

A NEW SPECIES OF *MELITAEA* (NYMPHALIDAE)
FROM ARMENIA

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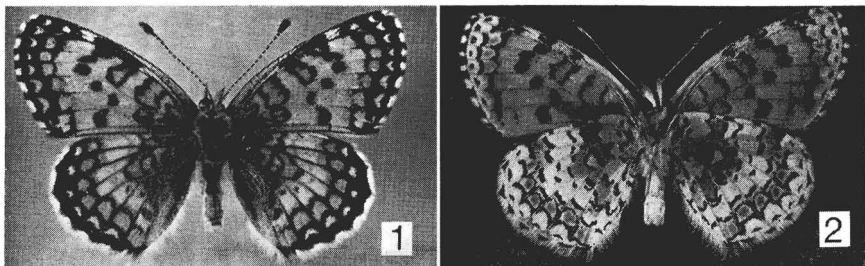
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While a member of the State Museum of Georgia Transcaucasian Expedition, I collected in the Chosrov Wildlife Reservation (Armenia), where an undescribed fritillary species of the *phoebe*-group was found. This is thirtieth species of *Melitaea* (s. str.) known to occur in the U.S.S.R. territory, and ninth in the Caucasus Range (Korshunov, 1972). In the description of this new species I follow the vein and cell terminology of Miller (1969) and genitalic armatures terminology of Higgins (1941, 1955) with some changes, pointed out in the text.

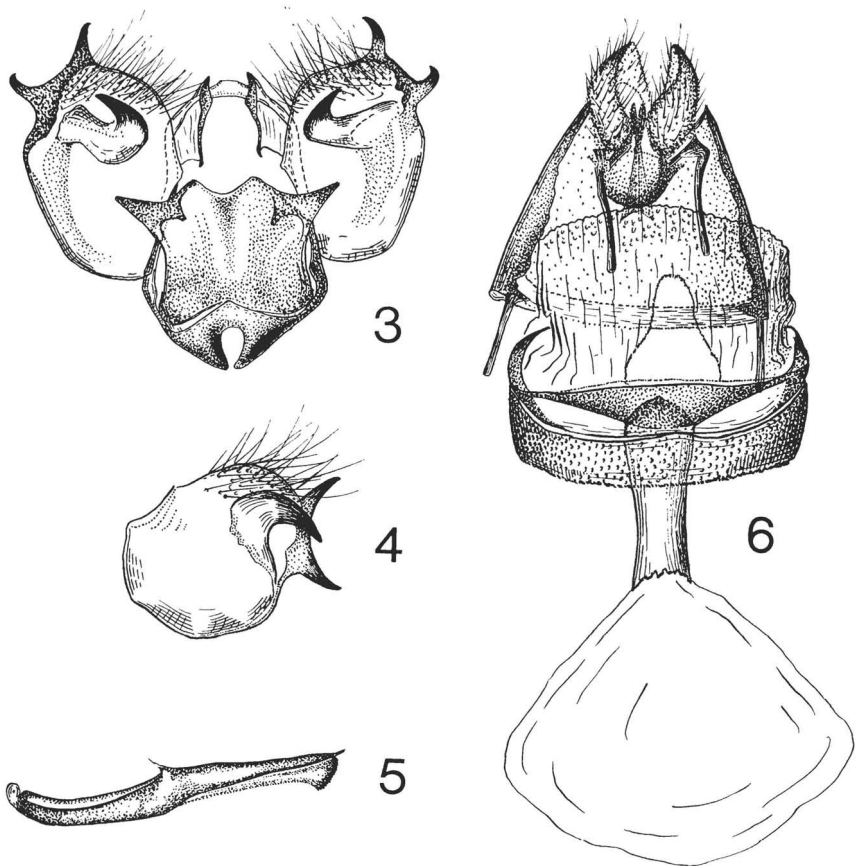
***Melitaea vedica* Nekrutenko, new species**

(Figs. 1, 2)

Male. Length of the forewing (base to tip) of the holotype 16.5 mm (variation in type series 15.0–17.5 mm). Upperside ground color of both wings orange-yellow, faded (fresh specimens). Fringe checkered, at vein tips black, between veins white; fringe of hindwing upperside white. Submarginal pattern of both wings consists of three black bands, joining along the veins. Spaces between these bands form two rows of ground color spots: marginal of crescent shape, and antemarginal of round shape. Antemarginal spots colored somewhat more vivid than ground color, those in cells M_2 - Cu_1 and Cu_1 - Cu_2 of forewing in most specimens examined are opened basally. Postdiscal pattern consists of a S-shaped row of bold black spots on the forewing, and 3–4 small diffused spots in cells M_2 - M_3 , M_3 - Cu_1 , Cu_1 - Cu_2 and Cu_2 -2A on hindwing. (In *M. turkmanica* Higgins and *M. collina* Lederer this row is complete.) Discal spot wide, closed, its interior orange-yellow, slightly more vivid than ground color; two spots of similar shape and color also in central and Cu_2 -2A cells of forewing. At costal edge of forewing, between antemarginal and postdiscal spots, lies an elongated, white to bright-yellow, mark. Veins on the



Figs. 1, 2. *Melitaea vedica* n. sp.: holotype, ♂, upper and undersides, Caucasus Minor, Armenia, Vedi District, Chosrov Wildlife Reservation, 1300–1500 m, 15 May 1974, Y. Nekrutenko.



Figs. 3-6. *Melitaea vedica* n. sp., paratypes, genitalia. Male genitalia: 3, ventral view, aedeagus removed; 4, valva, inner surface; 5, aedeagus, lateral view; 6, female genitalia.

hindwing upperside black, body fold richly powdered with black scales. Underside: forewing ground color bright yellow, with a notable pink shade. All black elements, except for postdiscal spots, slender. Ground color of marginal area rather whitish. Antemarginal spots in cells M_2 - M_3 , M_1 - M_2 and R_5 - M_1 centered with large diffused yellow pupils. Hindwing ground color chalky-white, consists of common to *phoebegroup* elements.

Male genitalia (Figs. 3-5): Ringwall short, pillow-shaped, bears two pairs of lingulae (nec sensu Higgins, 1941), lateral and internal. Saccus rhomboidal, with deep anterior incision. Valva (clasp of Higgins, 1941) (Fig. 4) rounded, bears two posterior processes of equal size; internal process (harpe of Higgins, 1941) strongly chitinized, short, horn-shaped. Aedeagus (penis of Higgins, 1941) (Fig. 5) straight, ends at apex, bears well developed oleocranon and ostium fold.

Female. Length of forewing of two female paratypes (base to tip) 17.0 mm. Wing pattern identical with that of male, but black elements developed somewhat



Fig. 7. *Melitaea vedica* n. sp., type locality. Thin forest of *Juniperus polycarpus* at an elevation of 1400 m, Chosrov Wildlife Reservation (Armenia).

stronger. The sexual dimorphism is so poorly expressed that there is no need to figure a female.

Female genitalia (Fig. 6): Papillae anales falcate. Length of apophyses posteriores equal to that of papillae, longer than apophyses anteriores. Genital plate funnel-shaped, auricles weakly developed. Scutum membranous, transparent, with notable cellular sclerotization, at anterior half bears a pear-shaped perforation. Ductus bursae (bacillus of Higgins) strongly chitinized, tubiform. Bursa copulatrix round ovate, slender, no signa or similar structures were observed.

Types. Holotype, male, Caucasus Minor, Armenian Soviet Socialist Republic, Vedi District, Chosrov State Wildlife Reservation, 1300–1500 m, 15 May 1974, Y. Nekrutenko. Paratypes, 23 ♂♂, 2 ♀♀, 15–30 May, same locality and collector.

Holotype, 4 ♂♂ and 1 ♀ paratypes will be deposited in the Zoological Institute, U.S.S.R. Academy of Sciences (Leningrad), 5 ♂♂ paratypes in the British Museum (Natural History), 5 ♂♂ paratypes in the Zoological Museum of the Kiev State University, and 1 ♂ paratype in the collection of E. S. Miljanowski (Sukhumi, Georgia). All other types are in the author's collection.

Type locality (Fig. 7). Chosrov Wildlife Reservation is situated on a southeastern spur of the Gegam Mountain Range (Caucasus Minor), within the juniper thin forest (*Juniperus polycarpus* C. Koch.). *M. vedica* n. sp. flies over sunny hot spots, protected from winds, along ravines, montane road benches, and other de-

pressions; females prefer grassy spots. The new species flies together with *M. phoebe* Den. & Schiff., *M. cinxia* L., *M. transcaucasica* Trti (ssp.) and *M. arduinna* Esp. (ssp.).

The described species belongs to the small representatives of the *M. phoebe* group. The essential feature of these butterflies, apart from their size, is the presence of one inferior (*M. collina*), or two superior and inferior (*M. consulis* Wiltshire, *M. turkmanica*, *M. vedica* n. sp.) posterior processes of the valva. Large representatives of the group (*M. phoebe*, *M. scotosia* Butl., *M. aetheriae* Hübn. and *M. sibina* Alph.) are characteristic with a tridentate end of the valva. The superficial appearance of *M. vedica* n. sp. seems to be distinctive enough to recognize it at a glance, without confusion with the other "dwarfs" mentioned above.

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LITERATURE CITED

- HIGGINS, L. G. 1941. An illustrated catalogue of the palearctic *Melitaea* (Lep., Rhopalocera). Trans. Roy. Entomol. Soc. London 91: 175-365.
- . 1955. A descriptive catalogue of the genus *Mellicta* Billberg (Lepidoptera: Nymphalidae) and its species, with supplementary notes on the genera *Melitaea* and *Euphydryas*. Trans. Roy. Entomol. Soc. London 106: 1-131.
- KORSHUNOV, Y. P. 1972. A catalogue of the butterflies of the fauna of U.S.S.R. (Lepidoptera, Rhopalocera), II. Entomol. Obozreniye 51: 352-368. (In Russian).
- MILLER, L. D. 1969 (1970). Nomenclature of wing veins and cells. J. Res. Lepid. 8: 37-48.