New taxa of Rhopalocera (Lepidoptera) from Middle Asia

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As a part of their investigation of Rhopalocera, both authors and a number of professional entomologists had undertaken several expeditions to different locations in Central Asia. As a result, the authors present the descriptions of several new taxa from Tien-Shan, Ghissar and West Pamir.

The type material (holotypes and some paratypes) will be deposited in the State Darwin Museum (Moscow, Russia). Some paratypes are presented in the collections of V. Tuzov (Moscow), G. Samodurov (Moscow), D. Zamolodchikov (Moscow), Y. Vasilchenko (Kiev), K. Rose (Germany), C. Dellabruna (Italy) and in the private collections of both authors.

Abbreviations: FW – forewings; HW – hindwings; TL - type locality.

Erebia meta pseudometa Churkin et Zhdanko, ssp.n.

Holotype: male, Kyrghyzstan, West Tien-Shan, Suusamyr Mts., Alabel Pass, 3300 m, 8.07.1999, S. Churkin leg.

Paratypes: 30 males, 20 females, same data, S. Churkin & A. Zhdanko leg.; 6 males, 1 female, same loc. (but slopes of Talassky Alatau), 3200 m, 14.07.1997; 4 males, same loc., 29.07.1991, I. Plyushch leg.,1 male, same loc., 3400 m, 30.07.2000, K. Kolesnichenko leg.

Description and diagnosis.

Male. Holotype FW length 23 mm, paratypes – 22 -24 mm.

This subspecies displays of mixed distinctions of two quite different known subspecies. The upperside is similar to *ssp. meta* Stgr. (1886), described from Alai: 4-5 black dots with developed red rings around these dots, only the size of the rings are slightly smaller. The underside is as in *ssp. melanops* Christoph (1889), which inhabits Inner Tien-Shan: totally dark with very small black submarginal dots without traces of the red colour.

Ssp. alexandra Stgr. (1877) and *ssp. issyka* Stgr. (1877) may be easily distinguished from new subspecies by enlarged red rings which form a red band on the FW.

FW underside with darkened not contrasted small red ring around the dots. HW underside without obvious border between the median band and the base. Upperside often with more or less reduced 1-2 black dots on the costal side of the row.

Female. FW length – 21 –23.5 mm.

The distinctions are as in male, excluding sexual dimorphism normal for this species sexual dimorphism.

Biology. Alpine grasslands.

Distribution. Suusamyr range and, probably, eastern part of Talassky Alatau.

Etymology. The name emphasizes that these butterflies are only similar to nominotypical race, but they are not the same.

Erebia meta manuevi Churkin et Zhdanko, ssp. n.

Holotype: male, N. Tien-Shan, Zailyisky Alatau, 20 km S Almaty, 25 – 27.06.2000, 2700-2900 m, A. Zhdanko leg.

Paratypes: 36 males, 19 females, same data.

Description and diagnosis.

Male. Holotype FW length 21.5 mm, paratypes – 20 -22 mm.

This subspecies is connected with *ssp. alexandra* Stgr. (1877) and *ssp. issyka* Stgr. (1877), but can be easy distinguished by reduced red rings around the dots on the upperside. So, the ocelli are widely separated one by one, very small, and black dots on the costal side of the rows (FW and HW) are often not visible. This upperside is even darker than in *ssp. pseudometa*. Any totally black specimen was observed (contrary to *ssp.* melanops) and only one paratype seems to be similar to *ssp. alexandra* (but not the same).

Underside is similar to the upperside and differs very much from *ssp. pseudometa* or *ssp. melanops*. All dots displays of red rings, the median band on the HW is not separated from the base.

Female. FW length – 20 - 21.5 mm.

Distinctions are the same as in male, but the red rings are slightly enlarged and extended towards the discal area. Meanwhile, the whole wing is brownish-dark, not totally reddish, as in *ssp. alexandra*.

Biology. Alpine grasslands.

Distribution. Northern slopes of Zailyisky range, Kazakhstan.

Etymology. This subspecies was named after V. E. Manuev, a painter.

Erebia radians rhea Churkin et Zhdanko, ssp. n.

Holotype: male, N. Tien-Shan, Zailyisky Alatau, Talgar, "skif valley" loc., 3.08.1989, 3200-3400 m, A. Zhdanko leg. Paratypes: 39 males, 9 females, same data.

Description and diagnosis.

Male. Holotype FW length 22 mm, paratypes – 21.5 - 23 mm.

The type of red area on the upperside is the same as in *ssp. uzungyrus* Churkin et Tuzov (2000) but the darkening across the discal cell is not so obvious and the red markings on the HW are slightly smaller.

HW upperside is very different from *ssp. uzungyrus*, with well developed median band, where even the basal line is obvious. This distinction is very unusual for species in general. Submarginal black line is reduced but may be seen sometimes as unclear dark traces. The discal line is very well developed.

Female. FW length 20 - 21 mm.

Same as male with sexual distinctions. Median band on the HW underside is more contrasted.

Biology. Alpine grasslands.

Distribution. Northern slopes of Zailyisky range, Kazakhstan.

Etymology. Rhea – the daughter of Uran and Gea, the mother of Jupiter.

Farsia iris eremita Churkin et Zhdanko, ssp.n.

Holotype: male, Tajikistan, West Ghissar (Zeravshansky Range), Shing R., Khasor-Tchashma Lake, 2800 m, 25.07.1995, S. Churkin leg. Paratypes: 1 male, same data; 1 male,1 female, same loc., 2500-3000 m, 25.07.1993, V. Tuzov leg.; 8 males, 3 females, Tajikistan, Fanskie Mts., 7 km SE Madovra v., Kakistan R., Ruzeravit Mt., 3100-3200 m, 17-25.07.1998, Y. Vasilchenko leg., 1 male, 1 female, same loc., 3100 m, 12-15.07.1998, Y. Vasilchenko leg., 1 male, 1 female, same loc., 3100 m, 25 and 23.07.1997, Y. Vasilchenko leg., 1 female, same loc., 2800 m, Y. Vasilchenko leg.; 6 males, 1 female, Tajikistan, Turkestansky Mts., Yori vic., 2400 – 2800 m, 2.02.1993, S. Churkin & V. Tuzov leg.

Description and diagnosis.

Male. Holotype FW length 13 mm, paratypes – 12 - 13.4 mm.

Different from the nominotypical race, distributed in Alai, by different shape of the wing with more developed apex and by bluish markings on the HW upperside. The size is smaller than F. n. *chernjaki ssp.n.* (see below) but distinctively larger than in typical form.

Upperside is darker than in *F. n. chernjaki ssp.n.* but not monotonous, with unclear grey hue as in typical form. HW upperside with developed dark submarginal line outlined usually by bluish markings.

HW underside much lighter than in typical form, with more or less but always not wholly displayed discal line (in *iris sensu stricto* this line is fully displayed, not so large as in *F. hanna* Evans (1932) but obviously more developed than in other races of this species) and smaller size of the black postdiscal dots. The antemarginal pattern not monotonous, more or less contrasted unlike in *ssp. ashretha* and *ssp. chernjaki*.

Female. FW length 11 -13 mm.

Same as male with sexual distinctions; bluish markings on the HW upperside is always well develped.

Taxonomical notes. The following synonyms were published: "*Lycaena iris* Lang,1884:369…(=*Lycaena sieversi var. haberhaueri* Stgr., 1886…)" (Lukhtanov,1999:148). If we agree that the name given by Lang is valid, we must agree with Tshikololovets who proposed new name for *Lycaena iris* Stgr. (1886:207-208) : "*Polyommatus neoiris* Tshikolovets nom. nov. pro *Lycaena* iris Stgr., 1886 (Tshikolovets, 1997:139)". Last year we mentioned the problem which arised because the book of Lang was practically absent as a reference during the last century (Churkin & Tuzov, 2000).

In new ICZN (1999) the point of view that the old permanently used name should be preserved even more pronounced. In present paper we still prefer to use old Staudinger name of the species (we suppose that the name *iris* Stgr. is a *nomen protectum* under the conditions of ICZN (23.9) but we will discuss it in seprate article).

To ensure stability in the zoological nomenclature (ICZN 1999), it is absolutely necessary to designate lectotype of the nominotypical taxon, i.e. *iris* Stgr. Without this lectotype it is impossible to make any identification within this group, this fact was the origin of many mistakes in recent publications (Tuzov et all., 2000). We designate as a lectotype the specimen which figures on the colour photo in the publication "New blue butterfly taxa (Lepidoptera, Lycaenidae) from Central Asia. Communication V." (Tshikolovets, 1997a: 35-38). It is the male which figures on the photo 7 (upperside) and 8 (underside) bearing the labels "*Iris* Stgr." (written by Staudinger hand), "Origin" and "Margelan Hbhr." This lectotype is deposited in Zoologische Museum Humboldt Universitat. Specific characteristics of this taxon are very well visible on the photo as well as one individual distinction – a small damage on the upperside of the right HW.

The actual distinctions of *iris* Stgr. are as follows: small size with rounded wings and not extended apex, monotonous darkened colour of the upperside without bluish markings, underside with displayed (fully darkened) discal line on the HW, strongly curved postdiscal line on the FW; in general the colour is darker, all dots are slightly enlarged.

We have a series of these butterflies from north Alai (labels: Alai, Dugoba, 13-18.07.1995, S. Churkin leg.); such specimens, we presume, are very rare in collections. On the other side, butterflies from Ghissar with bluish markings on the upperside and not displayed discal line on the HW underside are widely represented in collections and known under the name "*iris*" ("Guide to the butterflies of Russia...", plate 68, figures 13 – 15). We described this taxon as a new one basing on all above mentioned distinctions and because the lectotype of nominotypical taxon was designated.

Biology. Alpine dry places (unknown from low altitudes).

Distribution. Ghissar mountain system including the west end of Turkestansky Mts.

Etymology. "*Eremita*" (Latin) – an anchorite.

Farsia iris chernjaki Churkin et Zhdanko, ssp.n.

Holotype: male, West Pamir, Vanch Mts., Gyshkhun (Gushkhon) valley, 1.08. 1994, R. Gaziev leg.

Paratypes: 15 males, 10 females same data; 18 males, 9 females, same loc., 29.07.1990, 3100 m, S. Churkin leg.; 2 males, same loc., 21-26.07.1992, S. Churkin leg.; 2 males , same loc., 6 and 23.07.1991, 2700-2800 m, S. Churkin leg.; 1 male, 3 females, same loc., 26-28.07.1990, 3200-3300 m, D. Zamolodchikov leg.; 1 male, same loc., 1.08.1990, 3200 m, D. Zamolodchikov leg.; 5 males, 2 females, same loc., 6.07.1991, 2300 m, D. Zamolodchikov leg.; 4 males, same loc., 6.07.1990, 2300 m, D. Zamolodchikov leg.; 1 male, same loc., 5.08.1992, 3000 m, D. Zamolodchikov leg.; 1 male, same loc., 14.08.1992, 3200 m, D. Zamolodchikov leg.; 1 male, same loc., 3.08.1989, V. Tuzov leg.; 1 male, 1 female, West Pamir, Vanch Mts., Langar vall., 2800 m, 26.07.1989, V. Tuzov leg.

Description and diagnosis.

Male. Holotype FW length 13.5 mm, paratypes – 13.3 – 14.5 mm.

New subspecies is distinguished from the nearest subspecies from Ghissar mountain system by slight though distinctive reduction of the antemarginal pattern and slightly reddish hue of the upperside. This reddish hue connects new subspecies with *ashretha* Evans (1925), described from Chitral but the size of new subspecies is larger, the reddish hue is not so obvious, the discal line on the HW underside is not fully darkened and the light-whitish colour between postdiscal row and marginal row are not so developed.

Female. FW length 20 - 21 mm. Same as male with sexual distinctions.

Taxonomic notes. We suppose that *V. ashretha* is a bona species, distributed in N. Afganistan and West Pamir (two subspecies). The areal of this species is separated from that of *F. iris* by the Darwas system inhabited by the shining-red *Farsia.* The butterflies represented in the second volume of "Guide to the butterflies of Russia..." (2000) as "*Vacciniina iris ashretha*" (Khorog loc., plate 68, 16 – 18) and as "*V. jurii*" (South Pamir, plate 68, 22 – 23) are the same (evidently, they are not *F. jurii*).

Biology. Dry stony slopes on different altitudes.

Distribution. North-West Pamir.

Etymology. This subspecies was named after I. Chernjak, the amateur lepidopterologist, good man and our companion in many expeditions.

***Farsia iris petrovi* Churkin et Zhdanko, ssp.n.**

Holotype: male, Kyrghyzstan, Matcha mountain system (Turkestansky Mts,), Ak-Terek river, Noo-Dzhailo valley, 2400-2800 m, 1 – 10.07.1999, A. Petrov leg. Paratypes: 3 males, same data, A. Petrov & V. Pletnev leg., 4 males, same loc., 10-17.07.1999, leg. A. Petrov; 2 males, same loc., 15 km SW Korgon v., 2800 m, 8.07.1998, A. Petrov leg.; 1 female, Kyrghyzstan, Sokh R., Dzhoopaja v., Kyzyltash loc., 28.07.1999, 1800 m, A. Petrov leg.; 5 males,2 females, same loc., 2200 m, 6-17.07.2000, A. Petrov leg.

Description and diagnosis.

Male. Holotype FW length 13.6 mm, paratypes – 13.4 – 13.9 mm.

Easily distinguished from nominotypical form (TL: Alai) by practically black upperside which is very similar to that of *F. hanna* Evans (1932). Moreover, the submarginal part of the HW upperside does not display bluish markings and unclear dark markings.

Underside FW shows the postdiscal row which is only slightly s-formed, i.e. the row is not so curved or even straight; any black dot of this row lies closer to the discal spot than to other dots of the row. The dots on the underside are as in *ssp. eremita* and distinctively smaller than in nominotypical form. The discal line on the HW underside is more developed than in *ssp. eremita* but not fully displayed as in typical race.

Female. FW length 20- 21 mm. Same as male with sexual distinctions available, bluish markings on the HW upperside are sometimes developed.

Biology. Dry stony slopes, altitudes vary substantially from 1600 to 2800 m (and even lower than 1600 m).

Etymology. This subspecies was named after Dr. A. V. Petrov, professional entomologist who worked in Matcha mountain system during the last years despite the danger of terrorism in this area and very hard conditions of the trips.

***Agriades pheretiades lara* Zhdanko et Churkin, ssp.n.**

Holotype: male, Kyrghyzstan, W. Tien-Shan, Chatkal Mts., Chapchama Pass, 18.07.2000, A. Klimenko leg. Paratypes: 31 male, 16 female, same data; 2 males, 1 female, same loc., K. Kolisnichenko leg.; 11 male, 5 female, Kyrghyzstan, West Tien-Shan, Chandalash Mts., Chakmak-Su R., 2300-2700 m, 14-17.07.2000, A. Klimenko leg.; 4 males, 4 females, same loc., 2500-2800 m, 15-18.07.2000, K. Kolesnichenko leg. ; 24 males, 6 females, Chatkalsky Mts., Aktash vic., 22.07.1965, Kuzjakin leg.

Description and diagnosis.

Male. Holotype FW length 12.5 mm, paratypes – 12 - 13 mm.

Easily distinguished from *A. p. pheres* Stgr. (1886), inhabiting the Alai system and Inner Tien-Shan, by silvery shining on the upperside with greenish hue and narrow black margins which are not extended towards the discal space.

The underside with very reduced black pattern, usually only 1-3 dots are visible. Antemarginal dots are reduced.

Female. FW length – 12 - 13 mm. Similar to female from Alai Mts., with usually developed discal line on the upperside of the HW but with strong reduction of the antemarginal pattern on the underside.

Habitat: alpine grassland with *Androsace* on different altitudes.

Distribution: West Tien-Shan.

Etymology. "*Lara*" ("Laranda", Latin) – a nymph.

***Agriades pheretiades sveta* Zhdanko et Churkin, ssp.n.**

Holotype: male, N. Tien-Shan, Zailyisky Alatau, Kaskelen R., 3300-3500 m, 17.07.1995, A. Zhdanko leg. Paratypes: 30 males, 20 females, same data.

Description and diagnosis.

Male. Holotype FW length 11.1 mm, paratypes – 10.8-11.8 mm.

Easily distinguished from the closest *A. p. pheres* Stgr. from Alai and Inner Tien-Shan by extended black margins with unclear inner border and faded, dirty blue colour the upperside. The discal lines are less developed and sometimes even absent on the HW. Smaller than all other races, especially if compared in size with nominotypical form from Dzhungaria. The new form differs from the above mentioned also by the absence of deep shining on the upperside, more or less reduced discal lines and totally black pattern.

From *ssp. tekessana* Alph. (1897) it differs by not so extended black markings and small size.

Female. FW length – 11 -12 mm. Similar to female from Alai Mts. and Inner Tien-Shan though statistically its underside is lighter. The discal line on the HW uppperside is always absent contrary to all other forms where this line is present as a rule and only rarely reduced.

Taxonomic notes. Noteworthy, that *A. p. tekessana* does not figures in the "Guide to the butterflies of Russia..." Actually, the butterflies presented under this name (see plate 74, ff. 52 - 54) belong to *ssp. pheres* Stgr., as all populations from Inner Tien-Shan. The actual *ssp. tekessana* is very large with very widely extended black margins and strong shining on the base of the wing. This butterfly is very rare in collections, its inhabits the Eastern Tien-Shan in China. Within the territory of the former USSR it is known only from Bajankol R. in the Eastern Kirgizian edge of Terskey Alatau.

Habitat: alpine grassland with *Androsace*. Only high altitudes.

Distribution: northern slopes of Zailyisky Alatau.

Etymology. "*Sveta*" – Russian woman name.

Boloria sipora klimenkoi Churkin et Zhdanko, ssp.n.

Holotype: male, Kyrghyzstan, W. Tien-Shan, Chatkal Mts., Sary-Chelek Lake, Aflatun & Sary-Chelek R., 3200 m, 2.08.1998, A. Klimenko leg.

Paratypes: 2 males, same data; 3 males, 3 females, same loc, 25 – 31.07.2000, A. Klimenko leg.; 35 males, 15 females, W. Tien-Shan, Chatkal Mts., Sary-Chelek Lake, Aflatun R., 27.07.1997, A. Klimenko leg.

Description and diagnosis.

Male. Holotype FW length 21 mm, paratypes – 18 - 22 mm.

Differs from *B. s. generator* Stgr. (1886) by deep red colour and perfectly developed black pattern which always contain the discal row of black spots. *Ssp. generator* populates the whole territory of the North and Inner Tien-Shan (at least) and displays a reduced discal row of spots and lighter orange colour of the upperside. *Ssp. generator* have small markings, more or less reduced if compared with new subspecies; even if all dots are present, they do not form such a complete pattern as in Europaean Boloria and as in new subspecies. The intermediate populations are observed at the Suusamyr range but we suppose that Chatkal form should be described as a subspecies. There are no reasons to consider these butterflies as an ecological form. Such populations known only from West Tien-Shan inhabiting different latitudes and intermediate zone are very insignificant.

Females are more similar to *ssp. generator* but the black pattern is also enlarged and fully complete. FW length – 19-23 mm.

Biology. Alpine grasslands.

Distribution. West Tien-Shan.

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Резюме.

Чуркин С.В., Жданко А.Б. **Новые таксоны Rhopalocera (Lepidoptera) из Средней Азии.**

Erebia meta pseudometa Churkin et Zhdanko, ssp.n. (хребет Суусамыр), *E. meta manuevi* Churkin et Zhdanko, ssp. n. (Заилийский Алатау), *E. radians rhea* Churkin et Zhdanko, ssp. n (Заилийский Алатау), *Farsia iris eremita* Churkin et Zhdanko, ssp.n. (Западный Гиссар, р. Шинг), *F. iris chernjaki* Churkin et Zhdanko, ssp. n. (Ванчский хребет), *F. iris petrovi* Churkin et Zhdanko, ssp. n. (Матчинская горная система), *Agriades pheretiades lara* Zhdanko et Churkin, ssp. n. (Чаткальский хребет), *A. pheretiades sveta* Zhdanko et Churkin, ssp. n. (Заилийский Алатау) и *Boloria sipora klimenkoi* Churkin et Zhdanko, ssp. n. (Чаткальский хребет) описываются в данной статье. Обсуждается таксономическая ситуация в роде *Farsia* Zhdanko. Выделен лектотип таксона *Lycaena iris* Stgr., 1886 (=*Polyommatus neoiris* Tshikolovets nom. nov.).