Paradasycera – a new genus of the broad-winged moths (Lepidoptera, Oecophoridae) from the Russian Far East

Paradasycera – новый род ширококрылых молей (Lepidoptera, Oecophoridae) с Дальнего Востока России

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A new eastern-palaearctic monotypic genus of the broad-winged moths, *Paradasycera* gen. nov., is described. It is related to the European genus *Dasycera* Stephens, 1829, from which differs by the very short ovipositor in female and slightly pointed apex of the fore wing. The type species of the genus, *Paradasycera insignis* (Christoph, 1882), comb. nov., is redescribed.

Описан новый восточнопалеарктический монотипический род ширококрылых молей *Paradasycera* gen. nov., близкий к европейскому роду *Dasycera* Stephens, 1829, но отличающийся очень коротким яйцекладом самки и слегка заостренной вершиной переднего крыла. Приведено переописание типового вида рода *Paradasycera insignis* (Christoph, 1882), comb. nov.

Key words: Paradasycera insignis, Oecophoridae, new genus, new combination, Russia, Far East

Ключевые слова: Paradasycera insignis, Oecophoridae, новый род, новая комбинация, Россия, Дальний Восток

INTRODUCTION

The enigmatic species Incurvaria insignis Christoph, 1882 has been described by a single female collected at 22 June 1877 in the vicinities of Vladivostok (Christoph, 1882). This species was originally placed in the genus Incurvaria Haworth, 1828 (family Incurvariidae) basing on the similarity in the shape, general coloration and pattern of the fore wings. In the well-known catalogue of palaearctic Lepidoptera by O. Staudinger and H. Rebel it was conventionally remained in the genus Incurvaria with a note "certe non hujus generis, gen. propr.?" (Rebel, 1901: p. 242). Afterwards, nobody studied Incurvaria insignis for more than one hundred years. Only very recently it was repeatedly cited as *species incertae sedis* (Kozlov, 1987, 1996, 2008).

The holotype of *Incurvaria insignis* Christoph, 1882 is kept in the collection of the Natural History Museum of Humboldt University in Berlin (Museum fur Naturkunde der Humboldt-Universitat zu Berlin, MNHUB). It was first investigated by the late Dr. Ebbe Schmidt Nielsen who identified it as belonging to the family Oecophoridae; however, his opinion has never been published. Due to the courtesy of Wolfram Mey, the curator of the Lepidoptera collection in Berlin, we were allowed to study the holotype of *Incurvaria insignis*. Moreover, we found two additional specimens of this very rare species kept in the collection of the Zoological Institute, Russian Academy of Sciences (ZIN): one female from Vinogradovka in Primorskiy Territory and one male from Bol'shekhekhzirskiy Nature Reserve, Khabarovsk Territory. Investigation of this material allowed us to shed light on the systematic position of *Incurvaria insignis*.

RESULTS

According to the head structure (appressed scales on the frons, long and strongly upturned labial palpi, and scaled base of haustellum) and fore-wing venation (long common stalk of veins R4 and R5), the species under study undoubtedly belongs to the superfamily Gelechioidea. Furthermore, relatively broad wings, free and more or less parallel veins Rs and M1 in the hind wing, and well sclerotized and pointed gnathos in the male genitalia justify its placement into the subfamily Oecophorinae (family Oecophoridae). The general appearance and structure of male genitalia of this species suggest close relationships with the genus Dasycera Stephens, 1829, whereas the structure of female genitalia and characteristic shape of forewing distinguish it from all known genera of the family Oecophoridae. This gives us the reason to establish a new monotypic genus for Incurvaria insignis Christoph, 1882.

Paradasycera gen. nov.

Type species: *Incurvaria insignis* Christoph, 1882.

Description. Medium sized, dark coloured moths. Antennae with short white section near apex; scapus without pecten. Labial palpi strongly curved upward and moderately short, 2–2.5 times as long as eye diameter; second segment about 1.5 longer and slightly wider than third segment (Fig. 1). Wings moderately broad, fore wing with slightly pointed apex (Fig. 2). All forewing veins run from discal cell separately, except for R4 and R5 having long common stalk. In the hind wing, bases of Rs and M1 separated, while M3 and Cu1 have short common stalk. Abdominal tergites without fields of modified scales.

Male genitalia (Figs 3, 4). Uncus and gnathos unpaired, well sclerotized, apically pointed; tip of gnathos slightly curved upwards. Valvae broad, triangular, evenly converging to the apex; distal part of sacculus with straight sclerotized process. Transtilla absent. Juxta flat, small, caudally forked. Aedeagus straight, very short, with a group of tiny thorn-like cornuti.

Female genitalia (Fig. 5). Ovipositor very short, non-extended; anal lobes apically pointed. Ostium approaching to the posterior margin of sternum VIII. Ductus bursae long and moderately wide; ductus seminalis joints it close to ostium. Bursa copulatrix oval, with single signum which has a shape of small rounded spiny plate.

Differential diagnosis. The new genus differs from all other genera of Oecophorinae by moderately short labial palpi and very short ovipositor with apically pointed anal lobes. Furthermore, white section of antennae and pointed apex of fore wing are rarely presented in this subfamily.

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

Paradasycera insignis (Christoph, 1882) comb. nov.

Incurvaria insignis Christoph, 1882: 196–197. Type locality: "Amur" [Primorskiy Terr., surroundings of Vladivostok], Russia.

Type material examined. Holotype: female, labelled "Amur", "22/10", "Origin", "Incurvaria Insignis Chr.", "Zool. Mus. Berlin", "Gen. slide 1930 female E. Schmidt Nielsen", "Holotype Incurvaria insignis Christ." (MNHUB).

Additional material. One female, [Primorskiy Terr., Spassk District] Vinogradovka, 24 June 1929, leg. Djakonov & Filipjev (ZIN); 1 male, [Khabarovsk Terr.] vicinities of Khabarovsk, Bol'shekhekhzirskiy Nature Reserve, 29 May 2006, leg. Dubatolov (ZIN).

Description. Wingspan 17–21 mm. Head and thorax dark fuscous. Antennae



Figs 1–5. *Paradasycera insignis*. 1, head, lateral view; 2, venation of wings; 3–4, male genitalia (3, general view; 4, aedeagus); 5, female genitalia.

dark fuscous with white subapical section. Labial palpi yellowish, darkened at base of second segment. Fore wings blackish fuscous with 2 small yellowish costal spots: triangular spot at 2/5 and rounded spot at 3/4 of wing's length. Hind wings dark grey.

Male and female genitalia as described for the genus.

Distribution. Russian Far East: Primorskiy Territory and southern part of Khabarovsk Territory.

Biology unknown. All available specimens were collected from late May to the end of June. The holotype was found on the leaf of Quercus; two other specimens were collected at light.

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REFERENCES

- Christoph H. 1882. Neue Lepidopteren des Amurgebietes. Bulletin de la Société Impériale des Naturalistes de Moscou, 56 (2): 405–436.
- Kozlov M.V. 1987. Moths of subfamilies Incurvarianae and Prodoxinae (Lepidoptera, Adelidae) of the Far East. In: Ler P.A., Kirpichnikova V.A. & Kononenko V.S. (Eds.). Lepidoptera of the Far East of the U.S.S.R.: 14–24. Vladivostok: Institute of Biology and Soil Sciences. (In Russian).
- **Kozlov M.V.** 1996. Incurvariidae and Prodoxidae (Lepidoptera) from Siberia and the Russian Far East, with descriptions of three new species. *Entomologica Fennica*, **7**: 55–62.
- Kozlov M.V. 2008. Incurvariidae. In: Sinev S.Yu. (Ed.). Catalogue of the Lepidoptera of Russia: 26–27, 323. St Petersburg–Moscow: KMK Scientific Press.
- Rebel H. 1901. Famil. Pyralidae Micropterygidae. In: Staudinger O. & Rebel H. Catalog der Lepidopteren des palaearctischen Faunengebietes. Berlin: R. Friedlander & Sohn, 2: 1–368.

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