

***Paralypusa*, a new genus of the family Lypusidae (Lepidoptera: Gelechioidea) from China**

***Paralypusa* – новый род семейства Lypusidae (Lepidoptera: Gelechioidea) из Китая**

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A new eastern-palaearctic monotypic genus of the gelechioid moths, *Paralypusa* **gen. nov.**, is established for the Chinese species *Paralypusa chinensis* (Lvovsky, 2010), **comb. nov.** This genus is considered closely related to *Lypusa* Zeller, 1852 on the base of several synapomorphies. However *Paralypusa* also shares some features with the genera *Pseudatemelia* Rebel, 1910 and *Amphisbatis* Zeller, 1870. Its transitional state confirms the belonging of all the aforementioned genera to one family and synonymy of the Lypusidae Herrich-Schäffer, 1857 and Amphisbatidae Spuler, 1910 (Nieukerken et al., 2011).

Описан новый восточнопалеарктический монотипический род гелехиоидных чешуекрылых *Paralypusa* **gen. nov.**, включающий китайский вид *Paralypusa chinensis* (Lvovsky, 2010), **comb. nov.** Этот род сближается с родом *Lypusa* Zeller, 1852 на основании ряда синапоморфий. Тем не менее, *Paralypusa* также имеет признаки, общие с *Pseudatemelia* Rebel, 1910 и *Amphisbatis* Zeller, 1870. Его промежуточное положение подтверждает принадлежность всех вышеупомянутых родов к одному семейству и синонимии Lypusidae Herrich-Schäffer, 1857 and Amphisbatidae Spuler, 1910 (Nieukerken et al., 2011).

Key words: gelechioid moths, taxonomy, China, Lepidoptera, Lypusidae, Amphisbatidae, *Paralypusa chinensis*, new genus, new combination

Ключевые слова: гелехиоидные чешуекрылые, таксономия, Китай, Lepidoptera, Lypusidae, Amphisbatidae, *Paralypusa chinensis*, новый род, новая комбинация

INTRODUCTION

The species *Pseudatemelia chinensis* has been described for five males from eastern China, province Zhejiang (Chekiang) (Lvovsky, 2010). Some later the comparison of this species and *Lypusa maurella* ([Denis & Schiffermüller], 1775), the type species of the genus *Lypusa* Zeller, 1852, reveals some common characters in male genitalia (Figs 1–4). These characters are the following: uncus is with paired narrow projections; transtilla is with two characteristic finger-like lateral projections; sacculus is long and with a projection at the distal part; aedeagus is long, broad at the basal part, and with a narrow apical projec-

tion. These specific traits clearly place the Chinese species into the family Lypusidae; however, all species of the genus *Lypusa* has the labial palpi very small and rudimentary, and the gnathos rudimentary and lacking tiny spines. From the other hand, this species shares with representatives of the genera *Pseudatemelia* and *Amphisbatis* such features as visible labial palpi (Fig. 5) and the gnathos in shape of a plate covered with the tiny spines. In that way, the Chinese species has unique combination of characters, distinguishing it from the members of both *Lypusa* and *Pseudatemelia*, and deserve the placement in a separate genus described below.



Figs 1–5. *Paralypusa chinensis* (1–2, 5) and *Lypusa maurella* (3–4). 1, 3, male genitalia without aedeagus; 2, 4, aedeagus; 5, head.

TAXONOMIC PART

Genus *Paralypusa* gen. nov.

Type species: *Pseudatemelia chinensis* Lvovsky, 2010.

Diagnosis. Male. Small moths, wingspan about 10 mm. Antennae with very short cilia; scapus with pecten. Labial palpi small, only twice longer than diameter of eye (Fig. 5). Wings moderately broad, uniformly coloured. Fore wing with slightly

pointed apex; all veins separately running from discal cell, excepting *R4* and *R5* having long common stalk. Hind wing with bases of *Rs* and *M1* separated from each other. Abdominal tergites without areas of modified scales. Male genitalia (Figs 1, 2): uncus with paired narrow projections; gnathos in shape of plate covered with tiny spines; transtilla continuous, with two narrow finger-like lateral projections; valva broad, with rounded apex; sacculus

long, with two projections distally; juxta X-shaped; aedeagus broad at base, with long and narrow apical projection.

Female unknown.

Comparison. The new genus is closely related to *Lypusa* distinguishing by the labial palpi and gnathos well developed (both rudimentary in *Lypusa*). From the genera *Amphisbatis* and *Pseudatemelia*, it differs in the uncus with paired narrow projections, the transtilla continuous and with two narrow finger-like lateral projections, and the aedeagus long (in *Amphisbatis* and *Pseudatemelia*, uncus without paired narrow projections, transtilla interrupted in the middle and without finger-like lateral projections, and aedeagus short, jug-shaped).

Etymology. The generic name indicates the affinity to the genus *Lypusa*.

Remarks. The taxonomic position of the formerly monotypic family Lypusidae was uncertain for a long time. Recently the relationships of the genus *Lypusa* with the genera *Amphisbatis* and *Pseudatemelia* from the family Amphisbatidae were revealed being based on a similar construction of larval case (made from a whole piece of leaf), densely porose larval head, and modified pupal abdominal segment VIII having a transverse fold and protuberances. Thereby, the volume of this family was increased up to three genera (Heikkilä & Kaila, 2010), and the name Amphisbatidae was synonymised with Lypusidae (Nieukerken et al., 2011).

The new genus is considered closely related to *Lypusa* on the base of the characters (possibly synapomorphies) listed in the introduction. The genus *Lypusa* clearly distinguishes from the rest of Lypusidae by the almost total reduction of labial palpi and gnathos, whereas *Paralypusa* has well developed labial palpi and gnathos.

The genera *Pseudatemelia* and *Amphisbatis* are shared different combination of characters: uncus is unpaired; transtilla is interrupted in the middle, without narrow finger-like lateral projections; aedeagus is short, jug-shaped. The species of the genus *Pseudatemelia* are rather uniform in general

appearance and genital structures, excepting the structure of gnathos. In the subgenus *Pseudatemelia* s. str. (type species *P. aeneella* Rebel, 1910), gnathos is fungiform with the area of tiny spines oriented horizontally (in natural position). In the subgenus *Tubuliferodes* Toll, 1956 (type species *Tubuliferola josephinae* Toll, 1956), gnathos is flat with the area of tiny tubercles oriented vertically. The monotypic genus *Amphisbatis* is very close to *Pseudatemelia* distinguishing mainly by the forewing venation: *Amphisbatis* has veins *R4* and *R5*, usually fused with each other, and *R3* and *R4+5* stalked or running from one point; *Pseudatemelia* has veins *R4* and *R5* stalked, and *R3* and *R4* separately running from the discal cell. Furthermore, *Pseudatemelia* has one signum in bursa copulatrix; in *Amphisbatis*, bursa copulatrix lacks signum.

A number of differences in the structure of labial palpi, uncus, gnathos, transtilla and aedeagus in *Lypusa*, on the one hand, and in *Amphisbatis* and *Pseudatemelia*, on the other hand, gave a reason to consider Lypusinae and Amphisbatinae as two separate subfamilies (Lvovsky, 2011). Now, due to the presence of some plesiomorphic characters in *Paralypusa* (such as well developed labial palpi and gnathos), morphological hiatus between these subfamilies is not so obvious.

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