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A New Species of *Idarnotorymus* Masi, 1916 (Hymenoptera: Torymidae) from Turkey

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Abstract: Some specimens of Torymidae (Hymenoptera: Chalcidoidea) were collected in Turkey, one of which belongs to *Idarnotorymus* Masi, 1916 (Torymidae: Toryminae) as a new species, *I. burdurensis*, and is described from Burdur province. The diagnostic characters of the genus and the new species are reviewed, and photographs and line drawings of *I. burdurensis* are presented.

Key Words: *Idarnotorymus*, Torymidae, new species, Hymenoptera, Turkey

Türkiye'den Yeni Bir *Idarnotorymus* Masi, 1916 (Hymenoptera: Torymidae) Türü

Özet: Burdur İli'nden Torymidae (Hymenoptera:Chalcidoidea) familyasına ait bazı örnekler toplanmış, bunlardan bir tanesinin *Idarnotorymus* Masi, 1916 (Torymidae: Toryminae) cinsine ait yeni bir tür olduğu belirlenmiştir. Bu tür ve cinsin tanı karakterleri gözden geçirilmiş, yeni türün teşhisinde kullanılan karakterlerinin fotoğraf ve çizimleri verilmiştir.

Anahtar Sözcükler: *Idarnotorymus*, Torymidae, yeni tür, Hymenoptera, Türkiye

Introduction

The genus *Idarnotorymus* Masi, 1916 (Hymenoptera: Torymidae) was described based on its type species, *Idarnotorymus pulcher* Masi (monotypic) (Masi, 1916). Later, Boucek (1955) described *Slanecia elongata* Boucek n. gen. and n. sp., which was synonymized with *Idarnotorymus* by Erdös (1963), and Peck et al. (1964) and Boucek (1965) followed this placement. Grissell (1995) discussed the phylogeny and recognition of the genus in the tribe Microdontomerini (Toryminae), stating that within Microdontomerini, *Idarnotorymus* is recognized by a hind femur that has finely pointed teeth on its ventral edge, the lack of a pair of propodeal carinae as in *Ditropinotus* + *Eridontomerus*; notauli that become obscure in the posterior half of the mesoscutum, and in females, the 2nd and 3rd metasomal terga are much longer than wide, and Mt2 is deeply cleft and Mt3 has a slight dorsal crease along its margin (in males both Mt2 and Mt3 are emarginated, though Mt3 is less so than Mt2). The genus was placed as a sister group to *Ditropinotus* + *Eridontomerus* based on the serrate condition of the hind femur (Grissell, 1995). However, *Idarnotorymus* differs from both of these by having a propodeum without carinae, whereas in *Ditropinotus* + *Eridontomerus* 2 carinae are present on the propodeum, and Mt2 is elongate and emarginated, whereas Mt3 is elongate and dorsally folded (Boucek, 1955, 1965, 1978; Erdös, 1963; Peck et al., 1964; Nikol'skaya and Zerova, 1978; Grissell, 1995; Zerova and Seryogina, 1999).

Currently, the generic name, *Idarnotorymus*, is retained even though it is monotypic (Grissell, 1995). The genus and its type species, *I. pulcher*, were re-described by Boucek (1955) as *Slanecia elongata*, and by Zerova and Seryogina (1999) who illustrated the antenna with 3 anelli and 5 funicle segments.

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The present study adds an interesting new species of *Idarnotorymus* to the family Torymidae from Turkey. The new species is very similar to the type species, *I. pulcher.* In the current work the diagnostic characters of the genus are corrected, and the new species is described based on a female specimen.

Material and Methods

Morphological terminology follows Grissell (1995). The material was swept from pasture in Burdur province, Turkey. The examined specimen was deposited in the ICMKU collection, Insect Museum of the Plant Protection Department, Agriculture Faculty, Mustafa Kemal University, Antakya, Hatay, Turkey. Abbreviations used in the key and descriptions are: C: claval segment; F: funicular segment; Mt2 and Mt3: metasomal tergites 2 and 3.

Results

Genus *Idarnotorymus* Masi, 1916

Figures 1 and 2.

Idarnotorymus Masi 1916:59-60. Type species: *Idarnotorymus pulcher* Masi, by monotypy.

Slanecia Boucek 1955: 307-310. Type species: *Slanecia elongata* Boucek (= *pulcher* Masi).

Idarnotorymus: Erdös 1963: 283-285 (synonymy).

Idarnotorymus: Peck et al. 1964:20 (synonymy in the key).

Idarnotorymus: Boucek 1965:545 (synonymy).

Idarnotorymus: Boucek 1978:128 (keyed in the Monodontomerinae genera).

Idarnotorymus: Nikol'skaya and Zerova 1978:367 (keyed, diagnostic characters are given).

Idarnotorymus: Grissell 1995:93-94, 195. (key, phylogeny, diagnostic characters are given).

Idarnotorymus: Zerova and Seryogina 1999: 45-46 (re-described).

Diagnosis. The diagnostic characters of the genus were given by several authors (Peck et al., 1964; Boucek, 1955 (as *Slanecia*); Nikol'skaya and Zerova, 1978; Grissell, 1995; Zerova and Seryogina, 1999), which follow.

Female. Body elongated with long ovipositor, head wider than thorax, antennae clavate (in both sexes) with 3 anelli, occiput not carinate. Notauli become obscure in the posterior half of the scutum, propodeum is without carinae, and hind femora with finely pointed teeth on ventral edge. The metasoma is longer than the head and mesosoma combined. In the dorsal view the first 2 tergites of the metasoma are ligulate; metasoma slightly compressed, Mt3 dorsally folded.

Discovery of the new species alters our concept of the genus as follows: antennae with 2-3 anelli, hind femora with finely/distinctly pointed teeth on its ventral edge, metasoma at least slightly compressed, and Mt3 dorsally folded or Mt3-Mt5 dorsally carinate-like keel.

Distribution: Palearctic (Italy, Hungary, Bulgaria, former Czechoslovakia, Uzbekistan, Ukraine, Kazakhstan), and Turkey (new record).

Biology: *I. pulcher* is a parasitoid of *Tetramesa brevicollis* (Walker) (Hymenoptera: Eurytomidae) in stems of *Festuca sulcata* (Hack.) (Poaceae).

Key to species of *Idarnotorymus*:

1- Antenna with 3 anelli, third flagellar segment without linear sensillae, marginal vein twice as long as the stigmal vein, metasoma have a second tergite (Mt3) slightly creased medially, and hind femora with 4 small teeth . . . . . .***pulcher*** (Massi, 1916)

- Antenna with 2 anelli, third flagellar segment with 2 distinct linear sensillae (Figures 1c and 2b), marginal vein 2.57 times as long as the stigmal vein (Figure 2a), metasoma strongly carinate medially (except first tergite) (Figure 1e-f), and hind femora with 5 bigger teeth (Figures 1d and 2c) . . . . . .***burdurensis*** sp.n.

Idarnotorymus burdurensis n.sp.

(Figures 1 and 2).

Description:

Female: Length 6 mm including ovipositor (ovipositor: 2.9 mm). Body generally dark blue, abdomen dorsally more or less blackish. Funicle brownish yellow, club orange-red. Scape and pedicel of antennae, and coxae and femora of legs concolorous with the body, except the ventral side of the hind femora and its knee, which are pale brown. Knees of the other legs testaceous, fore and

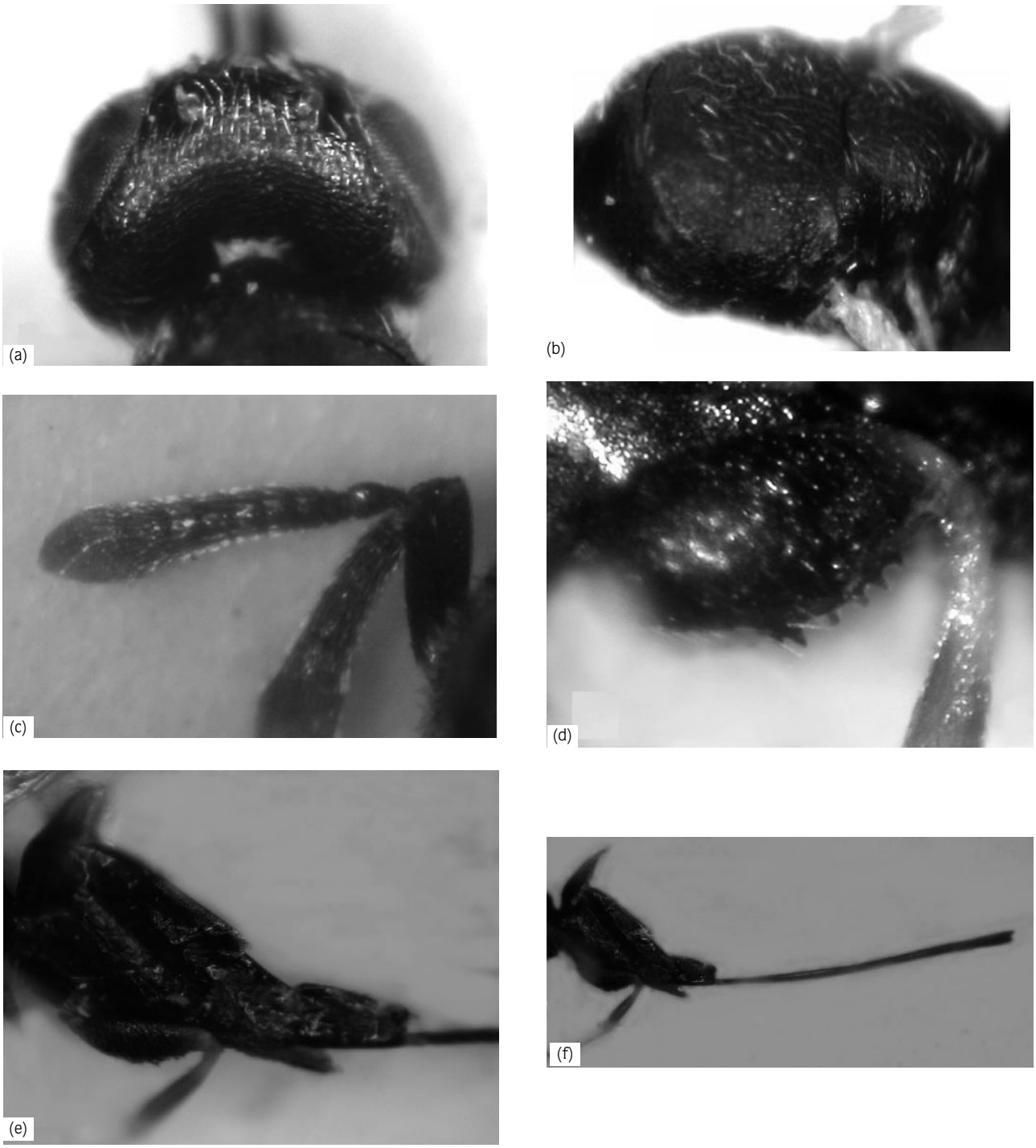

Figure 1. Head in dorsal view (a), forwarded white hairs on mesosoma (b), antenna (c), hind femur (d), metasoma, excluding ovipositor (e), and metasoma (f).

mid tibiae and tarsi pale yellow, except brown pretarsi. Hind tibia in basal 1/3 pale yellow and the remainder testaceous. Venation of wings yellow.

Head (Figure1a) and mesosoma (Figure 1b) covered with rather close, white hairs directed generally forward and quite visible on the dark blue surface. Head slightly

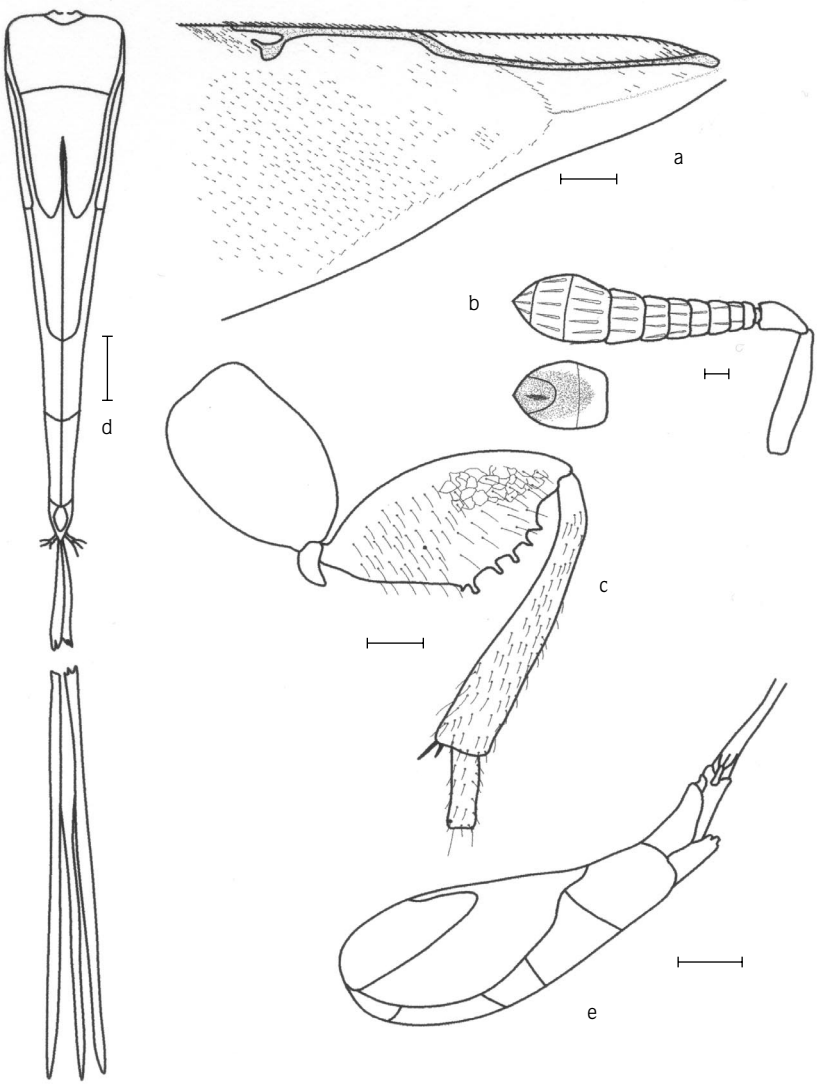

Figure 2. Forewing (a), antenna (b), hind leg (c), metasoma, dorsal view (d), and metasoma, lateral view (e) (scale bar: 0.125 mm).

transverse in front view (11:10), measured at the inner orbital as thick anteroposteriorly as the width of the frons at the front ocellus (11:11). Face moderately vaulted, with shallow scrobe cavity. Antennae inserted slightly above the lower ocular line. Low and polished inter-antennal callus not sharply limited below and against clypeus, which is truncated below. Ocelli in a broad triangle; its posterior side longer than the lateral side (2:1). Ocellocular line as long as the diameter of 1 ocellus. Hairs of head directed forward on frons, vertex, and temples, and downwards on the lower half of the frons, temples, and on the face.

Antennae short, clavate (Figures 1c and 2b) with the antennal formula 11263. Scape not reaching the front ocellus, nearly cylindrical, 1/2 as long as flagellum (1:2), and distinctly shorter than the width of the head (9:11). Pedicel 1.6 times longer than broad and 1.25 times longer than the following 3 flagellar segments combined; the first of these 1.5, the second twice as broad as long, the second one about half as long as the first funicle joint. First funicle joint (third flagellar segment with distinct linear sensillae) slightly transverse (4:5); the following ones gradually broaden, the last of them (the 6th) 1.66 times broader than long, narrower than the club. Club

moderately compressed laterally, broadly ovoid, as long as the 4 preceding segments combined, more than two times broader than pedicel; its sutures are very concave on the inner side, which bears an oval, elongate reticulated area.

Mesosoma (Figure 1b) 1.5 times as long as broad, its hairs directed nearly everywhere towards the head, on the dorsal surface of the pronotum the hairs are bent obliquely towards the middle. Pronotum short in the middle, its hind margin strongly and broadly emarginated, about 3 times as broad as long medially; mesonotum rather deeply and finely reticulated-punctured, mat, slightly vaulted, notauli shallow, posteriorly indistinct, about 1.5 times as long as broad; scutellum with the same reticulated sculpture as mesoscutum, but finer, without cross-furrow, as long as broad. Front half of mesopleuron shallowly reticulated, hind half nearly smooth. Relative lengths of veins of fore wing (Figure 2a): marginal vein 18, post-marginal vein 7, radial vein 4. Hind femora with 5 distinctly pointed teeth on its ventral edge (Figures 1d and 2c). Propodeum weakly reticulated, without distinct carinae, and spiracular furrows, spiracles round, with the distance between spiracles 3.5 times as long as its median length.

Metasoma (Figures. 1e-f and 2d-e) considerably longer than head and mesosoma combined (4:3), almost 2.3 times as long as broad, its dorsal surface shallow, transversally reticulated, the sides with thin white pubescence. First tergite 1.6 times as long as broad, the second about 4 times as long as broad (Figure 2d-e). First tergite with very deep incision, the second tergite and the following 2 tergites with a very high median keel (Figure 1e). Hypopygium (last sternite) reaches nearly to the level of the hind margin of the sixth tergite. Ovipositor 1.8 times as long as gaster (Figure 1f).

Male: Unknown.

Host: Unknown.

Described from one female (holotype) taken on 14 June 2003 by sweeping the grassy vegetation at Yesilova, Burdur, Turkey (collector: Oğuzhan Doğanlar) (Figure 3). Type specimens deposited in the Insect Museum of the Plant Protection Department of MKU, Agriculture Faculty, Antakya-Hatay.

Discussion

The new species, *I. burdurensis*, belongs to the genus *Idarnotorymus* due to its strongly clavate antennae, lengthened abdomen with a long ovipositor in the female, and by many other characters given in the description above. Based on the characters it is somewhat reminiscent of *I. pulcher*, but *I. burdurensis* differs from it by having a larger body (6 mm, including ovipositor). *I. pulcher* body 5.4 mm; 2 anelli segments in *I. burdurensis*, and 3 segments in *I. pulcher*; marginal vein 2.4 times as long as stigmal vein in *I. burdurensis*, but 2 times as long in *I. pulcher*; metasoma strongly carinate medially, except first tergite (Mt2) in *I. burdurensis* and in *I. pulcher* only the second tergite (Mt3) is slightly creased medially; hind femora with bigger teeth.

Grissel (1995) stated that discovery of additional species of *Idarnotorymus* might help verify or alter its generic status and might also be helpful in resolving questions concerning the relationship within the clade. By

Figure 3. Locality of the specimen.

having antennae with 2-3 anelli *Idarnotorymus* appears to be much closer to *Eridontomerus* than to *Ditropinous*, in which both sexes have 1 anellus. Having described the second species of the genus, we hope that the characters of the genus will be more apparent.

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