

# A new species of brown *Turanana* from Afghanistan (Lepidoptera: Lycaenidae, Polyommataini, Glaucopsychiti)

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**Abstract.** A new brown *Turanana* species from Afghanistan is described on the basis of male wing and genitalia characters. The description is supplemented by colour slides of the specimen, together with line drawings of its genitalia, and those of related taxa.

**Samenvatting.** Een nieuwe bruine *Turanana*-soort uit Afghanistan wordt beschreven op basis van kenmerken in de mannelijke vleugel en genitalia. De beschrijving bevat kleurenfoto's van het imago en tekeningen van de genitalia, alsook die van de verwante taxa.

**Résumé.** Une nouvelle espèce brune du genre *Turanana* d'Afghanistan est décrite en se basant sur des caractères de l'aile et des genitalia du mâle. La description est accompagnée des photos de l'exemplaire, de ses genitalia ainsi que ceux des espèces voisines.

**Key words:** Lycaenidae – Polyommataini – Glaucopsychiti – *Turanana* – *T. durranii* sp. nov. – Description – Genitalia – Afghanistan – Band-e Amir.

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## Introduction

While the first author was in the process of studying and drawing the genitalia of Polyommataini material provided by the second author, it was discovered that one of the included male specimens did not belong to the above sub-tribe, but instead to that of the Glaucopsychiti, being in fact a brown member of the genus *Turanana* Bethune-Baker, 1916. The butterfly was then compared to all other known brown *Turanana* species-group taxa, such as are *T. anisoptalma* (Kollar, [1849]), *T. kugitangi* Zhdanko, 1984, *T. mizildigara* Tshikolovets, 1997 and *T. teramura* Zhdanko, [2016], and was found to differ significantly from all four of them in male genitalia, and at least from three of them in certain wing characters.

## *Turanana durranii* sp. nov.

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The chosen name refers to Ahmad Shah Durrani, founder in 1747 of the Durrani Dynasty, and considered Father of Modern Afghanistan.

Type material: ♂ Holotype: Afghanistan, Band-e Amir, 3000 m, 4.vii.2009, I. Pljushch leg. (white label, black typed letters). Genitalia prep. no. 5640 (white label, black typed letters). *Turanana durranii* sp. nov., ♂ holotype, designated by J. G. Coutsis & V. V. Tshikolovets September 2016 (orange label, black typed letters). Depository: Natural History Museum, Prague.

## Wing description

FW length: 13.00 mm. Upper side: ground-colour uniform brown, outer margins lined dark brown, fringes pure white; small, dark brown discoidal stria present on FW and faint submarginal dark brown lunulate spot present in s2 on HW. Underside: ground-colour uniform light grey-brown, outer margins lined dark brown, fringes uniformly off-white; whitish-ringed black spots and striae

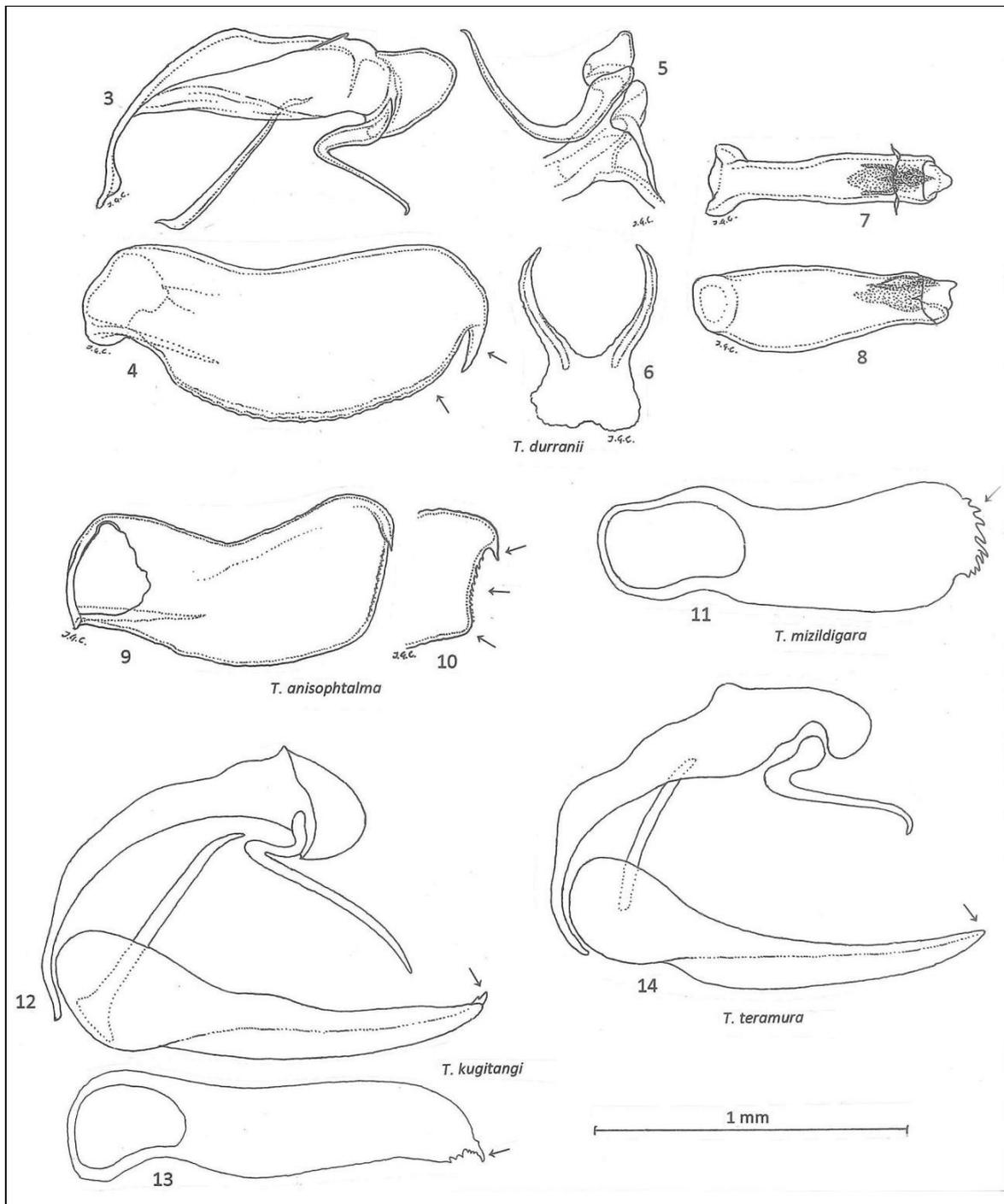
follow the usual *Turanana* pattern, but FW postdiscal black spot in s3 weakly displaced distad; submarginal row of lunulate spots – other than the black one in s2 of HW – and submarginal row of crescents, basad of former, slightly darker grey-brown than ground-colour; space between these two rows filled with almost imperceptible yellowish-orange tinge.



**Figs 1, 2.** *Turanana durranii* sp. nov.: male holotype, Afghanistan, Band-e Amir, 3000 m, 4.vii.2009, I. Pljushch leg. 1. Upper side. 2. Underside. Scale bar = 1 cm.

Diagnosis (distinction from similar taxa): *T. anisoptalma*: FW fringes greyish-brown with a white or off-white narrow patch restricted to wing apex; FW underside postdiscal black spot in s3 strongly displaced distad; HW underside submarginal lunulate spot in s2 slightly darker than rest in series.

*T. mizildigara*: fringes greyish-brown with a white or off-white patch restricted to wing apices; FW underside postdiscal black spot in s3 strongly displaced distad; HW underside submarginal black lunulate spot in s2 absent, being substituted instead by a grey-brown one of same colour and intensity as the rest of the submarginal lunulate spots.



**Figs 3–14.** Genitalic components of brown male *Turanana* species. **3–8.** *T. durranii* sp. nov.: holotype, Afghanistan, Band-e Amir, 3000 m, 4.vii.2009, I. Pljushch leg. **9, 10.** *T. anisoptalma* (Kollar, [1849]): Iran, Hyrcania (presently Gilan/Mazandaran/Golestan provinces). **11.** *T. mizildigara* Tshikolovets, 1997: paratype, Tajikistan, Gorno-Budakshanskaya avtonomnaya oblast, Ishkashimskiy Mts., kishlak Verkhniy Namatgut, Sangdzhegar River, mazar Mizildigar, 3600 m, 18.vii.1991, V. Tshikolovets leg. (Drawing is based on photographs provided by the second author, and is slightly off scale). **12, 13.** *T. kugitangi* Zhdanko, 1984: Turkmenistan, W. Kugitangtau Mts. (Drawings are based on renderings by Zhdanko ([2016], p. 35, fig. 5 & 1984, p. 100, fig. 4 respectively), and are slightly off scale). **14.** *T. teramura* Zhdanko, [2016]: Afghanistan, Surkhab, 2500–3000 m, Logar, 7.vii.1973, S. Teramura leg. (Drawing is based on rendering by Sakai (1981, p.229, fig. 164), and is slightly off scale).

**3.** Lateral aspect of left side of genitalia with aedeagus and valvae removed. **12, 14.** Lateral aspect of left side of genitalia with aedeagus removed. **4.** Lateral aspect of outer face of left valva. **9, 11, 13.** Lateral aspect of inner face of right valva. **10.** Flat aspect of distal extremity of right valva. **5.** Ventral aspect of right half of tegumen together with right falx and right labis. **6.** Frontal aspect of furca. **7, 8.** Aedeagus. **7.** Dorsal aspect. **8.** Left side lateral aspect.

(Note: in fig. 12 the valva is shown in place on genital ring and, as is the rule in all Glaucopsychiti, instead of being perpendicular to the horizontal it leans slightly outwards, thus appearing much slenderer and differently shaped than it is in a purely lateral aspect (fig. 13). It is also worth noting that the similarly positioned valva of *T. teramura*, shown in fig. 14, is almost identical to that of *T. kugitangi* in fig. 12, appearing to differ from it only by the lack of terminal spines, which probably may have been missed, as is the case with *T. laspura* (Evans, 1932) in Sakai (1981, p. 230, fig. 165).

*T. kugitangi*: fringes basically greyish-brown with white parts restricted to wing apices; FW underside postdiscal black spot in s3 strongly displaced distad; HW underside submarginal lunulate spot in s2 slightly darker than rest in series.

*T. teramura*: Only known from the single colour figure of its upper side in Sakai (1981). The available information, therefore, is insufficient for establishing diagnostic characters.

### Genitalia description

With the exception of the valva (fig. 4), all other genitalic components (figs 3, 5–8) are typical of the genus, being quite similar to the corresponding ones of all other known brown *Turanana* species-group taxa.

Valva (fig. 4): Long and wide; base excluded, overall roughly oval-shaped in lateral aspect, with smooth edges and a single, long (equal in length to about one third valva's total width), perpendicular spine, placed medially on its distal edge and extending downwards towards rounded junction between valval distal and ventral edges.

Diagnosis (Distinction from similar taxa):

*T. anisophtalma*: valva (fig. 9) in lateral aspect short and wide, its distal edge in flat aspect (fig. 10) with medium-sized spine near its dorsum, followed below by a variable number of small spines; junction between distal and ventral edges of valva roughly angular.

*T. mizildigara*: valva (fig. 11) in lateral aspect long and narrow; distal edge furnished with small series of medially placed, medium-sized spines. (Note: a comparison with the valva of *T. anisophtalma* immediately reveals significant differences between the two, leaving no doubt whatsoever about the fact that they indeed represent separate species. It is surprising therefore that the specificity of *T. mizildigara* is questioned by Tuzov *et al.* (2000, p. 150), who state that "this taxon can only prove to be a subspecies of *T. anisophtalma*.").

*T. kugitangi*: valva (fig. 13) in lateral aspect longer and narrower than in *T. durranii*, as well as in the two previous species, with one or more small spines placed medially on distal end. (Note: when the valva is not detached or moved about from its natural position on the genital ring (fig. 12), it appears slenderer and differently shaped than in lateral aspect (fig. 13) because, as in all *Glaucoptychiti*, it is not placed perpendicular to the horizontal but leans outwards instead. In this position it becomes almost indistinguishable from that of a similarly positioned one (fig. 14) of *T. teramura*).

*T. teramura*: valva (fig. 14), other than appearing to lack terminal spines, almost indistinguishable from that of *T. kugitangi* when both are seen in place on their respective genital rings. (Note. *T. teramura* was described by Zhdanko ([2016]) rather hastily on the basis of a single colour illustration of its upper side and a

rather crude drawing of its genitalia by Sakai (1981, pl. 42, fig. 34 & p. 229 fig. 164 respectively, in both cases as *Glaucoptysche anisophtalma*). We are therefore accepting it as a distinct species with some reservation until more material becomes available and a more thorough study of its male genitalia is carried out. Despite it all, however, and despite the crudeness of the Sakai drawing, it can still be clearly seen that this taxon bears closer affinities to *T. kugitangi* than to the other taxa in the group, from all of which in fact it differs quite significantly).

### Selected illustrations in literature

Adults:

*T. anisophtalma*: Tshikolovets (1997, p. 120, fig. 16b; 1998, pls. X & XI, figs. 21–25; 2003, pl. XXXIII, fig. 20); Tshikolovets *et al.* (2014, pl. XXV, figs. 11–15); Tuzov *et al.* (2000, p. 357, pl. 67, figs. 46–48).

*T. mizildigara*: Tshikolovets (1997, p. 118, pl. 1, figs. 1–12; p. 120, fig. 16a; 2003, pl. XXXIII, figs. 16–19, as *Turanana anisophtalma mizildigara*).

*T. kugitangi*: Tshikolovets (2000, pl. XXXVIII, figs. 19, 25, as *Turanana anisophtalma kugitangi*); Tuzov *et al.* (2000, p. 357, pl. 67, figs. 49–51).

*T. teramura*: Sakai (1981, pl. 42, fig. 34, as *Glaucoptysche anisophtalma*).

Male genitalia components:

*T. anisophtalma*: Tuzov *et al.* (2000, p. 149, fig. 45 (3): valva only); Zhdanko (1984, p. 101, fig. 5: all components; [2016], p. 35, fig. 3: all components).

*T. mizildigara*: Tshikolovets (1997, p. 121, fig. 17: all components); Zhdanko ([2016], p. 35, fig. 4, as *T. mizildigara*: all components).

*T. kugitangi*: Tuzov *et al.* (2000, p. 149, fig. 45 (6): valva only); Zhdanko (1984, p. 100, fig. 4: all components; [2016], p. 35, fig. 5: all components).

*T. teramura*: Sakai (1981, p. 229, fig. 164, as *Glaucoptysche anisophtalma*: all components); Zhdanko ([2016], p. 35, fig. 6: all components).

### Discussion

Despite the fact that this new brown *Turanana* species was described here on the basis of a single male specimen, we feel certain that our action is fully supported by clear-cut, undisputable genitalic differences between it and all other known brown *Turanana* taxa.

It is sincerely hoped that in the near future more specimens of this new species will be collected, and that its female will soon become known and described.

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