

## The caddisfly genus *Protophila* in Costa Rica (Trichoptera: Glossosomatidae)

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## ABSTRACT

Nineteen species of *Protoptila* known from Costa Rica are revised to include 11 previously described species (*P. bicornuta* Flint 1963, *P. boruca* Flint 1974, *P. burica* Flint 1974, *P. cana* Flint 1974, *P. ixtala* Mosely 1937, *P. laterospina* Flint 1967, *P. orotina orotina* Flint 1974, *P. spirifera* Flint 1974, *P. talamanca* Flint 1974, *P. tica* Bueno-Soria 1984, and *P. tojana* Mosely 1954) and 8 new species (*P. altura*, *P. bribri*, *P. chitaria*, *P. cristula*, *P. kjeri*, *P. jolandae*, *P. strepsicera*, and *P. trichoglossa*). Illustrations, diagnoses, descriptions, and distribution records are provided for all species.

**Key words:** Trichoptera, Glossosomatidae, Protoptilinae, *Protoptila*, caddisfly, new species, Neotropics, Costa Rica, male genitalia

## INTRODUCTION

This paper owes its origin, in part, to an inventory of the caddisflies of Costa Rica, conducted by Holzenthal and his colleagues from 1986–1992 and can be considered a result of that initiative. In a broader sense, this paper is part of a larger project, whose goal is to review and revise the whole of the subfamily Protoptilinae of the family Glossosomatidae, most of whose members are Neotropical.

*Protoptila* is the largest genus in the subfamily Protoptilinae, currently with 80 described species, but with many additional undescribed species known in existing collections (Flint et al. 1999). The genus is widely distributed, including much of North America and extending to the southern part of South America, but excluding the Chilean subregion. Almost exactly half of the species described prior to this paper (41) occur in Mexico and Central America. Eleven species have been recorded from Costa Rica, including: *Protoptila bicornuta* Flint 1963, *P. boruca* Flint 1974, *P. burica* Flint 1974, *P. cana* Flint 1974, *P. ixtala* Mosely 1937, *P. laterospina* Flint 1967, *P. orotina orotina* Flint 1974, *P. spirifera* Flint 1974, *P. talamanca* Flint 1974, *P. tica* Bueno-Soria 1984, and *P. tojana* Mosely 1954. Eight additional species are described in this paper. Most of these species have known distributions restricted to either Costa Rica or Costa Rica and adjacent Nicaragua and Panama. Only *P. bicornuta*, *P. ixtala*, and *P. tojana*, have distributions that extend northward to Mexico. However, the distributions of most species are still very inadequately known and it remains to be seen whether species within the genus will prove to be as endemic as they currently appear to be.

Adults of the genus, like most protoptilines, are small (not larger than 5 mm), brown caddisflies with a light transverse bar and apical spots on the wings (Fig. 1). They are readily attracted to collecting lights, often appearing by the 100s in light traps. Little is known of their biology. Larvae are well known and have been described a number of times (Wiggins 1996). They feed by scraping diatoms and other periphyton from rock surfaces of streams and rivers; they are especially abundant in warm, lowland rivers.