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## ***Sirindhornia* Pinkaew and Muadsub (Lepidoptera: Tortricidae), a new enarmoniine genus from Thailand**

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### **Abstract**

A new enarmoniine genus, *Sirindhornia*, **n. gen.**, is described based on the type species, *Sirindhornia pulchella*, **n. sp.**, and three additional new species: *Sirindhornia chaipattana*, **n. sp.**, *Sirindhornia curvicosta*, **n. sp.**, and *Sirindhornia bifida*, **n. sp.**, all from Thailand. A fifth species represented only by a single female is morphologically characterized but not formally described. *Sirindhornia* is most closely related to *Anthozela* Meyrick and *Irianassa* Meyrick but is easily distinguished by unique appendages of the tegumen and a conspicuous henion in the male genitalia.

**Key words:** Ang-Ed Community forest, Enarmoniini, Khao Nan National Park, new genus, new species, Olethreutinae, Trat Agroforestry Research and Training Station

### **Introduction**

Field work to document the diversity of olethreutine moths in Thailand was undertaken in different habitats in the evergreen forest of Khao Nan National Park, Nakhon Si Thammarat Province in 2008; the agroforestry area of Trat Agroforestry Research and Training Station, Trat Province in 2012; and the reforestation project of a 50-year old rubber plantation, the Ang-Ed Community forest, Chanthaburi Province in 2012. Among the collections from these three locations was material of an unusual and apparently unknown taxon. The wing pattern suggested that the new taxon is a member of Enarmoniini, and genitalia dissection confirmed this assignment and revealed that more than one species was involved. The genus proved to be new to science. As most of the specimens were collected in the Ang-Ed Community forest, belonging to the Chaipattana Foundation, this new genus was named to honor the Princess Maha Chakri Sirindhorn who generously supports this foundation.

### **Materials and methods**

This study is based on specimens in the Kasetsart Kamphaengsaen Insect Collection. A Leica MZ95 stereomicroscope was used for examination and specimen measurement, and a Leitz Dialux 20 compound microscope was used to examine genitalia preparations. Forewing length was measured from the outer edge of the tegula at wing base to the outermost edge of the fringe scales at apex. Genitalia preparation methods were adapted from Common (1990). Terminology for forewing pattern and genitalic structures follow Horak (1991, 2006). The following abbreviations are used for depositories: BMNH, The Natural History Museum, London; KKIC, Kasetsart Kamphaengsaen Insect Collection, Nakhon Pathom, Thailand.

Specimens examined: 1♀, Thailand, Trat Province, Trat Agroforestry R. St., 12°23'43"N 102°40'32"E, ca 30 m, 18–19 Aug 2012, N. Pinkaew, np 5325, ♀ genitalia slide NP 1785. Deposited in KKIC.

**Distribution.** Thailand.

**Remarks.** This single female was collected in the rainy season in the agroforestry ecosystem of Trat Agroforestry Research and Training Station. It has the same forewing wing pattern as *S. bifida*, known from a single male from the same locality, but there are sufficient differences to doubt that they are the two sexes of the same species. However, we refrain from formally naming a single female.

## Discussion

*Sirindhornia* is taxonomically interesting, combining rather plesiomorphic wing venation with highly derived socii, a long dorsal process from anellus and a modified costal hook in the male genitalia. The wing pattern and male genitalia suggest a close relationship with *Anthozela* Meyrick, with the highly modified socii (with pegs in *Anthozela* and thorns in *Sirindhornia*), a band-like gnathos ventrally connected and a modified anellus. However, *Anthozela* has a more generalized wing venation. The head of *Sirindhornia* is very similar to *Irianassa* with slender, upcurved palpi and a conspicuously large ocellus, and the two genera have the same wing venation. Both genera have a plesiomorphic wing venation with all veins separate except for  $M_3$  and  $CuA_1$  in the hindwing which is stalked and with  $M_1$  at base widely distant from  $R_s$ , but they share the most unusual character of  $CuA_1$  in the forewing arising from far below angle of cell. *Sirindhornia* and *Irianassa* also have the same wing shape and wing pattern of the forewing apex.

The fact that five species of the new genus have been discovered in three well-collected localities is a reminder of how little we know about the rich and diverse fauna of Oriental microlepidoptera, a fauna that may hold the key to understanding the phylogeny of many Lepidoptera groups. It is also confirmation how important conservation organisations like the Chaipattana Foundation are.

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