

A new species and additional records of the genus *Medon* Stephens, 1833 (Coleoptera: Staphylinidae: Paederinae) from Turkey

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Received: 27.06.2014 • Accepted/Published Online: 03.02.2015 • Printed: 30.07.2015

Abstract: *Medon assingi* sp. n. from Anatolia is described, and its diagnostic characters are illustrated. A total of 22 species of *Medon* are now known from Turkey. Moreover, additional records are reported for 14 species of the genus *Medon* from Turkey.

Key words: Coleoptera, Staphylinidae, Paederinae, *Medon*, Turkey, new species, additional records

1. Introduction

According to recent contributions, 78 species of *Medon* Stephens, 1833 are known in the Palaearctic region (Smetana, 2004; Assing, 2004a, 2005, 2013). The vast majority of species and subspecies (60 species and four subspecies) occur in the West Palaearctic region (Assing, 2013); the highest diversity of *Medon* species is in the Mediterranean region, especially in Turkey, which hosts as many as 21 species; 8 of these occur only in Turkey (Assing, 2004a, 2004b, 2005, 2007a, 2007b, 2007c, 2009, 2013; Anlaş, 2009) and were known prior to the present study.

A new species of *Medon* from Artvin and Şırnak provinces is described and illustrated; a total of 22 species are now known from Turkey, and records of the described species from 14 additional localities in Turkey are reported.

2. Materials and methods

The present paper is based on material collected during recent field studies in Turkey, especially the Aegean region of Western Turkey, conducted mainly by EA Yağmur, S Örgel, I Özgen, KB Kunt, and the author. This study was in part supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK, project no.: 112T907). The reference specimens for the records from Turkey are preserved in the collection of the Alaşehir Zoological Museum, Manisa (AZMM).

Primary and secondary sexual characters of the species described herein are termed following Coiffait (1984) and Assing (2004a). The limits of the zoogeographic regions are in accordance with those in Smetana (2004). The

morphological studies were conducted using a Stemi 2000-C microscope (Zeiss, Germany). For the photographs a digital camera (Zeiss Axiocam ERC5s) was used.

The following abbreviations are used for the measurements, which are given in millimeters:

AL: length of antenna; AW: maximal width of abdomen; EL: length of elytra from apex of scutellum to posterior margin at suture; EW: width of elytra; HL: head length from anterior margin of clypeus to posterior margin of head; HW: head width (including eyes); ML: length of aedeagus from apex of ventral process to base; PL: length of pronotum along median line; PW: maximal width of pronotum; TL: total body length.

3. Results

Medon abantensis Bordoni, 1980

Material examined: Denizli: 12 exs., 12.X.2013, Karcı mountain, sifter, 37°44'22"N, 28°58'37"E, 920 m, leg. Özgen & Örgel; 9 exs., 12.X.2013, road of Karcı mountain, sifter, 37°44'53"N, 28°58'56"E, 724 m, leg. Özgen & Örgel; 2 exs., 15.X.2013, Babadağ, sifter, 37°47'49"N, 28°50'49"E, 863 m, leg. Özgen & Örgel; 2 exs., 15.X.2013, Babadağ, leaf litter of chestnut, sifter, 37°47'14"N, 28°51'24"E, 806 m, leg. Özgen & Örgel; 3 exs., 15.X.2013, Sarayköy, Acidere, 37°51'18"N, 28°52'13"E, 350 m, leg. Özgen & Örgel; 1 exs., 15.IV.2014, Çal, Büyük Çökelez mountain, 38°01'31"N, 29°21'46"E, 1627 m, leg. Anlaş & Örgel. İzmir: 2 exs., 11.IV.2014, Bozdağlar, Narlıdere, 38°24'N, 28°08'E, ca. 1000 m, leg. Anlaş; 4 exs., 10.IV.2014, Kiraz, Karayavrular, leg. Özgen & Örgel. Malatya: 2 exs., 25.VII.2007, Hekimhan, İpekyolu, Girmana, leg. Anlaş &

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Yağmur. **Manisa**: 10 exs., 11.X.2013, Alaşehir-Kiraz road, a small creek, 38°13'35"N, 28°33'36"E, 318 m, leg. Özgen & Örgel. **Mersin**: 3 exs., 22.VII.2010, Çamlıyayla, Korucak 1 km E, 715 m, 37°08'56"N, 34°42'51"E, leg. Anlaş; 4 exs., 18.VII.2010, central province 20 km N, Aladağ 1.5 km W, 640 m, 36°56'21"N, 34°29'09"E, leg. Anlaş.

Distribution: According to Assing (2009, 2013) the distribution of this species ranges from Western Anatolia (İzmir) to Georgia and was recently reported from Cyprus (Anlaş, 2012). The specimens from Denizli, Manisa, and Mersin represent a new province record from Turkey.

***Medon brunneus* (Erichson, 1839)**

Material examined: **Edirne**: 2 exs., 23.XII.2009, Ipsala, Meriç river bank, leg. Koç. **Kırklareli**: 3 exs., 29.IX.2009, Demirköy, Dökümhane, ca. 41°49'N, 27°57'E, leg. Kunt; 5 exs., 02.X.2009, Demirköy, İğneada, Hamam lake, 41°49'43"N, 27°57'31"E, leg. Kunt; 2 exs., 22.V.2010, Demirköy, Sivrililer, leg. Kunt; 2 exs., 25.V.2010, Demirköy, Kadinkale, leg. Kunt; 1 ex., 03.X.2009, İğneada, Sislioba, leg. Kunt; 3 exs., 22.V.2010, Yıldız mts., Sislioba, leg. Bekchiev; 2 exs., 25.V.2010, Demirköy, Demirköy-Pınarhisar road, rhododendron forest, leg. Kunt.

Distribution: According to Assing (2009, 2013), this species is known from Northwestern Turkey, the Balkans, Italy, Central Europe, Northeastern Spain, France, and southern-northern Europe. The specimens from Edirne represent a new province record from Turkey.

***Medon caricus* Fagel, 1970**

Material examined: **Isparta**: 4 exs., 11.VIII.2010, Eğirdir, Kovada lake, 915 m, 37°37'54"N, 30°52'17"E, leg. Yağmur & Anlaş.

Distribution: The species is known from Southwestern Turkey, and also from the Greek island Nikariá (Assing, 2004a, 2013). The specimens from Isparta represent a new province record from Turkey.

***Medon dilutus pythonissa* (Saulcy, 1865)**

Material examined: **Ankara**: 1 ex., 13.IV.2013, Çamlıdere, Avşarlar 1 km N, 40°30'14"N, 32°25'17"E, 1211 m, leg. Anlaş. **Aydın**: 12 exs., 04.V.2013, Bozdoğan, Koyuncular 2 km N, 37°39'27"N, 28°25'54"E, 257 m, leg. Yağmur & Örgel. **Balıkesir**: 4 exs., 19.V.2013, Kepsut, Sayacık 5 km E, sifter, 39°39'44"N, 28°20'10"E, 632 m, leg. Yağmur & Örgel. **Denizli**: 2 exs., 15.X.2013, Babadağ-Sarayköy road, sifter, 37°50'42"N, 28°52'54"E, 350 m, leg. Özgen & Örgel; 2 exs., 14.X.2013, Çivril, Gümüşsu Köprüsü, 38°13'44"N, 30°01'41"E, 1137 m, leg. Özgen & Örgel; 5 exs., 15.X.2013, Sarayköy, Acıdere, 37°51'18"N, 28°52'13"E, 350 m, leg. Özgen & Örgel. **Elazığ**: 1 ex., 30.V.2013, central province, leg. Özgen. **Erzincan**: 2 exs., 17.V.2011, Erzincan-Refahiye road, Refahiye 20 km E, creek bank, 1774 m, 39°53'24"N, 38°58'34"E, leg. Anlaş, Özgen & Khachikov. **İzmir**: 2 exs., 28.V.2010, Buca, Kaynaklar, 365 m, 38°21'43"N, 27°17'19"E leg. Yağmur

& Anlaş; 1 ex., 19.IX.2009, Seferihisar, Orhanlı, 267 m, 38°11'42"N, 26°58'08"E, leg. Anlaş; 16 exs., 21.IV.2012, Seferihisar, Yukarı Orhanlı, leg. Yağmur; 7 exs., 06.VI.2014, Seferihisar, Yukarı Orhanlı 2 km E, leg. Yağmur. **Manisa**: 2 exs., 27.IX.2009, Spil National Park, 1200 m, 38°33'20"N, 27°23'17"E, leg. Anlaş; 4 exs., 17.I.2014, Alaşehir-Kiraz road, a small creek, 38°13'49"N, 28°35'00"E, 370 m, leg. Özgen & Örgel; 3 exs., 14.III.2014, Selendi, Omurlar village, 38°52'15"N, 28°49'11"E, leg. Yağmur & Örgel. **Muş**: 2 exs., 29-30.V.2011, Buğlan, leg. Khachikov & Kasatkin.

Distribution: This subspecies is common and widespread in the Eastern Mediterranean region (Assing, 2013).

***Medon ferrugineus* (Erichson, 1840)**

Material examined: **Gümüşhane**: 3 exs., 14.V.2011, Torul, Yıldız, 1161 m, 40°30'54"N, 39°13'44"E, leg. Anlaş, Özgen & Khachikov. **Muş**: 1 ex., 30.V.2011, Buğlan, leg. Khachikov & Kasatkin.

Distribution: According to Assing (2009), this species has a Ponto-Mediterranean element with distribution ranging from Eastern Turkey to the southeastern portion of Central Europe.

***Medon fuscus* (Mannerheim, 1830)**

Material examined: **Aydın**: 1 ex., 27.VI.2009, Nazilli, Çobanlar village, leg. Nabozhenko. **Denizli**: 2 exs., 14.X.2013, Çivril, Işıklı, a small creek, sifter, 38°18'03"N, 29°54'39"E, 845 m, leg. Özgen & Örgel. **Hatay**: 4 exs., 12.V.2008, Harbiye Cave, leg. Yağmur. **İzmir**: 3 exs., 11.IV.2014, Ödemiş, Bozdağlar, Akköy, 38°24'N, 28°08'E, ca. 1000 m, leg. Anlaş. **Kütahya**: 12 exs., 13.V.2014, Simav, Akdağ, 39°15'11"N, 28°48'45"E, 1800 m, leg. Yağmur & Örgel. 2 exs., 20.IV.2013, Hisarcık, Tokat, 39°11'56"N, 29°07'21"E, 1107 m, leg. Anlaş, Yağmur & Örgel. **Manisa**: 3 exs., 31.X.2013, Gördes, Karaağaç, 38°53'17"N, 28°09'29"E, 689 m, leg. Anlaş & Örgel. **Malatya**: 2 exs., 25.VII.2007, Hekimhan, İpekyolu, Girmana, leg. Anlaş & Yağmur. **Mersin**: 7 exs., 16.X.2010, Silifke, Cennet cave, leg. Yağmur.

Distribution: According to Assing (2009, 2013), *M. fuscus* is widespread from the Middle East to France and the British Isles. This species is also widespread and common in Turkey.

***Medon lanugo* Assing, 2004**

Material examined: **Antalya**: 3 exs., 01. VII. 2011, Alanya, Kaşbeleni Yaylası road, leg. Kunt.

Distribution: The known distribution of *M. lanugo* is confined to Anatolia (Assing, 2004a, 2009, 2013).

***Medon lindbergi* Scheerpeltz, 1958**

Material examined: **Gaziantep**: 4 exs., 25.VII.2012, Sofalıcı village, a small creek, leg. Yağmur. **Hatay**: 1 ex., 14.XI.2010, Samandağ, Tekepınar (Batıyaz), shifter, 525 m, 36°10'39"N, 35°59'28"E, leg. Anlaş & Yağmur.

Distribution: According to Assing (2009, 2013), the distribution of this species is confined to the Middle East from central Southern Anatolia to Israel.

***Medon lydicus* Bordoni, 1980**

Material examined: Aydın: 5 exs., 06.VII.2011, Davutlar, Güzelçamlı 10 km S, leg. Anlaş & Yağmur. Bursa: 4 exs., 26.IX.2010, Mezit 4 km S, Kestane village, 500 m, 39°56'58"N, 29°42'05"E, leg. Yağmur. İzmir: 5 exs., 10.IV.2014, Ödemiş, Bozdağlar, 38°24'N, 28°08'E, ca. 1000 m, leg. Anlaş. Kırklareli: 2 exs., 03.X.2009, Demirköy, Dökümhane, ca. 41°49'N, 27°57'E, leg. Kunt. Manisa: 2 exs., 11.IV.2014, Alaşehir-Kiraz road, 38°13'N, 28°35'E, ca. 500 m, leg. Anlaş, Yağmur & Örgel.

Distribution: According to Assing (2013), this species is known from Bulgaria, Serbia, Western Turkey, and Greece (Rhodes, Samos, Icaria, Lesbos). The specimens from Bursa represent a new province record from Turkey.

***Medon maronitus* (Saulcy, 1865)**

Material examined: Denizli: 4 exs., 15.X.2013, Sarayköy, Acıdere, 37°51'18"N, 28°52'13"E, 350 m, leg. Anlaş & Örgel. Hatay: 3 exs., 14.XI.2010, Yayladağı, Leylekli 2 km NW, 660 m, 35°57'34"N, 36°02'29"E, leg. Anlaş & Yağmur. Isparta: 2 exs., 10.VIII.2010, Eğirdir, Aksu 10 km NE, 1458 m, 37°48'06"N, 31°09'34"E, leg. Anlaş & Yağmur.

Distribution: This species is widespread from the Eastern Mediterranean to Middle Asia (Assing, 2013). The specimens from Denizli represent a new province record from Turkey.

***Medon reliquus* Assing, 2007**

Material examined: Manisa: 8 exs., 11.IV.2014, Alaşehir-Kiraz road, 38°13'N, 28°35'E, ca. 500 m, leg. Anlaş, Yağmur & Örgel.

Distribution: This species is known only from Aydın and İzmir provinces in Western Turkey (Assing, 2007). The specimens from Manisa represent a new province record.

***Medon rufiventris* (Nordmann, 1837)**

Material examined: Sinop: 2 exs., 07.IV.2011, central province, Nişi lake, leg. Koç.

Distribution in Turkey: According to Assing (2004, 2009, 2013), the distribution of this species is known from Turkey (Adana, Antalya, Isparta, Mersin) and the Black Sea region to Spain and southern-northern Europe.

***Medon semiobscurus* (Fauvel, 1875)**

Material examined: İzmir: 32 exs., 30.VI.2011, Buca, Gökdere cave, leg. Yağmur & Anlaş; 12 exs., 05.VI.2014, Buca, Gökdere cave leg. Yağmur & Örgel. Manisa: 2 exs., 17.I.2014, Alaşehir-Kiraz road, 38°13'49"N, 28°35'00"E, 370 m, leg. Özgen & Örgel. Muğla: 2 exs., 18.VI.2013, Fethiye-Çameli road, 36°50'30"N, 29°10'42"E, 1364 m, leg. Yağmur & Örgel. Siirt: 2 exs., 21.V.2010, 16.XI.2010, Baykan 4 km E, ca. 770 m, 38°11'42"N, 41°49'03"E, leg. Anlaş & Yağmur.

Distribution: This species is known from Turkey, the Middle East, and Greece (Rhodes, Samos, Kos) (Assing, 2013). The specimens from Siirt represent a new province record.

***Medon subfuscus* Fagel, 1969**

Material examined: Antalya: 1 ex., 03.I.2010, Gazipaşa, Beyrebucağı, 36°13'10"N, 32°24'17"E leg. Kunt; 1 ex., 10.XIII.2013, Alanya, Dim valley, 36°32'54"N, 32°07'26"E, 75 m, leg. Yağmur & Örgel.

Distribution: According to Assing (2013), this species is distributed from Southern Turkey and Greece (Kos).

***Medon assingi* sp.n. (Fig. 1)**

Type material. Holotype: TURKEY: ♂, "TR. Şırnak, İdil 40 km NW, 830 m, 37°18'57"N, 41°42'48"E, 12.IV.2011, leg. E. A. Yağmur/Holotypus ♂, *Medon assingi* sp. n. det. S. Anlaş 2014" (AZMM). Paratypes: 1♂, same data as holotype (AZMM); 1♂, Artvin, Hatila valley, 27.V.2012, leg. E. A. Yağmur (AZMM).

Description. Measurements (in millimeters) and ratios (n = 3): AL: 1.40–1.44, 1.42; HL: 0.72–0.75, 0.74; HW: 0.67–0.69, 0.68; PW: 0.65–0.67, 0.66; PL: 0.63–0.66, 0.65; EL: 0.78–0.81, 0.80; EW: 0.74–0.78, 0.76; AW: 0.72–0.74, 0.73; ML: 0.60–0.63, 0.61; TL: 5.0–5.1; HL/HW: 1.09; PW/HW: 0.97; PW/PL: 1.02; EL/PL: 1.23; EW/PW: 1.15; AW/EW: 0.96.

Habitus as in Figure 1A. Coloration: Head blackish; pronotum dark brown to blackish brown; elytra reddish brown, with the scutellar region and the posterior angles infusate; abdomen dark brown to blackish brown, with the apex reddish brown; legs and antennae reddish to reddish-brown.

Head weakly oblong (see measurements, ratio HL/HW; Figures 1A, 1B); eyes moderately large and weakly projecting from lateral outline of head, slightly more than half the length of postocular region in dorsal view; puncturation very dense, moderately coarse, and areolate, in central dorsal area mostly well-defined, in lateral areas partly confluent; interstices mostly reduced to very narrow ridges.

Pronotum slightly narrower than head (see ratio PW/HW; Figures 1A, 1B), and approximately as wide as long (see ratio PW/PL; Figures 1A, 1B); puncturation of pronotum similar to that of head but slightly coarser, less dense, more confluent and coriaceous, and less well-defined.

Elytra distinctly longer and wider than pronotum (see ratios EL/PL and EW/PW; Figures 1A, 1B), puncturation dense and fine, with granulose, and ill-defined; without distinct microsculpture; hind wings fully developed. Legs slender, metatibia approximately as long as elytra.

Abdomen slightly narrower than elytra (see ratio AW/EW; Figure 1A), widest at segments V and VI; puncturation fine and dense; interstices with microsculpture; posterior margin of tergite VII with palisade fringe.

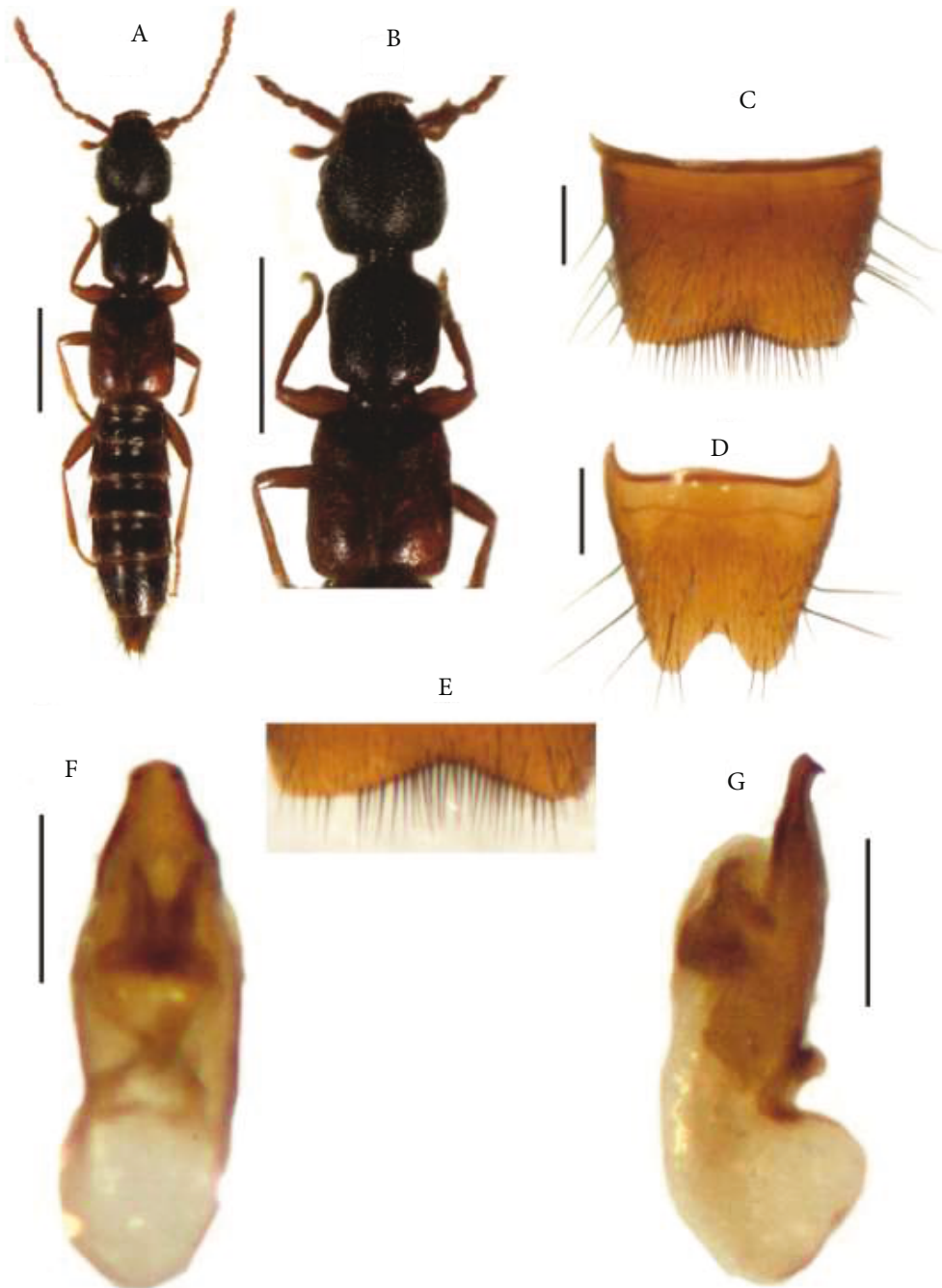


Figure 1. Details of *Medon assingi* sp. n. A–habitus; B–forebody; C–male sternite VII; D–male sternite VIII; E–postero-median portion of male sternite VII; F–aedeagus in ventral view; G–aedeagus in lateral view. Scale bars: 1.0 mm (Figures A, B); 0.2 mm (Figures C, D and F, G).

♂: Posterior margin of sternite VII concave, with a transverse row of approximately 30 long black setae (Figures 1C and 1E); sternite VIII with relatively large and deep posterior excision (Figure 1D). Aedeagus (Figures 1F, 1G) with long ventral process of characteristic shape, apically bird-beak-shaped in lateral view.

Comparative notes. This new species belongs to the *M. apicalis* group, which includes 30 species, 18 of them in the West Palaearctic region (Assing, 2013). The geographically closest *M. apicalis* group congeners are *M. beydaghensis* Fagel, 1969 (Antalya, Isparta); *M. caricus* Fagel, 1970 (Aydın, Çanakkale, Isparta, İzmir, Muğla); *M. maronitus*

(Saulcy, 1865) (widespread in Turkey); *M. reliquus* Assing, 2007 (Aydın, İzmir, Manisa); *M. seleucus* Bordoni, 1975 (Hatay, Osmaniye); and *M. subquadratus* Assing, 2004 (Adana, Mersin). The new species is distinguished from all its congeners by the distinctive morphology of the aedeagus, both ventral and lateral view, and by the different shape of excision at the posterior margin of the male sternite VII and by the presence of a transverse row of approximately 30 long black setae. It is additionally separated as follows.

From *M. maronitus* and *M. beydaghensis* by the different coloration (*M. maronitus* and *M. beydaghensis*: head dark brown to blackish and the remainder of the body yellowish brown or ferruginous), by the larger body and different shape of male sternite VII and VIII (*M. maronitus*: posterior marginate of sternite VII bisinuate, sternite VIII with relatively wide and not deep posterior incision; *M. beydaghensis*: posterior marginate of sternite VII shallowly concave, sternite VIII with relatively small incision).

From *M. reliquus* by the different coloration (*M. reliquus*: body uniformly rufous, legs and antennae pale reddish), by the larger body, and different shape of male sternite VII and VIII (*M. reliquus*: posterior margin of sternite VII almost truncate, sternite VIII with relatively small posterior excision).

From *M. caricus* by the different shape of male sternite VII (*M. caricus*: posterior marginate of sternite VII bisinuate, in the middle convex).

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- From *M. seleucus* and *M. subquadratus* by the different coloration (*M. seleucus* and *M. subquadratus*: body dark brown, with the abdominal apex and the appendages ferruginous; part of the pronotum and the anterior part of the elytra often lighter) and the different shape of male sternite VII (*M. seleucus* and *M. subquadratus*: posterior marginate of sternite VII strongly bisinuate).
- For illustrations of the genitalia and male sternite VII and diagnosis of these species see Assing (2004a, 2007c).
- Etymology.** The species is dedicated to Dr Volker Assing (Hannover, Germany), a specialist on Staphylinidae, who has carried out important entomological research on the genus *Medon* in the Palaearctic region.
- Distribution and bionomics.** The species was collected in two localities in Şırnak province of Southeastern Anatolia and Artvin province of Northeastern Anatolia. The specimens in Şırnak Province were found in moist grassland under calcareous stones at an altitude of 830 m; the specimen from Artvin was collected from leaf litter near a stream.

Acknowledgments

I am most grateful to my colleagues for making their staphylinid collections available to me. This study was supported in part by the Scientific and Technological Research Council of Turkey (TÜBİTAK, project no.: 112T907).