



## Two new species of *Fibuloides* Kuznetsov, 1997 (Lepidoptera: Tortricidae) from Thailand

NANTASAK PINKAEW<sup>1,2,4</sup> & AIHUAN ZHANG<sup>3,4</sup>

<sup>1</sup>Department of Entomology, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University, Nakhon Pathom, Thailand 73140.  
E-mail: agrnsp@ku.ac.th

<sup>2</sup>Center for Advanced Studies in Tropical Natural Resources, NRU-KU, Kasetsart University, Chatuchak, Bangkok, 10900, Thailand

<sup>3</sup>Beijing Key Laboratory for Agricultural Application and New Technique, College of Plant Science and Technology, Beijing University of Agriculture, Beijing 102206, P. R. China. E-mail: zhangaihuan@126.com

<sup>4</sup>Both authors contributed equally to this work

### Abstract

Two new species of *Fibuloides* Kuznetsov, 1997, *F. geniculata* Pinkaew and Zhang, **n. sp.**, and *F. khaoyai* Pinkaew and Zhang, **n. sp.**, are described and illustrated from Thailand. The two new species bring to 11 the number of *Fibuloides* documented from Thailand.

**Key words:** Eucosmini, *Fibuloides*, new species, Olethreutinae, Tortricidae

### Introduction

*Fibuloides* was proposed by Kuznetsov (1997) with *F. modificana* Kuznetsov from South Vietnam designated as the type species. The characters of *Fibuloides* given by Kuznetsov are as follows: male costal fold narrow; forewing with R<sub>4</sub> and R<sub>5</sub> stalked and R<sub>3</sub> at base close to this stem; CuA<sub>1</sub> strongly curved and originating from near base of M<sub>3</sub>; and hindwing with M<sub>3</sub> and CuA<sub>1</sub> stalked (Kuznetsov, 1997). Horak (2006) stated that the monophyly of *Fibuloides* is supported in the male by a dorsal notch at the base of the antenna, the distal portion of the gnathos forming paired rising bands, and the valva with a large basal excavation and long flattened bristles from its outer surface, and in the female by a spinulose sterigma and a two-pronged anterior sclerite in the ductus bursae. Nine species of *Fibuloides* have been recorded from Thailand: *F. cyanopsis*, *F. corinthia*, *F. euphlebia*, *F. japonica*, *F. macrosaris* were reported by Kawabe (1989); *F. bicucullus*, *F. vanevae*, and *F. munda* by Pinkaew *et al.* (2005); and *F. khaonanensis* by Pinkaew (2008). In this paper, two new species from Thailand, *F. geniculata* Pinkaew and Zhang, **n. sp.**, and *F. khaoyai* Pinkaew and Zhang, **n. sp.**, are described as new to science, bringing the number of Thai species to 11.

### Materials and methods

This study is based on the examination of specimens collected with a 20-watt blacklight operated from a car battery. Latitude and longitude were recorded with a Magellen GPS315. An Olympus SZ30 stereomicroscope was used to examine and measure the specimens. Forewing length was measured from outer edge of the tegula at the wing base to the outermost edge of the fringe scales at the apex. An Olympus CH2 compound microscope was used for examining microtrichia, cornuti, and other characters of the genitalia. Terminology for forewing pattern elements follows Brown and Powell (1991) as refined by Baixeras (2002). Methods of genitalia dissection were adapted from Common (1990). Adults and genitalia were photographed with an Olympus DP70 camera using DP Controller and DP Manager software with a stereomicroscope (Leica MZ8) and a compound microscope (Leitz