An. Inst. Biol. Univ. Nal. Autón. Méx. 56 (1985), Ser. Zool. (1): 213-216, 30-VIII-1986

STUDIES OF NEOTROPICAL CADDISFLIES, XXXVI: THE GENUS *Cochliopsyche* IN MIDDLE AMERICA (Trichoptera: Helicopsychidae).

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RESUMEN

En este trabajo se describe una nueva especie del género *Cochliopsyche* del sur de México, de Honduras, y Colombia. Se presentan esquemas de los genitales del macho y la hembra y de venación. Esta es la primera vez que el género *Cochliopsyche* es registrado fuera de Sud América.

Palabras clave: Trichoptera, Helicopsychidae, *Cochliopsyche*, Nueva especie, México, Honduras, Colombia.

ABSTRACT

Cocliopsyche, new species, is described from southern México, Honduras, and Colombia. The male and female genitalia and venation are figured. This is the first definite record of the genus outside of South America.

Key wors: Trichoptera, Helicopsychidae, *Cochliopsyche*, new species. México, Honduras, Colombia.

INTRODUCTION

In the New World, the caddisfly family Helicopsychidae contains only two genera: *Helicopsyche* Siebold and *Cochliopsyche* Muller. Species of the former genus are found from southern Canada to southern Chile, including the Antillean Islands in the New World, and widely in the old World especially in the tropics. The latter genus, however, has a much more restricted distribution, being recorded only from north-central Venezuela to central Argentina, generally east of the Andes. There is no substantiated record of this genus from México or Central America, although I did (Flint, 1983, p. 95) mention that I had examples from México. In the present paper this species is described, thereby establishing the presence of *Cochliopsyche* north of South America for the first time.

Genus Cochliopsyche Müller.

Cochliopsyche Müller, 1885, pp. 201-205. - Möller, 1921, pp. 535-536, 541. - Ulmer, 1955, p. 589.

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Tetanonema Ulmer, 1905, p. 17. - Ulmer, 1955, p. 589.

Type-species, *Tetanonema clarum* Ulmer, subsequent designation of Ulmer, 1955.

The two New World general of Helicopsychidae are easily distinguished by two clear-cut characteristics in the adult stage. First, the antennae of *Cochliopsyche* are long and very thin, at least two or three times as long as the forewing, whereas in *Helicopsyche* the antennae are short and thicker, being no longer than the forewing if that long. The very thin antennae of *Cochliopsyche* are much more likely to break off than those of *Helicopsyche*. Fortunately, there is a second definitive characteristics in the number of spurs on the hind tibia. In *Cochliopsyche* there is only an apical pair, but in *Helicopsyche* there is an additional subapical pair.

The immature stages of *Helicopsyche* are well known (see Wiggins, 1977, pp. 89-91, for example). The larvae construct very characteristic cases of small sand grains shaped in the form of the shell of a snail. Within this general helical shape, however, larvae of different species vary considerably in the exact form of the cases they construct. Just before pupation, the larvae attach their cases to the substrate and the pupae are found curled inside the cases. Unfortunately the larvae and cases of *Cochliopsyche* are unknown. Müller did figure (Müller, 1921, fig. 186d) the abdomen of a pupa; it is curled in the manner of the typical helical case inhabitant.

Adults of *Cochliopsyche* are attracted to ultraviolet and other lights at night. I have taken adults primarily next to large streams and rivers that are smoothly flowing with rather deep reaches. In contrast, *Helicopsyche* larvae typically inhabit brooks and small streams (in cold climates they will live on rocks on wave washed shores of lakes) that are fast flowing, often turbulent and quite shallow.

Description

Cochliopsyche vazquezae, new species.

Adult.- Length of forewing, ♂ 5-6 mm, ♀ 4-5.5 mm. Color light brown; forewing with scattered, irregular, marks of lighter and darker hair on a pale brown background. Abdominal sterna 2-5 with large, clear, lateral areas surrounded by dark margins, hairs on sterna 3-6 arising from large spots, sixth sternum with a midventral process about half as long as sternun, male with second and third sterna with darkened posterolateral areas.

Male genitalia: Ninth segment broadest laterally, narrowing both dorsad and ventrad. Tenth tergum elogante, rectanguloid; in dorsal aspect with a distinct apicomesal excision, with several, enlarged, dorsolateral setae. Cercus large, ovate. Clasper with base narrow, enlarged gradually apicad, with broad apical portion distinctly longer than broad; dorsomesal margin with 2, distinct, pointed teeth near base of enlarged section; ventrobasal margin with several small, setate lobes; apex with 2, short, darkened ridges on mesal face. Aedeagus tubular, elongate, apex membranous with a small internal sclerite.

Female genitalia: Eighth sternum with a broad plate, posterior half of which is dark and setate. Ninth sternum with rounded, posterolateral lobes, mesad of which is an ill-defined, darkened band, with central region bearing curved striae. Apex with a pair of rounded, setigerous, dorsal lobes surpassing a rounded ventral plate. Vaginal sclerite suspended by a pair of mesally darkened, elongate sclerites; sclerite shield-shaped, with 3 nail-like central lobes and a loosely attached, ringlike sclerite.

Material.--Holotype♂, México, Chiapas, Río Tulijá, 48 km south of Palenque, 17 May 1981, C.M. & O. S. Flint, Jr. USNM Type.

Paratypes: Same data, 34 ♂, 92 ♀ (USNM); same, but J. Bueno & H. Velasco, 4 ♂, 3♀ (IBUNM). Río Contento, 7 km north Ocosingo, 20 May 1981, C. M. & O. S. Flint, Jr., 1 ♂ (USNM). Oaxaca, Río Valle Nacional Chiltepec, 25 May 1981, C.M. & O.S. Flint, Jr. 1 ♂ (USNM). Honduras, Comayagua, Río Humuya, northwest Comayagua, 3 Aug 1967, O. S. Flint, Jr. 1♂. Francisco Morazan, El Zamorano, 28-29 Juan 1966, G. F. Freytag, 1 ♀. Colombia, Antioquia, Río Claro, 3 May 1984, U. Matthias, 1 ♂.

Discussion

This is the fourth species described in the genus. C. *clara* (Ulmer) is the only one to lack the midventral process from the sixth sternum; *opalescens* Flint, *lobata* Flint, and *vazquezae* n. sp. all posses this process. C. *opalescens* lacks all toothed lobes from the anterodorsal angle of the clasper and is dark brown with small, opalescent spots of pale hair on the forewing. C. *lobata* and *vazquezae* possess small, pointed teeth from the anterodorsal margin of the clasper and are pale brown with inconspicuous lighter and darker marks on the forewings. C. *labata* possess 4 teeth from the anterodorsal margin of the clasper which has a rather short, necklike basal region abruptly widening into a comparatively short, broad apical flap. In contrast, *vazquezae* has only 2 dorsal teeth on the clasper which has a longer nack, more gradually widening into a proportionately longer, narrower apical flap.

All material was collected at an ultraviolet light adjacent to rivers in the early evening. The Ríos Tulijá, Valle Nacional, and Humuya are quite large, at least 10 meters in width and several meters deep in parts. They have a swift, but not very turbulent current. The Río Contento was quite different, being smaller and shallower, with alternating cascades, falls and pools. Perhaps this specimen was attracted to the light from a lower, less turbulent section.

I take great pleasure in dedicating this species to Doctora Leonila Vázquez García in commemmoration of her 50 years of work on the Entomology of México.

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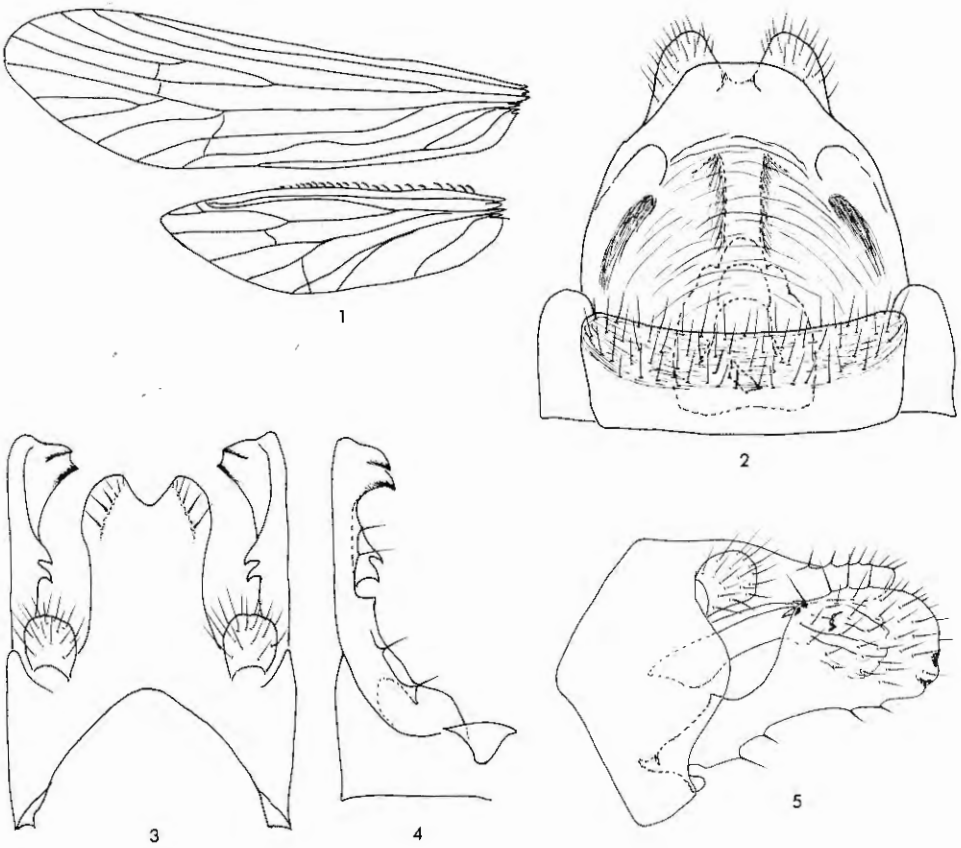

Figs. 1-5. *Cochliopsyche vazquezae*: 1, venation, male; 2, female genitalia, ventral; 3, male genitalia, dorsal; 4, left clasper and ninth sternum of male, ventral; 5, male genitalia, lateral.