

A new subspecies of *Polyommatus thersites* (Cantener, 1835) (Lepidoptera, Lycaenidae) from Peter the Great Range

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Introduction

The subspecific structure of *Polyommatus thersites* (Cantener, 1835) in Central Asia is not seriously studied. In the "Guide to the butterflies of Russia and adjacent territories" edited by V. Tuzov (2000) it was marked that an undescribed subspecies occurs in Darvaz zoogeographical district. This butterfly figured on the plate 76, figs.34-36. Unfortunately, the material was not enough to make a final decision about the status of the mentioned butterfly. During our work in Kyrgyzstan, we found a population of *thersites* at northern part of Fergansky Range being very similar to darvazian specimens. The series was also small. Only in 2003 we received enough specimens from Peter the Great, collected by A. Petrov. The study confirmed the subspecies status of this macro population.

According published point of view, Asian part of Russia and Russian Central Asia populates by the subspecies *orientis* Sheljuzhko, 1928 (nomen nova pro *orientalis* Chapman, 1913 : 675). Chapman based his "geographical variation" on the specimens originated from "Tianshan" and "Ongodai". A specimen from Ongodai was designated as a lectotype by Balint (1999: 49). In addition, another specimen with the label "Khingang" was treated as a paralectotype under the opinion that this specimen was examined by Chapman. According to strange Balint's remark, Khingang must be situated in East Tien Shan and meant "Tianshan" in original description of *orientalis*. Actually, Khingang is a Range in Russia and Mongolia/China – and we can not be sure that this specimen is a paralectotype as Balint designated. Fortunately, the lectotype designation is valid.

We studied a long series of *P. thersites* from Altai and not found any serious differences with nominative taxon. The butterflies is nearly identical to European specimens as well as series from East Kazakhstan or Zailiysky Alatau (the results of the study will be discussed below). Thus, *P. thersites* (Cantener, 1835) = *P. thersites orientis* Sheljuzhko, **syn. nova**.

The holotype and paratype of the new taxon are deposited in the Museum of the Zoological Institute of the Russian Academy of Sciences (St. Petersburg). The paratypes are located in the collections of the authors and V. Tuzov, G. Samodurov and A. Dantchenko (Moscow).

Polyommatus thersites petrovi ssp.n.

Holotype: male, Tajikistan, Peter the Great Range, 23 km SE Tadzhibobod, Ganishou v., 20-30.06.2003, A. Petrov leg. Paratypes: 43 males, 1 females, same data; 2 males, same loc., 2200 m, 8-11.07.1980, G. Samodurov leg.; 1 female, same loc., 5.07.1987, L. Chernyshev leg.; 8 males, Tajikistan, Peter the Great Range, Darai-Nazarak v., 1-10.07.2003, O. Pak leg.; 1 male, same loc., 2400 m, 19.07.1972, Yu. Yu. Shchetkin leg.; 5 males, 4 females, Fergansky Range (northern edges), Karasu Lake, 2200-2500 m, 2-7.07.2001, S. Churkin & A. Zhdanko leg. The paratypes are figured at the pl. 76, figs.34-36 in Tuzov et al. (2000).

Description and diagnosis. Male. The FW length is 16 mm in the holotype and 14.5-16.5 mm in the paratypes. The size is slightly larger than in Tien Shan representatives of nominative subspecies. The ground colour of the upper side without obvious reddish tinge unlike ssp. *thersites* because it is more deeper violet.

HW underside is dirty-gray – obviously different than in ssp. *thersites* (and, at the same time, without brownish hue: the colour in nominate taxon varies from whitish to brownish). FW

underside with more or less but distinctively reduced antemarginal pattern. This distinction joined with the reduction of the size of the spots in postdiscal series: if in nominate subspecies these postdiscal spots are obviously larger than the postdiscal spots on the HW underside, in ssp. *petrovi* FW spots has the same size or only very slightly larger. Two mentioned distinctions are the most important. In addition, HW underside often with distinctively yellowish (not bright orange) antemarginal markings. Male genitalia seems to be very similar to that of other subspecies.

Female. FW length is 14.7 – 16.5 mm. The underside has the same distinctions as males, only the reduction of the size of the postdiscal spots and antemarginal pattern on the FW is not so obvious. At the same time the upperside is much darker than in nominate taxon, orange submarginal markings reduced and often absent at all (the specimens from Fergansky Range has more developed orange markings).

Habitat and biology. Rich grasslands at the medium altitudes. Host plant is *Onobrychis* sp.

Distribution. During the work we studied a lot of material originated from the many localities. The characters of nominate subspecies were found in individuals from European part of Russia (many places), Ukraine (Kharkov, Crimea, etc.), North Caucasus (Mineral'nye Vody, Dagestan), Transcaucasia (Georgia, Armenia, Azerbaijan), South Ural (Bashkiria, Orenburg City), Altai, Tuva (Sayany), Saur, Dzhungarsky Alatau, Zailiysky Alatau. The specimens from Kungey Alatau and Terskey Alatau (margins of Issyk-Kul Lake) are little bit different from typical *thersites*, but it is nearly impossible to formulate it in taxonomic distinctions.

We need to remember that name “orientis” usually applied to mentioned “Tien Shanian” populations – while many collectors suggested that populations from Altai or Saur belongs to the nominative taxon. The designation of the lectotype of *orientalis* (= *orientis*) from Ongudai (Altai) results in the situation, that the populations from Issyk-Kul has not valid name. At the same time, we believed, that it is not necessary to describe these populations.

The differences between *petrovi* and nominative subspecies including butterflies from Issyk-Kul Lake are much more expressed than between typical *thersites* and *thersites* from Issyk-Kyl. At the same time, some important differences were found into the areal of *petrovi*. The butterflies from Fergansky Range looks nearly identical to Darvazian – but the females is not so dark and has normal orange markings on the upper side (we have no material from Alai, but it is surely that this range must be populated by new subspecies). The specimens from West Tien-Shan (Pskemsky Mts.) and Suusamy Range looks similar to Ferganian but some individuals more or less intermediate between *petrovi* and *thersites* and has more variable characters than typical population from Peter the Great. It is possible to treat the populations from Fergansky Range and West Tien Shan as other (undescribed) subspecies than *orientis* and *petrovi* – with combined characters between two mentioned taxa (males as in *petrovi* and females as in *thersites*), but we prefer to include this territory into the distribution of *petrovi* with remark about existed cline of characters. In addition, we have two males from Naryn (Inner Tien Shan) which are also similar to the northern variant of *petrovi*. Probably, the northern populations of *petrovi* has some hybridization with nominative taxon. On the other hand, *P. thersites* is very rare and even absent in collections from the territory between known areals of *thersites* and *petrovi* – it is former isolation zone which still not fully populates by the species.

Noteworthy, that such a situation recalling the known facts of the distribution of some rare “darvazian” species: *Melitaea kotshubeji* Sheljuzhko, 1929 populates absolutely the same territory and has two subspecies here – one in Darvaz and another distributed from Fergansky R. to West Tien Shan. A similar situation known after study of *M. enarea* Fruhstorfer, 1917 and *M. sultanensis* Staudinger, 1886 (Kolesnichenko, 1999; Kolesnichenko, Churkin, 2003).

Interesting form was found at the northern slopes of Kirgizsky Range, where the butterflies (especially the females) presents a most “dark” form of ssp. *thersites* with distinctively brownish underside – such a colouration actually presents the most different variant comparing with gray underside of *petrovi* and and the same time differs from normal Tien Shan butterflies.

We can conclude that, in our opinion, two variants of the subspecies structure of *thersites* are possible:

1. only two subspecies, one of which populated Darvaz (the material from Ghissar is not available), Alai, Fergansky range and valley of Naryn River (i.e. from northern part of Fergana valley till to Inner Tien Shan) with tributaries (Suusamyр valley) and West Tien Shan – nominative subspecies populates Europe (and, for our opinion, Caucasus and Transcaucasia) wide zone across Ural, Altai and mountains of the East Kazakhstan, northern slopes of Tien-Shan as well as mountains bordered Issyk-Kul Lake.
2. The hiatus between subspecies is much smaller, in this case the populations inhabits Issyk-Kul must be treated as a separate subspecies (and may be population from Kirgizsky Mts. also!) as well as areal of *petrovi* must be separated in 2 taxa – typical *petrovi* from Darvaz and another populates the rest part of the areal.

In this case we prefer the first system because in another system the taxonomic identification of individual will be practically impossible because the individual variability will be masked the geographical distinctions.

Etymology. The taxon is named after Dr. A. Petrov, professional entomologist and good man, which expeditions to the most hard and unexplored territories are very effective.

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Резюме

Жданко А.Б., Чуркин С.В. Новый подвид *Polyommatus thersites* (Cantener, 1835) (Lepidoptera, Lycaenidae) с хребта Петра Великого.

Polyommatus thersites petrovi ssp.n. описывается по сборам с хребта Петра Первого (Таджикистан). Ареал нового таксона простирается до Ферганского хребта и Западного Тянь-Шаня. Таксон *orientis* Shleljuzhko, 1928 (= *orientalis* Charman, 1913) является синонимом номинального подвида *P. thersites* (Cantener, 1835), чей ареал в Азии включает Урал, Алтай, Саур, Джунгарию и Северный Тянь-Шань.