

## A new species of the genus *Grammia* Rambur, 1866 (Lepidoptera, Arctiidae) from Northern Transbaikalia

### Новый вид рода *Grammia* Rambur, 1866 (Lepidoptera, Arctiidae) из Северного Забайкалья

V.V. Dubatolov\*, B.C. Schmidt\*\*  
В.В. Дубатовлов\*, Б.К. Шмидт\*\*

\* Siberian Zoological Museum, Institute of Systematics and Ecology of Animals, Siberian Branch of Russian Academy of Sciences, Frunze str. 11, Novosibirsk 630091 Russia. E-mail: vvubat@online.nsk.su.

\* Сибирский зоологический музей Института систематики и экологии животных СО РАН, ул. Фрунзе 11, 630091 Новосибирск Россия.

\*\* Dept. of Biological Sciences, University of Alberta, Edmonton, Alberta T6G 2E9 Canada. E-mail: bjorn@ualberta.ca.

**Key words:** *Grammia*, Arctiidae, new species, Transbaikalia.

**Ключевые слова:** *Grammia*, Arctiidae, новый вид, Забайкалье.

**Abstract.** A new species of the genus *Grammia* is described from the Kodar Mountain Range, Chita Province, Russia. It is similar to *Grammia quenseli* (Paykull, 1793), but differs in its larger size, darker wing coloration, and long vesica of the male aedeagus.

**Резюме.** Описывается новый вид рода *Grammia* с хребта Кодар в Северном Забайкалье. Он похож на *Grammia quenseli* (Паукюлл, 1793), но отличается большей величиной, более тёмным рисунком крыльев и очень большой везикой эдеагуса.

The genus *Grammia* Rambur, 1866 currently includes about 30 species [Ferguson, 1985] with four species previously reported from the Palaearctic region. *G. quenseli* (Paykull, 1793) occurs in arctic-alpine and northern boreal biotopes throughout the northern hemisphere; the closely related *Grammia zamolodchikovi* Saldaitis et Ivinskis, 2001 was described from the Chukotka Peninsula and Wrangel (=Wrangel) Island (Chukotka region, Russian Federation), and it appears to be a subspecies of *G. quenseli*. *G. olga* Dubatolov, 1990 was described from Wrangel Island, but was later downgraded to a subspecies of *G. philipiana* Ferguson, 1985, described from Alaska [Dubatolov, 1996]. Another Eastern Palaearctic species, *G. turbans* (Christoph, 1892), was found to be conspecific with North American *G. obliterated* (Stretch, 1885) [Ferguson, 1991]. Here we describe a new *Grammia* species of the *quenseli-virguncula* species group. It is the only *Grammia* species currently known to be endemic to the Palaearctic territory.

The holotype and a female paratype of the new species are deposited in the Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk (SZMN); a pair of paratypes are deposited in the National Museum of Natural History, Washington, DC, USA (NMNH).

#### *Grammia kodara* Dubatolov et Schmidt, sp.n.

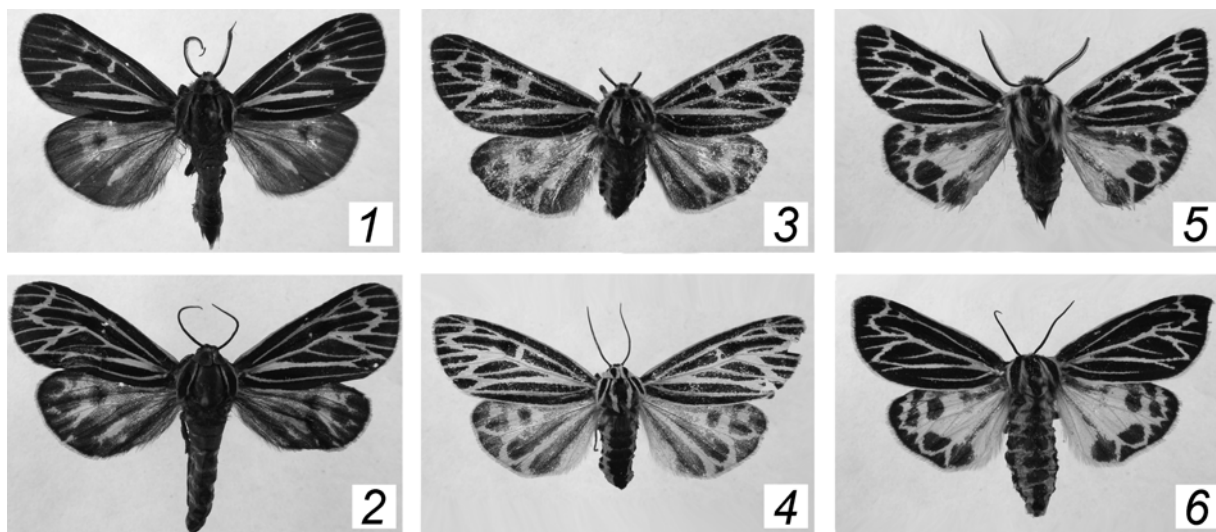
Figs 1–2, 7.

**Material.** Holotype, ♂, RUSSIA: Chita Province, Kodar Mt. Range, near Station Kodar, river Sul'ban, locality Mezhded', 1500 m a.s.l., 21.06.1999, Mikhailov leg., received from P.Yu. Gorbunov (SZMN). Paratypes: 1♀, the same data (SZMN); 1♂, 1♀, Kodar, 1100 m, 14.06–14.07.1999, A. Aniskovich leg. (NMNH).

**Description.** Male. *Forewing:* length 16–17 mm. Dorsal forewing black, with thin yellow lines along veins, and a broad longitudinal line between cubital and anal vein, not reaching distal margin. Yellowish transverse dash across apical quarter of the discal cell, a trace of a transverse line also occurs at the apex of the discal cell. The subterminal light line (*sensu* Ferguson [1995]) is reduced to a thin, partially obsolete line, in the holotype only the anal portion of this line is visible, between veins Cu1 and Cu2 (Fig. 1). The forewing transverse lines are likely variable in this species, as is often the case in members of this species group. Fringe, anal margin and basal two-thirds of costal margin yellowish, concolourous with remainder of line markings. Ventrally the markings are similar to the dorsal side, but slightly more diffuse. *Hindwing:* Hindwing with broad black margins, slightly paler and semitransparent medially and basally, sparsely covered with yellowish scales. Discal spot obscure; elongate yellowish patch between veins Cu2 and A2. Ventrally the paler medial area is much brighter than the dorsal side, lacking the cast of black scales. *Genitalia.* Overall very similar to other members of this group, with no apparent distinguishing features of the valva. The vesica structure is the only notable exception, and when inflated is longer than the aedeagus (Fig. 7).

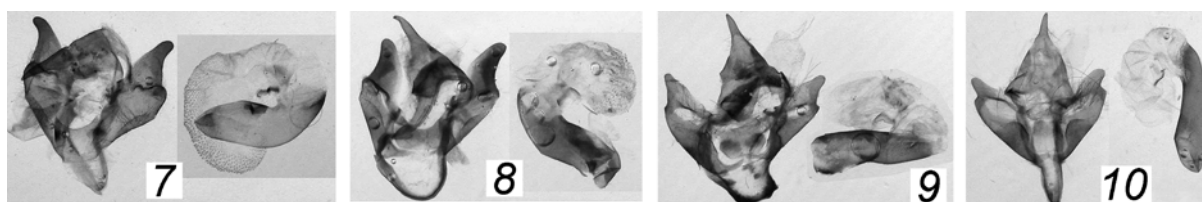
Female. *Forewing:* length 16 and 19 mm. Pattern similar to that of male, but subterminal line, Cu-A longitudinal line and transverse lines well-developed. *Hindwing:* Hingwings yellow-ochre with black margin and submarginal spots, discal spot and black anal and medial dashes (Fig. 2). *Genitalia.* Not examined.

**Diagnosis.** *G. kodara* is most similar to *G. quenseli* (Paykull, 1793), *G. philipiana* Ferguson, 1985 and *G. virguncula* (Kirby 1837). However, in *G. kodara* the broad



Figs 1–6. Moths of the Palearctic species of the genus *Grammia*. 1–2 — *G. kodara* sp.n., holotype male (1) and paratype female (2); 3–4 — *G. quenseli liturata* (Ménétriés, 1859): male, East Yakutia, West Oimyakon'e, river Kyubyuma (3); female, East Yakutia, Suntar-Khayata Mountain Range, river East Khandyga headwater (4); 5–6 — *G. obliterata turbans* (Christoph, 1892): male, Khakasia, Birikchul' (5); female, Central Yakutia, river Aldan, 20 km downstream from the river Amga mouth, village Megino-Aldan (6).

Рис. 1–6. Бабочки палеарктических видов рода *Grammia*. 1–2 — *G. kodara* sp.n., голотип самец (1) и паратип самка (2), 3–4 — *G. quenseli liturata* (Ménétriés, 1859): самец, Восточная Якутия, Западное Оймяконье, р. Кюбюма (3); самка, Восточная Якутия, хр. Сунтар-Хаята, верховья р. Восточная Хандыга (4); 5–6 — *G. obliterata turbans* (Christoph, 1892): самец, Хакасия, Бирикчуль (5); самка, Центральная Якутия, р. Алдан, 20 км ниже устья р. Амги, с. Мегино-Алдан (6).



Figs 7–10. Male genitalia of the Palearctic species of the genus *Grammia*. 7 — *G. kodara* sp.n., holotype; 8 — *G. quenseli quenseli*, Lapponia; 9 — *G. philipiana olga*, the Chukotsk Sea, Wrangel Is.; 10 — *G. obliterata turbans*, Buryatia, Vitim tableland, Baisa.

Рис. 7–10. Гениталии самцов палеарктических видов рода *Grammia*. 7 — *G. kodara* sp.n., голотип; 8 — *G. quenseli quenseli*, Лапландия; 9 — *G. philipiana olga*, Чукотское море, остров Врангеля; 10 — *G. obliterata turbans*, Бурятия, Витимское плоскогорье, Байса.

longitudinal line between the cubital and anal vein of the forewing does not reach the distal margin; the dark hindwing colour of males also distinguishes *kodara* from *G. virguncula* and *G. philipana*. The long male vesica is unlike any other species examined, including *G. quenseli* (Fig. 8), *zamolodchikovi* Ivinskis et Saldaitis 2001, *G. philipiana olga* Dubatolov, 1990 (Fig. 9) and *G. obliterata turbans* (Christoph, 1892) (Fig. 10).

## Acknowledgements

This research was partly supported by RFBR grant No. 04-04-48727 to V.V. Dubatolov and a NSERC grant to F. Sperleng.

## References

- Christoph H. 1892. *Arctia turbans*, eine neue Sibirische Art // Horae Societas Entomologicae Rossicae. T.26. S.460–461.
- Dubatolov V.V. 1990. [New taxa of tiger moths (Lepidoptera, Arctiidae: Arctiinae) from the Palearctic] // Redkie gelminty, klestshi i nasekomye. Novye i maloizvestnye vidy fauny Sibiri. No.21. Novosibirsk: Nauka. Siberian Dept. P.79–86.
- Dubatolov V.V. 1996. 3. A list of the Arctiinae of the territory of the former U.S.S.R. (Lepidoptera, Arctiidae) // Dubatolov V.V. Three contributions to the knowledge of palearctic Arctiinae. Neue Entomologische Nachrichten. Bd.37. S.39–87.
- Ferguson D.C. 1985. Contributions toward reclassification of the world genera of the tribe Arctiini, Part 1 — Introduction and a revision of the *Neoarctia*–*Grammia* group (Lepidoptera: Arctiidae: Arctiinae) // Entomography. An Annual Review for Biosystematics. Vol.3. P. 181–275.
- Ferguson D.C. 1991. The identity of *Arctia obliterata* Stretch (Lepidoptera: Arctiidae) // Proceedings of the Entomological Society of Washington. Vol.93. No.4. P.828–833.
- Paykull G. 1793. X. Beskrivelse over 5 Arter nye Nat-Sommerfulge // Skrivt. Naturh. Selsk. Kjobenhavn. T.2. P.97–102.
- Rambur J.P. 1866. Catalogue systématique des lépidoptères de l'Andalousie (2). Paris: J.B. Baillière: 93–412. Pl.XI–XXII.
- Saldaitis A., Ivinskis P. 2001. Some notes on the Palearctic species of the genus *Grammia* Rambur, 1866 (Lepidoptera, Arctiidae) with the description of a new species, *Grammia zamolodchikovi*, sp. n. // Helios. Vol.2. P.131–141. Pl.13.
- Stretch R.N. 1885. Descriptions of New Species of Heterocera // Entomologica Americana. Vol.1. P.101–107.