

***Turanana dushak* new to Iran, a re-description of its valva and of the valva of *Turanana panaegides*, and new sampling locality data for *Turanana endymion endymion* and *Turanana endymion ahasveros* (Lepidoptera: Lycaenidae)**

John G. Coutsis & Jean-Pierre Borie

Abstract. *Turanana dushak* Dubatolov, 1989 is reported as new to Iran, its valvae as well as those of *Turanana panaegides* (Staudinger, 1886) are re-described, and new sampling localities are given for *Turanana endymion endymion* (Freyer, 1850) and for *Turanana endymion ahasveros* Bytinski-Salz & Brandt, 1937.

Samenvatting. *Turanana dushak* een nieuwe soort voor Iran, met herbeschrijving van de valva en ook van de valva van *Turanana panaegides*, en nieuwe lokaliteiten voor *Turanana endymion endymion* en *Turanana endymion ahasveros* (Lepidoptera: Lycaenidae)

Turanana dushak Dubatolov, 1989 wordt hier voor het eerst uit Iran vermeld. De valven van deze soort alsook die van *Turanana panaegides* (Staudinger, 1886) worden opnieuw beschreven, en nieuwe lokaliteiten voor *Turanana endymion endymion* (Freyer, 1850) en voor *Turanana endymion ahasveros* Bytinski-Salz & Brandt, 1937 worden meegedeeld.

Résumé. *Turanana dushak*, espèce nouvelle pour l'Iran, avec rédescription de ses valves et de celles de *Turanana panaegides*, et nouvelles localités de *Turanana endymion endymion* et *Turanana endymion ahasveros* (Lepidoptera: Lycaenidae)

Turanana dushak Dubatolov, 1989 est mentionné ici pour la première fois de l'Iran. Les valves de cette espèce, ainsi que celles de *Turanana panaegides* (Staudinger, 1886) sont redécrites. De nouvelles localités de *Turanana endymion endymion* (Freyer, 1850) et de *Turanana endymion ahasveros* Bytinski-Salz & Brandt, 1937 sont mentionnées.

Key words: Lycaenidae – Genitalia – *Turanana dushak* – *Turanana panaegides* – *Turanana endymion endymion* – *Turanana endymion ahasveros* – Iran – Turkey – faunistics.

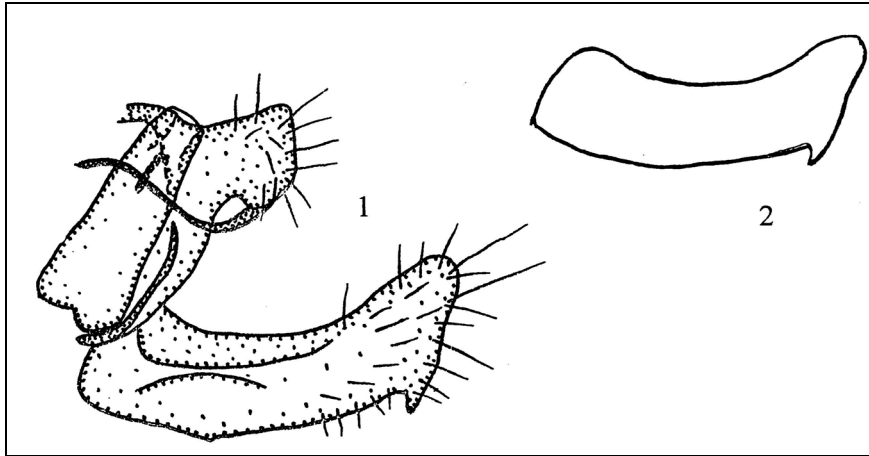
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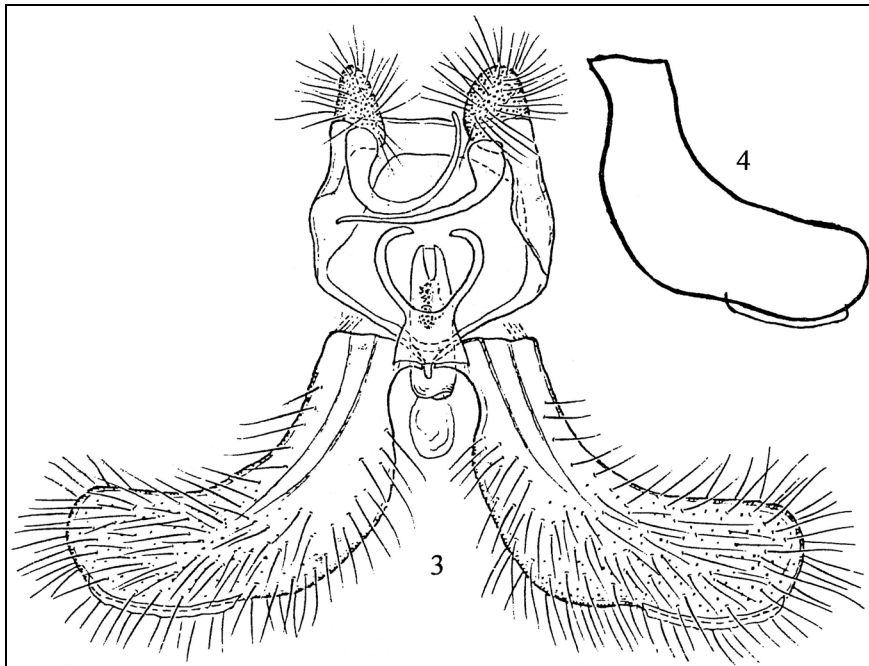
Introduction

Turanana dushak Dubatolov, 1989 —type locality Mt. Dushak, Kopet-Dagh, Turkmenistan— was described as a new species on the basis of what was said to be the existence of a single, large ventral tooth on the terminal edge of its valva (Fig.1), a feature which is absent in all other hitherto recognized *Turanana* species. Tuzov *et al.* (2000) use this feature (Fig. 2) in order to separate *T. dushak* from the externally similar *Turanana endymion* (Freyer, 1850), which is said to possess 8–12 small teeth ventro-distally on its valva.

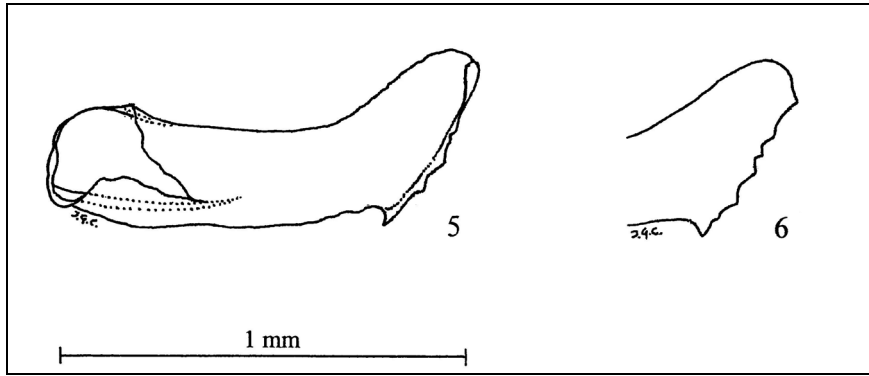
Turanana panaegides (Staudinger, 1886) has been separated from all other recognized *Turanana* species both by external characters as well as by the ventral part of the distal end of its valva, which is shown to possess an imperceptibly wavy, toothless, carinate extension ventro-distally in Zhdanko (1984), and one which is completely straight, in Tuzov *et al.* (2000) (Figs. 3 & 4 respectively); this is a feature unique to this species within the genus *Turanana*.



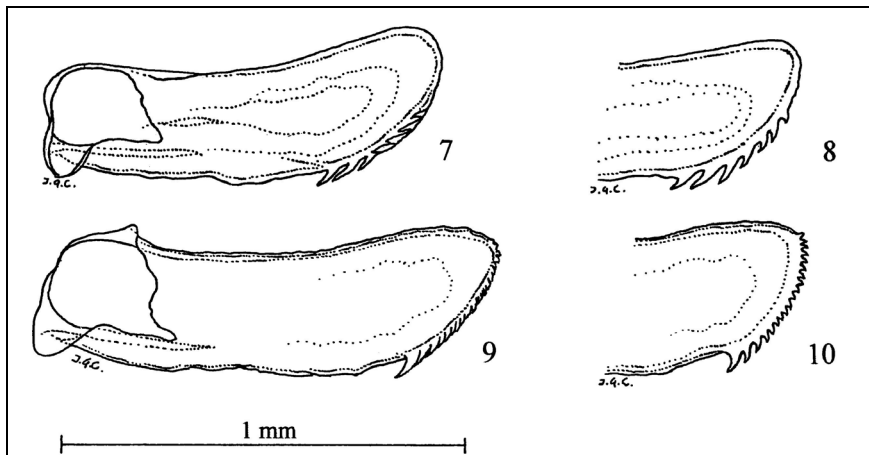
Figs. 1, 2. Male genitalia of *Turanana dushak* Dubatolov, 1989. 1.– Entire apparatus, after Dubatolov (1989). 2.– Valva, after Tuzov *et al.* (2000).



Figs. 3, 4. Male genitalia of *Turanana panaegides* (Staudinger, 1886). 3.– Entire apparatus, after Zhdanko (1984). 4.– Valva, after Tuzov *et al.* (2000).

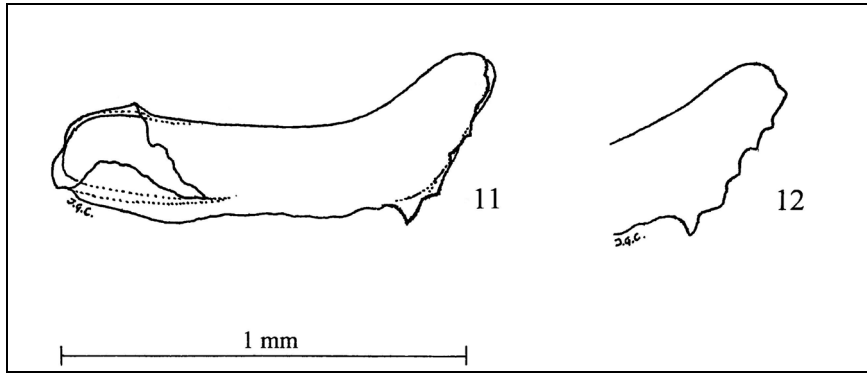


Figs. 5, 6. Right valva of *T. dushak*, Turkmenistan, Kopet-Dagh, Dushak Mts., 1500 m, N 37° 54', E 57° 56', 7.viii.1992, Hreblay & Ronkay leg., coll. J. P. Borie. 5.– Side view of inner face of valva. 6.– Flat view of distal end of valva.

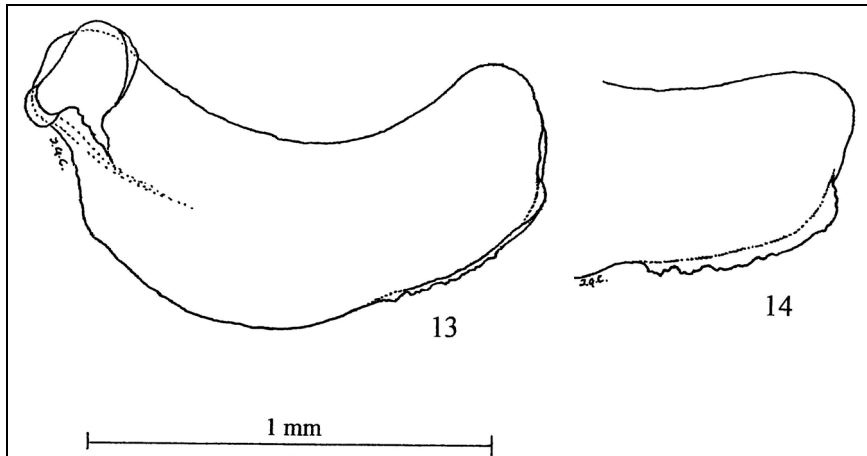


Figs. 7–10. Right valva of *Turanana* species. 7, 9. Side view of inner face of valva. 8, 10. Flat view of distal end of valva. 7, 8.– *T. endymion* (Freyer, 1850), Turkey, Erzincan province, 5 km SE of Çağlayan, 1500 m, 5.vii.1999. 9, 10.– *T. taygetica* (Rebel, 1902), Greece, Pelopónnisos, Mt. Helmós, 1680 m, 18.vi.1997.

In Coutsis (2005), a map and lists of sampling localities are given for *T. endymion endymion*, *T. endymion ahasveros* (Bytinski-Salz & Brandt, 1937), *Turanana taygetica taygetica* (Rebel, 1902) and *T. taygetica endymionoides* Coutsis, 2005. In Coutsis (2006) these are amended, further supplemented and also include sampling locality data for the newly described *T. taygetica micrasiatica* Coutsis, 2006.



Figs. 11, 12. Right valva of *T. dushak*, Iran, Khorasan, 53 km NE of Qučan, 1900 m, 15.vii.2000, J. P. Borie leg. et coll. **11.**– Side view of inner face of valva. **12.**– Flat view of distal end of valva.

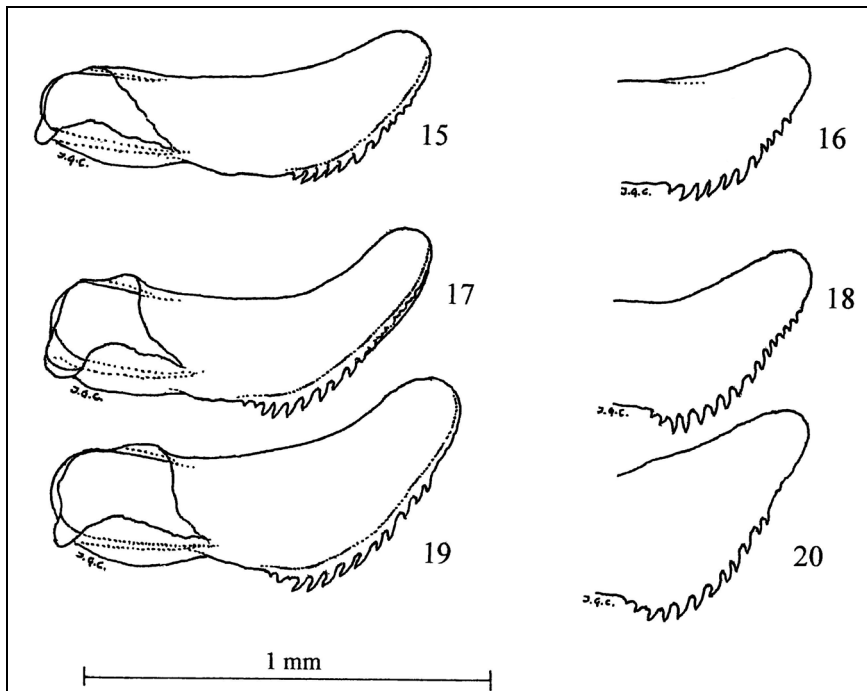


Figs. 13, 14. Right valva of *T. panaegides*, W. Tian-Shan, Kuraminsky Mts., Kamchik pass, 2500–2800 m, 4.vii.1997. **13.**– Side view of inner face of valva. **14.**– Flat view of distal end of valva.

A re-description of the valva of *T. dushak*

A single male, toptotypical *T. dushak*, labelled Turkmenistan, Kopet-Dagh, Dushak Mts., 1500 m, N 37° 54', E 57° 56', 7.viii.1992, Hreblay & Ronkay leg., coll. J. P. Borie, exhibited valvae that are longer than those of *T. endymion*, for specimens of near equal size (Fig. 5). The distal edge of the valva was found to have 6 wide-at-base teeth, of which the one placed ventrally is the most prominent (Fig. 6). These features clearly separate *T. dushak* from the externally quite similar *T. endymion*, and *T. taygetica*, whose valvae are quite different (Figs. 7, 8 & 9, 10 respectively), but disagree slightly with the original notion that its valva is single-toothed. It must also be noted that the number of valval

teeth observed in an extensive series of *T. endymion* was found to vary from 6 to 15, suggesting that this variability is even greater than that which is reported in Tuzov *et al.* (2000).



Figs. 15–20. Right valva of *Turanana* species. 15, 17, 19. Side view of inner face of valva. 16, 18, 20. Flat view of distal end of valva. 15, 16.— *T. endymion endymion*, Turkey, Adana province, 8 km N of Saimbeyli, 30.vii.1987. 17–20.— *T. endymion ahasveros* (Bytinski-Salz & Brandt, 1937), Iran. 17, 18.— Semnan, 43 km NW of Bechan, 2500 m, 26.vii.2000, coll. J. P. Borie. 19, 20.— Hamadan, 20 km SE of Nehavand, Sarab, 2100 m, 20.vii.2001, coll. J. P. Borie.

T. dushak from Iran

A single male *Turanana* specimen, labelled Iran, Khorasan, 53 km NE of Qučan, 1900 m, 15.vii.2000, J. P. Borie leg. et coll., exhibited valvae that are identical to those of topotypical *T. dushak* (Figs. 11, 12), leaving no doubt in mind that the specimen in question indeed belongs to this same species. In view of the fact that to the best of our knowledge there exist in the literature no previous records for this species from Iran—as also evidenced by the latest work on Iranian butterflies (Nazari 2003)— we believe that the present record constitutes a new addition to the faunal elements of that country. Zoo-geographically, however, the Iranian locality comes as no surprise, as it is situated in the same mountain chain, i.e. Kopet-Dagh, as is the type locality.

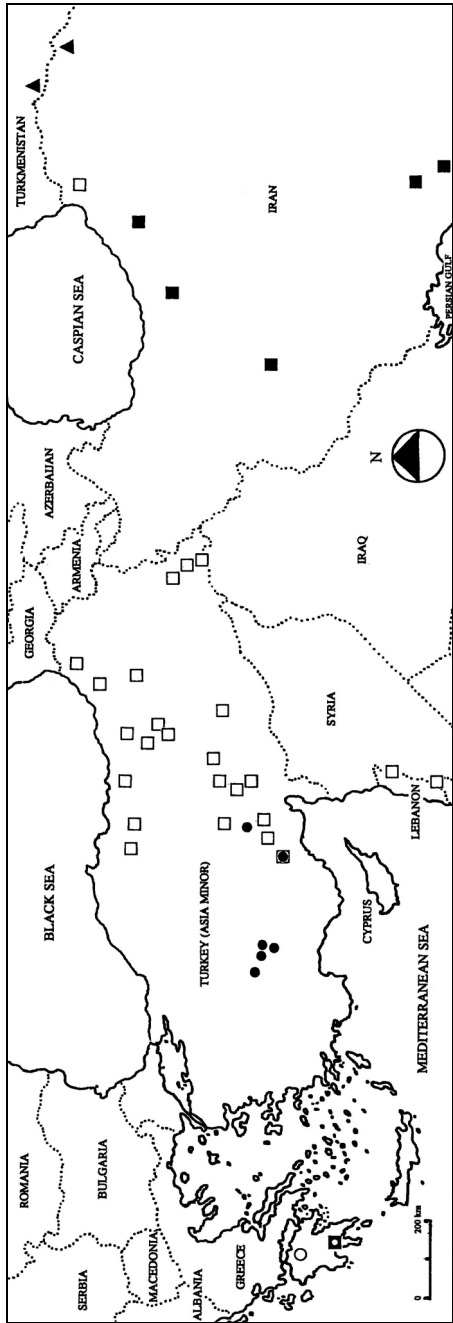


Fig.21. Map showing sampling localities of *Turanana* species, as applying to Coutsis (2005 & 2006) and to the present paper.
 □ = *Turanana endymion endymion* (Freyer, 1850) ■ = *Turanana endymion ahasveros* (Bytinski-Salz & Brandt, 1937)
 ■ = *Turanana taygetica taygetica* (Rebel, 1902) ○ = *Turanana taygetica endymionoides* Coutsis, 2005
 ● = *Turanana taygetica micrasiatica* Coutsis, 2006 ▲ = *Turanana dushak* Dubatolov, 1989

A re-description of the valva of *T. panaegides*

A single male specimen, labelled W Tian-Shan, Kuraminsky Mts., Kamchik pass, 2500–2800 m, 4.vii.1997 was found to possess valvae attributable to *T. panaegides* (Fig. 13). It was however found that the valval distal end exhibits ventrally a multi-toothed carinate extension (Fig. 14) in place of an imperceptibly wavy, or straight one, as previously shown respectively in Zhdanko (1984) and in Tuzov *et al.* (2000). The teeth are shallow, wide-at-base, weekly serrated and irregular in size and placement. Another character worth mentioning is the great size of the valva, this being considerably longer and wider than that of either *T. endymion*, *T. taygetica* or *T. dushak*.

New sampling localities for *T. endymion endymion* and for *T. endymion ahasveros*

A single male specimen labeled Turkey, Adana province, 8 km N of Saimbeyli, 30.vii.1987 was found to possess valvae referable to those of *T. endymion endymion* (Figs. 15, 16).

Two more male specimens from Iran, one from Semnan, 43 km NW of Bechan, 2500 m, 26.vii.2000, coll. J. P. Borie, and the other from Hamadan, 20 km SE of Nehavand, Sarab, 2100 m, 20.vii.2001, coll. J. P. Borie, both were found to possess elongated valvae similar to those of *T. endymion ahasveros* (Figs. 17, 18 & 19, 20, respectively).

All three of these records constitute new additions to the sampling localities presented in Coutsis (2005 & 2006), and are shown on the included map, together with the previous ones, as well as with those for *T. dushak* (Fig. 21).

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