DESCRIPTION OF THE MALE *PERUCANIA LONGIAREOLA* NEW & THORNTON (PSOCOPTERA: PTILONEURIDAE)

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RESUMEN

Se describe e ilustra el macho de *Perucania longiareola* New & Thornton, descrita con base en hembras colectadas en la Zona Reservada de Tambopata (Madre de Dios, Perú, 12°50'S, 60°20'W). El ejemplar estudiado se depositará en la Colección del Smithsonian Institution, en Washington, D.C. (U.S.A.)

Palabras Clave: *Perucania longiareola*, Zona Reservada de Tambopata, Perú, Ptiloneuridae.

ABSTRACT

The male *Perucania longiareola* New & Thornton is described and illustrated. It was taken at the type locality, in the Río Tambopata Reserved Zone (Madre de Dios, Perú, 12°50'S, 69°20'W). The specimen studied will be deposited in the Smithsonian Institution Collection, Washington, D.C. (U.S.A.).

Key Words: *Perucania longiareola*, Río Tambopata Reserve, Peru, Ptiloneuridae.

INTRODUCTION

The ptiloneurid genus *Perucania* was erected by New & Thornton (1988) on basis of two females collected on 28 October and 8 November, 1982, at the Río Tambopata Reserve, in Amazonian Perú (Madre de Dios, 12°50'S, 69°20'W), by the Smithsonian Institution Canopy Fogging Project, conducted by Dr. Terry L. Erwin. New & Thornton (1988) placed *Perucania* near *Triplocania*, pointed out its unique wing venation characters (e.g. pterostigma and areola postica long and shallow, and very long and straight fore wing M), and noted that the genitalia is *Triplocania* - like.

The purpose of this paper is to describe the male of *P. longiareola*, document its characteristics and provide evidence to place it among the genera of Ptiloneuridae.

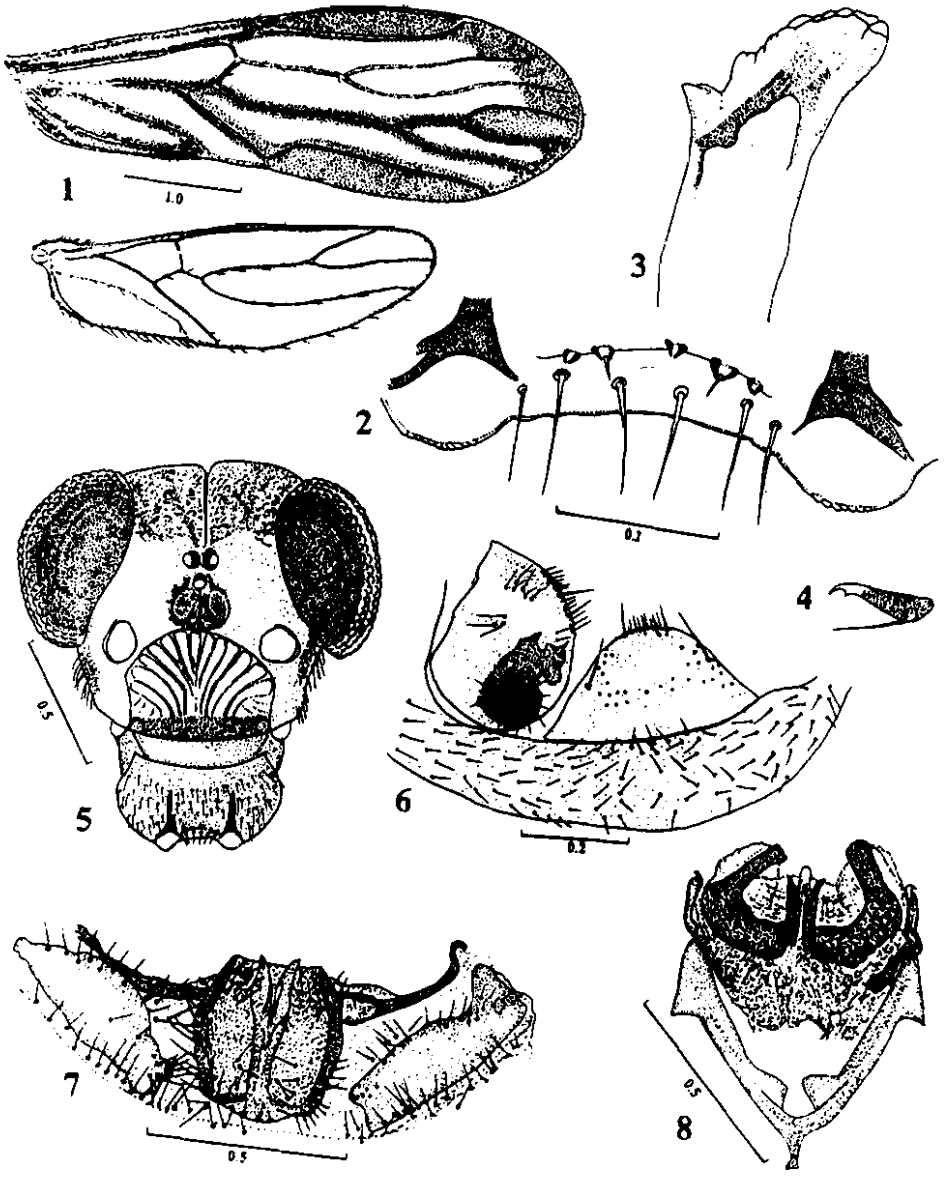
MATERIAL AND METHODS

One male specimen, corresponding to *P. longiareola* New & Thornton, was collected at the type locality, by the Smithsonian Institution Canopy Fogging Project, on 7 November, 1983, one year after the capture of the females on which the genus *Perucania* was erected. In 19 episodes of canopy fogging, from 7 November 1983 to 14 September 1984, only that single male was taken, which, added to the two females taken in 1982, indicate that the species is quite rare in the area. The specimen, slightly mutilated, was dissected in 80% alcohol and the head, right fore and hind wings, right front leg and genitalia, were mounted on Euparal. Measurements of parts mounted, were taken with a filar micrometer, whose measuring unit is 1.36 microns for wings and 0.53 microns for other parts. The following abbreviations stand for parts measured: FW, HW: fore and hind wing lengths, F: front femur length, f1: length of first flagellomere, IO: minimum distance between compound eyes, D: antero-posterior diameter of compound eye, d: transverse diameter of compound eye, PO: d/D. The specimen studied will be deposited in the Smithsonian Institution Collection, Washington, D.C.

Perucania longiareola New & Thornton (♂)
(Figs. 1-8)

Color (in 80% alcohol). Reddish brown. Compound eyes black, ocelli hyaline, with ochre centripetal crescents. Vertex black, above the level of the lateral ocelli (Fig. 5); a large, round, black spot between third ocellus and fronto-clypeal sulcus. Antennae pale brown, legs brown. Fore wings (Fig. 1) pale brown, opaque, with margins and veins, other than Rs, R_{2+3} and R_{4+5}, bordered with brown bands. Hind wings hyaline, slightly opaque (Fig. 1). Thorax and abdomen pale reddish brown.

Morphology. Posterior border of labium concave, labral sclerites incomplete, not reaching anterior border (Figs. 2, 5). Five distal inner labral sensilla, in line, three placoid and two trichoid, as illustrated (Fig. 2). Lacinial tip (Fig. 3) with well defined median tyne, and large, multidenticulate outer lobe. Fore and hind wings (Fig. 1), slender, elongate, essentially as described for the female. Hypandrium (Fig. 7) made up of broad central piece, flanked by large, elongated, setose sclerites; central piece almost hexagonal, strongly sclerotized, setose, with median longitudinal stem split posteriorly in two stout, acuminate apophyses; sides of hypandrium limited posteriorly by a strongly sclerotized, slender band. Paraprocts simple (Fig. 6), rounded, with field of short setae on outer edge; sensory fields with 28-30 densely packed trichobothria, each set on basal floret. Epiproct (Fig. 6) large, wide based, rounded posteriorly, with field of short setae on posterior border. Phallosome (Fig. 8) V-shaped, with stout, symmetric, heavily sclerotized U-shaped bodies on each side of central, longitudinal, short, distally rounded stem. A slender, sclerotized, claw-ended stem continuous with phallosome arm, on each side of central radular bodies.



Figures 1-8

Perucenia longiareola New & Thornton, ♂. 1. Fore and hind wings. 2. Posterior border of labrum. 3. Apex of right lacinia. 4. Pretarsal claw. 5. Front view of head. 6. Clunium, right paraproct and epiproct. 7. Hypandrium. 8. Phallosoma.

Measurements (in microns). FW: 5042; HW: 3677, f_1: 880; IO: 498; D: 650; d: 359; IO/D: 0.76; PO: 0.55.

Material examined. Perú, Madre de Dios, Río Tambopata Reserve, 30 Km (air) SW Puerto Maldonado, 290 m., 12°50'S, 69°20'W, Smithsonian Institution Canopy Fogging Project, T.L. Erwin *et al.*, 7 November, 1983, 01/02/59, 1♂, allotype.

Comments. The head and fore wing color patterns of the male are essentially as described for the female, so the association of both sexes in beyond doubt. Also beyond doubt, on basis of wing venation and genital characters, is the assignment of *Perucania* in the Ptiloneuridae; the genera in the family (*Ptiloneura, Loneura, Ptiloneuropsis, Euplocania* and *Triplocania*) have been characterized and diagnosed mainly on wing venation characters, which are now known to vary extensively (e.g. subgeneric separation of *Ptiloneura* and *Loneura*, extensive variation in species of *Loneura* and *Triplocania*, etc.). As for genital characters, the general ptiloneurid pattern for males, consisting in a V shaped phallosome, and hypandrium with central piece and lateral sclerites appears, with minor variants in *Ptiloneura, Loneura, Euplocania, Triplocania* and *Perucania*, which suggests that an analysis in depth of the whole family is in order, to unequivocally diagnose its constituent genera.

The very long and slender pterostigma, the almost straight Rs and M stems, and the very long and low areola postica of *Perucania* are unique in the family and would seem to warrant its generic status, close to *Triplocania*, on wing venation characters, and to *Euplocania* on male genital characters.

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