

## A new Turkish *Tipula* (*Lunatipula*) species in the *acuminata* group (Diptera: Tipulidae)

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A description, with figures, is presented of the new species *Tipula* (*Lunatipula*) *murati* from Turkey. The species belongs to the *acuminata* group sensu Mannheims, 1963, and its position within this species group is discussed.

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### 1. Introduction

The subgenus *Tipula* (*Lunatipula*) Edwards, 1931 contains 303 taxa in the Western Palaearctic. So far 83 taxa have been recorded from Turkey, of which 56 (67%) are endemic to the country and 47 (56%) have their type locality in Turkey (Koc; & Oosterbroek 2001, 2005).

Material that included a new species of the *acuminata* group was collected by H. Koc; & O. Özgül and A. Karaman in the province of Mugla and Denizli, Asiatic Turkey. The type specimens are deposited in the Department of Biology, Science and Arts Faculty, Mugla University and the Section Entomology, Zoological Museum, University of Amsterdam.

### 2. Species description

*Tipula* (*Lunatipula*) *murati* sp. n. (Fig. 1)

*Type material.* Holotype: 1 ♂, Turkey,

Mugla, Merkez, Yara Village (37°10' N, 28°27' E), 630 m a.s.l., 19.IV.2002. Paratypes: 6 ♂♂, locality and date as holotype. 1 ♂, Mugla, Ula, <ic>ekli Village (37°05' N, 28°29' E), 455 m a.s.l., 19.IV.2002; 1 ♂, Mugla, Ula, <ic>ekli Village (37°04' N, 28°30' E), 455 m a.s.l., 26.IV.2002; 3 ♂♂, Mugla, Fethiye, Babadag (36°35' N, 29°11' E), 1,200-1,250 m a.s.l., 03.V.2002; 2 ♂♂, Mugla, Fethiye, 23km from Korkuteli-Road (36°46' N, 29°28' E), 1155 m a.s.l., 04.V.2002; 2 ♂♂, Mugla, Giinlice Village (37°21' N, 28°34' E), 900 m a.s.l., 10.V.2002; 1 ♂, Mugla, Koycegiz, Dalyan, Iztuzu (36°46' N, 28°37' E), 0-50 m a.s.l., 02.V.2003; 1 ♂, Mugla, Koycegiz, Yesilyayla Village (37°01' N, 28°44' E), 641 m a.s.l., 03.V.2003; 4 ♂♂, Denizli, Beyagac;, 3 km from Beyagac; (37°22' N, 28°52' E), 1240 m a.s.l., 09.V.2003. Holotype and 20 paratypes are preserved at the Department of Biology, Science and Arts Faculty, Mugla University; 1 paratype at the Section Entomology, Zoological Museum, University of Amsterdam.

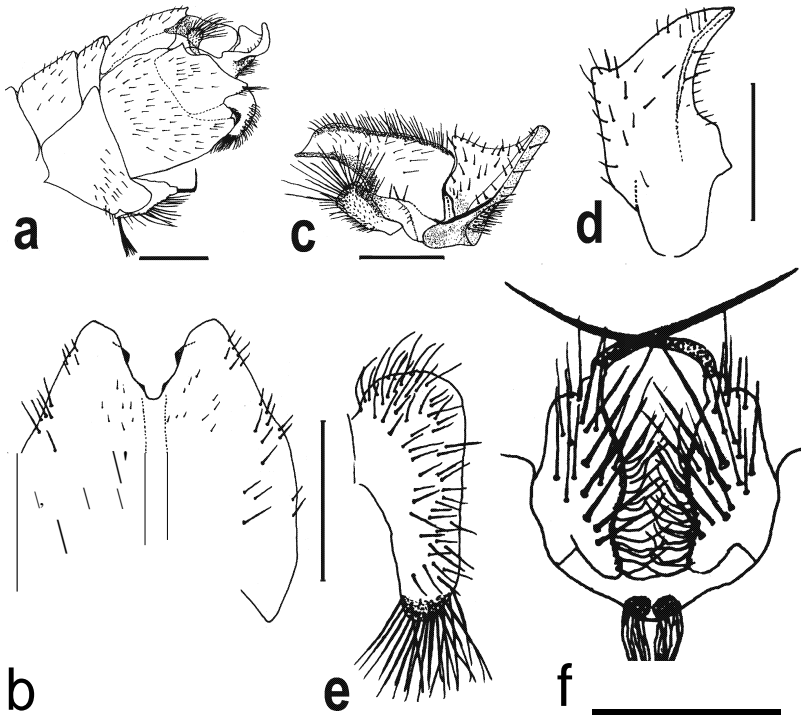


Fig. 1. *Tipula (Lunatipula) murati* sp. n. - a. Hypopygium, lateral view. - c. Left inner and outer gonostyles, outside view. - d. Left inner gonostyle, from behind. - b. Tergite 9, dorsal view. - f. Hind margin of stemite 8 and the bristle bearing lobes, hind view. - e. Appendage of stemite 9, lateral view. Scale bars 1.0 mm (a, b, f) and 0.5 mm (c, d, e).

**Description.** Male: Body length: 16-18 mm; **antennal** length: 5-5.5  $\text{IIIIII}$ ; wing length: 18-22  $\text{IIIIII}$ .

**Head** and rostrum largely yellow brown, **darkening** of vertex narrowly continued on frontal tubercle; dorsal part of rostrum darkened; nasus present, with an apical tuft of long golden hairs. Antenna 13-segmented, scape and pedicel yellowish, flagellar segments bicolourous, ranging from basally dark brown to apically yellowish, sometimes entire first flagellar segment **yellowish**; antenna of moderate length, if bent **backwards** more or less reaching to base of wing; **flagellar** segments cylindrical with the base **slightly** thickened, apical segment very small, **longest** vellicils somewhat longer than flagellar segments.

Pronotum and scutum gray brown, scutum with four yellow brown stripes; lateral parts of thorax yellowish brown. Wing with lunar mark reaching into discal cell; stigma just beyond lunar mark distinct, ranging from brown to dark brown; petiole of veins M1 and M2 short, about as long as height of discal cell. Coxae yellowish brown, basally darkened; trochanters and femora yellowish brown, tips of femora dark-

ened; tibiae brown, darker towards tips, spurs distinct, spur formula 1.2.2; tarsal segments dark brown to black, claws with a distinct secondary tooth.

Abdomen yellowish brown with a broad dark brown to black dorsal stripe and narrow somewhat lighter coloured lateral stripes.

Hypopygium (Fig. 1a) large and shining, dark brown to black, gonostyles and other appendages yellowish brown. Tergite 9 elongate with a narrow and deep longitudinal depression along the midline, hind margin with a narrow U-shaped incision and rounded lateral corners (Fig. 1b). Outer gonostyle short and broad with an evenly rounded dorsal margin and set with long hairs (Fig. 1e). Inner gonostyle with a large posterior part of which the outer corner is curved sideways (Fig. 1d). Appendages of stemite 9 long and simple, curving downwards and set with long golden hairs, very thickly so at the rounded apex (Fig. 1e). Stemite 8 with two large lobes, apically each bearing a very long medially directed bristles crossing each other; inner margin of lobes with long thin golden coloured bristles that reach as far as the opposite socket and are crossing each other medially; hind margin of stemite 8 medially

with two small brush-like clusters of long thin golden coloured bristles (Fig. 1f).

*Female.* Not known.

*Etymology.* Named in honour of Prof. Dr. Murat BÄRLAS of the Mugla University.

*Habitat.* The specimens belonging to this new species were collected at altitudes ranging from 0 to 1250 m a.s.l. The habitat is characterized as a mixed forest with a stream flowing through. Characteristic plants in this habitat are: *Cedrus libani*, *Platanus orientalis*, *Pinus brutia*, *Quercus* sp., *Rosa* sp., *Rubus* sp., *Juncus* sp., *Juniperus* sp., *Dryopteris* sp., *Torilis* sp. and *Trifolium* sp.

### 3. Discussion

The new species *Tipula (lunatipula) murati* belongs to the *acuminata* group sensu Mannheims (1963). This group is characterized by the presence of (1) two large lobes at the outer margin of sternite 8, each bearing one or more large apical bristles (as in Fig. 1f); (2) two closely set bundles of bristles in the middle of the outer margin of sternite 8 (as in Fig. 1f); (3) down curved appendages of sternite 9 set with long hairs, especially at the apex (as in Fig. 1e), sometimes with smaller side branches. The *acuminata* group presently contains some 53 species, most of which are distributed in the south-eastern part of the Mediterranean and the Transcaucasus. The descriptions of all species, as well as material of a large number of species, have been checked, revealing that *T. (L.) murati* is indeed a new species. In many species of the *acuminata* group the incision at the hind margin of tergite 9 is of the type found in *T. (L.) murati*, and the posterior part of the inner gonostylus is enlarged and mostly bifold. Within the *acuminata* group, *T. (L.) murati* shares most of its hypopygial characters with *T. (L.) emma-*

*helena* Theischinger (1980), a species described and known only from the Turkish province of Icel. The shape of the posterior part of the inner gonostylus as found in *T. (L.) murati* is however unique. Another character of *T. (L.) murati* not present in any of the other species of the *acuminata* group, is found in the long thin golden coloured bristles crossing each other at the inner margin of the lobes of sternite 8 (Fig. 1f). This character is found in three other species groups of *Lunatipula*, namely the *phaidra*, *pilicauda*, and *clio* groups sensu Mannheims (1963). Identification using the key in Mannheims (1963) leads to the *phaidra* group that contains at present five species from Greece, the islands of Crete and Rhodes and one species from southwest Turkey (*t. (L.) sciurus* Theischinger). However, as outlined above, on the basis of all the other hypopygial characters, *T. (L.) murati* cannot be assigned to the *phaidra* group, which is characterized by hind margin of sternite 8 with hair plate and appendages of sternite 9.

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