



Description of four new species of the genus *Ptilocerembia* Friederichs, 1923 (Embioptera: Ptilocerembiidae) from Thailand

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Abstract

Four new species of webspinners in the genus *Ptilocerembia* Friederichs (Ptilocerembiidae) are described including *Ptilocerembia thaidina* sp. n., *P. senathami* sp. n., *P. catherinae* sp. n. and *P. rossi* sp. n. from Thailand. Illustrations of heads, genitalia and papilla of adult males, sternite pattern of adult females together with photographs of adult males, females and their galleries for each species are provided. Notes on field observations and egg mass structure are given for *P. catherinae* sp. n. A distribution map and a dichotomous key to the Thai species in the genus *Ptilocerembia* are also included.

Key words: Embiidina, Embioidea, taxonomy, Thailand, webspinner

Introduction

The webspinner family Ptilocerembiidae Miller and Edgerly, 2012 consists of only one Southeast Asian genus known to date, *Ptilocerembia* Friederichs, 1923, which was erected based on a single species from Indonesia (*Ptilocerembia roepkei* Friederichs, 1923). Nevertheless, the genus probably occurs throughout Thailand as well as in eastern Myanmar (Ross, 1963).

The recently established family Ptilocerembiidae is apparently related to *Oedembia* in the polyphyletic family Embiidae, designated as “Embiidae 3” in Miller *et al.* (2012). Three different analyses (Parsimony, Likelihood and Bayes) placed Ptilocerembiidae near the families Oligotomidae and Teratembidae (Miller *et al.* 2012). Ross (1963) noted in his treatment of Australian embiopterans and his discussion of the Family Notoligotomidae (configured by Davis (1940b) to include *Ptilocerembia*) that the genus is a complex of many species occurring throughout Asia (Indonesia, Myanmar, and Thailand). Our collecting efforts in Thailand confirm Ross’s assessment with the discovery of four new species. In this report, we describe and illustrate morphological characteristics of these new species. Distribution maps and a key to species of both sexes are also provided. Females with their nymphs are often the only stages encountered in the field and therefore the separate key to the nymph-like adult females is a helpful tool for field identification. Otherwise, colonies must be collected and reared to obtain adult males.

Material and methods

Webspinner specimens were collected from different localities in Thailand. Their morphological characteristics were examined and photographed with a handheld digital microscope (AM-413T-FVW Dino-Lite Pro White) and the DinoCapture Program for measurement. The head, genitalia and tarsi of males and sternite patterns of females were illustrated with the aid of a stereomicroscope with a drawing tube attachment. Photographic plates were generated with Adobe Photoshop CS5.

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