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Additions to the Nepticulidae (Lepidoptera) of East Asia, with descriptions of three new species from Primorskiy Kray

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Abstract

Stigmella multispicata Rocienė & Stonis, **sp. nov.**, *S. sexcornuta* Rocienė & Stonis, **sp. nov.**, and *Ectoedemia paraortiva* Rocienė & Stonis, **sp. nov.** are described from Primorskiy Kray (Russian Far East). The new species are illustrated with photographs and drawings of the adults and genitalia. *Stigmella thuringiaca* (Petry), a species previously known only from West Palaearctic, is here newly recorded in East Asia. The male genitalia of the little known *Stigmella gimmonella* (Matsumura) are illustrated for the first time with photographs; the male genital morphology of two other species, *S. tranocrossa* Kemperman & Wilkinson and *Ectoedemia philipi* Puplesis, is updated and newly documented. A chart of chorological composition of the Nepticulidae currently known in East Asia is provided.

Key words: East Asia, *Ectoedemia*, Nepticulidae, new species, Primorskiy Kray, *Stigmella*

Introduction

The short history of description of the Nepticulidae from East Asia was outlined by Rocienė & Stonis (2013). The male genitalia of the type material of the nepticulid species described by R. Puplesis from Primorskiy Kray (Puplesis 1984a, 1984b, 1984c, 1984d, 1987) were re-examined by Stonis & Rocienė (2013). The present paper continues our study on the diversity and systematics of the Nepticulidae of East Asia.

Before now, the checklist of the Nepticulidae of East Asia comprised 105 species, including 67 species occuring in the Russian Far East and 53 in Japan (20 of which occur both in Japan and Russia). Very little is known about the Nepticulidae of Korea and China (see Park 1983, van Nieukerken & Liu 2000, Puplesis & Diškus 2003, Lee & Byun 2007). In 2013, one peculiar new species, *Stigmella cornuta* Rocienė & Stonis. was added to the East Asiatic fauna of Nepticulidae from NE China (Stonis *et al.* 2013). Recent collecting by A. Rocienė in Primorskiy Kray revealed a few more discoveries, including three new species: two in *Stigmella* Schrank and one in *Ectoedemia* Busck, which are described in this paper.

Material and methods

Collection material of all species treated in this paper was available to the authors due to recent fieldwork by A. Rocienė in Gornotayezhnoe, 43°41′N, 132°09′E, Primorskiy Kray, the Russian Far East (Figs 1–5). Adult moths were collected by attracting them to mercury-vapour light from a lamp suspended slightly above eye level and 5–10 cm in front of a white screen. Techniques for genitalia preparation and the protocol for descriptions were outlined in Stonis & Rocienė (2013). Permanent slides were studied and photographed using a Leica DM2500 microscope and Leica DFC420 digital camera, respectively.

The terminology of morphological structures follows Johansson *et al*. (1990), Puplesis (1994), Puplesis & Robinson (2000), and Puplesis & Diškus (2003). Taxonomic nomenclature follows the world catalogue of the Nepticuloidea and Tischerioidea by Diškus & Puplesis (2003).

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(about 17%) known from the continental Russian Far East (Primorskiy Kray), the Euro-East Asiatic distribution is characteristic.

For the chorological analysis, the geographical distributions of all Nepticulidae species occurring in East Asia were mapped. Based on the distribution pattern, the species were divided and attributed to six chorological groups, shown in Fig. 48.

However, the number of species still does not reflect the actual diversity (and distribution) of the Nepticulidae of East Asia, which is undoubtedly much richer than indicated here. We hope, that many new discoveries will be made in the near future (particularly in the Japanese fauna).

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