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A new *Lachesilla* from Chiapas, Mexico, representing a new species group (Psocodea: 'Psocoptera': Lachesillidae)

Una nueva *Lachesilla* de Chiapas, México, que representa un nuevo grupo de especies (Psocodea: 'Psocoptera': Lachesillidae)

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ABSTRACT

A new species of *Lachesilla*, from the Mexican state of Chiapas, is here described and illustrated. It represents a new species group, that is diagnosed. It is close to species group *Sclera*. The types of the new species are deposited in the National Insect Collection, Zoology Department, Instituto de Biología, Universidad Nacional Autónoma de México, México, D. F.

Key words: *Lachesilla*, new species, new species group, neotropics.

RESUMEN

Una nueva especie de *Lachesilla* del estado de Chiapas, México, es aquí descrita e ilustrada. Representa un nuevo grupo de especies, cuya diagnosis se presenta. Es cercano al grupo de especies *Sclera*. Los tipos de la nueva especie están depositados en la Colección Nacional de Insectos, Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México, en México, D. F.

Palabras clave: *Lachesilla*, nueva especie, nuevo grupo de especies, neotrópico.

INTRODUCTION

Lachesilla Westwood, is the most species-rich and one of the most diverse genera of Psocoptera. It presently includes 313 described species, distributed in all biogeographic regions of the world. On a phenetic basis, 19 species groups have been recognized to date (García Aldrete, 1974, 1982, 2010, 2011; García Aldrete & Mockford, 2011). I recently found, near Simojovel, Chiapas, Mexico, two female specimens of *Lachesilla* with gonapophyses and ninth sternum of the type found in species group *Sclera* (García Aldrete & Mockford, 2011). It has a subgenital plate not corresponding to this group, and not found in females of any of the species groups recognized in *Lachesilla*, other than the female of *L. mexicana* García Aldrete (species group *Mexica*, close to species group *Corona*, García Aldrete, 1982). The purpose of this paper is to describe the new species, and to erect a new species group for it.

MATERIAL AND METHODS

Two females were available for study, they 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 the specimens, before dissection, at 50X under a dissection microscope illuminated with cold, white light. Standard measurements were taken with a filar micrometer. Abbreviations of parts measured are the following: FW and HW: lengths of right fore- and hind- wings, F, T, t_1 and t_2 : lengths of femur, tibia and tarsomeres 1 and 2 of right hind leg, ctt_1 : number of ctenidobothria on t_1 , Mx4: length of fourth segment of right maxillary palpus, f_1 - f_n : lengths of flagellomeres 1-n of right antenna, IO, D and d: minimum distance between compound eyes, antero-posterior and transverse diameters of right compound eye, respectively, in dorsal view of head, PO: d/D. The

types are deposited in the National Insect Collection (CNIN), Zoology Department, Instituto de Biología, Universidad Nacional Autónoma de México (UNAM), México, D. F.

RESULTS

Family Lachesillidae

Lachesilla simojovelensis n. sp. Female

(Figs. 1-5)

Diagnosis. Differing from species in group *Sclera* (see García Aldrete & Mockford, 2011), in that the subgenital plate has a broad, median lobe, flanked by two short, distally rounded processes (Fig. 3).

Description. Color. Body creamy brown, compound eyes black, ocelli hyaline, with ochre centripetal crescents. Mx1 pale brown, Mx 2-3 brown, Mx4 deep brown. Antennae and legs pale brown, tibiae and tarsomeres dark brown. Wings opaque, veins brown, with R_1 bordering pterostigma reddish brown. Thorax brown, areas between tergal lobes of meso- and metathorax creamy brown. Abdomen creamy brown, with dark brown subcuticular rings, evanescent ventrally.

Morphology. As in diagnosis, plus the following. Compound eyes well below the level of the vertex (Fig. 1). Forewing pterostigma wider posteriorly, areola postica wide based, apically rounded, veins Rs-M fused basally for a short distance (Fig. 2). Subgenital plate broad, with anterior setal field and four mesal macrosetae; plate glabrous on distal half (Fig. 3). Gonapophyses long, setose as illustrated, with outer border more pigmented, and apex slightly projected (Fig. 4). Ninth sternum with central, ovoid hyaline area, surrounded by a pigmented arch, continuous anteriorly by a less pigmented arch as illustrated, spermapore small, with pigmented rim, located near posterior end (Fig. 4).

Paraprocts robust, with a mesal macrosetae and a setal field along posterior border, sensory fields with ten trichobothria issuing from basal rosettes (Fig. 5). Epiproct almost semicircular, with setal field on distal third (Fig. 5).

Measurements (in μm). FW: 2396, HW: 1852, F: 398, T: 802, t_1 : 318, t_2 : 106, ctt_1 : 14, Mx4: 106, f_1 : 239, f_2 : 189, f_3 : 159, f_4 : 114, IO: 352, D: 162, d: 98, IO/d: 3.5, PO: 0.60.

Type locality. MEXICO. Chiapas. 13 km N El Bosque, near Simojovel, 7.III.2013, 17°07.569'N: 92°42.018' W, on dead leaves of cut down trees, A. N. García Aldrete, holotype female and one paratype female (CNIN).

Etymology. The specific name refers to the type locality, Simojovel, well known for its late Oligocene-early Miocene amber deposits, with insects embedded in the amber.

Remarks. The subgenital plate of *L. simojovelensis* is reminiscent of the subgenital plate of the brachypterous *L. mexicana* García Aldrete (1982), from the Distrito Federal and the state of Mexico, in central Mexico; in both there is a large central lobe, with a small process on each side. The former lacks the pigmented area that underlies the plate in the latter. The gonapophyses and ninth sternum of the latter are of the type found in species of the *Corona* species group (see García Aldrete, 1974, Figs. 29, 31, 33, and 37-39), and the male also has characters that, alone, would assign the species to it. The gonapophyses and ninth sternum of *L. simojovelensis* would assign the species in the *Sclera* species group, but no species in it has the subgenital plate resembling that of *L. simojovelensis*, and thus it is justifiable to erect for it species group *Simojovelensis*, diagnosed as follows:

Female subgenital plate with a large posterior lobe in the middle, flanked by elongate small processes, distally rounded. Gonapophyses and ninth sternum as in species of group *Sclera*.

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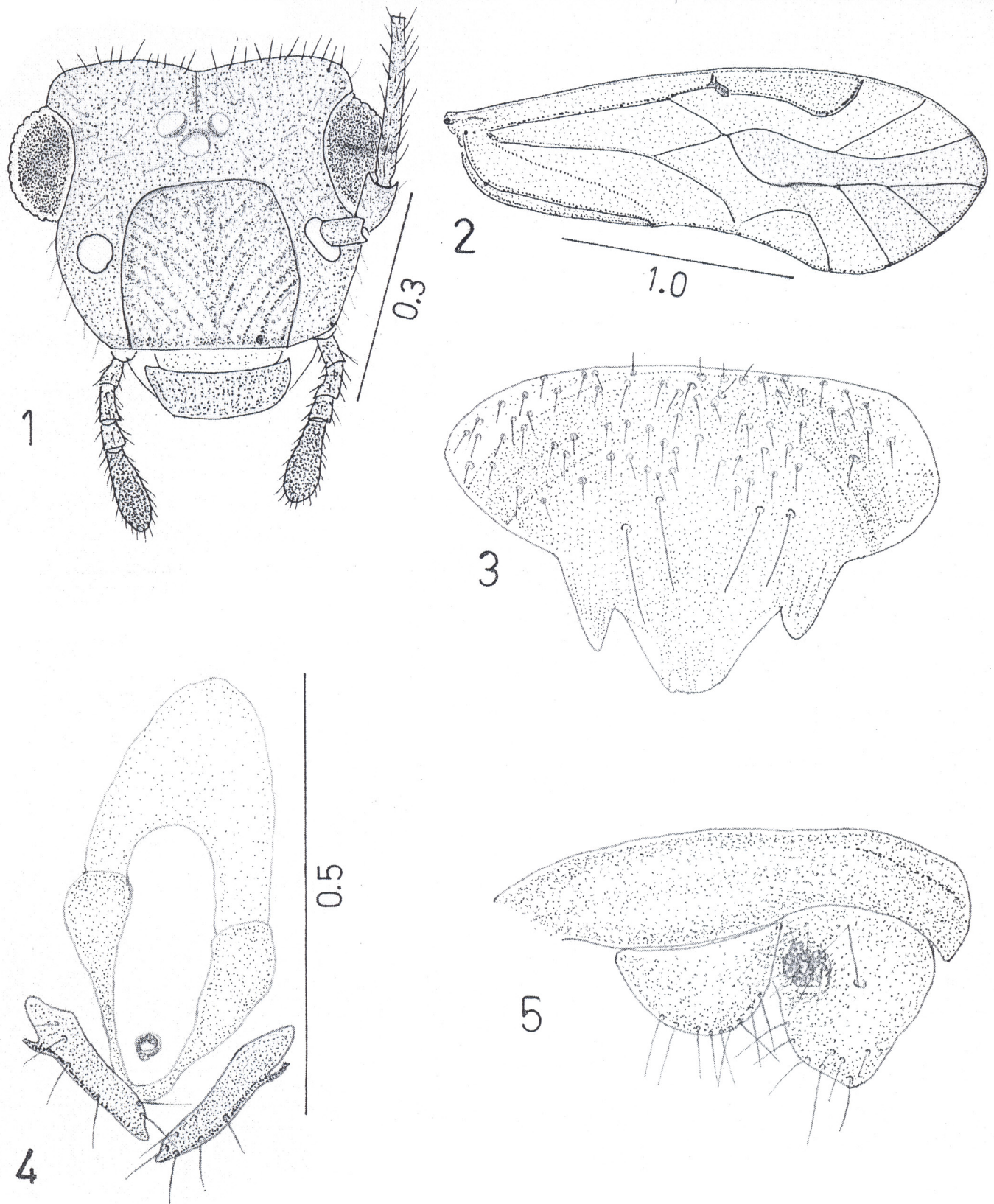
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Figs. 1-5. *Lachesilla simojovelensis* n. sp. Female. 1. Front view of head. 2. Forewing. 3. Subgenital plate. 4. Gonapophyses and ninth sternum. 5. Epiproct and right paraproct. Scales in mm. Figures 3 and 5 to same scale as Figure 4.

