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A new species of *Thersamonolycaena* from Tadjikistan

(Rhopalocera, Lycaenidae)

by

SERGEI V. CHURKIN

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Summary: *Thersamonolycaena aelides* spec. nov. is described from the Fanskie Mountains (Tadjikistan, Ghissar mountain system). The closest species, *T. aeolus* WYATT originates from the West Pamir. The new species is distinguished from the former by not-elongated wings as well as a different pattern of the black spots, characteristics of the valva and the groundcolour of the wing underside in females.

Introduction

The new species has been collected by JURY and ANATOLY VASILCHENKO, Ukrainian amateur entomologists, during their trips to the Fanskie Mts. twice in 1997 and 1998. Only one specimen was collected in 1997, while the second expedition was much more successful. We presume that such an unusual quantity of specimens collected is the result of a uncommon climatic situation during the last two years – and, of course, of hard working abilities of both collectors. The Fanskie Mts. are situated between the Ghissar and Zeravshan ranges.

The type material will be deposited in the Zoological Museum of the Moscow State University and also in the private collections of JURY and ANATOLY VASILCHENKO and that of the author.

Abbreviations

FW – forewing

HW – hindwing

Thersamonolycaena aelides spec. nov.

Type material. Holotype ♂: Tadjikistan, Fanskie Mts., 15 km SW from Madovra v., Kulikalon Lake, 3200 m, 28.VII.1998, leg. Yu. VASILCHENKO.

Paratypes: 158 ♂♂, 71 ♀♀, same locality, 3200–3600 m, 28.VII.–2.VIII.1998, leg. Yu. & A. VASILCHENKO; 1 ♀, same locality, 30.VII.1997, leg. Yu. VASILCHENKO.

Description

Male. Holotype (colour plate IVb, fig. 1): FW length 13.4 mm, paratypes: 13–14.2 mm, usually 13.3 mm (30 specimens have been measured).

The upperside is dense golden-red with a black margin and white fringes. The red colour is distinctly deeper than in *T. aeolus*. The wing shape is not elongated, the appearance of the butterflies is conventional.

FW upperside. The pattern of black spots is similar to that of *T. aeolus*: the first apical series consists of four spots and another series of 2–3 spots. Two spots are present on the discal cell.

The spot situated between vein M3 and Cu1 is notably displaced towards the big spot on the external side of the cell. As a result the second series of spots is separated from the apical series forming actually one line with the bigger cell spot.

HW upperside with one spot in the cell and two series of submarginal spots (3 spots in each series). Groundcolour with bluish-grey suffusion; only several paratypes have a vague yellowish area at the middle of the wing.

FW underside (colour plate IVb, fig. 5) with bluish-grey suffusion, spot pattern the same as on the upperside. The second series of submarginal spots forms one line with the cell spot, this line being actually parallel to the apical series of spots.

HW underside with dense bluish-grey suffusion. The pattern of the spots is similar to that in *T. aeolus* but the distance between the M3-Cu1 submarginal spot and the cell spot is shorter than that to the previous submarginal spot (between M-veins). In the case of *T. aeolus* the situation is the opposite. Here the distance between the M3-Cu1 and M2-M3 spots is shorter—as a result the whole appearance of the pattern is quite different.

Genitalia (figs. 1a, b, e, g, i): the length of the valva correlates to the maximum width as 2:0.8. Valva with one big and many small spines. Aedeagus with a distinctive narrowing in the medium part; the distal part narrow with small and practically not-curved edge.

Female (colour plate IVb, fig. 3): length of the FW 14–15 mm, usually 14.3 mm (20 specimens measured).

All specific characteristics are present: the whole shape of the wing is not elongated, the displacement in the position of the M3-Cu1 black spot is even more visible.

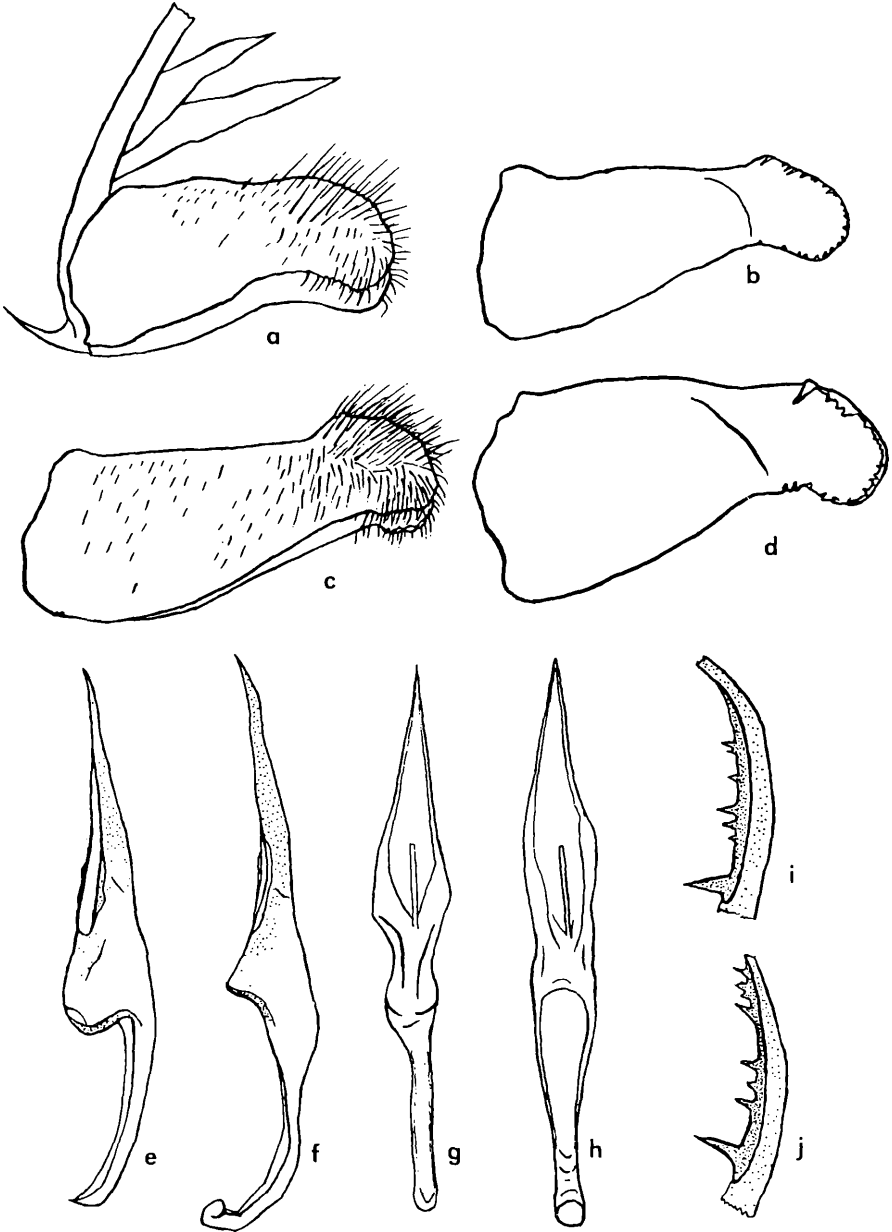
All black spots are enlarged and elongated to the inner surface of the wing (in *T. aeolus* this feature is represented only as an aberration). The brightest female is figured on the plate (colour plate IVb, fig. 2).

The HW upperside is obscured totally and without any reddish band on the marginal side; tracks of red markings may be traced but this situation is very uncommon. The violet iridescence on the groundcolour is practically absent in the new species but clearly visible in *T. aeolus*. HW underside (colour plate IVb, fig. 4): the colour is bluish-grey, as in the male – in contrast to the female of *T. aeolus*, which is clear yellowish without dense bluish suffusion.

Diagnosis

The new species occurs in another mountain system than *T. aeolus* WYATT. Series of the last species from Shugnansky and Ishkashimsky ranges (West Pamir) were studied. *T. aeolus* is distinctly larger (male usually 15 mm, female – 16 mm) with a well known elongated shape of the wing, the red colour of the upperside (colour plate IVb, fig. 7) is not so deep but usually (especially in females) with a violet iridescence. The bluish-grey suffusion on the underside (colour plate IVb, fig. 8) is not so extensive – the male with a yellowish area on the FW (absent in the new species) and the female with a completely yellowish surface. The M3-Cu1 black spot is actually not much displaced on each wing: the second series of submarginal spots does not

Fig. 1: Male genitalia of *T. aeolides* spec. nov. (a, b, e, g, i) and *T. aeolus* (c, d, f, h, j): a, c – valva, lateral view; b, d – valva, inside lateral view; e, f, g, h – aedeagus; i, j – part of the spined area on the valva (*T. aeolides* – holotype, Tadjikistan, Fanskie Mts., 15 km SW from Madovra v., Kulikalon Lake, 3200 m, 28.VII.1998, leg. Y. VASILCHENKO; *T. aeolus* – Tadjikistan, Pamir, Ishkashimsky Mts, nearIshkashim, 18.VII.1984, 3100 m, V. Tuzov leg.).



form one line with the bigger cell spot, all submarginal black spots are ranged within one wavy line. The female of *T. aeolus* (colour plate IVb, fig. 6) has a reddish band or a series of spots on the marginal border of the HW, quite obvious when the surface of the wing are darkened—in the new species only the brightest female has traces of red markings (colour plate IVb, fig. 2). Some characteristics of the upperside in the new species are similar to *T. kasyapa* MOORE, but the underside of the last species without spots is quite different (SEITZ, 1909).

The total structure of the male genitalia of this group was pictured by SAKAI (1981) and by ZHDANKO (1993). Meanwhile it's worth to be noted, that the genitalia of *T. aeolus* as examined in the last article is very similar to that of the new species. The article did not contain any records about the locality. We dispose of verbal confirmation by A. ZHDANKO that he has dissected only one specimen, probably from the Turkestan Mts. This means that it might be actually *T. aeolides*.

A good picture of the genitalia of *T. aeolus* is given in the publication by SAKAI, only the proportion of the valva is not correct as a result of an unusual picture taking point. Our dissection provides the following distinction between the new species and *T. aeolus* (figs. 1c, d, f, h, j): the total size of the genitalia is larger, except the size of the aedeagus which is the same. The valva is bigger, the relation total length to maximum width is 2: 1 or even more, the spines are bigger and stronger. A lot of little differences between the species can be observed, but for practical determination the most important distinction is in the aedeagus. In *T. aeolus* the aedeagus has a strong curved distal part ending with a small but distinct bulb on the end. This distal part is not narrow, enlarging from the edge toward the medium part. The medium part has no strong narrowing, the proximal part is of a different shape.

The genitalia of *T. kasyapa* has an unusual distal part of the aedeagus – very much curved at the edge and very long – twice as long than in *T. aeolus* (ZHDANKO, 1993). Totally, if we compare the genitalia of the three related species *T. aeolides*, *T. aeolus* and *T. kasyapa*—we disclose one enlarging row of the distal part of aedeagus.

Biology

T. aeolides spec. nov. was discovered on stony slopes close to small rocks.

Etymology

The name of the new species is designed in a way to show the relationship between the new species and *T. aeolus*.

Acknowledgments

Gratitude to JURY M. VASILCHENKO and ANATOLY M. VASILCHENKO for providing material of the expeditions and for some very important advice during this work. Special thanks to VASILY TUZOV, ALEXANDER ZHDANKO and GENRIKH SAMODUROV who were also very helpful as well as to IGOR CHERNIAK for editing the English version of the present article. All photos were taken by ANDREI SOTCHIVKO.

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Explanation of colour plate IVb (p. 351):

- Fig. 1: *Thersamonolycaena aeolides* spec. nov., ♂, upperside, holotype, Tadjikistan, Fanskie Mts., 15 km SW from Madovra v., Kulikalon Lake, 3200 m, 28.VII.1998, leg. Y. VASILCHENKO.
- Fig. 2: *T. aeolides* spec. nov., ♀, upperside, paratype, same data.
- Fig. 3: *T. aeolides* spec. nov., ♀, upperside, paratype, same data.
- Fig. 4: *T. aeolides* spec. nov., ♀, underside, paratype, same data.
- Fig. 5: *T. aeolides* spec. nov., ♂, underside, holotype.
- Fig. 6: *T. aeolus*, ♀, upperside, Tadjikistan, Pamir, Shugnansky Mts., Roshtkala v., 2900 m, 15.VII.1984, V. Tuzov leg.
- Fig. 7: *T. aeolus*, ♂, upperside, same locality as ♀, 3500 m, 16.VII.1984, V. Tuzov leg.
- Fig. 8: *T. aeolus*, ♀, underside, same data as ♂.

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2	6
3	7
4	8

Address of the author

SERGEI V. CHURKIN
Jubileinyi pr. 14, kv. 168
Reutov, Moscow region
Russia, 143952

Farbtafel IVa

SAMODUROW, G. D., KOROLEW, W. A. & W. W. TSCHIKOLOWEZ: Eine Übersicht über die Satyriden der Gattung *Hyponephele* MUSCHAMP, 1915. IV. Die Arten *Hyponephele naubidensis* (ERSCHOFF, 1874), *H. amardaea* (LEDERER, 1869), *H. perplexa* WYATT & OMOTO, 1966, *H. glasunovi* (GRUM-GRSHIMAILO, 1893), *H. hilaris* (STAUDINGER, 1886), *H. fortambeka* SAMODUROV, 1996 (Lepidoptera, Satyridae). – *Atalanta* 29 (1/4): 25–68.

3	4	3A	4A
1	2	1A	2A

Abb. 1: *Hyponephele hilaris bori* (HERZ, 1900). ♂, Gissar, Iskanderkul-See, 2400 m, 18.VII.1988, leg. et coll. SAMODUROV G.

Abb. 2: *Hyponephele hilaris bori* (HERZ, 1900). ♀, Gissar, Iskanderkul-See, 2400 m, 18.VII.1988, leg. et coll. SAMODUROV G.

Abb. 1A–2A: wie Abb. 1–2, Unterseite.

Abb. 3: *Hyponephele hilaris tsvetajevi* SAMODUROV, 1996. Holotypus ♂, Turkestanski-Gebk., Kumbel-Paß, [3000 m], 26.VII.1976, leg. ZWETAJEW A., coll. ZMUM.

Abb. 4: *Hyponephele hilaris tsvetajevi* SAMODUROV, 1996. Paratypus ♀, Turkestanski-Gebk., Kumbel-Paß, [3400 m], 30.VII.1976, leg. ZWETAJEW A., coll. ZMUM.

Abb. 3A–4A: wie Abb. 3–4, Unterseite.

Colour plate IVb

CHURKIN, S. V.: A new species of *Thersamonolycaena* from Tadjikistan (Rhopalocera, Lycaenidae). – *Atalanta* 29 (1/4): 125–129.

Fig. 1: *Thersamonolycaena aeolides* spec. nov., ♂, upperside, holotype, Tadjikistan, Fanskie Mts., 15 km SW from Madovra v., Kulikalon Lake, 3200 m, 28.VII.1998, leg. Y. VASILCHENKO.

Fig. 2: *T. aeolides* spec. nov., ♀, upperside, paratype, same data.

Fig. 3: *T. aeolides* spec. nov., ♀, upperside, paratype, same data.

Fig. 4: *T. aeolides* spec. nov., ♀, underside, paratype, same data.

Fig. 5: *T. aeolides* spec. nov., ♂, underside, holotype.

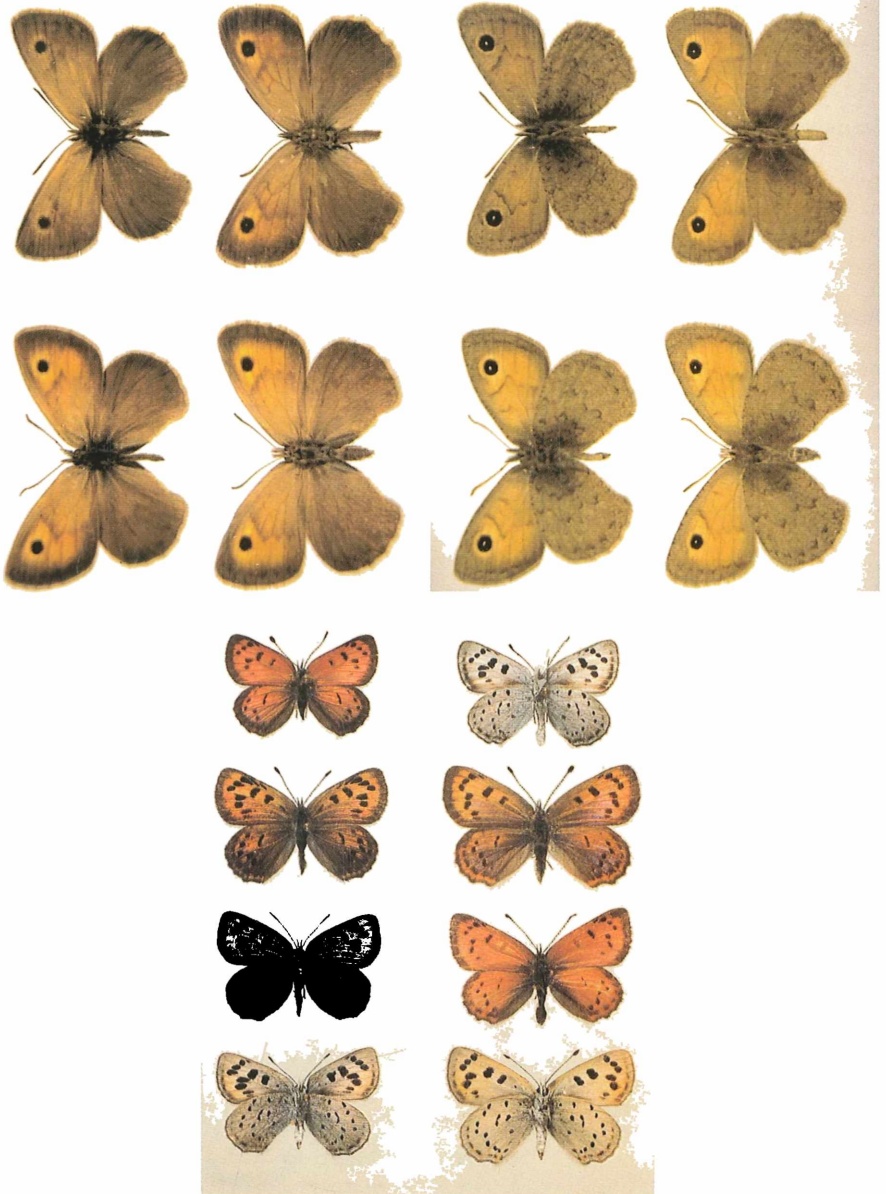
Fig. 6: *T. aeolus*, ♀, upperside, Tadjikistan, Pamir, Shugnansky Mts., Roshtkala v., 2900 m, 15.VII.1984, V. Tuzov leg..

Fig. 7: *T. aeolus*, ♂, upperside, same locality as ♀, 3500 m, 16.VII.1984, V. Tuzov leg.

Fig. 8: *T. aeolus*, ♀, underside, same data as ♂.

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Farbtafel VIa / Colour plate VIb



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