

New subspecies of *Parnassius nomion* from Northern Kazakhstan

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Abstract. The new subspecies *Parnassius nomion bayansulu* **ssp. n.**, described from Northern Kazakhstan (the Bayan-Aul Mountains), represents an isolated population, strongly separated from the main distribution area, with a number of external characters that readily distinguish it from the related subspecies *Parnassius nomion korshunovi* Kreuzberg & Pljustsh, 1992.

Introduction

While processing material from the territory of the Pavlodarskaya oblast (Northern Kazakhstan), RVY found a small series of *Parnassius nomion* Fischer de Waldheim, 1824, collected in the Bayan-Aul Mountains (the Bayan-Aul State National Nature Park) (Fig. 1) (Titov & Tarasovskaya 2009). This finding widens the distribution of this species in the Eastern Palaearctic to the southwest and represents a population (Fig. 2) somewhat isolated from the main area of the species' distribution, which is almost unbroken in Eastern Siberia and Manchuria and extends to the Urals. The individuals belonging to this population can be easily distinguished from those from other *P. nomion* populations and hence we describe here a new subspecies from this material.

Abbreviation list:

RYB	collection of Roman Yakovlev (Barnaul, Russia)
SZMN	Siberian Zoological Museum (Novosibirsk, Russia)
RECPU	Research Centre for Environmental Monitoring at Pavlodar State University named after S. Toraigyrov (Kazakhstan)

Parnassius nomion bayansulu **ssp. n.**

(Figs 3–6)

Material. Holotype, ♂, Kazakhstan, Pavlodar Reg., Bayan-Aul distr., Bayan-Aul Mts., near Sabyndykol' lake, 10.VIII.2007, leg. Kaman Ulykpan (SZMN). Paratypes: 3 ♂♂, 1 ♀, same data (RECPU, RYB).

Description. Forewing length (base-apex) 35 mm in male and 36 mm in female. Ground colour pale-cream, almost white. Forewing broad, rounded apically; basally with a small shaded area; a dense suffusion of black scales along costa; discal cell with two large black spots, one in center, one in cell apex; three postdiscal spots, one in M1–M2, one in Cu2–2A (sometimes with red centre in males), and one in R2+3–



Fig. 1. Bayan-Aul Mts., June 14, 2009 (photo by S. Titov).



Fig. 2. Distribution of *Parnassius nomion* Fischer de Waldheim, 1824 (western part of the range).

R4 cell (always red-centred); submarginal row forming an almost uninterrupted grey band; marginal area broad, covered with sparse grey scales, semitransparent, with white dashes between veins. Hindwing with a pair of red, white-centred spots bordered with black; anal margin with broad irregular black area; along anal edge towards tornus with an elongate black spot that is usually separated with a pale interspace at vein Cu2; submarginal row consisting of semicircle with somewhat defined spots; marginal zone with grey semitransparent spots at veins and broad white areas between them; fringe black at veins, with small white interspaces between them. Hindwing underside pattern almost identical to upperside, except for small red black-edged spots basally and two red black-edged spots corresponding to the elongate one on upperside anal area; spot in cell Cu2–2A often with white centre. Female with widened grey and black elements and enlarged red spots compared to male; small sphragis.



Figs 3–6. *Parnassius nomion bayansulu* ssp. n.: ♂, holotype, upperside (3) and underside (4) (SZMN); ♀, paratype, upperside (5) and underside (6) (SZMN).

Notes. The new subspecies is very different from the subspecies *korshunovi* Kreuzberg & Pljustsh, 1992 reaching the west part of the range of this species (the Altai and the Sayans). The type series includes several specimens from the Middle and Northern Urals (Kreuzberg & Pljustsh 1992). The Ural *P. nomion* subspecies' membership cannot be confirmed because we have not studied the material and, in spite of the fact that the Ural fauna is well studied, this noticeable species has not been found in the Urals recently. That is why (taking into account questionable specimens found in the Urals) the latest literature attributes subspecies *korshunovi* (the holotype occurs in the Altai Mountains near the Katun' river) to the population from the Altai-Sayan mountain area (Korshunov & Gorbunov 1995, Sorimachi 1995, Kaabak et al. 1997, Yakovlev & Nakonechnyi 2001, Korshunov 2002, Korb 2005, Zhdanko 2005). Several publications synonymize *korshunovi* as a nominate subspecies, described from Dauria (Weiss

2005, Tshikolovets et al. 2009). The material collected farthest to the west of Altai was in the suburbs of Zyryanovsk and in the mountains between the Buhtarma and the Naryn rivers (Zhdanko 2005, Lukhtanov et al., 2007).

Diagnosis. The new subspecies differs from the related *korshunovi* Kreuzberg & Pljustsh, 1992 in the following characters: 1) the presence of the red-centered black spot in cell R2 + 3 – R4 on the forewing in both males and females; 2) the clearer sub-marginal row of dark spots on the hindwing in males; 3) the better defined black spot in the cell M1 – M2 on the forewing; 4) a slight increasing of dark elements of the pattern in general.

Etymology. The new subspecies is named after a legendary Kazakh beauty Bayan-Sulu, who according to legend washed her hair in the Sabyndy-kol' lake.

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