



***Aposthonia* Krauss, 1911 (Embioptera: Oligotomidae) from Thailand, with description of a new species**

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Abstract

Three embiid species of the genus *Aposthonia* Krauss (Oligotomidae) are recognized from Thailand (*Aposthonia borneensis*, *A. ceylonica*, *A. problita* **sp. n.**) and the new species is described. The distribution of the three species in Thailand is shown and keys to the males of 25 species of this genus and to females found in Thailand are provided.

Key words: *Aposthonia*, Embioptera, Oligotomidae, Thailand

Introduction

The Embioptera (webspinners) is a small insect order in terms of the number of described species and genera, with approximately 2,000 species estimated to exist in the world (Ross 2000a). Most embiid species are small to medium sized, narrow-bodied insects and are easily recognized by the large, bulbous basal tarsomere on each foreleg. They live in silk-lined galleries; the silk is produced by glands and spun when the silk is ejected through hollow hair-like structures on the ventral surface of the basal tarsal segment. Webspinners feed entirely on vegetable matter such as outer bark, dead leaves and lichens. In general, the distribution of webspinners is restricted to the tropics and subtropics (Ross 1970, 2000a, 2007), but some representatives are occasionally also found in the warm temperate zones, probably as a result of recent artificial (anthropogenic) introduction through commerce.

The genus *Aposthonia* was established by Krauss (1911) and later synonymized with *Oligotoma* Westwood, 1837 by Davis (1940). Ross (1951) treated *Aposthonia* as a subgenus of *Oligotoma*, but later revised it as a genus in its own right (Ross 1963). Szumik (1996) suggested that *Aposthonia* might be paraphyletic because some characters of *Aposthonia* seem closer to *Oligotoma*; for instance, the anterior medial branch (MA) in the wings is itself unbranched. They also share the shape of the left paraproct (LPPT), but this character is actually missing in some *Aposthonia*. According to Ross (2007), *Aposthonia* differs from *Oligotoma* by the absence of mesal lobing of the left cercus-basipodite (LCB) and the simplicity of the left paraproct process. Currently 24 species are recorded in this genus, but there are estimated to be at least a hundred species worldwide, suggesting that many specimens are likely to undescribed and unclassified (Ross 2007). Further study on embiopteran systematics such as cladistic study (Szumik 1996, 2004, 2008) and evolutionary biology, including behavior, ecology, distribution, diversity and roles in Thai ecosystems will add greatly to our understanding of the taxa.

In our survey, three species, *Aposthonia borneensis* (Hagen), *A. ceylonica* (Enderlein) and *A. problita* **sp. n.**, were found in Thailand. The first two species were reported from Thailand previously (Ross 1943, 2000b). The illustrated description of *A. problita* **sp. n.** and additional details of female *A. borneensis* and *A. ceylonica* are presented. A key to the 25 known species of the genus *Aposthonia* and a key to females found from Thailand are provided. Finally, the distribution of the three known species in Thailand is provided.