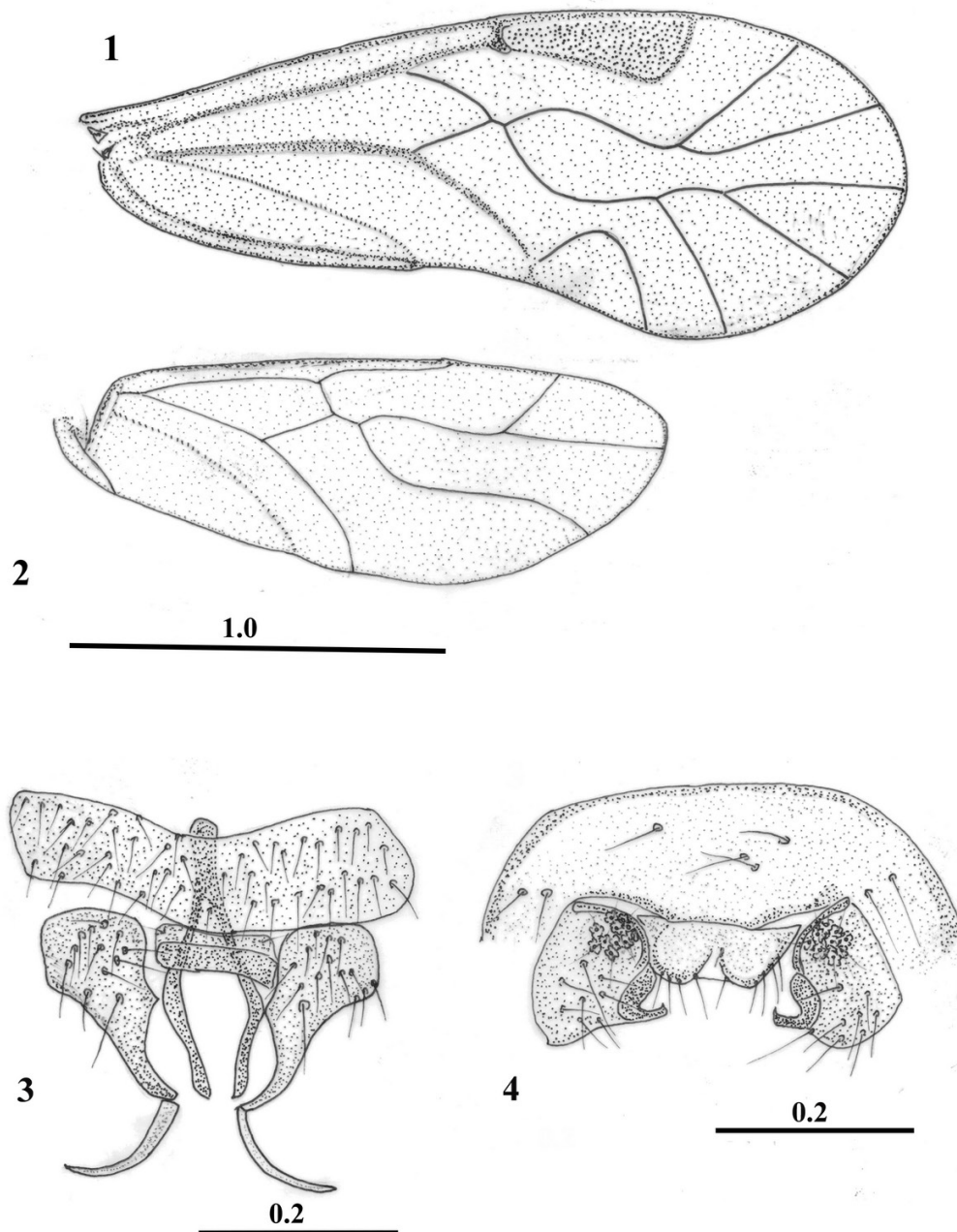
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Figures 1-4. *Lachesilla cibriani* García Aldrete & Silva Neto. Male. 1. Forewing. 2. Hindwing. 3. Phallosome, hypandrium and claspers. 4. Clunium, paraprocts and epiproct. Scales in mm.