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Taxonomy and systematics

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Una especie nueva de Lachesilla (Psocodea: Psocomorpha: Lachesillidae) en el grupo de especies de L. texcocana, de la Reserva de la Biosfera El Triunfo, Chiapas, México

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Abstract

A species of *Lachesilla*, in the *L. texcocana* species group, endemic to El Triunfo Biosphere Reserve, Chiapas, Mexico, is described and illustrated. Based on female characters (male is unknown), it is close to *L. gamma* García-Aldrete, from which it differs in the shape and size of the underlying pigmented area of the subgenital plate. It is the third species of the *L. texcocana* species group recorded in the state of Chiapas.

Keywords: Taxonomy; Neotropics; New species; Endemism

Resumen

Se describe e ilustra una especie de *Lachesilla* en el grupo de especies de *L. texcocana*, endémica de la Reserva de la Biosfera El Triunfo, en Chiapas, México. Con base en caracteres de la hembra (macho desconocido), es cercana a *L. gamma* García-Aldrete, de la cual difiere en la forma y talla del área pigmentada subyacente a la placa subgenital. Es la tercera especie del grupo de *L. texcocana* que se registra en el estado de Chiapas.

Palabras clave: Taxonomía; Neotrópico; Nueva especie; Endemismo

Introduction

The species group *L. texcocana* of the genus *Lachesilla* Westwood was diagnosed by García-Aldrete (1985). An additional species, endemic to the Sierra Juárez in Oaxaca, Mexico, was included 31 years later (García-Aldrete, 2016). It presently includes 10 species, that occur from the states of New Mexico and Nevada in the USA, south to Guatemala, as follows: USA (1 sp.), Mexico (8 spp.) and Guatemala (4 spp.). Five species are endemic to Mexico, 2 are endemic to Guatemala, 1 is shared with the USA, and 2 are shared with Guatemala. In Mexico, 2 species have been recorded from Chiapas: *L. monticola* García-Aldrete, from 15 and 20 km W of San Cristóbal de las Casas, and *L. texcocana* García-Aldrete, from 20 km W of San Cristóbal de las Casas (García-Aldrete, 1985).

In 1993, one female of the *Lachesilla texcocana* species, representing an undescribed species, was found in the Biosphere Reserve El Triunfo (15°09'10"-15°57'02" N, 92°34'04"-93°12'42" W). The purpose of this paper is to describe and illustrate the species and show its affinities to the other species in the group.

Materials and methods

The only female available for study was dissected in 80% ethanol, and its parts (head, right wings and legs, and genitalia) were mounted on one slide in Canada balsam. Color was recorded by observing the whole specimen, previous to the dissection, 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 mm. Abbreviations of parts measured are as follow: 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 palpomere 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 diameter and transverse diameter of right compound eye, in dorsal view of head, PO: d/D. The specimen studied is deposited in the National Insect Collection (CNIN, Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México, Mexico City).

Description

Lachesilla gammaoides García-Aldrete n. sp. Female (Figs. 1-5)

<http://zoobank.org/urn:lsid:zoobank.org:act:1DCC272B-7B25-40D1-85D9-6CC97DE13A69>

Diagnosis. Close to *L. gamma* García-Aldrete, recorded in the Mexican states of Guerrero, Mexico, Michoacán, Morelos, Puebla and Veracruz, differing from it by having the pigmented area underlying the subgenital plate much shorter, with small, slender antero-lateral processes.

Taxonomic summary

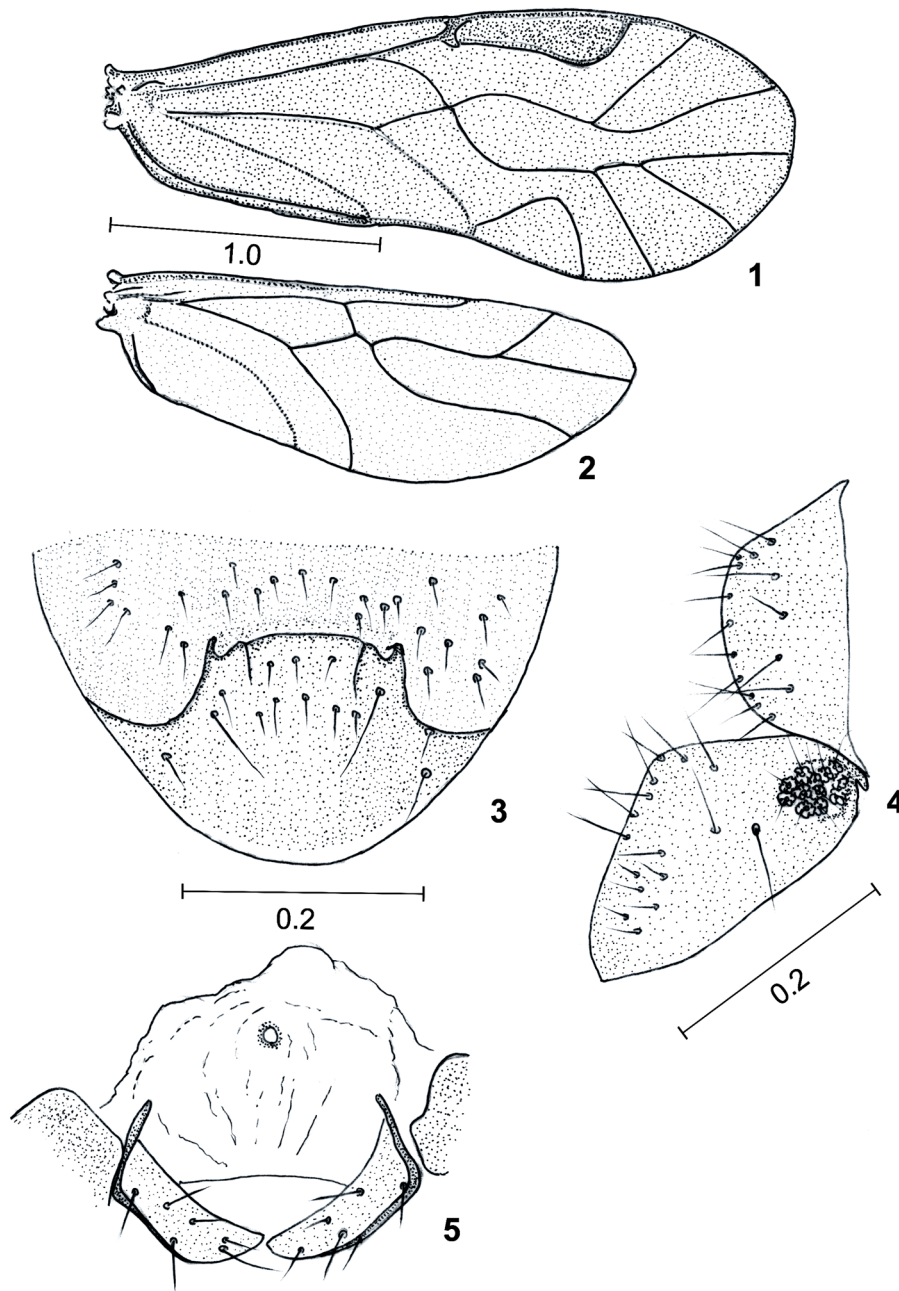
Holotype. Female. Color (in 80% ethanol). Body tawny brown. Compound eyes black, ocelli hyaline, with ochre centripetal crescents. Maxillary palps, antennae and legs pale brown. Wings almost hyaline, with a light orange hue. Veins pale brown. Tergal lobes of meso- and metathorax slightly more pigmented. Abdomen whitish, with dark brown subcuticular bands, faded ventrally. Morphology. Compound eyes below the level of the straight vertex. Forewing pterostigma elongate, wider posteriorly. Rs-M diverging from a point. Areola postica wide, broadly triangular (Fig. 1). Hindwing (Fig. 2). Subgenital plate broad, setose, posteriorly rounded; underlying pigmented area broad, short (Fig. 3). Gonapophyses (Fig. 5) long, with setae as illustrated, sides parallel, slightly pointed distally, outer border sclerotized, the sclerotized bands extended proximally into the membranous ninth sternum, this with the rimmed spermapore located toward the anterior border. Paraprocts (Fig. 4) large, broadly elliptic, setae as illustrated, sensory fields elliptic, with 11 trichobothria issuing from basal rosettes, and one marginal trichobothrium without basal rosette. Epiproct (Fig. 4) trapeziform, with setal field on distal half. Measurements. FW: 2583, HW: 1982, F: 494, T: 900, t1: 316, t2: 110, ctt1: 17, Mx4: 137, fl: 274, f2: 227, f3: 204, f4: 144. F5: 104, IO: 336, D: 200, d: 133, IO/d: 2.52, PO: 0.66.

Type material. Holotype female. Mexico. Chiapas. El Triunfo Biosphere Reserve. 1,800 m. Trail to Palo Gordo. 6-V-1993. Beating branches. A. N. García-Aldrete.

Etymology. The specific epithet refers to the similarity of this species with *L. gamma* García-Aldrete.

Discussion

Within the *L. texcocana* species group, *L. gammaoides* belongs in a species group assemblage that includes *L. delta* García-Aldrete, *L. gamma* García-Aldrete, *L. mathieui* García-Aldrete, *L. monticola* García-Aldrete and *L. texcocana* García-Aldrete, that share having similar underlying pigmented areas of the subgenital plates and similar gonapophyses. It differs from them in having the underlying pigmented area of the subgenital plate decidedly shorter, with the antero-lateral corners slightly projected.



Figures 1-5. *Lachesilla gammaoides* n. sp. Female. 1, Forewing; 2, hindwing; 3, subgenital plate; 4, epiproct and left paraproct; 5, gonapophyses, ninth sternum and spermatophore. Scales in mm. Figures 3 and 5 to common scale.

Lachesilla gammaoides is endemic to the state of Chiapas, raising to 11 the number of species in species group *L. texcocana*, it constitutes the third species of that group recorded in Chiapas. The finding of the male will be important to clarify the affinities indicated above, based on female characters.

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