



## Two remarkable new species of webspinners in the genus *Eosembia* Ross, 2007 (Embioptera: Oligotomidae) from Thailand

PISIT POOLPRASERT<sup>1,2</sup>, DUANGKHAE SITTHICHAROENCHAI<sup>2</sup>,  
CHARIYA LEKPRAYOON<sup>2</sup> & BUNTIKA AREEKUL BUTCHER<sup>2,3</sup>

<sup>1</sup>Biological Science Program, Faculty of Science, Chulalongkorn University, 254 Phayathai Road, Bangkok, 10330, Thailand

<sup>2</sup>Department of Biology, Faculty of Science, Chulalongkorn University, 254 Phayathai Road, Bangkok, 10330, Thailand

<sup>3</sup>Corresponding author. E-mail: buntika.a@chula.ac.th

### Abstract

Two new species of webspinners (Embioptera) in the genus *Eosembia* Ross from Thailand, *E. lamunae* sp. n. and *E. paradorni* sp. n., are described and illustrated. These species bring the total number of species known from eastern, south-eastern and southern Asia to 15 species. An identification key to the currently recognized species in the genus *Eosembia*, based on adult males, is included.

**Key words:** Embioptera, Oligotomidae, *Eosembia*, new species, identification key

### Introduction

Within the order Embioptera (webspinners), the family Oligotomidae is comprised of relatively small to medium sized embiids and contains six genera worldwide (Mill 2009). Members of the family are probably endemic to India (Ross 2000b), but can now be found in the Mediterranean, Middle East, Indian region, Southeast Asia and Australia (Ross 2007). The unique morphological characteristics of the order are the enlarged first segment of the fore tarsi with over 80 individual silk glands used to spin silk galleries or nests (Nagashima *et al.* 1991, Ross 1955, 2000a), within which the insects live gregariously. Additionally, their behaviors are also very distinctive in their social behaviors, ecology, and reclusiveness, which cause them to be uncommonly collected. They have never been considered as pests, because they feed on dead vegetable matter, and no webspinners are listed as endangered or threatened insects for conservation status (Ross 1970, 1991, 2000b). A few species, especially several from India, have been dispersed, presumably anthropochorically throughout ancient and modern trade, to a now globally wide-spread distribution (Ross 1991, 2000b, 2007).

The genus *Eosembia* is comprised of thirteen described species, ranging through eastern, southeastern and southern Asia (Poolprasert & Edgerly 2011). *Eosembia* is closely related to the genera *Aposthonia* Krauss, 1911 and *Oligotoma* Westwood, 1837. Ross (2007) erected *Eosembia* as a new genus on the basis of the following characters: the antennae are usually distally white, the setae are usually longer than the bearing segment and there are two ventral papillae on the hind basitarsus. Consequently, some species of the *Aposthonia* and the *Oligotoma* were then moved to *Eosembia*. Here, we describe two formerly unidentified taxa discovered from a survey of embiids (webspinners) in Thailand and consider them to be new species.

This work represents an additional contribution to the knowledge of the embiid fauna of Thailand, specifically from the mountains of the western region. Previous notes about Thai embiids in the genus *Eosembia* are included (*E. aequicercata* Ross, 2007; *E. apterosa* Poolprasert and Edgerly, 2011 and *E. auripecta* Ross, 2007) with emphasis on their ecological preferences. Because webspinners can be found in various types of forests (Ross 2000b), it is plausible that a rich fauna still exists in the patchy remnants of the diverse flora of Thailand, especially in the biodiversity hotspot of the western forested areas (Poolprasert & Edgerly 2011). Therefore, a survey of *Eosembia* spe-