

## New taxa of blue butterflies (Lepidoptera, Lycaenidae) from Tien Shan

A.B. Zhdanko

Institute of Zoology, Akademgorodok, Almaty, 480060, Kazakhstan

The present paper has been prepared in the course of study of lepidopteran collection deposited in the Zoological Institute of Russian Academy of Sciences, St.-Petersburg (ZIN). The holotypes and paratypes of the new species are preserved in ZIN. Basic bibliography has been studied as well (D'Abrera, 1993; Zhdanko, 1993a, 1995, 2000; Zhdanko, Churkin, 2001). Figures in the text are original.

### *Thersamonolycaena zaure* Zhdanko, sp. n.

**Material.** Holotype ♂: Aksu R., Tien-Shan, [W. China, southern slopes of Kokshaaltau meeting Range], 06.1912 (Rujkbeil leg.). Paratypes: 3 ♂ ibidem, together with holotype (Rujkbeil).

**Diagnosis.** The most close to *Thersamonolycaena kasyapa* Moore and *T. zariaspa* Moore; readily distinguishes from both species by several characters. Apical and central spots in the discal cell on upper forewing side are larger, outer side border of black postdiscal spots is not rounded, upper point of postdiscal row on hind wing reduced, arms of gnathos short, uncus shorter and narrower, valva longer and narrower before its top.

**Description.** Male (holotype). Wing length 16.3 mm (16.1-16.4 mm in the type series). Antennae long, exceeding the top of cell. Antennal club elongate, black. Fringe on the both wings black basally and brown on the outer side. Upper wing side orange-red with violet sheen; its basal part with one black spot. Apical discal cell spot large, almost square. Postdiscal row S-shaped, consists of distinct black spots. Central spots spread along whole wing. The width of the black wing margin by its edge 2.5 mm, near the top 3 mm; its inner edge vague. Hindwing orange-red. Apical black spot of discal cell distinct, elongate. Postdiscal row consists of distinct black points, upper ones reduced. Anal part darkened. The width of the black wing margin by its edge about 3 mm. Underside forewing bluish-green, but the space between postdiscal and antemarginal regions is pale orange. Points as on upper wing side. Antemarginal black strokes developed only in lower wing part. Underside of hindwing side bluish-green. Male genitalia (Fig.1) are most close to *T. zariaspa* (Fig.2), but tegumen is broader, uncus and saccus are shorter, arms of gnathos are slightly curved. Juxta with shorter lateral branches. The distal part of valva is narrower near its top, the last is dentate. Top with teeth. Aedeagus curved proximally and slightly curved up distally.

Female unknown.

**Etymology.** Turkic woman's name meaning the "morning star", i.e. Venus.

### *Pamiria margo* Zhdanko, sp. n.

**Material.** Holotype ♂: Aksu R., Tien-Shan, [W. China, south slopes of the Kokshaaltau meeting Range], 06.1912 (Rujkbeil leg.). Paratypes: 5 ♂ ibidem, together with holotype (Rujkbeil).

**Diagnosis.** The most close to *Pamiria galathea* Blanchard but distinguishes by the following characters. Upper forewing side usually narrower, hindwing underside is more green, valva is longer and narrower, its inner membrane is larger, proximal part of arms of gnathos is broader.

**Description.** Male (holotype). Wing length 16.6 mm (14.5-16.6 mm in the type series). Antennae long, exceeding the top of cell. Antennal club elongate, black. Inner part of the fringe on the both wings darkened, its outer part is snow-white. Upper wing side is violet-blue, with black margins. The width of the black margins is variable and rarely exceeds 1.5 mm. Anal part of the hindwing is darkened. Forewing underside is grey, postdiscal points small. Postdiscal row slightly S-shaped. The antemarginal pattern reduced. Marginal area almost white, with sparse bluish-green scales. Hindwing underside bluish-green. Apical white line distinct. Postdiscal row is completed and consists of white points. Male genitalia (Fig.3) are most close to *P. galathea* (Fig.4). Vinculum is thin and slender, tegumen ordinary, uncus thickened, with longer and narrowed distal part, arms of gnathos are sharpened and curved in the middle part, hamate on the top. Juxta is thick, with longer lateral branches. Valva is longer and narrower, denticulate on the top along its border. Inner membrane of valva is larger than in *P. galathea* (Fig.5, 6). Aedeagus is cylindrical, shorter than 1/2 of the valva.

Female unknown.

**Taxonomic notes.** *Pamiria margo* is the single species of this genus, occurring in Tien-Shan.

**Habitat and biology.** Unknown, but probably such as in closely related species of the genus *Pamiria*. Its caterpillars live on various grass species of the genus *Astragalus*.

**Etymology.** This species is named in honour of psychologist Margarita Alekseevna Nam. 115

*Plebejus arina* Zhdanko, sp. n.

**Material.** Holotype ♂: Aksu R., Tien-Shan, [W. China, south slopes of the Kokshaaltau meeting Range.], 06.1912 (Rujkbeil leg.). Paratypes: 5 ♂ ibidem, together with holotype (Rujkbeil).

**Diagnosis.** The most close to *Plebejus maidantagi* Zhdanko, but distinguishes from the last by the following characters. Male upperside is more violet, underside of wings is grey, postdiscal row slightly S-shaped, black dots on the underside of hindwing more developed, arms of gnathos short, uncus short, valva narrow.

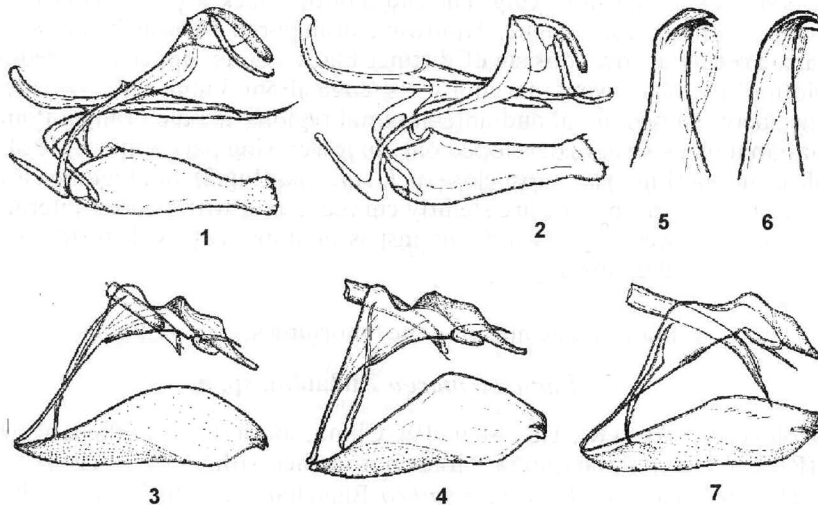
**Description.** Male (holotype). Wing length 14.3 mm (13.4-14.3 mm in the type series). The upper side is violet-blue. The black wing margins are narrow, but broader than in *P. maidantagi*. Fringe on the both wings black basally and white on the outer side. The underside is grey (in *P. agnatus* coffee-colored). The forewing underside with black discal line, the postdiscal row slightly S-shaped. The antemarginal pattern is slightly developed only in the central part and consists of more or less reduced small separated spots with yellowish markings; besides, all spots have metallic scales (in *P. maidantagi* metallic spots are large). The bluish basal suffusion on the hindwing underside is poorly developed; the postdiscal black dots are small. Male genitalia in Fig.7. Uncus is compact and thickened, with short narrowed distal part. The branches of gnathos are shorter than in *P. maidantagi*, valva narrower than in the last species, but broader than in *P. agnatus*. Aedeagus shorter than valva, slightly curved in its distal part. Juxta longer than in *P. maidantagi* and *P. agnatus*.

Female unknown.

**Distribution.** Probably only in the valley of Aksu River.

**Habitat and biology.** Unknown, but it is no doubt very similar to *P. rogneda* with *Hippophae rhamnoides* as a host plant. Important to note that the new species flies together with *P. agnatus*.

**Etymology.** Old-russian woman's name.



**Figs. 1-6.** Male genitalia from the genera *Thersamonolycaena* Vrtv., *Pamiria* Zhd., *Plebejus* Klug (lateral view) and details of their construction: 1 – *T. zaure*, sp. n. (holotype), 2 – *T. zariaspa* Moore; 3 – *P. margo*, sp. n. (paratype), 4 – *P. galathea* Blanchard (Gorai, NW India); 5 – *P. margo*, sp. n. (paratype), top of the valva (ventral view); 6 – *P. galathea* Blanchard (Gorai, NW India), top of the valva (ventral view); 7. – *Pl. arina*, sp. n.

## References

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