

***Thumatha monochroa* spec. nov.,
a new species of arctiid moth from south-eastern Kazakhstan**

(Lepidoptera, Arctiidae)

by

VADIM V. ZOLOTUHIN

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Summary: *Thumatha monochroa* spec. nov. is closely related to the western palaeartic *Th. senex* HBN. and is described from the middle part of the Ili river in south-eastern Kazakhstan. The single specimen was collected just before midnight on a lamp-post in a sandy-clay desert not far from an outlet of hot thermic waters from the underground. It is suggested, that the penetration of *Thumatha*-species in the deserts was only possible with the conservation of a close connection with the oasis associations of the River Ili Valley or with the local outlets of hot thermic waters at the surface. In this case it is possible that *Thumatha monochroa* spec. nov. is endemic in the valley of the middle part of the Ili river.

A new species of *Thumatha* WALKER was discovered among the Lepidoptera collected with light in the desert zone of south-eastern Kazakhstan

***Thumatha monochroa* spec. nov.**

Material: 1 ♀ labelled "14.VIII.1993, SE Kasakhstan, 25 km NE Chilik, lum., V. ZOLOTUHIN leg." The type specimen is deposited in the collection of the Zoological Museum of the Russian Academy of Science St.-Petersburg, Russia).

Description

A single female (fig. 1) is known. The body has frail yellowish-cream scales. The wings have unnumerous excited yellowish-cream scales which do not cover the wings' membrane completely. The wing pattern is strongly reduced and exists only as grey rounded spots on the discal veins of all wings; on the forewing the basal quarter of the costal edge is darkened and 8-9 congestions of grey scales along R2–R5 and M1 are present: the apex of the wing is also slightly darkened. Venation is typical for the genus' groundplan: 5 branches of R present in the forewing, R3–R5 are stalked. Origins of M2 and M3 are moved backwards in the hindwing and M1 originating in the middle of the discal vein. Wing expanse is 17 mm, the forewing length 8.2 mm. The legs are weakly haired, fore legs have a lancet-shaped epiphysis, the middle legs have two short spurs and the hind legs have four short spurs. The abdomen is yellow-cream, weakly haired, with single elongate scales. These are typical for all abdominal segments but form a characteristic little bundle on the top of the abdomen only.

Female genitalia (fig. 2)

The anal lobes strongly flattened laterally and slightly haired. Apophyses posteriores thin, broadened caudally and weakly dentated basally; apophyses anteriores stronger and slightly shorter than posteriores. Tergite VIII weakly sclerotized, sternite VIII represented by thin sclerotized bands joining with the foundations of the apophyses anteriores and reaching the ostium. Ostium membranous, anthrum is strongly flattened dorso-ventrally and well sclerotized. Ductus short and membranous, bursa copulatrix is large and bag-shaped with a vague sclerotization in the caudal zone, with obvious longitudinal folds and a single drop-shaped weakly sclerotized signum.

Diagnosis

It can be easily differentiated from the western palaeartic *Thumatha senex* HBN. in that it has more elongate and much more transparent wings and its background is lighter, that the dark wing pattern is reduced and that it is smaller in size. In the female genitalia of *Thumatha senex* the thin and elegant apophyses anteriores are not shorter than the apophyses posteriores. The foundations of the apophyses posteriores are weakly broadened and rounded in another manner. The ductus has zones of vague sclerotization. Sclerotization of the bursa copulatrix is present as regular bands, signum crescent- or diamond-shaped.

Distribution

Only known from the type locality: south-eastern Kazakhstan, in the middle part of Ili river.

The biology is unknown. The single specimen was collected just before midnight on a lamp-post in a sandy-clay desert not far from an outlet of hot thermic waters from the underground. This finding is very interesting with regards to the zoogeography, because the up-to-date single known species of this genus, *Thumatha senex* HBN., is exclusively native to humid and shaded places, forests, meadows, marshes etc. all over its western palaeartic area (reaching only southwestern Siberia, DUBATOLOV et al., 1993). In these places, the caterpillars develop on the moisture-philous *Peltigera*, *Homalothecium*, *Dicranoweisia*, *Jungermannia* (DE FREINA & WITT, 1987). It seems, that the penetration of a species of this genus into deserts was only possible with the conservation of a close connection with the oasis associations of the River Ili Valley or with the local outlets of hot thermic waters on the surface. In this case it is possible that *Thumatha monochroa* spec. nov. is endemic to the valley of the middle part of the Ili river.

Remark

The right forewing of the holotype had been damaged from the centre of the R-Cu cellula to the external edge before it was collected.

References

- DUBATOLOV, V. V., TSHISTJAKOV, YU. A. & J. VIIDALEPP (1993): A list of the Lithosiinae of the territory of the former USSR (Lepidoptera, Arctiidae). – *Atalanta* **24** (1/4): 165–175.
- FREINA, J. DE & T. WITT (1987): Die Bombyces und Sphinges der Westpalaearktis. Bd. **1**. – München, 708 pp.



Fig. 1: *Thumatha monochroa* spec. nov., holotype ♀.



Fig. 2: *Thumatha monochroa* spec. nov., holotype ♀, genitalia.

address of the author

Dr. VADIM V. ZOLOTUHIN
Ablukova 13–12
432005 Uljanovsk
Russia

Colour plate VIIIa

ZOLOTUHIN, V. V.: Studies in Asiatic Lasiocampidae. 2. On the status of *Stenophylloides javanus* DRAESEKE, 1941 (Lepidoptera, Lasiocampidae). – *Atalanta* **27** (1/2): 339–341.

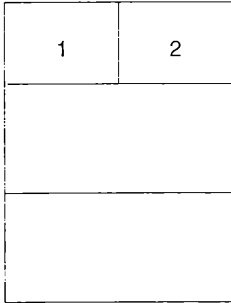


Fig. 1: *Paradoxopla javanus* (DRAESEKE, 1941), lectotype ♂.

Fig. 2: *Paradoxopla javanus* (DRAESEKE, 1941), paralectotype ♀.

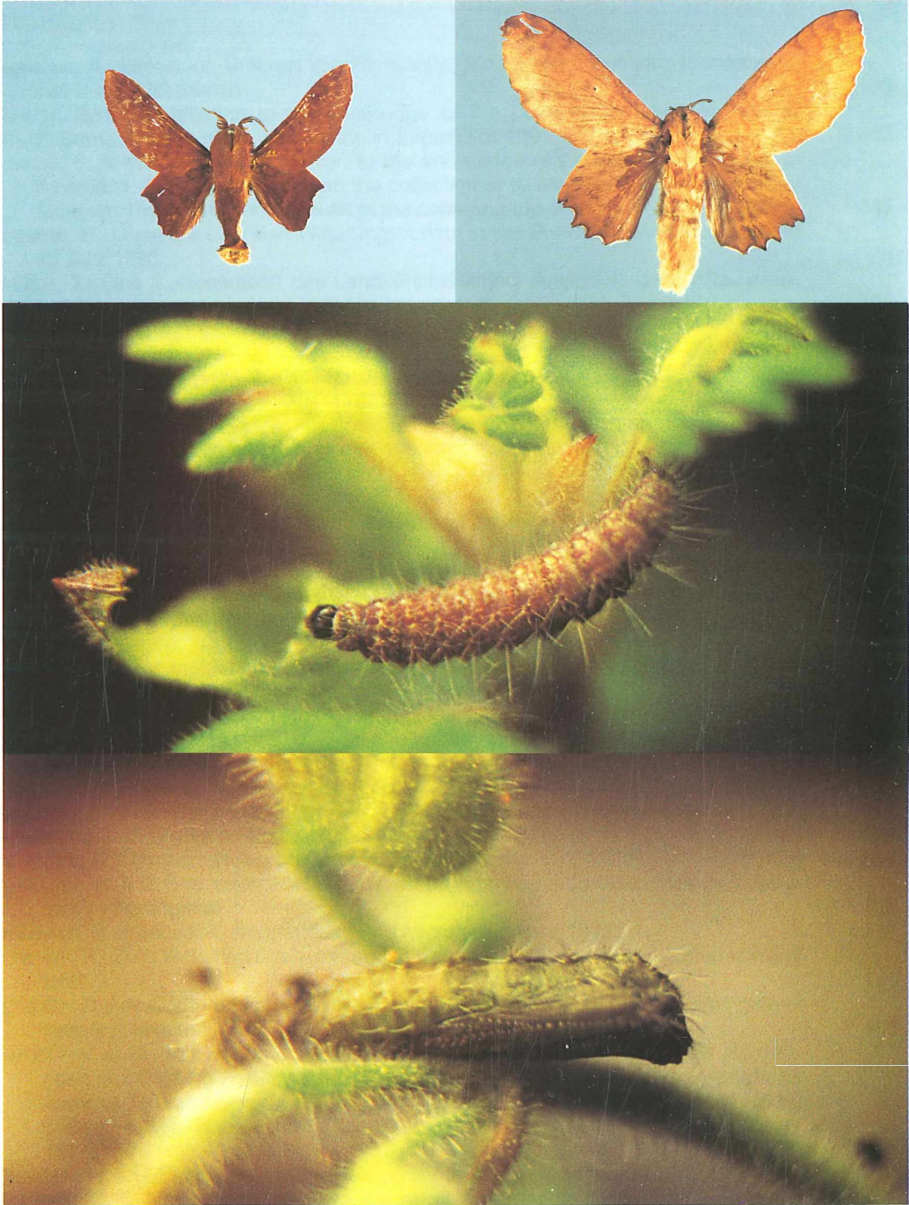
Farbtafel VIIIb

SCHOLZ, A.: Ein Beitrag zur Biologie und Verbreitung von *Capperia lorana* (FUCHS, 1895) (Lepidoptera, Pterophoridae). – *Atalanta* **27** (1/2): 411–419.

Oben: *Capperia lorana* FUCHS, adulte Raupe: Schwäb. Alb, 29.VI.88 (Freilandaufnahme).

Unten: *Capperia lorana* FUCHS, Puppe: Schwäb. Alb, 4.VII.88 (Freilandaufnahme).

Colour plate VIIIa / Farbtafel VIIIb



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Autor(en)/Author(s): Zolotuhin Vadim V.

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