

Atalanta (Dezember 2003) 34(3/4):440–442, colour plate XXIVb, Würzburg, ISSN 0171-0079

**A new subspecies of *Palaearctia gratiosa* (GRUM-GRSHIMAILO, 1890)  
from the Pamirs**

(Lepidoptera, Arctiidae)

by

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received 7.X.2003

**Summary:** A new subspecies of *Palaearctia gratiosa* (GRUM-GRSHIMAILO, 1890) is described from Central Pamirs. It is characterized by a continuous blackish border and the bright red ground colour of the hindwings.

In 1996, V. O. GURKO collected in the Rushan Range (Central Pamirs, Tadjikistan) specimens of *Palaearctia gratiosa* (GRUM-GRSHIMAILO, 1890) that noticeably differ from other taxa of this species group inhabiting mountain regions of Tien Shan and the Alai-Pamirs by an entire dark hindwing border, the brightly red hindwing ground colour being as in the nominative subspecies. The finding of such clearly distinguishing tiger-moths allows us to separate them into a distinct subspecies, which is described below.

*Palaearctia gratiosa sarezica* **subspec. nov.**

(Colour plate XXIVb, figs. 1, 2)

Holotype ♂: Tadjikistan, the Pamirs, Rushan District, the Rushan Range near the Lake Sarez, 5 km N of Irkht meteorological station (towards the Usoi Goaf), on a dark scree, h = 3700 m a. s. l., 10–20.VII.1996 (V. Gurko leg.). Preserved in the private collection of V. O. GURKO (Chernovtsy, Ukraine).

Paratypes: 35 ♂♂, 3 ♀♀, the same locality, h = 3700–4000 m a. s. l., 10.VII.–10.VIII.1996 (V. Gurko leg.); 1 ♂, the Russian Geographical Society Glacier, 29.VII.1983 (L. КАБАК).

**Diagnosis**

Forewing length in males 12–13 mm, wing expanse 25–27 mm; forewing length in females 13–14 mm, wing expanse 27–29 mm. Forewing pattern very similar to those of the nominative subspecies inhabiting the Alai Range but differing by a more contrasting dark pattern, almost without suffusion of separate black scales on light background. Light spot in cell is noticeably wider than discal spot. Hindwing ground colour bright red, as in the nominative subspecies; nevertheless, fore and outer margins are entirely occupied by a continuous blackish border. There is only a small hole at bifurcation of veins  $M_2$ -CuA. In the nominative subspecies, the dark border is always disrupted along the bifurcation of veins  $M_2$ -CuA and at the  $A_1$  fold. Anal margin red, with a slight dark suffusion along  $A_1$  fold. Discal vein almost dark only in one male, in other specimens there is a small dark spot on the fore part of this vein. Wing pattern in females is very similar to that of males, but the light background is more extended, mostly along the costa. Concerning genitalia structure the moths are identical to other subspecies of *P. gratiosa* (GR.-GR.).

## Discussion

All the taxa formerly described within *P. gratiosa* GR.-GR. from Tien Shan and Alai-Pamirs mountains, namely, *P. g. caroli* DUBATOLOV, 1996 from Kyrghyz Range and West Tien Shan, *P. g. sergei* DUBATOLOV, 1996 from south-eastern part of Terskei Ala-Too, *P. g. gratiosa* (GRUM-GRSHIMAILO, 1892) from the Alai Range, *P. g. flavala* DUBATOLOV, 1996 from Fany and Hissar mountains, have noticeably separated spots along the hindwing margin. Among all subspecies of *P. gratiosa* (GR.-GR.), only *P. g. postflavida* (HAMPSON, 1894) from Kashmir (Skoro-La) has a continuous dark external border on the hindwing, its ground colour being orange-yellow. The specimens of the new subspecies also have such a continuous hindwing dark border, but the wing ground colour is bright red, that can distinguish it from the formerly described subspecies. The Vanch Range, that adjoins to Lake Serez in the west, is inhabited by specimens similar to *P. g. sarezica* subsp. nov., having a continuous hindwing dark border, but their hindwing ground colour is yellow. The pattern of specimens from the Vanch Range is mostly similar to that of *P. g. postflavida* Hmps., the hindwing being orange-yellow with a continuous dark border. For this reason we do not consider them as a new subspecies. So, moths with a continuous dark border on the hindwing inhabit the Central and North-Western Pamirs. Nevertheless, in the Shugnan Range, that is located slightly to the south, moths occur similar to those from Rushan, but with orange-yellow hindwings with separate spots along the outer margin. But additional material is still needed for studying their taxonomic position.

Apart from the group under discussion, there are moths with white, grey or black hindwings which inhabit the Transalai and East Pamirs up to the Koitezek Pass and eastern spurs of the Shugnan Range, formerly attributed by DUBATOLOV (1996) to *P. g. rupicola* (GRUM-GRSHIMAILO, 1890). From these moths, *P. sarycola* DE FREINA, 1997 from the Sarykol Range in the Chinese part of Eastern Pamirs almost does not differ. *Palaearctia kashmirica* FERGUSON, 1985 from Indian Baltistan also belongs to this group. According to Mr. V. O. GURKO's observations, such East Pamirian specimens, although not differing from other subspecies of *P. gratiosa* (GR.-GR.) in male genitalia structure, have, however, a noticeably distinct behavior and habitats. Their flight is very rapid and impetuous, moths occurs mainly on screes, while specimens of other subspecies of *P. gratiosa* (GR.-GR.) fly more slowly and often occur on grassy slopes. Nevertheless, an absence of noticeable morphological differences does not allow us to separate *rupicola* GR.-GR. to a separate species, although in future it could be proved.

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Explanation of colour plate XXIVb (p. 473):

Fig. 1: *Palaearctia gratiosa sarezica* subsp. nov., holotype ♂, Tadjhikistan, the Pamirs, Rushan District, the Rushan Range near the Lake Sarez, 5 km N of Irkht meteorological station (towards the Usoi Goaf), on a dark scree, h = 3700 m a.s.l., 10.–20.VII.1996, V. GURKO leg.

Fig. 2: *Palaearctia gratiosa sarezica* subsp. nov., paratype ♀, same data.

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Colour plate XXIVa

DUBATOLOV, V. V. & D. A. MILKO: A new subspecies of *Parnassius (Kailasius) charltonius* GRAY, 1852 from the Kyrghyz Kashgaria (Lepidoptera, Papilionidae). – *Atalanta* **34** (3/4) 435–439.

Fig. 1: *Parnassius charltonius aenigma* subsp. nov., holotype ♂, Kyrghyzstan Kashgaria, east from the Alai Valley, the right bank of the Kyzylsuu River at its confluence with the Koksuu River, loess-pebble bluff, 2900 m a.s.l., 19.VII.2003, V. V. DUBATOLOV leg., upperside.

Fig. 2: Id., underside.

Fig. 3: *Parnassius charltonius aenigma* subsp. nov., paratype ♀, the same locality and data, upperside.

Fig. 4: Id., underside.

Fig. 5: The type habitat of *Parnassius charltonius aenigma* subsp. nov.: Kyrghyzstan Kashgaria, east of the Alai Valley, the right bank of the Kyzylsuu River at its junction with the Koksuu River.

1	3
2	4
5	

Colour plate XXIVb

DUBATOLOV, V. V. & V. O. GURKO: A new subspecies of *Palaearctia gratiosa* (GRUM-GRSHIMAILO, 1890) from the Pamirs (Lepidoptera, Arctiidae). – *Atalanta* **34** (3/4): 440–442.

Fig. 1: *Palaearctia gratiosa sarezica* subsp. nov., holotype ♂, Tadjikistan, the Pamirs, Rushan District, the Rushan Range near the Lake Sarez, 5 km N of Irkht meteorological station (towards the Usoi Goaf), on a dark scree, h = 3700 m a.s.l., 10.–20.VII.1996, V. GURKO leg.

Fig. 2: *Palaearctia gratiosa sarezica* subsp. nov., paratype ♀, same data.

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Colour plate XXIVa / XXIVb



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Artikel/Article: [A new subspecies of \*Palaearctia gratiosa\* \(Grum-Grshimailo, 1890\) from the Pamirs \(Lepidoptera, Arctiidae\) 440-442](#)