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A taxonomic revision of the genus *Edosa* Walker, 1886 from China (Lepidoptera, Tineidae, Perissomasticinae)

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Abstract

The genus *Edosa* Walker, 1886 is revised in China. Of the 31 recognized species, 23 are described as new: *Edosa aurea* sp. nov., *E. baculiformis* sp. nov., *E. bicolor* sp. nov., *E. bifurcata* sp. nov., *E. carinata* sp. nov., *E. conchata* sp. nov., *E. cornuta* sp. nov., *E. curvidorsalis* sp. nov., *E. dentata* sp. nov., *E. digitata* sp. nov., *E. duoprojecta* sp. nov., *E. elongata* sp. nov., *E. eminens* sp. nov., *E. hamata* sp. nov., *E. longicornis* sp. nov., *E. minuta* sp. nov., *E. robinsoni* sp. nov., *E. robustispina* sp. nov., *E. semicircularis* sp. nov., *E. torta* sp. nov., *E. truncatula* sp. nov., *E. uncusella* sp. nov., and *E. varians* sp. nov.; *Edosa gaedikei* nom. nov. is proposed as a replacement name for *Edosa spinosa* Gaedike, 2012, a junior homonym of *Edosa spinosa* Gaedike, 1984; four species are newly recorded for China: *E. hendrixella* Robinson, 2008, *E. crayella* Robinson, 2008, *E. orphnodes* (Meyrick, 1911) and *E. smithaella* Robinson, 2008; the female of *E. hendrixella* is described for the first time. Phylogenetic relationships of the Chinese species, except *E. malthacopis* (Meyrick, 1936), are postulated based on 42 morphological characters. The phylogenetic analysis of the morphology matrix yielded one most parsimonious tree (length 121 steps, CI = 0.56, RI = 0.81), based on which seven species-groups are proposed: the *hemichrysell*a-group, the *subochraceella*-group, the *pyrochra*-group, the *duoprojecta*-group, the *eminens*-group, the *crayella*-group and the *uncusella*-group. The whole body structures of the genus are presented and photographs of adults and genitalia are provided, along with a key to all the known Chinese species and maps to show the distribution of *Edosa* in China. A world checklist of *Edosa* is given as an appendix, in which 41 new combinations are included.

Key words: Lepidoptera, Tineidae, *Edosa*, taxonomy, species-groups, new species, China

Introduction

Edosa Walker, 1886 belongs to the subfamily Perissomasticinae, which currently consists of five genera: *Perissomastix* Warren & Rothschild, 1905 consists of 70 species, mainly distributed in the Afrotropical and Mediterranean regions and the Middle East; *Ectabola* Gozmány, 1966 includes eight species, distributed in the Afrotropical Region; *Hyperbola* Gozmány, 1965 has 12 species, also distributed in the Afrotropical Region; *Theatrochora* Meyrick, 1921 includes the type species only, known from the Afrotropical Region; and *Edosa*, the largest genus of Perissomasticinae, consists of 197 species worldwide, including 23 new species described in this study (Appendix 3).

The genus *Edosa* was established by Walker with *E. hemichrysell*a Walker, 1866 as the type species. Of the 174 valid species, 13 are described from the Palearctic Region, 82 from the Oriental Region, 60 from the Afrotropical Region, and 19 from the Australia Region. Of the 56 species described before the 1950s, most were proposed by Meyrick (1893–1936) and placed in the genus *Tinea*. Significant taxonomic work has been performed since the 1960s, with most of the previously known species redescribed and illustrated. Petersen (1959, 1973) described three species from Afghanistan and Zagulajev (1964) described two species from India, which were placed in *Episcardia* Rogonot, 1895; Zagulajev (1975) redescribed and figured eight species in *Episcardia* from the Palearctic Region, established the subgenera *Episcardia* and *Bilobatana*; Gozmány (1965–1976, 2004) described 46 new species, most of which were redescribed or revised, and assigned to *Episcardia* and *Sphallesi*sthis Gozmány, 1959 by Gozmány and Vári (1973) in their study of the Tineidae of the Afrotropical Region; Diakonoff (1967) treated six species from the Philippine Islands as *Haplotinea* Diakonoff *et* Hinton, 1956; Gaedike (1984) discussed the phylogenetic relationships of the *Episcardia*-group and four related genera (*Phalloscardia* Gozmány, 1966, *Hyperbola*, *Neoepiscardia* Petersen & Gaedike, 1982, *Cylicobathra* Meyrick, 1920), provided a checklist of these genera, and described two new species from China originally placed in *Cylicobathra* and *Neoepiscardia* respectively; Petersen and Gaedike (1982, 1984) described three species originally placed in *Episcardia* and *Neoepiscardia*; Robinson (1985b) revised the *Episcardia lardatella*-complex from North Africa and the Middle East, and described three new species; Robinson and Nielsen (1993) reviewed the genus with particular reference to the Australian species, provided a checklist of 16 named species in this region, and synonymized four genera with *Edosa*; Robinson and Tuck (1996) listed 28 species of the Oriental Region; Rose and Pathania (2003) described four new species from India, three of which were synonymized later by Robinson (2008b); Robinson (2008a) described 52 *Edosa* species from Sundaland, combined three genera to *Edosa*, and made a phylogenetic analysis of four Perissomasticine genera; Mey (2011) described one species from southwestern Africa; and Gaedike (2012) described ten species in *Edosa* from Nepal.

Of the described species, only four *Edosa* species were recorded in China prior to this study: *E. subochraceella*

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