



Article

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A revision of the *Xestia (Raddea) alexis* (Kozhanchikov, 1928) species-group with a checklist of subgenus *Raddea* Alphéraky, 1892 and description of brachipterous females (Lepidoptera, Noctuidae, Noctuinae)

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Abstract

The subgenus *Raddea* Alphéraky, 1892 of the genus *Xestia* Hübner, 1818 is reviewed. A checklist of 29 described species is presented, with 26 new combinations (**comb. n.**) introduced. Two taxa, *Xestia (Raddea) alexis* (Kozhanchikov, 1928) and *Xestia (Raddea) herrichschaefferi* (Alphéraky, 1895) are revised, and three new synonyms are introduced (*X. alexis* (Kozhanchikov, 1928) = *Estimata oschi* Kozhanchikov, 1937, **syn. n.**; = *Estimata militzae* Kozhanchikov, 1937 **syn. n.**; *Protolampra sobrina* (Duponchel, 1843) = *Estimata dailingensis* Chen, 1984, **syn. n.**). The name *alexis* Kozhanchikov, 1937 is recognized as unjustified emendation. Lectotypes for *X. alexis* and *X. herrichschaefferi* are designated; brachipterous females for *X. alexis* and *X. herrichschaefferi* are described.

Key words: Lepidoptera, Noctuidae, Noctuinae, *Xestia*, *Raddea*, *Estimata*, taxonomic notes, new synonymy, new combination, Russia, South Siberia

Introduction

Xestia Hübner, 1818 (type-species *Noctua ochreago* Hübner, 1790) is the largest genus of the tribe Noctuini (Noctuidae) with about 200 species occurring around the World. The genus exhibits high morphological diversity, but the taxonomic structure of the genus is still not fully resolved. The genus is represented by several subgenera, among them: *Xestia* s.str., and *Megasema* Hübner, [1821] 1816 distributed mainly in temperate zone and montane areas of tropics; *Pachnobia* Guenée, 1852 (= *Schoyenina* Ausivillius, 1883, *Anomogyna* Staudinger, 1871, etc., see Lafontaine *et al.* 1987) in arctic, subarctic and mountains habitats of northern Palaearctic; and *Raddea* Alphéraky, 1892 in mountain systems of Inner Asia. The genus is most diverse in the mountains of South Siberia, West China and the Himalayas, where many species, especially in China, have highly divergent genital structures (Boursin 1963, 1964). The Nearctic fauna of the genus has been revised by Lafontaine (1998); the Holarctic subgenus *Pachnobia* was revised by Mikkola *et al.* (1983, as *Schoyenina*), Lafontaine *et al.* (1987, as *Pachnobia*), and Lafontaine *et al.* (1998, in Lafontaine, 1998).

In his revision of the Nearctic *Xestia*, Lafontaine (1998) synonymised the Tibetan-Himalayan genera *Raddea*, *Estimata* Kozhanchikov, 1928 and *Erebophasma* Boursin, 1963 with *Xestia*, downgraded *Raddea* to a subgenus and placed *Estimata* and *Erebophasma* in synonymy to *Raddea*. Unfortunately, these changes have not been followed universally in the Old World, and the aforementioned genera, and *Estimata* particularly, were treated as distinct genera in recent publications (Lehmann *et al.* 1998; Kononenko 2005; Lehmann & Bergmann 2005, Matov *et al.* 2008). Here we follow Lafontaine (1998) in the treatment of this group.

The present article is devoted to the taxonomy of the *Xestia (Raddea) alexis* (Kozhanchikov, 1928) species group, distributed in mountains of South Siberia, Kazakhstan and Mongolia. It includes two species in Russia, *X. alexis* and *X. herrichschaefferi* Alphéraky, 1895, formerly treated by authors in the genus *Estimata* Kozhanchikov,