

APPENDIX I:

Temporary key to males of the SW-Himalayan species of *Chelifera* Meigen

- | | | | | | |
|------|--|---|------|---|----------------------------|
| 1 | – Wing without pterostigma | 2 | 5(4) | – Dorsal margin of cercus ca. straight | |
| | – Wing with pterostigma | 4 |  | ..... | <i>stauderae</i> n.sp. |
| 2(1) | – Thorax pale yellow, postgonite absent | | | – Dorsal margin of cercus sinuous..... | 6 |
|  | ..... |  |  | ..... | <i>haeselbarthae</i> n.sp. |
| | – Thorax brownish..... | 3 | 6(5) | – Epandrium with 3 strong setae, genitalia (Figs. 18-19)..... | <i>rhombicercus</i> n.sp. |
| 3(2) | – Dorsal margin of cercus simple, bent..... | | | – Epandrium with 1 strong seta, genitalia (Figs. 16-17)..... | <i>curvata</i> n.sp. |
|  | ..... |  |  | ..... | <i>accomodata</i> n.sp. |
| | – Dorsal margin of cercus with upturned 'nose' | | 7(4) | – Cercus rhomboid, dorsal margin irregularly serrate, postgonite large with horizontal appendage, hypandrium shallow tub-shaped, genitalia (Figs. 3-5)..... | <i>insueta</i> n.sp. |
|  | ..... |  |  | – Hypandrium with simple process and postgonite | 8 |
| 4(1) | – Mesonotum or entire thorax dark brown, pterostigma distinctly black..... |  |  | ..... |  |
|  | ..... |  |  | ..... | <i>rhombicerca</i> group |
| | – Mesonotum light brown to brown, pterostigma faint, more or less elongate ... | 7 | 8(7) | – Opening between cerci narrow, hypandrial process thin, less than half length of postgonite, genitalia (Figs. 8-10)..... | <i>multiseta</i> n.sp. |
|  | ..... |  |  | – Opening between cerci wide, hypandrial process broad, more than half length of postgonite, genitalia (Figs. 12-15)..... | <i>multisetoides</i> n.sp. |
| | – Mesonotum reddish brown, pterostigma brown, distinct, caudal margin of cercus with upturned 'nose' ..... |  |  | ..... | <i>brevidigitata</i> n.sp. |

APPENDIX II:

Temporary key to males of *Hemerodromia* Meigen from the Himalayas and China based only on lateral aspects of male genitalia

- 1 – Cercus with several dorsal digitate processes . 2
 – Cercus bilobed 4
 – Cercus simple 8
- 2(1) – Cercus with wide U-shaped incision
 *menghaiensis* Yang & Yang (**China**)
 – Cercus with narrow 3
- 3(2) – Dorsal margin of cercus with more than two
 spined tips
 *furcata* Grootaert, Yang & Saigusa (**China**)
 – Dorsal margin of cercus with two spined tips...
 *menglunana* Grootaert, Yang & Saigusa
 (**China**)
- 4(1) – Incision on distal (short) side of cercus..... 5
 – Incision on dorsal (long) side of..... 7
- 5(4) – Incision deep, inner lobe of epandrium with
 two large spines*serpa* Smith (**Nepal**)
 – Incision shallow 6
- 6(5) – Epandrium thin, elongate
 *striata* Yang & Yang (**China**)
 – Epandrium triangular, short.....
 *fusca* Yang & Yang (**China**)
- 7(4) – Distal part of cercus slightly longer than wide..
 *digitata* Grootaert, Yang & Saigusa (**China**)
 – Distal part of cercus twice as long as wide
 *concava* Yang & Yang (**China**)
- 8(1) – Cercus large, extensive, less than two times
 longer than wide 9
 – Cercus narrow elongate, more less than two
 times longer than wide 10
- 9(8) – Cercus oval, with 5 setae inside along distal
 margin, hypandrium with postgonite
 *elongatoides* n.sp. (**SW-Himalayas**)
 – Cercus and periandrium rhomboid, cercus with
 dorsomedian field of setae.....
 *rhomboides* n.sp. (**SW-Himalayas**)
- 10(8) – Cercus bent, increasing in width distally, often
 with distal ‘knob’ 11
 – Cercus more or less straight, decreasing in
 width distally 17
- 11(10) – Cercus bent anteriorly *pila* Smith (**Nepal**)
 – Cercus bent posteriorly..... 12
- 12(11) – Cercus strongly bent posteriorly
 *curvata* Grootaert, Yang & Saigusa (**China**)
 – Cercus slightly bent posteriorly, almost
 straight 13
- 13(12) – Distal margin of cercus serrate
 *apiciserrata* Grootaert, Yang & Saigusa (**China**)
 – Distal margin of cercus smooth 14
- 14(13) – Cercus slightly bent
 *fujanensis* Yang & Yang (**China**)
 – Cercus almost straight 15
- 15(14) – Epandrium sharp triangular
 *guangxiensis* Yang & Yang (**China**)
 – Cercus blunt triangular 16
- 16(15) – Cercus with strong inner distal setae, without
 apical epandrial lobe.....
 *acutata* Grootaert, Yang & Saigusa
 (**China, SW-Himalayas**)
 – Cercus without strong setae, with apical epan-
 drial lobe*spinosa* n.sp. (**SW-Himalayas**)
- 17(10) – Cercus distally acute 18
 – Cercus distally blunt 20
- 18(17) – Distal half of cercus thin.....
 *elongata* Yang & Yang (**China**)
 – Tip of cercus shorter 19
- 19(18) – Upper edge of epandrium almost straight
 *chita* Smith (**Nepal**)
 – Upper edge of epandrium bent
 *euneura* Yang & Yang (**China**)
- 20(17) – Tip of cercus in dorsal view trifid
 *chitaoides* n.sp. (**SW-Himalayas**)
 – Tip of cercus in dorsal view bifid.....
 *lomri* Smith (**Nepal**)
 – Tip of cercus simple in lateral view 21
- 21(20) – Phallus and its lateral processes thin acute,
 strongly bent
 *mengyangana* Grootaert, Yang & Saigusa
 (**China**)
 – Phallus almost straight..... 22
- 22(21) – Cercus sinuous.....
 *yunnanensis* Yang & Yang (**China**)
 – Cercus bent clockwise 23
- 23(22) – Epandrium with large oval apical projection
 *flaviventris* Yang & Yang (**China**)
 – No visible apical projection 24
- 24(23) – Epandrium tip bent dorsally
 *beijingensis* Yang & Yang (**China**)
 – Epandrium tip straight
 *puerensis* Yang & Yang (**China**)

APPENDIX III:

Temporary key to males of *Heleodromia* Haliday from the Himalayas based only on lateral aspects of male genitalia

- | | | | |
|------|---|------|---|
| 1 | – Tergite 8 with process 2 | 3(1) | – Blackish, long setae on basal half of front and middle femora..... <i>hilo</i> Smith (Nepal) |
| | – Tergite 8 without process 3 | | – Brownish-green, long setae only on front femur..... <i>obscura</i> (Brunetti) (W-Himalayas) |
| 2(1) | – Tip of process sharp, hypandrium with upright prolongation <i>ausobskyi</i> Wagner (Nepal) | | |
| | – Tip of process blunt, hypandrium without prolongation..... <i>rami</i> n.sp. (SW-Himalayas) | | |

APPENDIX IV:

Temporary key to males of *Clinocera* Meigen from the Himalayas and China based on genital features

- | | | | |
|-------|---|--------|---|
| 1 | – Clasper cercus (clc) setose 2 | 8(3) | – clc triangular with sharp tip 9 |
| | – clc 'naked' 3 | | – clc elongate with round tip 10 |
| 2 | – Surstylus (ss) thin, naked ... <i>pani</i> Smith (Nepal) | 9(8) | – Epandrium dorsally rounded <i>sinensis</i> Yang & Yang (China) |
| | – ss broad with a small proximal tip, a few large setae on both sides <i>setosa</i> n.sp. (SW Himalayas) | | – Epandrium dorsally straight <i>wui</i> Yang & Yang (China) |
| 3 (1) | – clc broad, < 2.5 as long as wide 4 | 10(8) | – clc 3-4 x longer than wide 11 |
| | – clc thin, > 3 times longer than wide 8 | | – clc 5-6 x longer than wide 12 |
| 4(3) | – clc with sharp tip 5 | 11(10) | – clc ~3 x longer than wide, ss small with distinct anterior tip <i>minutissima</i> Vaillant (Tadjikistan, SW Himalayas) |
| | – clc with blunt tip..... 6 | | – clc ~4 x longer than wide, ss broad with dorsal tip <i>stackelbergi</i> Vaillant (Tadjikistan, SW Himalayas) |
| 5(4) | – clc arrowhead-shaped, dorsal rim of ss sinuous <i>cuspidata</i> n.sp. (SW Himalayas) | | |
| | – clc short triangular, or dorsal rim of ss straight <i>nadi</i> Smith (Nepal) | 12(10) | – clc bent anticlockwise..... <i>chilamche</i> Smith (Nepal) |
| 6(4) | – clc widest in the middle, with blunt tip <i>sinclairi</i> n.sp. (SW Himalayas) | | – clc upright or bent clockwise..... 14 |
| | – clc with straight dorsal rim..... 7 | | |
| 7(6) | – clc with many setae inside, ss broad sickle-shaped..... <i>lunata</i> n.sp. (SW Himalayas) | 13(12) | – ss high and broad, with a short 'nose' <i>marginesetosa</i> n.sp. (SW Himalayas) |
| | – clc with few setae inside, ss thin sickle-shaped <i>lunatoides</i> n.sp. (SW Himalayas) | | – ss basally oval, with a long 'nose' <i>longicercus</i> n.sp. (SW Himalayas) |

A Revision of the *Medon* Species of the Eastern Mediterranean and Adjacent Regions

(Insecta: Coleoptera: Staphylinidae: Paederinae)

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Abstract. Types and additional material of *Medon* Stephens from the Eastern Mediterranean and adjacent regions (Balkans, Turkey, Caucasus region, Middle East) are revised. 31 species are recorded from the region and attributed to 6 re-defined species groups; the identity and status of *M. exquisitus* (Kirschenblat) remains doubtful. Six new species are described: *Medon impar* **sp. n.** (Rhodos), *M. subquadratus* **sp. n.** (southern Anatolia), *M. lanugo* **sp. n.** (Anatolia), *M. lamellatus* **sp. n.** (Anatolia), *M. paradisiacus* **sp. n.** (Azerbaijan), and *M. sequax* **sp. n.** (Armenia). The previously unknown male sexual characters of *M. coriaceus* Coiffait, 1969 are described. The following 26 new synonymies and other taxonomic changes are proposed: *Medon maronitus* (Saulcy, 1864), **sp. propr.**, = *M. marmarisensis* Fagel, 1970, **syn. n.**, = *M. alexandrinus* Bordoni, 1980, **syn. n.**, = *M. turcmenus* Gusarov, 1995, **syn. n.**; *M. petrochilosi* Coiffait, 1970 = *M. croaticus* Tóth, 1980, **syn. n.**; *M. caricus* Fagel, 1970 = *M. marmaridis* Franz, 1987, **syn. n.**; *M. brunneus* (Erichson, 1839) = *M. olympicus* Scheerpeltz, 1963, **syn. n.**; *M. semiobscurus* (Fauvel, 1875) = *M. rhodiensis* Scheerpeltz, 1963, **syn. n.**, = *M. clambus* Fagel, 1969, **syn. n.**; *M. pythonissa* (Saulcy, 1864) = *M. haafi* Scheerpeltz, 1956, **syn. n.**, = *M. mersinus* Bordoni, 1980, **syn. n.**, = *M. erevanensis* Coiffait, 1969, **syn. n.**, = *M. macedonicus* Coiffait, 1976, **syn. n.**; *M. rufiventris* (Nordmann, 1837) = *M. anatolicus* Coiffait, 1969, **syn. n.**; *M. ferrugineus* (Erichson, 1837) = *M. orduanus* Bordoni, 1980, **syn. n.**; *Medon fuscus* (Mannerheim, 1830) = *M. auraniticus* (Saulcy, 1864), **resyn.**, = *M. abchasicus* Bernhauer, 1922, **syn. n.**, = *M. gajaci* Coiffait, 1973, **syn. n.**, = *M. bulgaricus* Coiffait, 1970, **syn. n.**, = *M. paradobrogicus* Decu & Georgescu, 1994, **syn. n.**; *M. lindbergi* Scheerpeltz, 1958 = *M. scheerpeltzianus* Fagel, 1966, **syn. n.** = *M. loebli* Bordoni, 1980, **syn. n.**; *M. subfuscus* Fagel, 1969 = *M. besucheti* Bordoni, 1980, **syn. n.**; *M. umbilicatus* Coiffait, 1970 = *M. mimulus* Fagel, 1970, **syn. n.**, = *M. lydicus* Bordoni, 1980, **syn. n.**, = *M. rhodicus* Franz, 1987, **syn. n.**; *M. fuscoides* Coiffait, 1969 = *M. amidanus* Bordoni, 1978, **syn. n.**; *M. sparsiventris* Eppelsheim, 1889 = *M. frater* Bernhauer, 1922, **syn. n.**, = *M. wittmeri* Coiffait, 1976, **syn. n.** Six species originally described in *Medon* are transferred to the genus *Sunius* Curtis: *Sunius meuseli* (Bernhauer, 1905), **comb. n.**; *S. lebedevi* (Roubal, 1926), **comb. n.**; *S. kaboulensis* (Coiffait, 1981), **comb. n.**; *S. nidicola* (Kasheev, 1982), **comb. n.**; *S. splendidulus* (Boháč, 1988), **comb. n.**; *S. wrasei* (Schülke, 1989), **comb. n.** Lectotypes are designated for *Lithocharis apicalis* Kraatz, 1857, *Lithocharis brunnea* Erichson, 1839, *Medon olympicus* Scheerpeltz, 1963, *Medon rhodiensis* Scheerpeltz, 1963, *Lithocharis ferruginea* Erichson, 1837, *Lithocharis brancsiki* Eppelsheim, 1880, *Medon lindbergi* Scheerpeltz, 1958, and *Medon frater* Bernhauer, 1922. For the species treated, diagnoses and illustrations of the male sexual characters are presented, biogeographic and ecological data are compiled, the distributions are mapped, and a key to species is provided.

Key words: *Sunius* – Palaearctic – Europe – taxonomy – new species – new synonyms – new combinations – lectotype designations

1. INTRODUCTION

According to COIFFAIT (1984), the genus *Medon* Stephens is represented in the Western Palaearctic region by some 70 species. Only few additional species have been described in the past 20 years (ASSING 1998; ASSING & WUNDERLE 2001a; DECU & GEORGESCU 1994; GUSAROV 1995; SERRANO 1993). For the Eastern Mediterranean region (only the Balkans, Turkey, Syria, Lebanon, Israel, and the islands), COIFFAIT (1984) reports almost 40 species, 16 of them known only from Turkey.

Based on the morphology of the male primary and secondary sexual characters, BORDONI (1980a) attributed the *Medon* species of the Western Palaearctic to six species groups with several subgroups, but did not include all the species. COIFFAIT (1984) largely rearranged this

concept by attributing some species to other groups, establishing some of BORDONI's subgroups as distinct species groups, proposing other names, and adding some species groups.

Numerous species were first discovered in caves and have been considered troglophiles ever since, although most of these species do not show any morphological adaptations to caves. True troglophiles, however, are known only from the Canaries (*M. oromii* Assing, 1998), Madeira (*M. vicentensis* Serrano, 1993), and southeastern Romania (*M. dobrogicus* Decu & Georgescu, 1994). Generally, little is known about the habitats of *Medon* species; based on the circumstances of collection and because of the rarity of records, many species have been hypothesized to be associated with the burrows of small mammals (COIFFAIT 1984; HORION 1965).

The present revision was initiated mainly by repeated, but usually futile attempts at identifying Eastern Mediterranean *Medon* material, which aroused the suspicion that the prevailing taxonomic and biogeographic concept proposed by BORDONI (1980a) and COIFFAIT (1984) was at least partly incomplete or erroneous. During the past decades, various field trips have been carried out to the southern Balkans, Turkey, and the Middle East. The abundant *Medon* material from these regions that has been accumulated mainly in the collections of the natural history museums in Genève and Wien, as well as in some private collections, provided an opportunity to revise the taxonomic status and the distributions of the *Medon* species occurring in the Eastern Mediterranean. With few exceptions, all the relevant types were studied. Those species whose types were not accessible, available, or located could be interpreted with sufficient reliability based on their original descriptions and additional material from the vicinity of their respective type localities.

The region treated in this study comprises the Eastern Mediterranean and adjacent regions and is more or less strictly limited to the Balkans (including the islands), Cyprus, Turkey, the Caucasus region, and the Middle East (Syria, Lebanon, Israel).

2. MATERIAL AND MEASUREMENTS

Types and additional material from the following institutions and private collections were examined:

DEIC	Deutsches Entomologisches Institut, Eberswalde (L. Zerche)
FMNH	Field Museum of Natural History, Chicago (A.F. Newton Jr., P.P. Parrillo)
HNHM	Hungarian Natural History Museum, Budapest (O. Merkl)
ISNB	Institut Royal des Sciences Naturelles de Belgique, Bruxelles (D. Drugmand)
MSNV	Museo Civico di Storia Naturale, Verona (L. Latella)
MHNG	Muséum d'Histoire Naturelle, Genève (G. Cucodoro)
MNHN	Muséum National d'Histoire Naturelle, Paris (N. Berti)
NHMW	Naturhistorisches Museum Wien (H. Schilhammer)
USRS	Università degli Studi di Roma "La Sapienza" (A. Vigna Taglianti)
ZMHB	Museum für Naturkunde der Humboldt-Universität, Berlin (J. Frisch)
cAss	author's private collection
cBor	private collection A. Bordonì, Firenze
cKor	private collection H. Korge, Berlin
cRos	private collection A. Rose, Oldenburg
cRou	private collection G. de Rougemont, Londonièrès
cSch	private collection M. Schülke, Berlin

cSol	private collection A. Solodovnikov, St. Petersburg
cWun	private collection P. Wunderle, Mönchengladbach

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length along suture from the apex of the scutellum to the elytral hind margin.

3. THE *MEDON* FAUNA OF THE EASTERN MEDITERRANEAN AND ADJACENT REGIONS

A major result of the revision is a considerable decrease in the diversity of *Medon* "species" (i. e. a reduction of names) in the studied region. A study of the types and abundant additional material now available – altogether 4204 specimens, not counting those seen from other regions – revealed a taxonomic chaos of unexpected dimensions, exemplified in the fact that not a single Turkish *Medon* specimen I had identified (or tried to identify) before the revision turned out to be correctly named. The presence of only 31 species is confirmed. 27 new synonymies are proposed and one name is re-synonymized, whereas only six new species are described. The reasons for the numerous synonymous descriptions are manifold.

Systematic collecting activity in the region has strongly increased during the past three decades, but was much lower prior to the 1970s, so that only little material was available and it was not possible to fully assess intraspecific variation. In the present study, many external characters treated as distinguishing characters in the literature and even the male secondary sexual characters, which have previously been attributed high taxonomic significance, were found to be highly variable. The shape and chaetotaxy of the male sternite VII are useful characters for the separation of species groups, but often unsuitable for the identification of species, due to considerable intraspecific variation (especially of the number of palisade setae) and interspecific character overlap. The morphology of the aedeagus often provides the only reliable characters for identification at the species level. However, its general shape is strongly dependent on the mode of preparation, and interspecific differences, though constant, may not be very pronounced.

In many *Medon* species intraspecific variation of external characters was found to be enormous. This particularly applies to *M. semiobscurus* (see details in section 3.12). For most of the highly variable species of the *M. fuscus* group, no constant external characters allowing a separation with sufficient reliability were found; therefore, females from areas where several species of this group occur are listed only when they were found together with males.

Some previous misconceptions resulted from the fact that interpretations of species were based on misidentified non-type material and never questioned subsequently. This, for instance, applies to *M. pythonissa* (Saulcy), *M. fuscus* (Mannerheim), and *M. haafi* Scheerpeltz.

In the species of the *M. apicalis*, the *M. brunneus*, and the *M. fuscus* group, aedeagi were repeatedly found to be teratologically malformed or reduced, much more frequently so than in other staphylinid taxa I have studied. In some samples, most or even all of the males had teratological genitalia. Occasionally, teratologically malformed aedeagi were observed to coincide with reductions or other modifications of the male secondary sexual characters (sternite VII). The description of *Medon parvipallus* Coiffait, 1973, as well as the *M. parvipallus* species group established by COIFFAIT (1984) are evidently based on a male with a teratological aedeagus.

Six species groups are present in the studied region: The *M. apicalis* group (3 species), the *M. coriaceus* group (7 species), the *M. ripicola* group (1 species), the *M. brunneus* group (2 species), the *M. ferrugineus* group (3 species), and the *M. fuscus* group (15 species); for the species here attributed to these species groups see the key at the end of this paper. (The phylogenetic affiliations of *M. ripicola* are somewhat uncertain; the morphology of its aedeagus is similar to that of some species of the *M. fuscus* group (*M. lamellatus*, *M. cyprensis*), but other characters do not support a closer relationship to the species here included in this group, so that *M. ripicola* is tentatively attributed to a group of its own.) In contrast to the species group concept established by COIFFAIT (1984), *M. beydaghensis* is here attributed to the *M. apicalis* group. *M. coriaceus*, *M. petrochilosi*, *M. seleucus*, *M. cerrutii*, and *M. caricus*, which he referred to four different groups, are evidently closely related and here all included in the *M. coriaceus* group, together with two additional new species.

Personal field experience as well as the additional material examined shows that most *Medon* species are regularly and in greater numbers collected by sifting forest leaf litter (e. g. species of the *M. brunneus* and the *M. fuscus* group), suggesting that this is their true habitat and that the records from caves are probably accidental. However, some widespread species (e. g. *M. petrochilosi*, *M. rufiventris*) are rarely found, which indicates that they may be associated with a habitat of a more special nature.

While the *M. apicalis*, the *M. brunneus*, and the *M. ferrugineus* group are represented in the whole of the Mediterranean region, the *M. coriaceus* and the *M. fuscus*

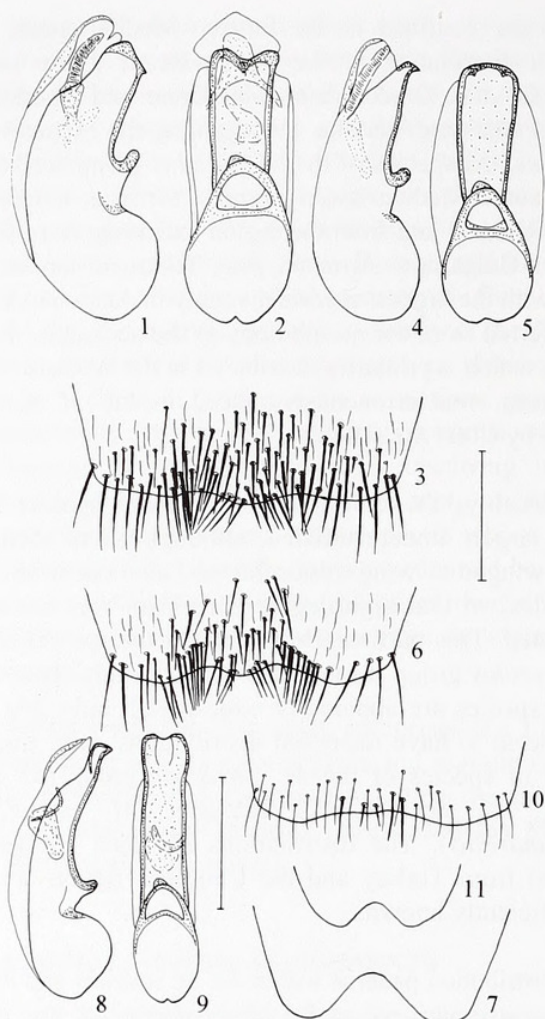
group are confined to the Eastern Mediterranean. The known distribution of the *M. coriaceus* group ranges from Croatia, Greece (including Crete and Rhodos) to central southern Anatolia. Disregarding the expansive *M. fuscus*, the species of the *M. fuscus* group are known from some Mediterranean islands (Sardinia, Crete, Cyprus, Rhodos) and from the region extending from south-eastern Bulgaria to Armenia, Iran, Turkmenistan, and Israel, with the highest species diversity in Anatolia. As can be inferred from the morphology of the aedeagus, *M. pocifer*, which is primarily distributed in the Western Mediterranean, was erroneously placed in the *M. fuscus* group by COIFFAIT (1984).

Remarkably, the distributions of many species have been largely underestimated, although all of them are fully winged or wing-dimorphic and also occur at lower altitudes, so that high-degree endemism was not to be expected. This particularly applies to the species of the *M. fuscus* group. In fact, the present study shows that most species are apparently widespread; only few species seem to have restricted distributions, e. g. the majority of species of the *M. coriaceus* group (*M. coriaceus*, *M. cerrutii*, *M. seleucus*, *M. impar*, *M. subquadratus*). The distributions of some species recorded from Turkey and the Caucasus region are still insufficiently known.

The distribution patterns within the *M. apicalis* and the *M. coriaceus* group, except for *M. beydaghensis*, are apparently strictly allo- or parapatric, suggesting that interspecific competition may be an important factor determining the ranges of individual species. The distributions of the species of the *M. fuscus* group, in contrast, largely overlap; on several occasions two or even three species of this group were represented in the same sample.

Several species from the east of the Western Palearctic region have been described in the genus *Medon*, but are evidently not congeneric with the species treated here and apparently refer to *Sunius* CURTIS. Traditionally, *Medon* and *Sunius* have been distinguished based on the distance between the gular sutures (narrowly separated, contiguous, or fused in *Medon*, and widely separated in *Sunius*). However, *Sunius* species are variable in this respect, so that this character alone is of relatively little systematic significance. For details regarding the species see section 5.

In the past, there has been some confusion regarding the gender of the genus. BORDONI (e.g. 1980a) treated it as neuter, whereas COIFFAIT (1976, 1986) inconsistently treated it as masculine and neuter. The Greek word *medon* (lord, ruler), however, is of masculine gender, so that all the adjectival species names are adapted accordingly.



Figs. 1 – 11: *Medon apicalis* (Kraatz) (1 – 3), *M. maronitus* (Saulcy) (4 – 7), and *M. beydaghensis* Fagel (8 – 11): Aedeagus in lateral and in ventral view (1, 2, 4, 5, 8, 9); posterior part of male sternite VII (3, 6, 10); outline of posterior margin of male sternite VIII (7, 11). Scales: 0.2 mm.

3.1. *Medon apicalis* (Kraatz, 1857) (Figs. 1 – 3, Map 1)

Lithocharis apicalis Kraatz, 1857: 715 f.

Types examined: Lectotype ♂, present designation: Cassel / Richt. / *apicalis* / coll. Kraatz / Syntypus / Lektotypus / coll. DEIC / *Medon apicalis* Kr. Wunderle det. 92 / *Medon apicalis* (Kr.) ♂ V. I. Gusarov det. 1996 / Lektotypus ♂ *Lithocharis apicalis* Kraatz desig. V. Assing 2002 (DEIC). Paralectotypes: 1♀: same data as lectotype, but “Paralectotypus” (DEIC); 1♀: Lyon / Paralectotypus / Syntypus / ? *rufiventris* Lyon Rey / coll. Kraatz / *Medon apicalis* Kr. Wunderle det. 92 / *Medon apicalis* (Kr.) ♀ V. I. Gusarov det. 1996 (DEIC).

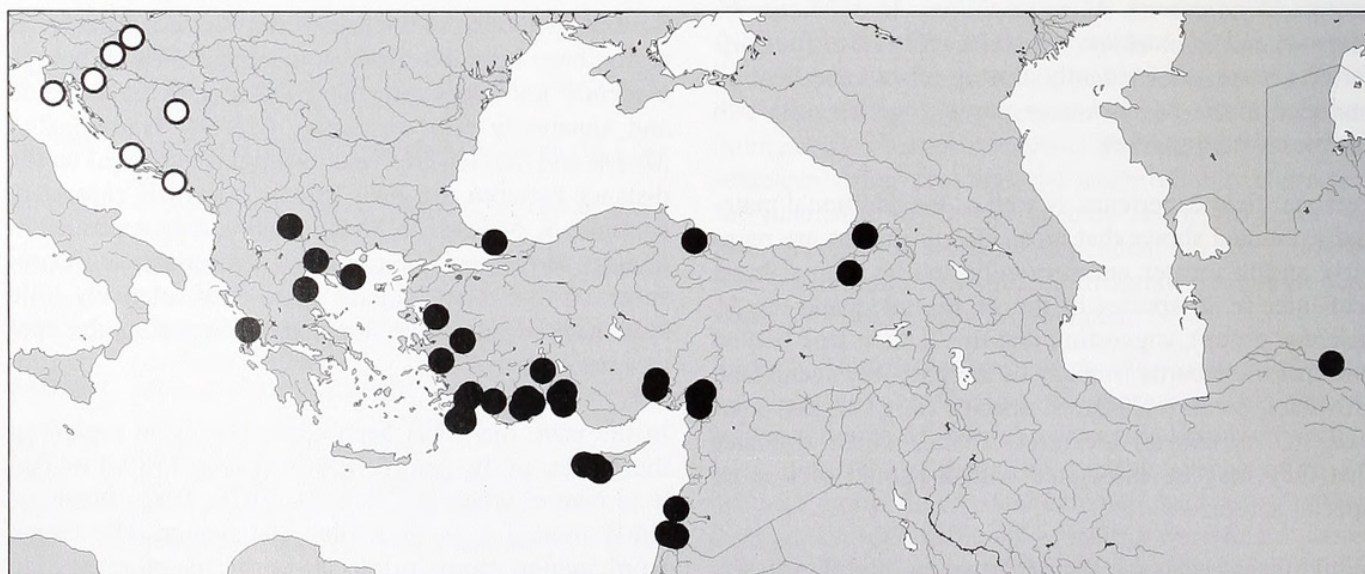
Additional material examined (total from studied region: 14 exs.): In addition to the material listed below, specimens from Germany, Austria, France, Spain, Portugal, Canary Islands, Madeira, and North Africa were examined.

Croatia: 1 ex., Josipdol-Karlovac, car-net, 9.V.1990, leg. Wunderle (cWun); 2 exs., Ludbreg, leg. Apfelbeck (HNHM); 1 ex., Zagreb, leg. Stiller (HNHM); 3 exs., Dubrovnik, leg. Reitter (HNHM, cAss); 4 exs., Pula (NHMW); 1 ex., Brač, leg. Schatzmayr (NHMW).

Bosnia-Herzegovina: 1 ex., Zavidovići, leg. Kendi (HNHM).

Diagnosis: Medium-sized species, 3.8 – 4.6 mm. Coloration somewhat variable; head usually dark brown to blackish; pronotum, elytra, and abdomen reddish brown to brown; elytra usually with the area surrounding the scutellum and the posterior angles more or less extensively darkened; appendages light brown to reddish brown.

Head with large and dense, weakly umbilicate, but not very deep puncturation, and with distinct microreticulation; interstices very narrow; surface mat or nearly so.



Map 1: Distributions of *Medon apicalis* (Kraatz) (open circles) and *M. maronitus* (Saulcy) (filled circles) in the Eastern Mediterranean and the Caucasus region, based on revised records.

Puncturation of pronotum fine and dense, not umbilicate; interstices without or with indistinct microsculpture; surface with some shine. Elytra at suture distinctly longer than pronotum and with dense, fine, somewhat granulose puncturation. Abdomen distinctly microsculptured and with dense and fine puncturation.

♂: sternite VII posteriorly weakly bisinuate and with numerous long and stout dark setae, palisade setae absent (Fig. 3); sternite VIII not distinctive; aedeagus of characteristic morphology (Figs. 1–2).

Comments: The original description is based on an unspecified number of syntypes. In view of the frequent confusion with similar species, the male syntype from the Kraatz collection is here designated as the lectotype in order to fix a single name-bearing type and thus to define the species.

Distribution and bionomics: In the Eastern Mediterranean, the species has been reported from Dalmatia, Greece, and Lebanon (COIFFAIT 1984; HORION 1965), but, apart from Croatia and Bosnia-Herzegovina, I have seen no material from the region (Map 1). It seems most likely that the records from the southern Balkans and from the Middle East are based on misidentifications (confusion with the similar *M. maronitus*). According to HORION (1965), *M. apicalis* is probably associated with burrows of small mammals and usually collected in rotting debris or on the wing.

3.2. *Medon maronitus* (Saulcy, 1864), sp. propr. (Figs. 4–7, Map 1)

Lithocharis maronita Saulcy, 1864: 650 f.

Medon marmarisensis Fagel, 1970: 161 ff.; **syn. n.**

Medon alexandrinum [sic] Bordoni 1980a: 85; **syn. n.**

Medon turcmenus Gusarov, 1995: 47 ff.; **syn. n.**

Types examined: *M. marmarisensis*: Holotype ♂: Anatolia merid. Marmaris, V.1969, G. Fagel / G. Fagel det. marmarisensis n. sp. / TYPE / R. I. Sc. N. B. I. G. 24885 / *Medon marmarisensis* ♂ Fagel, V. I. Gusarov det. 1992 / *Medon maronitus* (Saulcy) det. V. Assing 2001 (ISNB). Paratypes: 2♂♂, 4♀♀, same data as holotype (ISNB).

M. alexandrinus: Holotype ♂: Turquie Erzurum á Azort/lac de Tortum, 12.V.67, Cl. Besuchet / HOLO-TYPUS / *Medon alexandrinum* n. sp. Det. A. Bordoni 1975 / *Medon alexandrinum* ♂ Bordoni, V.I.Gusarov rev. 1993 / *Medon maronitus* (Saulcy) det. V. Assing 2001 (MHNG).

Additional material examined (total: 322 exs.):

Macedonia: 24 exs., Vardar plain, leg. Schatzmayr (NHMW, cAss).

Greece: Mainland: 2 exs., Larissa, Ossa Oros, W Stomio, bank of Pinios river, 5.IV.1998, leg. Wunderle (cWun); 4 exs., Thessaloniki, leg. Schatzmayr (ZMHB); 6 exs., Khalkidhiki, Athos, leg. Schatzmayr (NHMW, cAss). **Levkás:** 7 exs., Karia, 600 m, dark creek valley, 22.IX.1993, leg. Assing (cAss). **Ródhos:** 8 exs., M. Kariona, 400 m, 11.IV.1977, leg. Besuchet (MHNG, cAss); 10 exs., Profitis Ilias, 650 m, 11.IV.1977, leg. Besuchet (MHNG, cAss); 1 ex., Profitis Ilias, 600 m, 24.IV.1973, leg. Besuchet (MHNG); 16 exs., Petaloudes, 8.&15.IV.1977, leg. Besuchet (MHNG, cAss); 3 exs., Kremasti, 10.IV.1977, leg. Besuchet (MHNG, cAss); 8 exs., Epta Pigai, 9.IV.1977, leg. Besuchet (MHNG, cAss); 1 ex., "Rhodos", 23.IV.1973, leg. Besuchet (MHNG).

Cyprus: 10 exs., S Platres, Moniatas, 700 m, bank of stream, 2–12.IV.1995, leg. Assing (cAss); 4 exs., Paphos forest, Kykkos – Pera Vasa, 400 m, creek valley, 9.IV.1995, leg. Assing (cAss); 6 exs., Baths of Aphrodite, 22.VII.1977, leg. Besuchet (MHNG, cSch); 1 ex., Cedar Valley, 1200 m, 18.VII.1977, leg. Besuchet (MHNG); 1 ex., Agios Dhimitrios, 600 m, 9.VII.1977, leg. Besuchet (cSch); see also ASSING & WUNDERLE (2001a).

Turkey: **Istanbul:** 1 ex., Belgrader Wald, leg. v. Bodemeyer (ZMHB). **Samsun:** 31 exs., Samsun – Kavak, 20.V.1967, leg. Besuchet (MHNG, cAss). **Artvin:** 2 exs., Pirmalli, Karkal Dağı, 1600 m, 11.VI.1986, leg. Besuchet, Löbl & Burckhardt (cAss). **Izmir:** 7 exs., Bergama – Kozak, 18.VII.1969, leg. Besuchet (MHNG); 4 exs., Meryemana – Selçuk, 500 m, 9.V.1975, leg. Besuchet & Löbl (MHNG). **Manisa:** 1 ex., Salihli, 500 m, 29.IV.1975, leg. Besuchet & Löbl (cAss). **Muğla:** 1 ex., Bayır, 25 km NE Kemer, 950 m, 3.V.1975, leg. Besuchet & Löbl (MHNG); 1 ex., Marmaris, Çetibeli, 1.V.1975, leg. Besuchet & Löbl (MHNG). **Isparta:** 1 ex., S Eğirdir, Kovada National Park, 13.V.2000, leg. Meybohm & Brachat (cAss). **Antalya:** 1 ex., Bey Dag, V.1968 ["apicalis Kr. G. Fagel det."] (ISNB); 3 exs., Manavgat, 900 m, 31.XII.1990, leg. Assing (cAss); 1 ex., Manavgat, 0–50 m, 4.I.1991, leg. Assing (cAss); 1 ex., Manavgat, Yaylaalan, 850 m, 31.XII.1990, leg. Wunderle (cWun); 2 exs., road to Saklikent, 1000 m, pine forest, 11.V.2000, leg. Meybohm & Brachat (cAss); 2 exs., same data, but 1200 m, 10.V.2000 (cAss); 15 exs., Antalya – Kemer, 4.V.1975, leg. Besuchet & Löbl (MHNG). **Mersin:** 1 ex., ca. 30 km NNW Tarsus, 37°10'N, 34°46'E, 580 m, fallow with deciduous trees, 26.XII.2000, leg. Assing (cAss); 1 ex., 90 km W Adana, "Bulghardagh", leg. Sahlberg (DEIC). Adana: 5 exs., S Pozanti, 37°22'07"N, 34°49'48"E, 945 m, *Platanus* litter near stream, 26.XII.2000, leg. Assing (cAss); 1 ex., E Osmaniye, 1200–1700 m, leg. Schubert (NHMW). **Antakya:** 1 ex., 7 km E Yeşilkent, 350–400 m, 4.V.1978, leg. Besuchet & Löbl (MHNG); 2 exs., Payas, river valley, 25.V.1987, leg. Schönmann & Schilhammer (NHMW, cAss).

Lebanon: 28 exs., Damour, 28.III.1975, leg. Besuchet (MHNG, cAss).

Israel: 1 ex., Galilee, Montfort, 19.IV.1982, leg. Besuchet & Löbl (MHNG); 3 exs., Galilee, Mt. Meron, 900 m, 27.V.1973, leg. Löbl (MHNG); 61 exs., Galilee, Safad, 500 m, 30.V.1973, leg. Löbl (MHNG, cAss).

Georgia: 5 exs., Tbilisi, Mzcheta, 4–23.VI.1987, leg. Wrase & Schülke (cSch, cAss); 1 ex., same data, but VI.1986 (cSch).

Russia: 1 ex. [identified by V. Gusarov as *M. turcmenus*], Krasnodar territory, near town Pshada, in flood debris, 24.IV.1995, leg. Solodovnikov (cSol).

Iran or Azerbaijan: 1 ex., Talysch range, 1897, leg. Korb (ZMHB).

Diagnosis: Small species, 3.3 – 4.5 mm. Usual coloration: Distinctly bicoloured, with the head dark brown to

blackish and the remainder of the body yellowish brown to ferrugineous.

Head almost completely mat; punctures not umbilicate, dense and large, but rather shallow and weakly defined; interstices usually narrower than punctures and with isodiametric microsculpture. Pronotum also with dense, but much finer puncturation; interstices usually weakly microsculptured and somewhat shining, rarely with pronounced microreticulation and mat. Puncturation of elytra coarser than that of pronotum, very dense, slightly granulose, and ill-defined; interstices at most with weak microsculpture. Abdomen with extremely fine and dense puncturation, and with distinct microsculpture.

♂: posterior margin of sternite VII bisinuate, without palisade setae, but with clusters of long black stout setae (Fig. 6); sternite VIII with relatively wide and not very deep posterior incision (Fig. 7); aedeagus distinctive (Figs. 4–5).

Comments: The description of *Lithocharis maronita* is based on a single female from Şaydā, now in Lebanon (SAULCY 1864), which was not found in the Saulcy collection (N. BERTI, Paris, pers. comm. 2002). COIFFAIT (1984) studied the holotype and states that it is conspecific with *M. apicalis* “sans aucun doute”. However, *M. apicalis* does not occur in the Middle East; there is not a single confirmed record from the Eastern Mediterranean southeast of Bosnia-Herzegovina. So there is little doubt that the holotype of *M. maronitus* (Saulcy) is in fact conspecific with the species that has been described as *M. marmarisensis* and *M. alexandrinus*, respectively, which is very common and widespread in the region and which is often difficult to distinguish from *M. apicalis* based on external characters alone.

According to BORDONI (1980a), *M. alexandrinus* is separated from *M. marmarisensis* by the coloration and by the morphology of the aedeagus. A comparison with abundant material from various areas in the eastern Mediterranean, however, showed that the holotype of *M. alexandrinus* falls within the range of intraspecific variation of *M. maronitus*. The width of the ventral process of the aedeagus, as well as the distance between and the shape of the apical processes of the ventral process are variable. Consequently, both *M. marmarisensis* Fagel and *M. alexandrinus* Bordoni are here placed in the synonymy of the senior name *M. maronitus* (Saulcy).

The types of *M. turcmenus* were not seen, because they are temporarily unavailable (V. GUSAROV, Lawrence, pers. comm. 2002). However, the distinguishing characters (particularly the shape of the ventral process of the aedeagus) indicated in the original description are within the range of intraspecific variation of *M. maronitus* and the examined material includes one male identi-

fied as *M. turcmenus* by V. Gusarov, suggesting that *M. turcmenus*, too, is conspecific with *M. maronitus*.

Intraspecific variation and comparative notes: As is to be expected in a widespread species, various characters are subject to considerable intraspecific variation: coloration, size, eye size, relative length of elytra, microsculpture, puncturation; even the male sexual characters are somewhat variable. Based on the available material and evidence, the observed differences are here interpreted as an expression of – partly clinal – intraspecific rather than interspecific variation. The microsculpture of the forebody was found to be subject to considerable intraspecific variation in other species, too, particularly so in *M. semiobscurus* (see remarks below that species).

M. maronitus is distinguished from other congeners occurring in the eastern Mediterranean and adjacent regions especially by the morphology of the aedeagus, usually also by the puncturation and coloration of the forebody and by the shape and chaetotaxy of the male sternite VII. For separation from the similar *M. beydaghensis* see below.

Distribution and bionomics: *M. maronitus* is one of the most widespread *Medon* species in the Western Palaearctic region. It occurs in the Eastern Mediterranean from Greece to Israel, to the Caucasus region, and to Turkmenistan (Map 1). *M. maronitus* has been found in various habitats, especially in moist situations, at a wide range of altitudes (0–2000 m). Teneral specimens were observed in May and July.

3.3. *Medon beydaghensis* Fagel, 1969 (Figs. 8–11, Map 2)

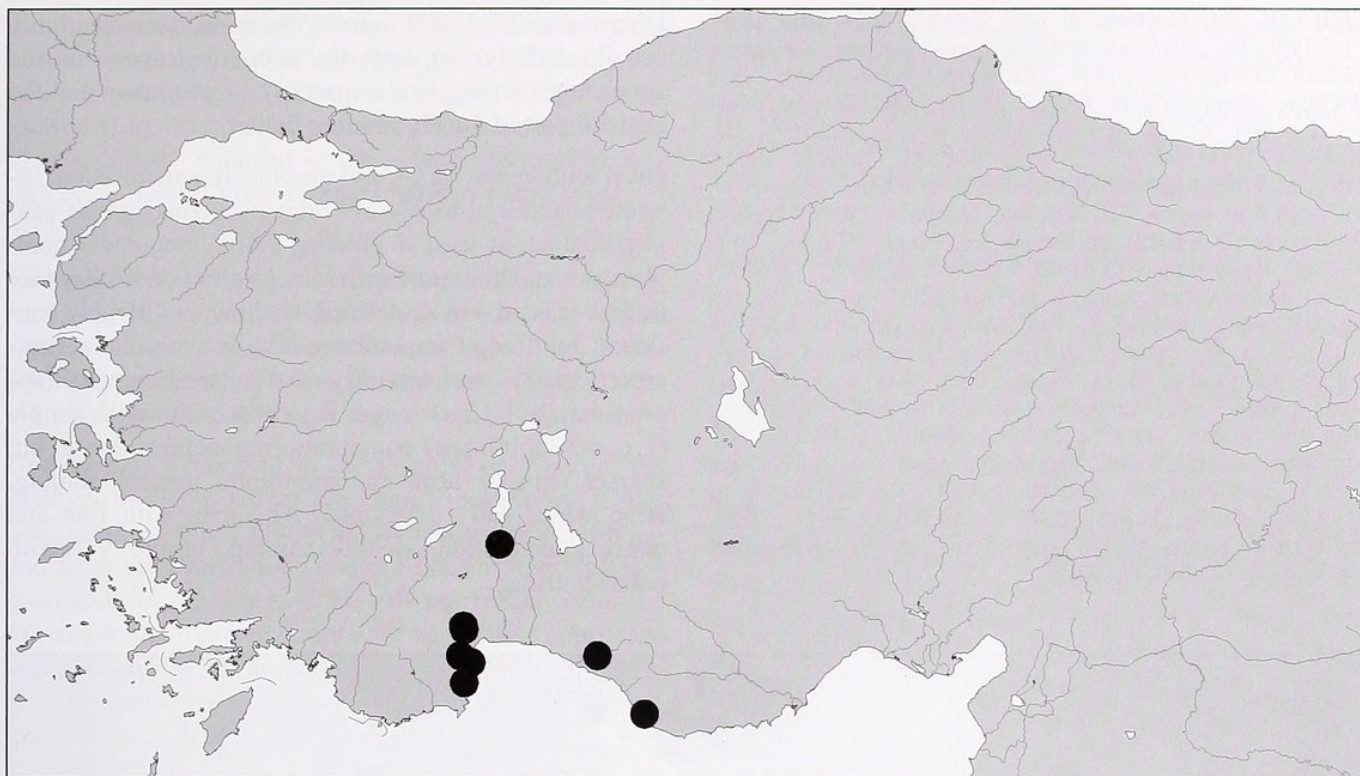
Medon beydaghensis Fagel, 1969: 108 ff.

Types examined: Holotype ♂: Anatolie mér., Bey Dag, V.1968, G. Fagel / G. Fagel det. beydaghensis n. sp. / TYPE / R. I. Sc. N. B. I. G. 24885 (ISNB). Paratypes: 2♀♀, same data as holotype (ISNB).

Additional material examined (total: 18 exs.):

Turkey: Antalya: 2 exs., SW Antalya, 15 km s Kemer, 36°30'N, 30°29'E, 60 m, 24.IV.2001, leg. Meybohm & Brachat (cAss); 2 exs., Antalya, valley SE Termessos, 36°57'N, 30°29'E, 300 m, 22.IV.2001, leg. Meybohm (cAss); 2 exs., Termessos, 10.&14.IV.1984, leg. Brachat (cSch); 1 ex., NW Alanya, Günzelbağ, 21.-26.IV.1984, leg. Brachat (cAss); 4 exs., Antalya – Kemer, 4.V.1975, leg. Besuchet & Löbl (MHNG, cAss); 2 exs., 18 km SE Gazipaşa, 27.IV.1978, leg. Besuchet & Löbl (MHNG, cAss); 4 exs., W Kemer, S Hisar, 36°44'02"N, 30°26'23"E, 1120 m, litter of *Quercus* and *Carpinus*, 2.IV.2002, leg. Assing, Wunderle (cAss, cWun). **Isparta:** 1 ex., Eğirdir – Çandır, 900 m, 7.V.1975, leg. Besuchet & Löbl (MHNG).

Diagnosis: Similar to *M. maronitus*, but distinguished as follows: Smaller, 3.2–3.6 mm. Coloration as in *M. maronitus*. Head with coarser and distinctly sparser puncturation; interstices in central dorsal area approxi-



Map 2: Distribution of *Medon beydaghensis* Fagel in Turkey, based on revised records.

mately as wide as or wider than punctures; interstices with distinct, but relatively shallow microreticulation; surface more shiny than in *M. maronitus*.

Pronotum with much larger and sparser shallow punctures; posterior half of midline impunctate; interstices of variable width, but on average approximately as wide as punctures; microreticulation much more pronounced than in *M. maronitus*; surface almost mat.

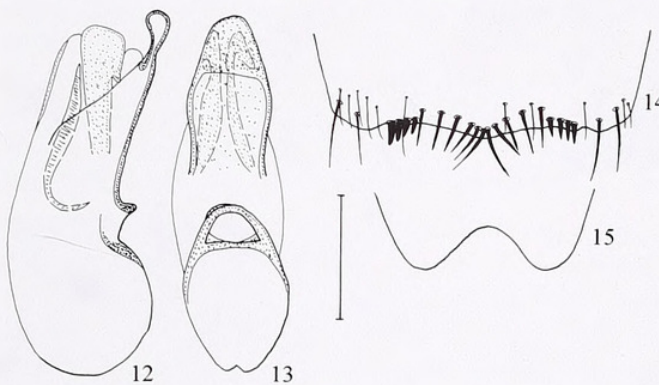
Elytra relatively shorter than in *M. maronitus*, at suture 1.05 – 1.10 times as long as pronotum; puncturation distinctly coarser. Hind wings present. Posterior margin of abdominal tergite VII with narrow palisade fringe.

♂: posterior margin of sternite VII shallowly concave, not bisinuate, without palisade setae, only with few (3–7) stouter setae in the middle (Fig. 10); posterior margin of sternite VIII with relatively small incision (Fig. 11). Aedeagus small, ventral process slender, its shape completely different from that of *M. maronitus* both in lateral and in ventral view (Figs. 8 – 9).

Comparative notes: From all its congeners occurring in the Eastern Mediterranean, *M. beydaghensis* is distinguished especially by the male sexual characters. For separation from the similar *M. maronitus* see diagnosis above.

Distribution and bionomics: The species is known from several localities in Antalya and Isparta, southwestern Anatolia (Map 2), where it was collected at rather low altitudes (60 – 900 m). Remarkably, *M. bey-*

daghensis is apparently much less widespread than other species of the *M. apicalis* group and, in contrast to the distribution patterns of other species of the group, its distribution overlaps with that of *M. maronitus*.



Figs. 12 – 15: *Medon cerrutii* Coiffait: Aedeagus in lateral and in ventral view (12, 13); posterior margin of male sternite VII (14); outline of posterior margin of male sternite VIII (15). Scale: 0.2 mm.

3.4. *Medon cerrutii* Coiffait, 1976 (Figs. 12 – 15, Map 3)

Medon cerrutii Coiffait, 1976b: 94 f.

Material examined (total: 101 exs.):

Kríti: 6 exs., W-Crete, Nea Roumata, 35°23N, 23°51E, 290 m, 14.III.2001, leg. Meybohm (cAss); 1 ex., W-Crete, Elos, 35°21N, 23°38E, 625 m, 15.III.2001, leg. Meybohm (cAss); 6 exs., W-Crete, Kakodiki, 35°17N, 23°42E, 310 m, 16.III.2001, leg. Meybohm (cAss); 2 exs., W-Crete, Prases, 35°22N, 23°50E, 550 m,

14.III.2001, leg. Meybohm (cAss); 2 exs., Prases, pine forest, 13.X.1991, leg. Wunderle (cWun); 1 ex., W-Crete, Kandamos, 35°20N, 23°44E, 420 m, 16.III.2001, leg. Meybohm (cAss); 5 exs., W-Crete, Sfinari, 35°24N, 23°35E, 240 m, 15.III.2001, leg. Meybohm (cAss); 8 exs., W-Crete, Deres, 500 m, 13.X.1991, leg. Wunderle (cAss, cWun); 2 exs., W-Crete, Vrysses, 100 m, 21.IV.2000, leg. Meybohm (cAss); 3 exs., W-Crete, Vathi, 350 m, leaf litter near source, 7.X.1991, leg. Wunderle (cWun); 12 exs., W-Crete, between Lakki and Phruses, leg. Franz (NHMW); 5 exs., W-Crete, Rethymnon, 13.VI.1984, leg. Franz (NHMW); 3 exs., W-Crete, Kandanos, "geg. Spina", leg. Franz (NHMW); 1 ex., E-Crete, Agios Nikolaos, Kalamafka, 17.IV.2000, leg. Meybohm (cAss); 8 exs., E-Crete, Ano Zakros, 20.III.1986, leg. Meybohm (cAss); 1 ex., E-Crete, Kato Horio, 200 m, *Platanus* litter, 14.IV.2000, leg. Meybohm (cAss); 1 ex., E-Crete, Assitaes, leg. Holtz (ZMHB); 2 exs., Rethimnon Armeni, 35°17N, 24°28E, oakwood, 24.IV.2000, leg. Meybohm (cAss); 4 exs., Rethimnon, Agios Ioannis, 35°15N, 24°25E, 22.IV.2000, leg. Meybohm (cAss); 1 ex., Samaria valley, 21.-22.III.1975, leg. Fölscher & Meybohm (cAss); 19 exs., Kerá, 9.VIII.1973, leg. Vit (MHNG, cAss); 8 exs., locality not specified, leg. Paganetti (ZMHB, NHMW).

Diagnosis: 3.7 – 4.7 mm. Coloration variable, body usually dark brown, with the abdominal apex and the appendages ferrugineous; (part of) the pronotum and the anterior part of the elytra often lighter.

Head with dense, large, and umbilicate puncturation; interstices reduced to narrow ridges; microsculpture usually distinct, at least in anterior half; integument completely mat. Pronotum with puncturation of similar size as that of head, but ill-defined, shallow, and largely confluent; midline, if impunctate, usually with distinct microreticulation and mat. Elytra at suture distinctly (approximately 1.15 x) longer than pronotum; with simple (i. e. not umbilicate) puncturation; punctures dense, but sparser than on head and pronotum, instices shining. Hind wings fully developed. Abdomen with fine and dense puncturation, weakly shining; tergite VII with palisade fringe.



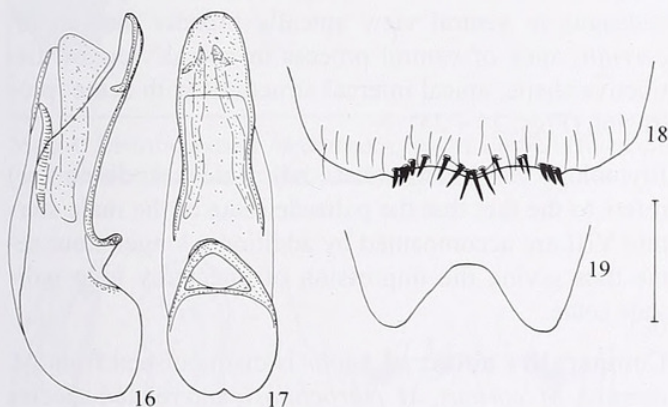
Map 3: Distributions of *Medon cerrutii* Coiffait (open circles) and *M. caricus* Fagel (squares), and *M. impar* sp. n. (filled circles), based on revised records.

♂: posterior margin of sternite VII bisinuate, in the middle convex, on either side with comb of usually 3-5 palisade setae (Fig. 14); sternite VIII posteriorly broadly incised (Fig. 15; ventral process of aedeagus in lateral view distinctly widened in the middle, apex of ventral process in lateral view of characteristic shape (Figs. 12 – 13).

Comparative notes: In external morphology, *M. cerrutii* is highly similar to *Medon petrochilosi* and related species (*M. caricus*, *M. impar*, *M. subquadratus*, *M. seleucus*). An identification is possible only based on the morphology of the aedeagus.

Comments: According to the original description, the holotype is deposited in the Cerruti collection. It was not examined, but it can be inferred from the description and from the illustrations that the present interpretation is correct. *M. cerrutii* is the sole representative of the *M. coriaceus* group in Crete and, based on the primary and secondary sexual characters, cannot be confused with its sympatric congeners (*M. brunneus*, *M. pythionissa*, *M. beroni*).

Distribution and bionomics: *M. cerrutii* is apparently endemic to Crete, where it seems to be rather common (Map 3). The labels attached to the material examined indicate altitudes between 200 and 625 m. At least part of the specimens were collected in leaf litter of deciduous trees.



Figs. 16 – 19: *Medon petrochilosi* Coiffait: Aedeagus in lateral and in ventral view (16, 17); posterior margin of male sternite VII (18); outline of posterior margin of male sternite VIII (19). Scale: 0.2 mm.

3.5. *Medon petrochilosi* Coiffait, 1970 (Figs. 16 – 19, Map 4)

Medon petrochilosi Coiffait, 1970a: 231 ff.

Medon croaticus Tóth, 1980: 163 f.; **syn. n.**

Types examined: *M. petrochilosi*: Paratypes: 1♂: Péloponnèse – X.63, Pyrgos, Dirou, Gr. Glyphada / PARATYPE / *Medon petrochilosi* Coiff. H. COIFFAIT det.

1971 [sic]; 1♀: Péloponnèse X.63, P. Dirou, Gr. Glyphada / PARATYPE / *petrochilosi* Coiffait (ISNB).

M. croaticus: Holotype ♂ [slightly damaged]: Croatia, Padewieth / Gospics / Holotypus *Medon croaticus* ♂ L. Tóth / *Medon petrochilosi* Coiffait det. V. Assing 2002 (HNHM).

Additional material examined (total: 3 exs.):

Greece: 1 ex., Levkás, S Exanthia, 600 m, creek valley, 27.IX.1993, leg. Assing (cAss); 1 ex., Gythion (=Yíthion), 18.-29.IV.1956, leg. Schubert (NHMW); 1 ex., Pelopónnisos, 8 km N Kalavrita, 38°05'N, 22°10'E, 680 m, litter of *Platanus*, 30.III.1997, leg. Zerche (DEIC).

Diagnosis: Of similar external morphology as *M. cerrutii*.

♂: sternite VII of similar shape and chaetotaxy as in *M. cerrutii*, but setae slightly shorter (Fig. 18); posterior incision of sternite VIII slightly deeper (Fig. 19). Ventral process of aedeagus similar to that of *M. cerrutii*, but in ventral view less strongly dilated in the middle and apex of ventral process in lateral view of distinctive shape; outline of apical internal structures different (lateral view) (Figs. 16 – 17).

Comparative notes: From *M. cerrutii*, *M. caricus*, and related species, *M. petrochilosi* is distinguished especially by the morphology of the aedeagus.

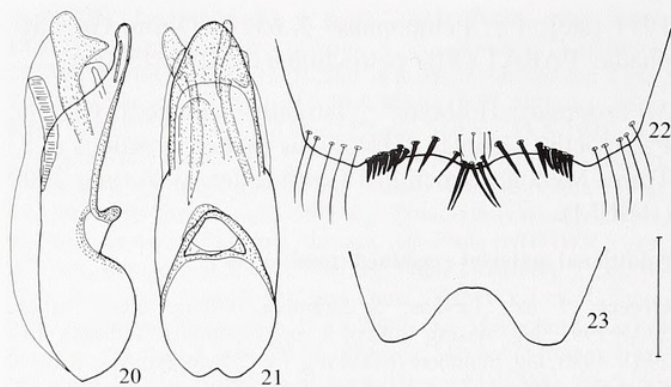
Comments: According to TÓTH (1980), *M. croaticus* is distinguished from *M. petrochilosi* by “its slender body, the sculpture, the characteristic black setae at the apex of male’s [sic] 6th ventral segment and by the build of its aedoeagus.” An examination of the types of both names, however, revealed no such differences; they are in fact conspecific, so that *M. croaticus* is here placed in the synonymy of the senior name *M. petrochilosi*.

Distribution and bionomics: The species was previously known only from the type locality of *M. petrochilosi* in the Pelopónnisos, but is here recorded also from Levkás, and Croatia (Map 4). According to COIFFAIT (1970a, 1984) it lives in caves, but judging from the complete absence of any morphological adaptations usually encountered in cavernicolous Staphylinidae and from the circumstances under which the additional material was collected, this does not seem very likely. The true habitat of the species is unknown.

3.6. *Medon coriaceus* Coiffait, 1969 (Figs. 20 – 23, Map 4)

Medon coriaceum Coiffait, 1969: 714 f.

Type examined: Holotype ♀: Bulgarie, 26, Melnik, (Cave.) 20.9.65 / HOLOTYPE / Museum Paris coll Coiffait / *Medon coriaceum* Coiff. H Coiffait det. 1969 (MNHN).



Figs. 20 – 23: *Medon coriaceus* Coiffait: Aedeagus in lateral and in ventral view (20, 21); posterior margin of male sternite VII (22); outline of posterior margin of male sternite VIII (23). Scale: 0.2 mm.

Additional material examined (total: 2 exs.):

Macedonia: 1 ex., Strumica, leg. Liebmann (DEIC).

Greece: 1 ex., Khalkidhiki, Cholomon, 900 m, caught flying, 30.III.1989, leg. Assing (cAss).

Diagnosis: Of similar external morphology as *M. petrochilosii*; distinguished only by the coarser and more coriaceous puncturation of the pronotum and by the male sexual characters.

♂: sternite VII of similar shape and chaetotaxy as in *M. cerrutii*, but in the middle more distinctly pointed and lateral palisade setae more numerous (about 6) (Fig. 22); posterior margin of sternite VIII as in Fig. 23. Ventral process of aedeagus similar to that of *M. cerrutii*, but broader in ventral view and with more slender apex (lateral view); apical internal structures (lateral view) of distinctive shape (Figs. 20 – 21).

Comparative notes: From *M. cerrutii*, *M. petrochilosii*, *M. caricus*, and related species, *M. coriaceus* is distinguished especially by the very coarsely punctured pronotum, by the chaetotaxy of the male sternite VII, and by the morphology of the aedeagus.

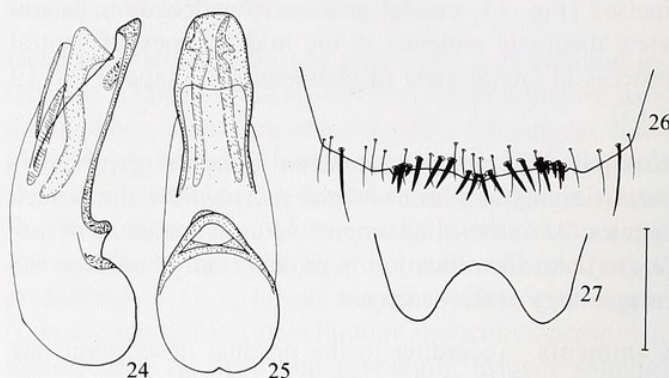
Distribution and bionomics: *Medon coriaceus* apparently has a restricted distribution. Only three records from southern Macedonia, southwestern Bulgaria, and north-eastern Greece have become known (Map 4). The specimen from Khalkidhiki was caught on the wing in March.

3.7. *Medon impar* sp. n. (Figs. 24 – 27, Map 3)

Types: Holotype ♂: RHODES No 17, Petaloudes, 15.IV.1977, Cl. Besuchet / Holotypus ♂ *Medon impar* sp. n. det. V. Assing 2001 (MHNG).

Paratypes (total: 26 exs.): 4♂♂, 5♀♀: same data as holotype (MHNG, cAss); 2♂♂, 1♀: RHODES 2b, Petaloudes, 8.IV.1977, Cl. Besuchet (MHNG, cAss); 4♂♂, 4♀♀: RHODES: M. Kariona, 400 m, 11.IV.1977, Cl. Besuchet 3. (MHNG, cAss); 1♂, 3♀♀: RHODES 4b, Kremasti, 10.IV.1977, Cl. Besuchet (MHNG, cAss);

1♂: RHODES 3b., Epta Pigai, 9.IV.1977, Cl. Besuchet (MHNG); 1 ex.: GRÈCE Rhodes, Kolimbia, 24.IV.73, Cl. Besuchet (MHNG).



Figs. 24 – 27: *Medon impar* sp. n.: Aedeagus in lateral and in ventral view (24, 25); posterior margin of male sternite VII (26); outline of posterior margin of male sternite VIII (27). Scale: 0.2 mm.

Diagnosis: External morphology as in *M. cerrutii*, but pronotum with less pronounced microsculpture and part of midline in posterior half often shining.

♂: sternite VII of similar shape and chaetotaxy as in *M. cerrutii*, palisade setae and additional stout setae at posterior margin shorter, combs of palisade setae with one or two additional longer stout setae (Fig. 26); posterior incision of sternite VIII variable, on average slightly deeper than in *M. cerrutii* (Fig. 27). Ventral process of aedeagus in ventral view apically broader than in *M. cerrutii*, apex of ventral process in lateral view of distinctive shape; apical internal structures with acute protrusion (Figs. 24 – 25)

Etymology: The name (Lat., adj.: unequal, dissimilar) refers to the fact that the palisade setae of the male sternite VIII are accompanied by additional longer stout setae thus giving the impression of unequally long palisade setae.

Comparative notes: *M. impar* is distinguished from *M. cerrutii*, *M. caricus*, *M. petrochilosii*, and related species by the morphology of the aedeagus.

Distribution and bionomics: The new species is apparently endemic to Rhodes (Map 3), where part of the types were collected at an altitude of 400 m. Further ecological data are unknown.

3.8. *Medon caricus* Fagel, 1970 (Figs. 28 – 31, Map 3)

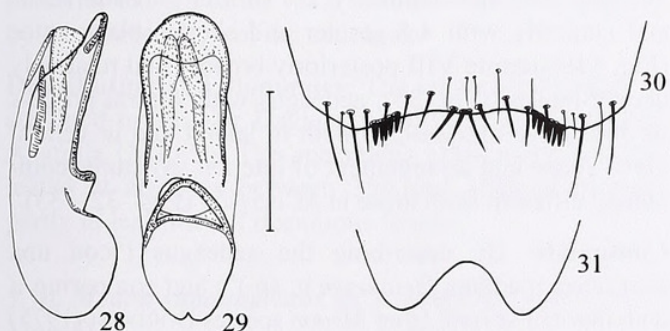
Medon caricus Fagel, 1970: 158 ff.

Medon marmaridis Franz, 1987: 79 ff.; **syn. n.**

Types examined: *M. caricus*: Holotype ♂: Anatolia merid. Marmaris, V.1969, G. Fagel / G. Fagel det. caricus n. sp. / TYPE (ISNB). Paratypes: 9♂♂, 6♀♀, same data as holotype (ISNB).



Map 4: Distributions of *Medon petrochilosus* Coiffait (filled circles) and *M. coriaceus* Coiffait (squares) in the Balkans, except for the type locality of *M. coriaceus* based on revised records.



Figs. 28 – 31: *Medon caricus* Fagel: Aedeagus in lateral and in ventral view (28, 29); posterior margin of male sternite VII (30); outline of posterior margin of male sternite VIII (31). Scale: 0.2 mm.

M. marmaridis: Holotype ♂: Umg. Marmaris, W-Anatolien, leg. H. Franz / *Medon marmaridis*, det. H. Franz / Holotypus / *Medon caricus* Fagel det. V. Assing 2002 (NHMW). Paratype: 1♀: same data as holotype (NHMW).

Additional material examined (total: 7 exs.):

Turkey: 2 exs., Izmir, Bahçeliköy, 16.VII.1969, leg. Besuchet (MHNG, cAss); 1 ex. [teneral], N Marmaris, 36°58'49N, 28°17'29E, 65 m, floodplain forest, *Platanus* litter, 5.VII.2002, leg. Assing (cAss).

Greece: *Dhódhekánisos*: 4 exs., Nikariá [36°51', 25°55'], leg. v. Oertzen (ZMHB, cAss).

Diagnosis: 4.0 – 5.0 mm, on average larger than *M. cerutii*. Coloration variable, body usually dark brown, with the abdominal apex and the appendages ferruginous; (part of) the pronotum and the anterior part of the elytra often lighter.

Head with dense, large, and umbilicate puncturation; interstices reduced to narrow ridges; without or with very shallow microsculpture; integument almost completely mat. Pronotum with puncturation of similar size as that of head, but less well-defined, shallower, and partly confluent; midline usually more or less impunctate, without or with very weak microreticulation, usually at

least partly shining; sometimes impunctate area reduced to minute oblong area in posterior half. Elytra at suture distinctly (approximately 1.15 x) longer than pronotum; with simple (i. e. not umbilicate) puncturation; punctures dense, but sparser than on head and pronotum, instices shining. Hind wings fully developed. Abdomen with fine and dense puncturation, weakly shining; tergite VII with palisade fringe.

♂: posterior margin of sternite VII bisinuate, in the middle convex, on either side with comb of approximately 5 relatively long (longer than in *M. cerrutii*) palisade setae (Fig. 30); sternite VIII posteriorly broadly incised (Fig. 31); aedeagus smaller than in *M. cerrutii*, ventral process short and in ventral view broad (Figs. 28 – 29).

Comparative notes: From *M. cerrutii*, *M. petrochilosi*, and allied species, *M. caricus* is distinguished by the long palisade setae of the male sternite VII and by the morphology of the distinctly smaller aedeagus (Figs. 28 – 29).

Comments: An examination of the types of *M. caricus* and *M. marmaridis* revealed that they are conspecific, so that *M. marmaridis* is here placed in the synonymy of the senior name *M. caricus*.

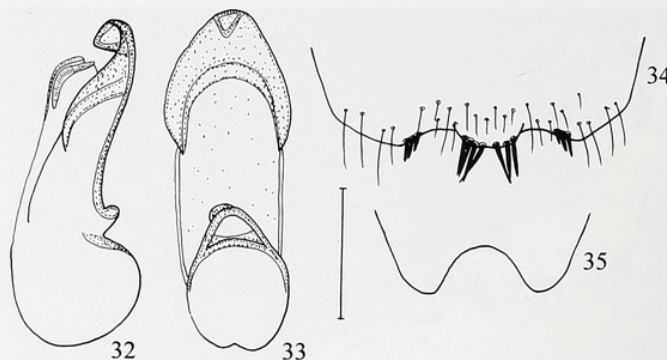
Distribution and bionomics: The known distribution of *M. caricus* is confined to southwestern Anatolia (Muğla, Izmir) and to the Southern Sporades (Greece: Dhodhekánisos) (Map 3). Two females were seen from Paros (Cyclades), but due to the external similarity of the species of the *coriaceus* group, their identification is uncertain. Some of the types (taken in May) and a non-type specimen collected in July are teneral. In a floodplain forest near Marmaris, the species was found together with *M. umbilicatus*, *M. fuscus*, and *M. semiobscurus*.

3.9. *Medon seleucus* Bordoni, 1975 (Figs. 32 – 35, Map 5)

Medon seleucus Bordoni, 1975: 441; unintentional description.

Medon seleucus Bordoni, 1980a: 85 f.

Type examined: Lectotype ♂: Turquie Antakya, Ura-bat, 6-V-67, Cl. Besuchet / HOLOTYPUS / *Medon seleucus* n. sp. Det. A. Bordoni 1975 (MHNG).



Figs. 32 – 35: *Medon seleucus* Bordoni: Aedeagus in lateral and in ventral view (32, 33); posterior margin of male sternite VII (34); outline of posterior margin of male sternite VIII (35). Scale: 0.2 mm.

Additional material examined (total: 34 exs.):

Turkey: Antakya: 1♀: same labels as lectotype, but “PARATYPUS” (MHNG); 1 ex., Kizildag, NW Teknepinar, 36°11'16N, 35°58'57E, 383 m, 28.IV.2002, leg. Meybohm & Brachat (cAss); 14 exs., E Yesilkent, 36°57'30N, 36°15'42E, 389 m, sifted under bushes near road, 30.IV.2002, leg. Meybohm (cAss); 1 ex., E Yesilkent, 36°57N, 36°15E, 400 m, 30.IV.2002, leg. Meybohm & Brachat (cAss); 7 exs., WSW Yeşilkent, 36°55N, 36°19E, 990 m, mixed deciduous forest, 28.XII.2000, leg. Assing (cAss); 5 exs., 7 km E Yeşilkent, 350-400 m, 4.V.1978, leg. Besuchet & Löbl (MHNG, cAss); 3 exs., Harbiye, 2.V.1978, leg. Besuchet & Löbl (MHNG); 1 ex., Kışlak – Senköy, 800-850 m, 2.V.1978, leg. Besuchet & Löbl (MHNG); 1 ex., Payas, river valley, 25.V.1987, leg. Schönmann & Schillhammer (NHMW).

Diagnosis: External morphology as in *M. cerrutii*, but on average smaller, elytra slightly shorter, head and pronotum with coarser puncturation, elytra with somewhat coarser and sparser puncturation, and microsculpture of head and pronotum less pronounced.

♂: sternite VII of similar shape and chaetotaxy as in *M. cerrutii*, but posterior margin more strongly bisinuate, laterally with approximately 2-4 shorter palisade setae, and centrally with 4-8 stouter and shorter black setae (Fig. 34); sternite VIII posteriorly broadly and relatively deeply incised (Fig. 35); aedeagus with ventral process of distinctive morphology both in lateral and in ventral view; shape and arrangement of internal structures completely different from those in *M. cerrutii* (Figs. 32 – 33).

Comments: By describing the aedeagus (“con una sporgenza mediana (*seleucus* n. sp.)”) and comparing it with those of several other *Medon* species BORDONI (1975) unintentionally made the name *Medon seleucus* available (Article 13.1.1., ICZN 1999). BORDONI (1980a) later intentionally described the species. Therefore, *Medon seleucus* Bordoni, 1980 must be regarded as a junior primary homonym and a junior objective synonym. In stating that he based his description on a single specimen (holotype), BORDONI (1980a) designated a lectotype. The additional specimen from the type locality (MHNG) is no type despite its label; according to BORDONI (1980a), there is only one type specimen.



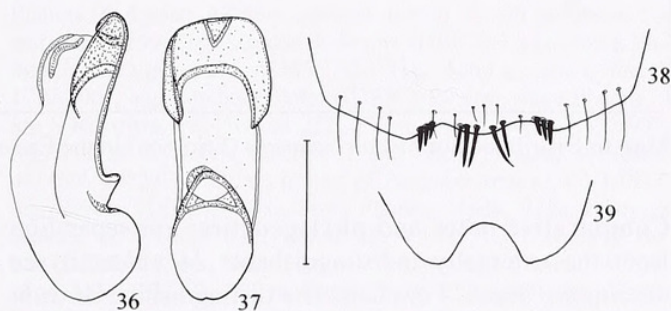
Map 5: Distributions of *Medon seleucus* Bordonii (open circles) and *M. subquadratus* sp. n. (filled circles) in Turkey, based on revised records.

Comparative notes: *M. seleucus* is readily separated from *M. cerrutii*, *M. caricus*, *M. coriaceus*, *M. petrochilosi*, and *M. impar* by the coarser and more well-defined puncturation of the forebody, by the sparser puncturation of the elytra, by the shape and chaetotaxy of the posterior margin of the male sternite VII, and especially by the morphology of the aedeagus.

Distribution and bionomics: The known distribution is confined to the Nur Dağları, Antakya, southern central Anatolia (Map 5). The specimens examined were collected at altitudes between 350 and 1000 m, at least partly in leaf litter of deciduous forests.

3.10. *Medon subquadratus* sp. n. (Figs. 36 – 39, Map 5)

Types: Holotype ♂: TR – Mersin, ca. 30 km NNW Tarsus, 430 m, No. 7, 37°08'43N, 34°44'29E, *Pinus*, *Q. ilex*, *Juglans*, 26.12.2000, V. Assing / Holotypus ♂ *Medon subquadratus* sp. n. det. V. Assing 2001 (cAss). Paratypes (total: 30 exs.): 5♂♂, 5♀♀: same data as holotype (cAss); 19 exs.: Turquie Mersin, Tarsus – Gülek, 550 m, 30.IV.78, Besuchet Löbl (MHNG, cAss); 1 ex.: Turquie Mersin, 10 km N. Mersin, 29.IV.78, Besuchet Löbl (MHNG).



Figs. 36 – 39: *Medon subquadratus* sp. n.: Aedeagus in lateral and in ventral view (36, 37); posterior margin of male sternite VII (38); outline of posterior margin of male sternite VIII (39). Scale: 0.2 mm.

Diagnosis: External morphology as in *M. seleucus*.

♂: sternites VII and VIII of similar shape and chaetotaxy as in *M. seleucus* (Figs. 38, 39). Aedeagus of similar general morphology as in *M. seleucus*, but ventral process in ventral view apically with subquadrate dilatation (in *M. seleucus* almost triangular) and in lateral view wider (Figs. 36 – 37).

Etymology: The name (Lat., adj.) refers to the distinctive shape of the ventral process of the aedeagus.



Map 6: Distribution of *Medon brunneus* (Erichson) in the Eastern Mediterranean, based on revised records.

Comparative notes and phylogenetics: For separation from the externally indistinguishable *M. seleucus* see description above. For characters distinguishing *M. subquadratus* from *M. petrochilosii*, *M. cerrutii*, and allied species see the comparative notes below *M. seleucus*. The similarly derived morphology of the aedeagus (apical dilatation of ventral process, internal structures) and of the male sternite VIII suggests that *M. subquadratus* is the adelphotaxon of *M. seleucus*.

Distribution and bionomics: The new species is known only from three localities in Mersin, southern central Anatolia (Map 5). Part of the types were sifted from litter of a mixed wood with *Pinus* sp. and *Quercus ilex*.

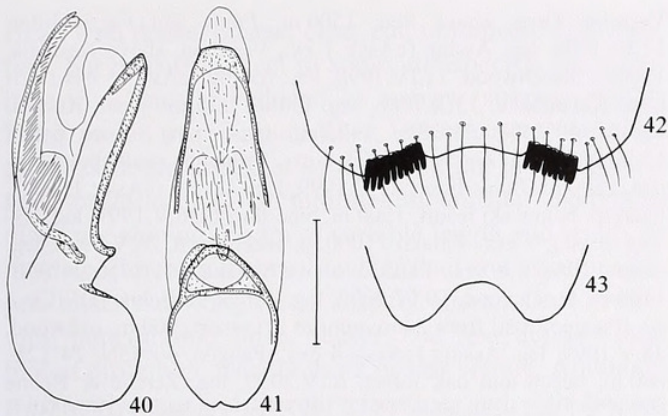
3.11. *Medon brunneus* (Erichson, 1839) (Figs. 40 – 43, Map 6)

Lithocharis brunnea Erichson, 1839: 513 f.

Medon olympicus Scheerpeltz, 1963b: 439 ff.; **syn. n.**

Types examined: *Lithocharis brunnea*: Lectotype ♂, here designated [aedeagus dissected]: 6363 / brunnea Er. / Hist.-Coll. (Coleoptera) Nr. 6363, *Medon brunneus* Er., Zool. Mus. Berlin / Lectotypus ♂ *Lithocharis brunnea* Erichson desig. V. Assing 2002 / *Medon brunneus* (Erichson) det. V. Assing 2002 (ZMHB). Paralectotypes: 2♂♂: Hist.-Coll. (Coleoptera) Nr. 6363, *Medon brunneus* Er., Zool. Mus. Berlin (ZMHB).

Medon olympicus: Lectotype ♂, here designated: ♂ / STAVROS, 3.V.60 / BUCHENWALD / OLYMP / GRIECHENLAND, IV.1960, W. KÜHNELT / *Medon olympicus* n. sp. / ex coll. Scheerpeltz / TYPUS *Medon olympicus* O. Scheerpeltz / Lectotypus ♂ *Medon olympicus* Scheerpeltz desig. V. Assing 2001 / *Medon brunneus* (Erichson) det. V. Assing 2001 (NHMW). Paralectotypes: 1♀: same labels as lectotype (NHMW); 1♂: same labels as lectotype, but “*Cotypus* ...” (NHMW).



Figs. 40 – 43: *Medon brunneus* (Erichson): Aedeagus in lateral and in ventral view (40, 41); posterior margin of male sternite VII (42); outline of posterior margin of male sternite VIII (43). Scale: 0.2 mm.

Additional material examined (total from studied region: 1088 exs.): Besides the specimens listed below, material was seen from the following countries: Spain, France, Belgium, Germany, Austria, Italy, Slovakia, Slovenia.

Hungary: 1 ex., Budapest, Budafok, leg. Fodor (ZMHB).

Romania: 76 exs., Krassó-Szörény, Băile Herculane [Herkulesfürdő, Herkulesbad], leg. Csiki, Fodor, Pável, Stiller (HNHM); 13 ex., Herkulesfürdő, 21.IV.1915, leg. Fodor (HNHM); 8 exs., Mehádia (HNHM); 1 ex., Krassó-Szörény, Mehádia, Feregárfegy, 28.-30.V.1915, leg. Fodor (HNHM); 2 exs., Braşov, leg. Deubel (HNHM); 2 exs., Com. Szörény, 1878, leg. Pavel (HNHM).

Croatia: 2 exs., Split, leg. Reitter (HNHM); 1 ex., Velebit, leg. Reitter (ZMHB); 1 ex., Velebit, Mali, 1910, leg. Meusel (ZMHB); 3 exs., Plitvica (HNHM); 5 exs., Brušane, leg. Pável (HNHM); 1 ex., Velebit (HNHM); 5 exs., Velebit, Podgorje, leg. Padewieth (HNHM); 10 exs., Zagreb, leg. Stiller (HNHM); 1 ex., Crni Padež, 1146 m, 30.VI.1910, leg. Meusel (HNHM); 6 exs., Crni Padež, 1423 m, 27.VII.1910, leg. Meusel (ZMHB); 1 ex., Ludbreg, leg. Apfelbeck (HNHM); 1 ex., Gospi, leg. Padewieth; 10 exs., Plitvica, beech forest, 15.VII.1996, leg. Zerche (DEIC); 10 exs., Plitvica, leg. Heyden (DEIC); 3 exs., Plitvica, 4.VIII.1935, leg. Liebmann (DEIC); 10 exs., Kapela, leg. Heyden (DEIC); 1 ex., "Luzina peccina", leg. Padewieth (HNHM); 5 exs., locality not specified (HNHM, ZMHB).

Bosnia-Herzegovina: 7 exs., Jablanica, leg. Apfelbeck, Grabowski, Paganetti (HNHM); 3 exs., Bjelasnica, leg. Fodor, Paganetti (HNHM); 95 exs., Bjelasnica, 700-1000 m, V.-VI.1912 (ZMHB); 2 exs., locality not specified, leg. Reitter (HNHM); 1 ex., Igman, leg. Apfelbeck (HNHM); 24 exs., Mostar, leg. Grabowski (HNHM); 1 ex., Zavidovići, leg. Kendi (HNHM); 1 ex., Sarajevo, leg. Apfelbeck (HNHM); 7 exs., Reljevo near Sarajevo (HNHM); 2 exs., Bosnia, Sarajevo, Kobilja Glava, 24.IV.1936, leg. Fodore (HNHM); 2 exs., Maglaj, Megara Pecina, 9.-15.VIII.1934, leg. Fodor (HNHM); 1 ex., Radova Planina, 23.VII.1930, leg. Fodor (HNHM); 6 exs., Tilava, 15.X.1933, leg. Fodor (HNHM); 6 exs., Vareš, Pajtor Han, 25.IX.1929, leg. Fodor (HNHM); 4 exs., Pazar-rič, Zovnik, 21.V.1937, leg. Fodor (HNHM); 1 ex., Krupa, Pazar-rič, leg. Fodor (HNHM); 2 exs., Kladanj, 1909, leg. Hilf (DEIC); 4 exs., Velež Planina, leg. Leonhard (DEIC); 5 exs., Bjelasnica Planina, leg. Leonhard (DEIC); 4 exs., Maklen pass, 1909, leg. Leonhard (DEIC); 3 exs., Korična, leg. Leonhard (DEIC); 2 exs., Ivan, leg. Formanek (NHMW); 1 ex., Ivan (ZMHB); 1 ex., Jablonica, 14.VI.1936, leg. Linke (ZMHB); 3 exs., Pazaric,

18.VI.1936, leg. Linke (ZMHB); 1 ex., Sarajevo, 13.VI.1936, leg. Linke (ZMHB); 1 ex., "Bosnien" (ZMHB).

Yugoslavia: 6 exs., Ostri Medvedjak (HNHM); 2 exs., W-Montenegro, leg. Reitter (HNHM); 2 exs., Pe, leg. Csiki (HNHM); 4 exs., Zelenika, leg. Liebmann (DEIC); 1 ex., Herzeg-Novi, 3.V.1939, leg. Liebmann (DEIC); 1 ex., Krivošije [42°32', 18°33'], leg. Paganetti (ZMHB); 2 exs., Herzeg-Novi, leg. Paganetti (ZMHB); 1 ex., Zelenika, leg. Liebmann (ZMHB).

Macedonia: 1 ex., Skopje, Skopska Crna Gora, Creševo, 4.V.1997, leg. Podlussány & Rozner (HNHM); 4 exs., Berovo, Malevski Planina, Prevedena pass, 8.V.1997, leg. Podlussány & Rozner (HNHM); 2 exs., Berovo, Malevski Planina, 800 m, VI.1998, leg. Podlussány (HNHM); 2 exs., Ohrid, Crvena Voda, 2.V.1997, leg. Podlussány & Rozner (HNHM).

Albania: 15 exs., Tomor, Kulmak, V.1931, leg. Winkler, Lona, Bischoff (NHMW); 14 exs., Reza e Kanalit, Logara, V.1931, leg. Winkler, Lona, Bischoff (NHMW).

Bulgaria: 32 exs., Stara Planina, N Kalofer, 800 m, VI.1989, leg. Zerche & Behne (DEIC); 5 exs., Stara Planina, Res. Dschendema, S-Botev, 1200 m, 22.VI.1989, leg. Zerche & Behne (DEIC); 11 exs., Stara Planina, Babin Nos, N Rakovischki, Manastir, 43°46'N, 22°25'E, 585 m, Tilia forest, 20.V.2000, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, Vratschanska Planina, W Vraza, 43°09'N, 23°30'E, 1265 m, beech forest, 23.V.2000, leg. Zerche (DEIC); 16 exs., Stara Planina, Vratschanska Planina, N Druscheski Prohod, 43°09'N, 23°23'E, 840 m, beech forest, 23.V.2000, leg. Zerche & Behne (DEIC); 2 exs., Stara Planina, Vratschanska Planina, W Vraza, 43°11'N, 23°29'E, 930 m, beech forest, 7.V.2001, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, Etropoleška Planina, Murgana hut, 42°44'N, 24°01'E, 1640 m, grass and *Juniperus*, 8.V.2001, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, Aprilzi, N Manastir, 42°51'N, 24°55'E, 480 m, litter of *Carpinus* and *Ulmus*, 26.V.2000, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, Vidima near Aprilzi, 42°45'N, 24°54'E, 1045 m, 26.VI.1997, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, E Aprilzi, 42°53'N, 25°02'E, 600 m, mixed deciduous forest, 28.VI.1997, leg. Zerche & Behne (DEIC); 3 exs., Stara Planina, E Schipka pass, 42°45'N, 25°21'E, 1060 m, beech forest, 17.V.2001, leg. Zerche & Behne (DEIC); 20 exs., Stara Planina, 5 km S Ribaritz, 42°45'N, 24°23'E, 750 m, beech forest, 7.VI.1997, leg. Zerche & Behne (DEIC); 1 ex., Stara Planina, Weschen, 42°46'N, 24°24'E, 1890 m, in nest of *Formica exsecta*, 6.VI.1997, leg. Zerche (DEIC); 1 ex., Stara Planina, Bjala, Reka valley, S Stokite, 42°49'N, 25°03'E, 500 m, 28.VI.1997, leg. Zerche & Behne (DEIC); 13 exs., Stara Planina, Vratschanska Planina, W Vraza, 43°11'N, 23°29'E, 930 m, beech forest, 23.V.2000, leg. Zerche (DEIC); 11 exs., Stara Planina, Vrach Kopren W Kopilovzi, 43°19'N, 22°52'E, 1035 m, beech forest, 19.V.2000, leg. Zerche (DEIC); 1 ex., same data, but 1100 m (DEIC); 3 exs., Stara Planina, Berkovska Planina S Barzija, 43°11'N, 23°09'E, 640 m, mixed deciduous forest, 20.V.2000, leg. Behne (DEIC); 1 ex., same data, but 43°08'N, 23°08'E, 1200 m, beech forest, leg. Behne (DEIC); 5 exs., Stara Planina, Kom range, above Berkoviza, 43°13'N, 23°06'E, 680 m, mixed deciduous forest, 18.V.2000, leg. Zerche & Behne (DEIC); 11 exs., same data, but 600 m, 8.VI.1997 (DEIC); 2 exs., Stara Planina, Schipka pass, 1200-1300 m, 13.-14.IX.1977, leg. Hieke & Uhlig (ZMHB); 1 ex., Stara Planina, Kalofer, beechwood, 26.VI.1979, leg. Uhlig (ZMHB); 17 exs., SW-Rila, Bistriza, 42°03'N, 23°14'E, 780 m, deciduous forest, 19.VI.1997, leg. Zerche & Behne (DEIC); 9 exs., Lakatishka Rila, W Klisura pass, 42°21'N, 23°20'E, 850 m, 23.VI.1997, leg. Zerche & Behne (DEIC); 1 ex., Rila, Rila-Kloster, 1150 m, 25.VII.1983, leg. Zerche (DEIC); 21 exs., Ali Botusch, Goleschow, 41°24'N, 23°35'E, 1015 m, 15.VI.1997, leg. Zerche & Behne (DEIC); 1 ex., Sredna Gora, N Streitscha, 42°33'N, 24°18'E, 950 m, beech forest, 25.VI.1997, leg. Zerche & Behne (DEIC); 3 exs., Sredna Gora, S

Koprivshtiza, 42°35N, 24°22E, 1110 m, beech forest, 29.VI.1997, leg. Zerche & Behne (DEIC); 2 exs., Rhodopi, 2 km W Jakoruda, 42°00N, 23°38E, 960 m, 18.VI.1997, leg. Zerche & Behne (DEIC); 1 ex., S-Pirin, Orelek, 41°33', 23°38E, 1560 m, pine forest, 5.V.2000, leg. Behne (DEIC); 8 exs., Pirin, Predel pass, 780 m, deciduous forest, 23.VI.1997, leg. Zerche & Behne (DEIC); 6 exs., Pirin, Popina Laka NE Sandanski, 41°39N, 23°23E, 990 m, beech forest, 1.V.2001, leg. Zerche & Behne (DEIC); 9 exs., Belasiza, S Petritsch, 41°22N, 23°11E, 810 m, litter of *Fagus* and *Castanea*, 4.V.2000, leg. Zerche & Behne (DEIC); 1 ex., Krvavi Kamik range, W Dragojčinci, 42°35N, 22°33E, 895 m, beech forest, 4.V.2001, leg. Zerche & Behne (DEIC); 11 exs., Ruj range, W Tran, 42°52N, 22°33E, 985 m, beech forest, 5.V.2001, leg. Zerche & Behne (DEIC); 3 exs., Varna (NHMW, cAss); 5 exs., Varna, Gündusa-erdő, leg. Balog (HNHM); 9 exs., Rila, IX.1928, leg. Biró (HNHM); 1 ex., Rila, Rila Kloster, 11.-14.VII.1927, leg. Fodor (HNHM); 3 exs., VISOČICA Planina, 20.X.1927, leg. Fodor (HNHM); 1 ex., Vitoscha, Liulin, 23.IV.1909, leg. Rambousek (DEIC); 1 ex., Sofia, Pančarevo, 27.V.1908, leg. Rambousek (DEIC); 3 exs., Tschamkoria, 1911, leg. Hilf (DEIC).

Greece: Mainland: 4 exs., 20 km SSW Lamia, Oros Kallidromo, 38°45'29N, 22°28'08E, 940 m, litter of *Quercus ilex* and *Abies*, 2.-6.IV.2001, leg. Assing (cAss); 35 exs., 25 km NE Lamia, Oros Othris, 39°04'29N, 22°43'39E, 980 m, *Abies* and *Quercus* litter, 3.IV.2001, leg. Assing (cAss); 32 exs., Oros Elikonas, road from Kiriaki to Elikonas, 38°22'40N, 22°49'16E, 900 m, *Abies* forest, 4.IV.2001, leg. Assing (cAss); 1 ex., 25 km SSW Lamia, near Kaloskopi, 38°42'25N, 22°18'24E, 1200 m, *Abies* litter, 6.IV.2001, leg. Assing (cAss); 1 ex., Parnassos, W ski resort, 38°33N, 22°34E, 1380 m, *Abies* forest, 25.IV.1998, leg. Zerche (DEIC); 13 exs., Athina, Parnis, leg. Franz (NHMW); 3 exs., NW-Evvoia, Oros Lichas, 38°51'11N, 22°54'30E, 525 m, *Pinus* wood, 8.IV.2001, leg. Assing (cAss); 4 exs., Ipiros, Timfi Oros, above Mikró Pápinko, 39°58N, 20°44E, 1000 m, 31.III.2001, leg. Zerche & Behne (DEIC); 8 exs., Timfi Oros, Kalivia, 39°58N, 20°40E, 350 m, *Quercus ilex* forest, 1.IV.2001, leg. Zerche & Behne (DEIC); 3 exs., Ipiros, Smólikas, 40°09N, 20°49E, 600 m, mixed deciduous forest, 1.IV.2001, leg. Zerche & Behne (DEIC); 5 exs., Thessalia, Trikala, Katara pass, above Koridallios, 39°48N, 21°20E, 680 m, oak forest, 2.IV.2001, leg. Zerche & Behne (DEIC); 1 ex., Oros Iti, 38°49'26N, 22°14'03E, 1450 m, 10.IV.2001, leg. Assing (cAss); 1 ex., Oros Oxia, SW Paleochori, 38°49'43N, 21°55'42E, 1500 m, 11.IV.2001, leg. Assing (cAss); 2 exs., Kalambáka, Kastanea, 28.III.1997, leg. Riedel (NHMW); 15 exs., Pelion, 3 km S Zagora, 400-500 m, chestnut and oak forest, 3.IV.1998, leg. Assing (cAss); 2 exs., Pelion (NHMW); 1 ex., Pelion, Hania, 1400 m, 22.V.1997, leg. Lebenbauer (NHMW); 7 exs., Pelion, S Xourichti, 39°22N, 23°11E, 325 m, macchia, 3.IV.2001, leg. Zerche & Behne (DEIC); 4 exs., Ossa Oros, 6 km W Karitsa, 750 m, beechwood, 4.IV.1998, leg. Assing (cAss); 16 exs., Ossa Oros, 3 km NW Karitsa, 550 m, beech and oak litter, 4.IV.1998, leg. Assing (cAss); 47 exs., Ossa Oros, 3 km SE Stomio, 100 m, *Platanus* and *Quercus* litter, 4.IV.1998, leg. Assing (cAss); 1 ex., Ossa Oros, above Stomio, 39°50N, 22°42E, 865 m, *Abies-Fagus* forest, 5.IV.2001, leg. Zerche & Behne (DEIC); 1 ex., same data, but 39°51N, 22°44E, 500 m (DEIC); 1 ex., Kato Olympos, E Kallipefki, 1450-1500 m, *Abies* and *Fagus* litter, 6.IV.1998, leg. Assing (cAss); 2 exs., Olympos, NW Stavros hut, 1400 m, *Abies* and *Fagus* litter, 7.IV.1998, leg. Assing (cAss); 5 exs., Olympos, above Litóchoro, 40°07N, 22°23E, 1500 m, beechwood, 6.IV.2001, leg. Zerche & Behne (DEIC); 4 exs., same data, but 40°05N, 22°24E, 1100 m (DEIC); 2 exs., same data, but 40°07N, 22°28E, 1080 m, 4.IV.2001 (DEIC); 3 exs., Olympos, IX.1984, leg. Mahunka (HNHM); 17 exs., Pieria Oros, above Skotina, 900-1000 m, *Abies* and *Fagus* litter, 9.IV.1998, leg. Assing (cAss); 4 exs., Pieria, above Elatochóri, 40°19N, 22°14E, 1135 m, 4.IV.2001, leg. Zerche & Behne (DEIC); 1 ex.,

Vermion Oros, above Seli, 1500 m, *Pinus* and *Fagus* litter, 11.IV.1998, leg. Assing (cAss); 1 ex., Vermion, above Kastania, 1300 m, beechwood, 11.IV.1998, leg. Assing (cAss); 5 exs., Tríkala, Kalámbaka, 13.X.1988, leg. Pittino (cRou); 1 ex., Kozáni, Vlásti, 40°25N, 21°33E, 1475 m, grass near snow patch, 15.IV.2000, leg. Zerche (DEIC); 1 ex., Vrontous, peak above Laiias, 1800 m, *Pinus* litter, 25.V.1999, leg. Assing (cAss); 18 exs., Falakró, below ski resort, 1500 m, pine forest, 26.V.1999, leg. Assing (cAss); 9 exs., Falakró, 1000 m, beechwood, 26.V.1999, leg. Assing (cAss); 8 exs., Falakró, above Vólakas, 41°17N, 24°00E, 1100 m, beechwood, 10.IV.2000, leg. Zerche & Behne (DEIC); 1 ex., Pangéo, road from Akrovouni to ski resort, 500 m, oakwood, 28.V.1999, leg. Assing (cAss); 4 exs., Pangéo, 40°55N, 24°12E, 680 m, beech and oak forest, 6.IV.2000, leg. Zerche & Behne (DEIC); 1 ex., Pentalofos, 18.IX.1997, leg. Pdlussány (HNHM); 3 exs., Khalkidhiki, Arma Evros near Arnea, leg. Franz (NHMW); 6 exs., Khalkidhiki, Smerna near Olympias, leg. Franz (NHMW). **Pelopónnisos:** 9 exs., Agios Petros, 900-1160 m, 22.III.1997, leg. Assing (cAss); 4 exs., Agios Petros, Vourvouni, 37°20N, 22°27E, 920 m, *Quercus ilex* forest, 22.III.1997, leg. Assing (cAss); 1 ex., same data, but leg. Zerche (DEIC); 3 exs., N-Taygetos, E Perivolía, 1450 m, *Abies* and *Pinus* litter, 24.III.1997, leg. Assing (cAss); 4 exs., N-Taygetos, E Perivolía, 1300 m, *Acer* and *Pinus* litter, 24.III.1997, leg. Assing (cAss); 7 exs., Taygetos, path to Prof. Ilias, 860 m, *Acer* litter, 25.III.1997, leg. Assing (cAss); 1 ex., Taygetos, Kalamata, 250 m, V.1999, leg. Wachtel (cAss); 14 exs., Erimanthos, above Kalendzi, 31°57N, 21°47E, 1200 m, *Abies* forest, 26.III.-1.IV.1997, leg. Assing (cAss); 6 exs., same data, but 1150 m, leg. Zerche (DEIC); 5 exs., E Trechló, 38°02N, 21°59E, 795 m, oak forest, 25.IV.1999, leg. Zerche & Behne (DEIC); 3 exs., N Kalavrita, bank of Vouraikos river, 680 m, *Platanus* litter, 30.III.1997, leg. Assing (cAss); 46 exs., 30 km NE Pírgos, 37°47N, 21°45E, 630 m, Koumani, oakwood, 1.IV.1997, leg. Assing (cAss); 11 exs., same data, but 1.IV.1997, leg. Zerche (DEIC); 3 ex., Gythion (=Yithion), 18.-29.IV.1956, leg. Schubert (NHMW); 1 ex., Taygetos, W Mt. Pserovounia, 37°07N, 22°17E, 1545 m, *Abies* forest, 22.IV.1999, leg. Zerche & Behne (DEIC); 2 exs., Kiparissia, 5.-10.V.1956, leg. Schubert (NHMW); 1 ex., Taygetos pass, between Sparta and Kalamata, 1200-1300 m, 2.IV.1970, leg. Korge (cKor); 4 exs., Parnon, SW Kastanitsa, 37°14N, 22°37E, 1380 m, *Abies* forest, 18.IV.1998, leg. Zerche (DEIC). **Levkás:** 7 exs., Lazarata, 400 m, 25.IX.1993, leg. Assing (cAss); 1 ex., Egklouvi, 650 m, 26.IX.1993, leg. Assing (cAss). **Kérkira** (Corfu): 9 exs. [males with teratological aedeagus], N-Corfu, Arkadades, deep leaf litter, 27.IX.1994, leg. Wunderle (cWun); 6 exs., Gastni, 25.III.1905, leg. Leonhard (DEIC); 26 exs., locality not specified (DEIC, ISNB, ZMHB). **Ándros:** 6 exs., Kovari, leg. v. Oertzen (ZMHB). **Kríti:** 6 exs., Amari, 4.VI.1906, leg. Biró (HNHM); 1 ex., W-Crete, Rethymnon, 13.VI.1984, leg. Franz (NHMW).

For additional records see ASSING & WUNDERLE (2001b).

Turkey: Istanbul: 3 exs., Belgrader Wald, 1.-7.VII.1954, leg. Schubert (NHMW, cAss); 6 exs., Belgrader Wald, leg. v. Bode-meyer (ZMHB); 2 exs., "Adampol, Constantinopel", 1900, leg. Korb (ZMHB); 1 ex., "Alem-Dagh", leg. v. Bodemeyer (ZMHB); 1 ex., Alem Dagh, 1902, leg. Gottwald (ZMHB). **Kırklareli:** 1 ex., Demirköy, Istança Dağ, 2.VII.1970, leg. Korge (cKor).

Locality not identified or doubtful: 1 ex., Kula Lums, leg. Csiki (HNHM); 1 ex., Iv. Lisin, leg. Apfelbeck (HNHM).

Diagnosis: Very variable species. 3.8 – 5.5 mm. Coloration variable, ranging from uniformly ferrugineous to blackish brown, with the appendages and usually the elytra, the abdominal apex, and the pronotum lighter, ferrugineous to brown.

Head with dense, coarse, clear-cut, umbilicate puncturation, but density subject to some intraspecific variation; interstices mostly reduced to narrow shining ridges. Puncturation of pronotum finer, less clear-cut, and usually less dense than that of head and not umbilicate; at least posterior half of midline impunctate; interstices distinctly shining. Elytra of variable length and width, in most specimens indistinctly wider than and at suture approximately as long as or slightly shorter than pronotum; puncturation finer, denser, and less defined than that of pronotum, usually more or less serrate. Abdomen with very dense and fine puncturation, and with distinct microsculpture; tergite VII with palisade fringe.

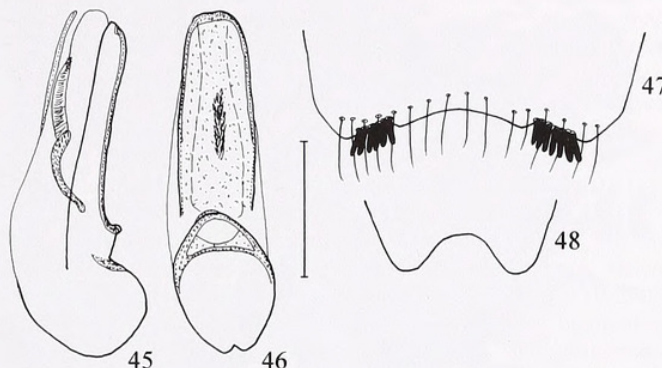
♂: posterior margin of sternite VII shallowly concave and with two combs of 6–12 relatively long palisade setae (Fig. 42); sternite VIII not distinctive, posteriorly with relatively broad incision (Fig. 43). Aedeagus with ventral process and internal structures of characteristic morphology (Figs. 40–41).

Comments: ERICHSON (1839) explicitly mentions one specimen from Mark Brandenburg (“aus der hiesigen Gegend”), but had evidently seen several specimens, since he describes both sexes. The three males from Erichson’s collection are here considered syntypes; additional syntypes may exist elsewhere. In order to fix a single name-bearing type and to unambiguously define the species, the male syntype in best condition is here designated as the lectotype.

The original description of *M. olympicus* is based on two “Typen” and four “Paratypen” (SCHEERPELTZ 1963b). Since no holotype is specified, all the types must be considered syntypes. Three syntypes were not found in the Scheerpeltz collection. The possibility that they belong to a different species cannot be ruled out, so that a lectotype is here designated in order to secure the present synonymy. An examination of the male primary and secondary sexual characters revealed that the types of *M. olympicus* are conspecific with *M. brunneus*, so that *M. olympicus* Scheerpeltz is here placed in the synonymy of the senior name *M. brunneus* (Erichson).

Distribution and bionomics: *M. brunneus* is common and widespread in the Western Palaearctic region, from the south of North Europe in the north and northern Spain in the west to the southern Balkans in the south-east. The exact eastern limit of its range is unknown (HORION 1965; material from various parts of Europe examined). It has been recorded from the Caucasus region, but these records are likely to be based on mis-identifications; SOLODOVNIKOV (St. Petersburg, pers. comm. 2002) does not know any confirmed records from there. *M. brunneus* is apparently absent from southern Spain. In Turkey, it is only known from the surroundings of Istanbul (see also FAGEL 1970). It is extremely common in Greece (mainland and some is-

lands), where it is by far the most common species of the genus, but it seems to be absent from Rhodos (Map 6). In the Balkans, *M. brunneus* is abundant in the leaf litter of virtually all kinds of woodland.



Figs. 45–48: *Medon semiobscurus* (Fauvel): Aedeagus in lateral and in ventral view (45, 46); posterior margin of male sternite VII (47); outline of posterior margin of male sternite VIII (48). Scale: 0.2 mm.

3.12. *Medon semiobscurus* (Fauvel, 1875) (Figs. 44–48, Map 7)

Lithocharis semiobscura Fauvel, 1875: xx.

Medon rhodiensis Scheerpeltz, 1963a: 68 ff.; **syn. n.**

Medon clambus Fagel, 1969: 111 ff.; **syn. n.**

Medon montisamani Scheerpeltz, i. l.

Medon opacicollis Scheerpeltz, i. l.

Types examined: *M. semiobscurus*: Syntypes: 1♀: A. Hammé / semiobscura Fvl. / Ex-Typis / R. I. Sc. n. B. 17.479 Medon Coll. et det. A. Fauvel (ISNB); 1♂ [with teratological aedeagus]: A. Hammé / Ex-Typis (ISNB); 1♂: [without locality label] Ex-Typis (ISNB); 1♀: Syrie, W. Tzerka (ISNB).

M. rhodiensis: Lectotype ♂ [macropterous], here designated: ♂ / Insel Rhodos, Dr. K. MANDL, 23.5. – 6.6.62 / Philirimos, 28.5.62 / ex coll. Scheerpeltz / TYPUS *Medon rhodiensis* O. Scheerpeltz / Lectotypus ♂ *Medon rhodiensis* Scheerpeltz desig. V. Assing 2001 / *Medon semiobscurus* (Fauvel) det. V. Assing 2001 (NHMW). Paralectotype ♀: same data as lectotype (NHMW).

M. clambus: Holotype ♂: Anatolie mér, Bey Dagh, V.1968, V.1968 G. Fagel / G. Fagel det. clambus n. sp. / TYPE / *Medon semiobscurus* (Fauvel) det. V. Assing 2001 (ISNB). Paratypes: 1♂, 1♀: same data as holotype (ISNB).

Additional material examined (total: 533 exs.):

Ródhos: 3 exs., Kolimbia Epta Piges, 100 m, 10.IV.1999, leg. Meybohm (cAss); 1 ex., Petaloudes, butterfly valley, 200 m, 12.IV.1999, leg. Meybohm (cAss); 3 exs., Salakos Prof. Ilias, east of hotels, 500 m, 9.IV.1999, leg. Meybohm; 8 exs., M. Kariona,



Map 7: Distribution of *Medon semiobscurus* (Fauvel) in the Eastern Mediterranean, based on revised records.

400 m, 11.IV.1977, leg. Besuchet (MHNG, cAss); 1 ex., Ebonas, 15.IV.1977, leg. Besuchet (MHNG); 1 ex., Profitis Ilias, 650 m, 11.IV.1977, leg. Besuchet (MHNG); 1 ex., Profitis Ilias, 600 m, 24.IV.1973, leg. Besuchet (MHNG); 1 ex., Profitis Ilias, leg. Franz (NHMW); 1 ex., Petaloudes, 15.IV.1977, leg. Besuchet (MHNG); 10 exs., Petaloudes, 26.IV.1973, leg. Besuchet (MHNG, cAss); 1 ex., "Rhodos", 23.IV.1973, leg. Besuchet (MHNG); 1 ♀, Petaloudes, 2.VI.1962, leg. Mandl ["COTYPUS *Medon rhodiensis* O. Scheerpeltz"] (NHMW); 1 ex., "Schmetterlingstal", leg. Franz (NHMW); 1 ex., Eleoussa, leg. Franz (NHMW); 1 ex., locality not specified, leg. Franz (NHMW).

Turkey: **Bursa:** 6 exs., S Bursa, 500 m, 12.V.1976, leg. Besuchet & Löbl (MHNG, cAss). **Izmir:** 2 exs., Izmir, Ağamemnon, 28.IV.1975, leg. Besuchet & Löbl (MHNG, cAss). **Denizli:** 2 exs., ca. 30 km N Fethiye, N Arpacık, 36°52'41N, 29°10'43E, 1500 m, *Pinus* litter, 9.VII.2002, leg. Assing (cAss). **Muğla:** 8 exs., Marmaris, V.1969, leg. Fagel (ISNB); 2 exs., Marmaris, leg. Franz (NHMW); 2 exs., Çetibeli near Muğla, 36°58'N, 28°17'E, riparian forest, 10-30 m, 30.IV.2001, leg. Meybohm & Brachat (cAss); 1 ex., Çetibeli, 1.V.1975, leg. Besuchet & Löbl (MHNG); 5 exs., Köceğiz near Muğla, 36°50'N, 28°42'E, riparian forest, 29.IV.2001, leg. Meybohm (cAss); 3 exs., Bayır near Muğla, 37°15'N, 28°09'E, 450 m, 1.V.2001, leg. Meybohm (cAss); 2 exs., Fethiye, Kayaköy, 36°34'N, 29°06'E, 280 m, 27.IV.2001, leg.

Meybohm & Brachat (cAss); 1 ex., Fethiye, Kadyanda, 36°43'N, 29°14'E, 850 m, 28.IV.2001, leg. Meybohm & Brachat (cAss); 21 exs., Gökova, 30.IV.1975, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., ca. 20 km NNE Fethiye, 36°47'28N, 29°11'29E, 970 m, oakwood in northern exposition, 27.III.2002, leg. Assing (cAss); 3 exs., same data, but 8.X.2002 (cAss); 13 exs. [all submacropterous], 15 km ENE Ortaca, 36°52'01N, 28°52'25E, 470 m, litter of *Pinus*, *Quercus* sp., *Q. ilex*, and deciduous shrubs, 27.III.2002, leg. Assing, Wunderle (cAss, cWun); 4 exs., SE Köyceğiz, 36°56'50N, 28°43'56E, 10 m, flood-plain wood, 28.III.2002, leg. Wunderle (cWun); 1 ex., SE Fethiye, Baba Dağ, above Ovacık, 36°32'47N, 29°10'52E, 1170 m, coniferous forest with *Quercus ilex*, 30.III.2002, leg. Assing (cAss); 1 ex., SE Fethiye, Baba Dağ, above Ovacık, 36°33'23N, 29°09'49E, 680 m, *Pinus* forest, 30.III.2002, leg. Assing (cAss); 5 exs., SE Fethiye, Baba Dağ, above Ovacık, 36°32'16N, 29°10'20E, 1705 m, sifted leaf litter and grass roots, 4.VII.2002, leg. Assing (cAss); 2 exs. [teneral], Baba Dağ, 36°33'07N, 29°11'41E, 1385 m, roots of grass and herbs, 4.VII.2002, leg. Assing (cAss); 3 exs. [1 ex. teneral], N Marmaris, 36°58'49N, 28°17'29E, 65 m, floodplain forest, *Platanus* litter, 5.VII.2002, leg. Assing (cAss); 9 exs., 25 km NNE Fethiye, N Üzümlü, 36°47'22N, 29°14'22E, 750 m, pine forest, 4.X.2002, leg. Assing (cAss); 5 exs., 25 km NE Fethiye, E Üzümlü, 36°43'54N, 29°15'22E, 610 m, litter of *Quercus ilex* and bushes, 4.X.2002, leg. Assing (cAss); 1 ex., Gölgeli Dağları, 20 km

NE Köyceğiz, below Ağa, 37°01'20N, 28°44'27E, 600 m, litter of *Platanus* and other deciduous trees, 6.X.2002, leg. Assing (cAss). **Antalya:** 1 ex., 50 km SE Fethiye, Dumanlı T. near Aklar, 36°23'04N, 29°24'50E, 855 m, litter of *Quercus ilex*, 9.VII.2002, leg. Assing (cAss); 3 exs., Antalya, valley SE Termessos, 36°57N, 30°29E, 300 m, 22.IV.2001, leg. Meybohm & Brachat (cAss); 1 ex., Termessos, 12.V.2000, leg. Meybohm & Brachat (cAss); 4 exs., 10 km N Beskonak, Köprülü canyon, 37°13'11N, 31°12'45E, 265 m, sifted leaf litter, 22.III.2002, leg. Rose (cRos); 11 exs., 30 km W Alanya, Incekum 36°38N, 31°47E, 20 m, 21.V.2000, leg. Meybohm (cAss); 1 ex., 26 km W Alanya, Incekum, 16.IV.-2.V.1984, leg. Brachat (cSch); 3 exs., 22 km W Alanya, Avsallar near Incekum, 9.-23.V.1995, leg. Pütz (cAss, cSch); 1 ex., Incekum, IV.1987, leg. Frieser (DEIC); 2 exs., Akseki, Güçlüköy, 600 m, sifted *Pinus* and *Quercus* litter, 14.III.2000, leg. Rose (cRos); 1 ex., Saricinar Dağ, Beldibi, 300 m, 6.-18.VI.1994, leg. Pütz (cSch); 1 ex., road from Antalya to Saklikent, 550 m, 11.V.2000, leg. Meybohm & Brachat (cAss); 4 exs., same locality, but 1000 m, pine forest, 11.V.2000, leg. Meybohm (cAss); 1 ex., SW Antalya, 15 km S Kemer, 36°30N, 30°29E, 60 m, 24.IV.2001, leg. Meybohm & Brachat (cAss); 1 ex., Antalya – Kemer, 4.V.1975, leg. Besuchet & Löbl (MHNG); 35 exs., Manavgat, Kiselot, 0-50 m, 2.-5.I.1991, leg. Assing, Wunderle (cAss, cSch, cWun); 3 exs., Manavgat, 900 m, 31.XII.1990, leg. Assing (cAss); 6 exs., Manavgat, Güneycak near Gündogmus, 700 m, 4.I.1991, leg. Assing, Wunderle (cAss, cWun); 1 ex., W Anamur, 13 km SE Gazipasa, 36°12N, 32°25E, 180 m, leg. Meybohm (cAss); 1 ex., 18 km SE Gazipasa, 27.IV.1978, leg. Besuchet & Löbl (MHNG); 2 exs., NW Alanya, Güzelbağ, 21.-26.IV.1984, leg. Brachat (cSch); 3 exs., Alanya, Sapadere, leg. Franz (NHMW); 1 ex., "Pamphylicher Taurus, Ovdjik -Gr., leg. Weirather (NHMW); 2 exs., E Kumluca, 36°21'50N, 30°22'27E, 385 m, litter of *Laurus* and *Platanus*, 3.IV.2002, leg. Assing (cAss); 2 exs., 60 km SSW Antalya, Çirali, 36°25'54N, 30°25'59E, 220 m, litter of deciduous trees and shrubs, 25.III.2002, leg. Assing (cAss); 11 exs., 20 km N Kas, S Karaovabeli pass, 36°23'12N, 29°42'34E, 830 m, oakwood in southern exposition, 26.III.2002, leg. Assing (cAss); 2 exs., W Kemer, road to Ovacik, 36°36'18N, 30°28'38E, 325 m, litter of *Quercus* and other deciduous trees, 2.IV.2002, leg. Assing (cAss); 7 exs., W Kemer, S Hisar, 36°44'02N, 30°26'23E, 1120 m, litter of *Quercus* and *Carpinus*, 2.IV.2002, leg. Assing, Wunderle (cAss, cWun). **Isparta:** 1 ex., Kovada National Park, 13.V.2000, leg. Meybohm & Brachat (cAss); 1 ex., Eğredir – Çandır, 950 m, 6.V.1975, leg. Besuchet & Löbl (MHNG); 1 ex., Eğredir, IV.1972, leg. Schubert (NHMW). **Mersin:** 15 exs., Anamur, Kösekbasi, 36°08N, 32°46E, 150 m, leg. Meybohm (cAss); 1 ex., Anamur, Abanoz, 36°21N, 32°56E, 1240 m, 20.V.2000, leg. Meybohm (cAss); 2 exs., road from Anamur to Ermenek, km 21, 350 m, 17.V.2000, leg. Meybohm & Brachat; 7 exs., ca. 25 km NW Erdemli, 36°43N, 34°10E, 1085-1150 m, oak leaf litter, 29.XII.2001, leg. Assing, Wunderle (cAss, cWun); 1 ex., road from Silifke to Gülnar, 36°21N, 33°35E, 1015 m, oak leaf litter, 27.XII.2000, leg. Assing (cAss); 3 exs., 23 km N Silifke, 36°32N, 33°57E, 900 m, *Juniperus* and shrubs, 25.XII.2000, leg. Assing, Wunderle (cAss, cWun); 6 exs., Mersin – Yeniköy, 650 m, 29.IV.1978, leg. Besuchet & Löbl (MHNG, cAss); 3 exs., Çamlıyayla ("Namrun"), IV.1976, leg. Schubert (NHMW); 18 exs., same data, but V.1960 (NHMW, cAss); 1 ex., same data, but 10.V.-3.VI.1963 (NHMW); 5 exs., Mersin – Arslanköy, 9 km SE Akdag, 36°54N, 34°32E, 6.V.2002, leg. Meybohm & Brachat (cAss); 2 exs., Mersin – Arslanköy, SE Akdag, 36°55N, 34°31E, 6.V.2002, leg. Meybohm & Brachat (NHMW). **Adana:** 13 exs., Tekir, 1300 m, 30.IV.1978, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., Pozanti, 1000 m, 11.VIII.1966 (MHNG); 9 exs., N Osmaniye, Karatepe National Park, 37°17N, 36°14E, 200 m, Laurisilva, 28.XII.2000, leg. Assing, Wunderle (cAss, cWun); 8 exs., Karatepe, 1.V.1978, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., Feke, 21.-24.VII.2000, leg. Smatana (cSch); 6 exs., Karatepe,

37°17'03N, 36°14'04E, 200 m, sifted, 28.IV.2002, leg. Meybohm & Brachat (cAss); 2 exs., Nur Dağları, 9 km W Hassanbeyli, 37°09N, 36°29E, sifted under *Rubus*, 2.V.2002, leg. Meybohm & Brachat (cAss); 1 ex., Nur Dağları, ENE Osmaniye, 5 km N Karpak, 37°08N, 36°28E, 2.V.2002, leg. Meybohm (cAss); 4 exs., E Osmaniye, Yarpuz, 900 m, 13.IV.1966 (NHMW). **Antakya:** 18 exs., Nur Dağları, WSW Yeşilkent, 36°55N, 36°19E, 990-1010 m, mixed deciduous forest, 28.XII.2000, leg. Assing, Wunderle (cAss, cWun); 1 ex., Yayladağı – Yeditepe, 23.V.1987, leg. Schönmann & Schillhammer (NHMW); 1 ex., Yayladağı, 450 m, 17.V.1973, leg. Schubert (NHMW); 1 ex., 25 km S Senköy, 36°01N, 36°07E, 900 m, *Laurus* litter, sifted, 27.IV.2002, leg. Meybohm (cAss); 1 ex., S Senköy, 36°01'11N, 36°07'16E, 901 m, *Laurus* litter, sifted, 27.IV.2002, leg. Meybohm (cAss); 3 exs., Kizildag, NW Teknepinar, 36°11'16N, 35°58'57E, 383 m, 28.IV.2002, leg. Meybohm (cAss); 6 exs., Iskenderun, Belen, 36°29'49N, 36°10'47E, 344 m, moist litter sifted, 29.IV.2002, leg. Meybohm & Brachat (cAss); 2 exs., Iskenderun, Sogukoluk, 36°30'03N, 36°08'35E, 533 m, 29.IV.2002, leg. Meybohm (cAss); 1 ex., E Yeşilkent, 36°57'30N, 36°15'42E, 389 m, sifted under bushes near road, 30.IV.2002, leg. Meybohm (cAss). **Di-yarbakir:** 2 exs., Ergani, 1500 m, VI.1977, leg. Schubert (NHMW). **Bitlis:** 1 ex., Hizan, 10.VI.1987, leg. Schönmann & Schillhammer (NHMW).

Lebanon: 8 exs., Kartaba, 1200-1400 m, V.1964, leg. Fagel (ISNB); 4 exs., Nabeh Safa, 1000 m, V.1966, leg. Fagel (ISNB); 4 exs., Ain Dara, Nahr Jesayer, 900 m, V.1966, leg. Fagel (ISNB); 1 ex., El Barouk, Kafra, 1200 m, V.1966, leg. Fagel (ISNB); 1 ex., Damour, 24. III.1975, leg. Besuchet (MHNG); 4 exs., Jeita, 26.III.1975, leg. Besuchet (MHNG); 1 ex., Djebel Akkar, leg. Coutrau (NHMW); 1 ex., locality not specified (ISNB).

Israel: 3 exs., Galilee, Mt Meron, 1100 m, 21.IV.1982, leg. Besuchet & Löbl (MHNG); 1 ex., same data, but 27.V.1973 (MHNG); 2 exs., Mt Meron, 700 m, 26.IV.1982, leg. Besuchet & Löbl (MHNG); 22 exs., Galilee, Eilon, N. Betzet, 22.IV.1982, leg. Besuchet & Löbl (MHNG); 2 exs., same data, but 20.IV.1982; 5 exs., Galilee, Montfort, 19.IV.1982, leg. Besuchet & Löbl (MHNG); 1 ex., Galilee, Safad, 500 m, 26.IV.1982, leg. Besuchet & Löbl (MHNG); 1 ex., same data, but 14.VI.1973, leg. Löbl (MHNG); 14 exs., coast, Mt Carmel, 500 m, 17.IV.1982, leg. Besuchet & Löbl (MHNG); 50 exs., same data, but 100 m (MHNG); 3 exs., Mt. Carmel, Little Switzerland, 28.V.73, leg. Löbl (MHNG); 4 exs., coast, Beit Tzevi, 18.IV.1982, leg. Besuchet & Löbl (MHNG, cAss); 2 exs., Shomeron: Rehan, Qazir, SW Megiddo, 400-500 m, 15.IV.1987, leg. Heinz (cKor).

Diagnosis: Highly variable species (Fig. 44). 3.8 – 4.8 mm. Coloration variable; usual coloration: blackish brown to blackish, with at least part of the elytra, the abdominal apex, and the appendages ferruginous to brown; sometimes whole body more or less uniformly reddish brown to brown, or with the head slightly darker.

Head with relatively dense, relatively clear-cut and coarse umbilicate puncturation, interstices usually without, rarely with distinct microsculpture; dorsal surface in most specimens with some shine. Pronotum with coarse and relatively dense, but not umbilicate puncturation; interstices distinctly shining or with microsculpture. Elytra of highly variable length and width, at suture 1.0 to almost 1.25 times as long and 1.15 to 1.30 times as wide as pronotum; puncturation less well-defined and denser than that of pronotum. Hind wings

dimorphic, fully developed or of reduced length. Abdominal tergite VII with palisade fringe.

♂: posterior margin of sternite VII shallowly concave and laterally with combs of usually 5-9 palisade setae (Fig. 47); sternite VIII not distinctive (Fig. 48). Aedeagus with long and slender ventral process, shape of apex (ventral view) somewhat variable, truncate to weakly convex (Figs. 45 – 46).

Comparative notes: *M. semiobscurus* is easily distinguished from *M. pythonissa* by smaller body size, the relatively coarser and denser puncturation of head and pronotum, and by the male sexual characters. It is separated from *M. brunneus* by the (on average) less coarse and less dense puncturation of the head, the (on average) smaller head, and especially by the morphology of the aedeagus. For distinction from other Eastern Mediterranean species of the genus see the key in section 4.

Comments: The original description of *M. rhodiensis* is based on two "Typen" (SCHEERPELTZ 1963a). A holotype is not specified, so that both types are syntypes. Since an identification of females is problematic in this species group, the male type is here designated as the lectotype to secure the present interpretation of the species. An examination of the types as well as of abundant additional material yielded no evidence that *M. clambus* Fagel and *M. rhodiensis* Scheerpeltz should represent species distinct from *M. semiobscurus* (Fauvel) (see also the following paragraph), so that they are here placed in the synonymy of the senior name.

Distribution, intraspecific variation, and bionomics:

The range of *M. semiobscurus* extends from northwestern Anatolia (Bursa) to Israel and includes Rhodes (Map 7); there is no overlap with the range of *M. brunneus* (see Map 6). The distributions of both species are almost parapatric.



Figs. 44A-D: *Medon semiobscurus* (Fauvel): habitus of specimens from Muğla (A), Adana (B), Antakya (C), and Israel (D).

Intraspecific variation is enormous (Fig. 44). In the northwest of its range, from Bursa to Mersin, the species is usually macropterous and dark coloured (Fig. 44A); occasionally, however, there are also populations with short-winged specimens of light coloration and with a microsculptured forebody. In Rhodes, the beetles are usually of somewhat lighter coloration and often have shorter elytra and hind wings. The vast majority of the specimens seen from Antakya are of lighter coloration, usually uniformly brown, have a distinctly microsculptured forebody and shorter wings than the more western populations (Fig. 44C). In Israel, the species is dimorphic. One morph is uniformly ferrugineous with a clearly microsculptured forebody; the vast majority of specimens is brachypterous and has smaller and less prominent eyes (Fig. 44D). The other morph, too, is distinctly microsculptured, but is dark coloured, has long wings, and large and prominent eyes. All the specimens seen from Lebanon belong to the latter morph. The external differences between the populations from Israel, Antakya, and the remaining parts of the range are so striking (Figs. 44A-D), that they were at first believed to be an expression of interspecific rather than intraspecific variation. However, transitions can be observed not only regarding the character states, but also regarding the representation of the different morphs in the populations examined. This is especially true of the material seen from Adana, which consists partly of dark, long-winged specimens without microsculpture on the forebody, and partly of more light-coloured, short-winged, and microsculptured beetles. However, no constant differences whatsoever were found in the male primary and secondary sexual characters. Consequently, the evidence available suggests that *M. semiobscurus* represents a remarkable example of clinal variation with a character gradient and an increasing dimorphism from the northwest to the southeast of its range.

The species apparently inhabits a wide range of habitats, mostly forests, and was collected at altitudes of 0-1250 m. Teneral adults were observed in April and July. The species was frequently found together with other congeners, especially *M. pythonissa*. In some populations, especially in the east and southeast of the range of distribution, the dissected males quite frequently had teratological aedeagi.

3.13. *Medon pythonissa* (Saulcy, 1864) (Figs. 49 – 52, Map 8)

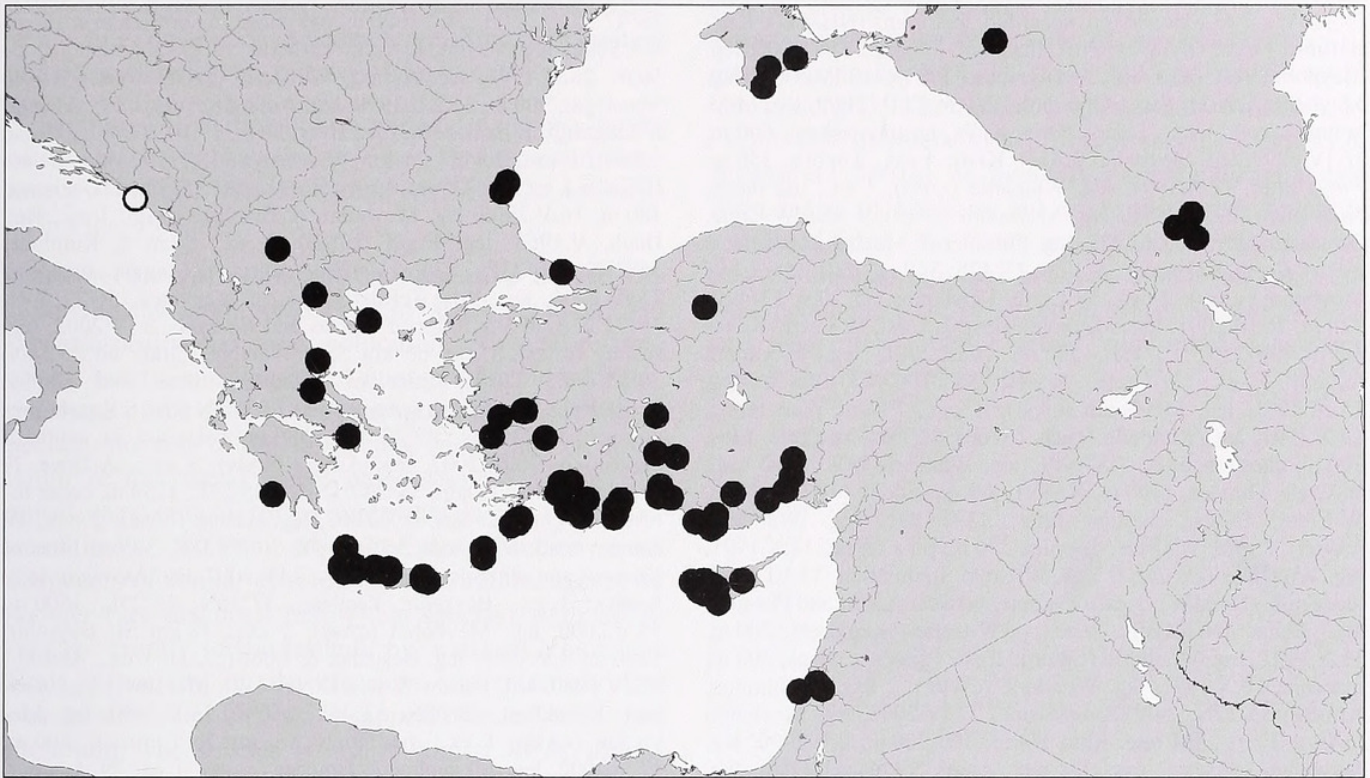
Lithocharis pythonissa Saulcy, 1864: 649 f.

Medon haafi Scheerpeltz, 1956: 1095 ff.; **syn. n.**

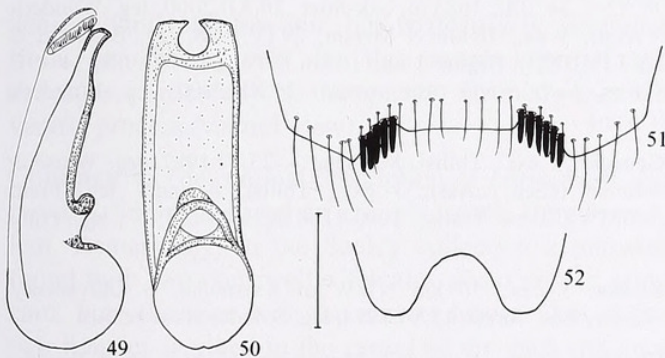
Medon mersinum Bordoni, 1980c: 75 f.; **syn. n.**; see also Assing & Wunderle (2001a).

Medon erevanensis Coiffait, 1969: 706 f.; **syn. n.**

Medon macedonicum Coiffait, 1976: 242; **syn. n.**



Map 8: Distributions of *Medon pythonissa* (Saulcy) (filled circles) and *M. pocofer* (Peyron) (open circle) in the Eastern Mediterranean and adjacent regions, based on revised records.



Figs. 49 – 52: *Medon pythonissa* (Saulcy): Aedeagus in lateral and in ventral view (49, 50); posterior margin of male sternite VII (51); outline of posterior margin of male sternite VIII (52). Scale: 0.2 mm.

Types examined: *L. pythonissa*: Holotype ♀ [with non-type ♀ glued on the same label; see comments below]: Jerusalem / *pythonissa* / Jerusal / Collect. de Saulcy / TYPE / Muséum Paris Coll. A. Argod / *pythonissa* Saulcy (MNHN).

M. haafi: see ASSING & WUNDERLE (2001a).

M. mersinus: see ASSING & WUNDERLE (2001a).

M. erevanensis: Holotype ♂: Erevan, Arabkir, ASSR [data transliterated from Kyrillic], 15-4-51 / HOLOTYPE / Museum Paris Coll H. Coiffait / *Medon ere-*

vanensis Coiff., H. Coiffait det. 1969 / *Medon pythonissa* (Saulcy) det. V. Assing 2003 (MNHN).

M. macedonicus: Holotype ♂: Distr. Skopje, Rašče, 6.6.71, P. Beron / Grotte Dona Duka / HOLOTYPE / Museum Paris Coll H. Coiffait / *Medon macedonicum*, H. Coiffait det. 1969 / *Medon pythonissa* (Saulcy) det. V. Assing 2003 (MNHN).

Additional material examined (total: 342 exs.):

Bulgaria: 1 ex., Burgas, Pomorie, 20.-22.VI.1981, leg. Schülke (cSch); 4 exs., Eminska planina, Vlas, 12.V.1987, leg. Behne & Heinig (cSch, cAss).

Macedonia: 1 ex., Vardar plain, leg. Schatzmayr (NHMW).

Greece: Mainland: 7 exs., Makedhonia, Athos, leg. Schatzmayr (DEIC, ZMHB, NHMW, cAss); 1 ex., Athos, 40°08N, 24°19E, 1000 m, chestnut forest, 23.III.2001, leg. Behne (DEIC); 1 ex., Athos, 40°08N, 24°18E, 635 m, mediterranean forest, 23.III.2001, leg. Behne (cAss); 6 exs., Athos (NHMW); 1 ex., Thessaloniki, leg. Schatzmayr (ZMHB); 3 exs., Pelion (NHMW); 1 ex., “Macedonien?, Grotte de Leondarion”, 20.IV.1954, leg. Lindberg (NHMW); 1 ex., Attika, Leonton, Mt. Hymettos, 1.XI.56, leg. Strinati (ISNB). **Pelopónnisos:** 1 ex., Koróni, 21.II.1994, leg. Graudenz (cSch). **Evvoia:** 1 ex., Oros Lichas, 38°51N, 22°55E, 525 m, pine forest, 8.IV.2001, leg. Wunderle (cWun). **Ródhos:** 4 exs., M. Kariona, 400 m, 11.IV.1977, leg. Besuchet (MHNG); 2 exs., Ebonas, 15.IV.1977, leg. Besuchet (MHNG); 1 ex., Profitis Ilias, 600 m, 24.IV.1973, leg. Besuchet (MHNG); 3 exs., Psinthos – Arhipoli, 100 m, 12.IV.1999, leg. Meybohm (cAss); 1 ex., Eleousa, Agios Nikolaos, Fountoukli, 300 m, 9.IV.1999, leg. Mey-

bohm (cAss); 1 ex., Petaloudes, butterfly valley, 200 m, 12.IV.1999, leg. Meybohm (cAss); 1 ex., Eleoussa, leg. Franz (NHMW); 2 ex., locality not specified, leg. Franz (NHMW). **Karpathos:** 4 exs., Olympos, Prof. Ilias, 450-700 m, 27.IV.2000, leg. Meybohm (cAss); 1 ex., S Olympos, 200 m, 27.IV.2000, leg. Meybohm (cAss); 1 ex., Olympos, 250 m, 27.IV.2000, leg. Meybohm (cAss); 1 ex., Lastos, Oros Kolla, northern slope, 600 m, 16.IV.1999, leg. Meybohm (cAss). **Kríti:** 4 exs., Topolia, 350 m, *Pinus* litter, 12.X.1991, leg. Wunderle (cAss); 1 ex., Ida range, Nida plain, 26.III.1986, leg. Meybohm (cAss); 1 ex., W-Crete, Samaria valley, 20.III.1973, leg. Fülcher & Meybohm (cAss); 1 ex., W-Crete, Kakodiki, 35°17'N, 23°42'E, 310 m, 16.III.2001, leg. Meybohm (cAss); 2 exs., W-Crete, Kandamos, 35°20'N, 23°44'E, 420 m, 16.III.2001, leg. Meybohm (cAss); 1 ex., W-Crete, Kakopetros, 35°25'N, 23°45'E, 500 m, 16.III.2001, leg. Meybohm (cAss); 1 ex., W-Crete, Prases, 35°21'N, 23°49'E, 800 m, 13.III.2001, leg. Meybohm (cAss); 4 exs., Prases, pine forest, 13.X.1991, leg. Wunderle (cSch, cWun); 14 exs., W-Crete, Elos, 300 m, chestnut litter, 7.X.1991, leg. Wunderle (cWun); 2 exs., W-Crete, Omalos, 1100 m, X.1991, leg. Wunderle (cWun); 1 ex., W-Crete, Deres, chestnut litter, 13.X.1991, leg. Wunderle (cWun); 3 exs., W-Crete, Topolia, 350 m, pine forest, 12.X.1991, leg. Wunderle (cWun); 6 exs., W-Crete, Rethimnon, 13.VI.1984, leg. Franz (NHMW); 1 ex., W-Crete, between Lakki and Phrunes, leg. Franz (NHMW); 1 ex., SW-Crete, Azogires, 200 m, 11.X.1991, leg. Wunderle (cWun); 1 ex., Psiloritis, Axos, 500 m, macchia, 10.X.1991, leg. Wunderle (cWun); 2 exs., Rethimnon, Armeni, 35°17'N, 24°28'E, oakwood, 22.IV.2000, leg. Meybohm (cAss); 2 exs., E-Crete, Kato Horio, 100-200 m, 2.V.2000, leg. Meybohm (cAss); 2 exs., E-Crete, Agios Nikolaos, Kalamafka, 17.IV.2000, leg. Meybohm (cAss); 1 ex., Agios Nikolaos, Lato, 100-300 m, 13.IV.2000, leg. Meybohm (cAss); 1 ex., Lakki, XI.1953, leg. Brondeel (ISNB); 1 ex., locality not specified, leg. Paganetti (NHMW).

Cyprus: 34 exs., S Ayia, 950 m, 12.VII.1977, leg. Besuchet (MHNG); 3 exs., Stroumbi, 400 m, 22.VII.1977, leg. Besuchet (MHNG); 8 exs., Yerovasa, 14.VII.1977, leg. Besuchet (MHNG); 1 ex., Mt. Olympos, 24.VII.1977, leg. Besuchet (MHNG); 1 ex., Olympos, 1950 m, leg. Franz (NHMW); 5 exs., Troodos range, Mesopotamos, leg. Franz (NHMW, cAss); 11 exs., Troodos, Moniatis, leg. Franz (NHMW); 2 exs., Platres, leg. Franz (NHMW); 1 ex., Alonoudhi Junction, 600 m, 15.VII.1977, leg. Besuchet (MHNG); 1 ex., Caledonian Falls, 16.VII.1977, leg. Besuchet (MHNG); 6 exs., Baths of Aphrodite, 22.VII.1977, leg. Besuchet (MHNG, cSch); 2 exs., Livadhi valley, 700 m, 19.VII.1977, leg. Besuchet (MHNG); 11 exs., Agios Dimitrios, 600 m, 9.VII.1977, leg. Besuchet (MHNG, cSch); 1 ex., Kalopanayiotis, 850 m, leg. Comellini (cSch); 6 exs., Cedar Valley, 1200 m, 15.VII.1977, leg. Besuchet (MHNG, cSch); 3 exs., Platania, 13.VII.1977, leg. Besuchet (cSch). For additional records see ASSING & WUNDERLE (2001a).

Turkey: **Istanbul:** 9 exs., Istanbul, 25.V.1911, leg. Biró (HNHM). **Izmir:** 1 ex., Bozdagh, 1200 m, 29.IV.1975, leg. Besuchet & Löbl (MHNG); 1 ex., Izmir, Ağamemnon, 28.IV.1975, leg. Besuchet & Löbl (MHNG); 2 exs., Meryemana – Selçuk, 500 m, 9.V.1975, leg. Besuchet & Löbl (cAss). **Aydın:** 1 ex., E Kuyucak, "Antioche, Grotte de Narlidja, guano", 8.X.1956, leg. K. Lindberg [37°55'N, 28°40'E] (NHMW). **Manisa:** 1 ex., S Salihli, 500 m, 29.IV.1975, leg. Besuchet & Löbl (MHNG). **Ankara:** 1 ex., Soğuksu National Park, 1000 m, 24.V.1967, leg. Besuchet (MHNG). **Denizli:** 1 ex., ca. 50 km N Fethiye, S Çameli, 36°58'55"N, 29°16'15"E, 1245 m, litter of *Quercus ilex*, 9.VII.2002, leg. Assing (cAss). **Muğla:** 8 exs., SE Fethiye, Baba Dağ, above Ovacik, 36°32'16"N, 29°10'20"E, 1705 m, sifted leaf litter and grass roots, 4.VII.2002, leg. Assing (cAss); 5 exs., 25 km NNE Fethiye, N Üzümlü, 36°47'22"N, 29°14'22"E, 750 m, pine forest, 4.X.2002, leg. Assing (cAss); 2 exs., 25 km NE Fethiye, E Üzümlü,

36°43'54"N, 29°15'22"E, 610 m, litter of *Quercus ilex* and bushes, 4.X.2002, leg. Assing (cAss); 3 exs., 20 km NNE Fethiye, 36°47'27"N, 28°11'29"E, 1000 m, oak forest in northern exposition, 8.X.2002, leg. Assing (cAss). **Antalya:** 14 exs., Manavgat, 0-50 m, 2.-5.I.1991, leg. Assing, Wunderle (cAss, cWun); 1 ex., Manavgat, 900 m, 31.XII.1990, leg. Assing (cAss); 1 ex., Alanya, S Tasgesigi, E-bank of Karpuz river, 50 m, 17.III.2000, leg. Rose (cRos); 1 ex., Beldibi 25 km W Antalya, 1.V.1992, leg. Behne (DEIC); 1 ex., road from Alanya to Anamur, 13 km E Gazipasa, 180 m, 16.V.2000, leg. Meybohm & Brachat (cAss); 1 ex., Bey Dag, V.1968, leg. Fagel (ISNB); 1 ex., 5 km E Kumluca, 36°23'N, 30°23'E, 530 m, sifted debris on moist meadow, 25.III.2001, leg. Rose (cRos); 1 ex., E Kumluca, 36°21'50"N, 30°22'27"E, 385 m, litter of *Laurus* and *Platanus*, 3.IV.2002, leg. Assing (cAss); 1 ex., 60 km SSW Antalya, Çıralı, 36°25'54"N, 30°25'59"E, 220 m, litter of deciduous trees and shrubs, 25.III.2002, leg. Assing (cAss); 1 ex., 20 km N Kas, S Karaovabeli pass, 36°23'12"N, 29°42'34"E, 830 m, oakwood in southern exposition, 26.III.2002, leg. Assing (cAss); 3 exs., Antalya, N Kalkan, Dumanlı Dağı, 36°24'01"N, 29°25'53"E, 1230 m, cedar forest with *Quercus ilex*, 5.X.2002, leg. Assing (cAss); 2 exs., W Kemer, road to Ovacik, 36°36'18"N, 30°28'38"E, 325 m, litter of *Quercus* and other deciduous trees, 2.IV.2002, leg. Assing (cAss). **Konya:** 1 ex., Beyşehir, Yesildag, 37°38'N, 31°25'E, 1500 m, 15.V.2000, leg. Meybohm (cAss); 2 exs., 18 km SE Beyşehir, 1200 m, 7.V.1978, leg. Besuchet & Löbl (cAss); 1 ex., Akşehir, 22.IV.1960, leg. Petrow & Ressler (NHMW). **Mersin:** 1 ex., Anamur, Kösekbasi, 36°08'N, 32°46'E, 150 m, 18.V.2000, leg. Meybohm (cAss); 1 ex., road from Anamur to Ermenek, 800 m, 17.V.2000, leg. Meybohm & Brachat (cAss); 1 ex., N Anamur, 36°12'N, 32°53'E, 800 m, 17.V.2000, leg. Meybohm (cAss); 1 ex., ca. 20 km NNW Mut, 36°49'N, 33°19'E, 1320 m, *Pinus* wood with *Quercus ilex*, 25.XII.2000, leg. Assing (cAss); 3 exs., ca. 30 km NNW Tarsus, 37°10'N, 34°46'E, 580 m, fallow with deciduous trees, 26.XII.2000, leg. Assing (cAss); 1 ex., 25 km NW Erdemli, 36°42'N, 34°10'E, 1085 m, oak litter, 29.XII.2000, leg. Wunderle (cWun); 1 ex., 10 km N Mersin, 29.IV.1978, leg. Besuchet & Löbl (MHNG). **Niğde:** 1 ex., 10 km N Pozanti, 37°30'N, 34°49'E, 870 m, *Salix* wood near stream, 26.XII.2000, leg. Wunderle (cWun).

Georgia: 2 exs., Tbilisi, Mzcheta, 4.-23.VI.1987, leg. Wrase & Schülke (cSch, cAss); 3 exs., Tbilisi, Ananuri, leg. Franz (NHMW); 1 ex., Tbilisi, 1000-1200 m, 1.-8.VI.1977, leg. Franz (cAss).

Russia: 7 exs., 50 km NWW of Krasnodar, S Oktyabrsky, "Krasny Les" forest, 15.VI.1994, leg. Solodovnikov (cSol).

Ukraine: 12 exs., Krim, Iaila Mountains, leg. Moczarski, Winkler (DEIC, HNHM, ZMHB, NHMW); 4 exs., Beidar Thor, leg. Knirsch (NHMW); 1 ex., Jaita, leg. Knirsch (NHMW).

Israel: 4 exs., Galilee, Ginosar, 0-200 m, 28.IV.1982, leg. Besuchet & Löbl (MHNG, cAss); 2 exs., Galilee, Mt. Meron, 27.V.1973, leg. Löbl (MHNG); 3 exs., Mt. Meron, 21.IV.1982, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., coast, Beit Tzevi, 16.IV.1982, leg. Besuchet & Löbl (MHNG).

Diagnosis: 4.5 – 5.5 mm. Coloration variable; blackish brown to black, usually with the elytra partly (anterior angles and a diagonal strip from anterior angles to central part of suture) or completely lighter; abdominal apex and appendages ferruginous to brown; antennomere I usually infusate.

Head and pronotum with characteristic puncturation: punctures well-defined and not very coarse, interstices distinctly shining, in central dorsal area of head on aver-

age at least as wide as punctures. Elytra with finer, less clear-cut, and distinctly denser puncturation. Hind wings fully developed. Abdomen with fine puncturation and distinct transverse microsculpture.

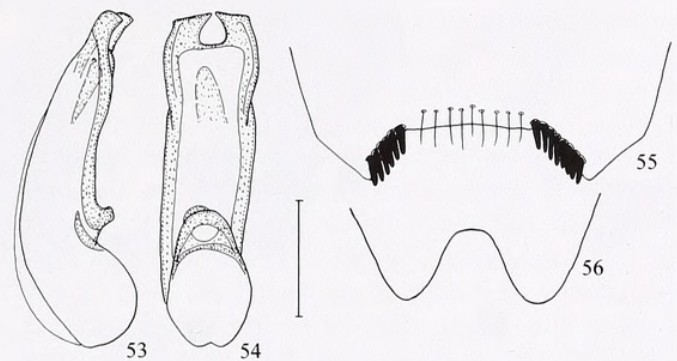
♂: sternite VII shallowly concave and with two combs of usually 4–7 palisade setae (Fig. 51); shape and chaetotaxy of sternite VIII not distinctive (Fig. 52); aedeagus as in Figs. 49–50.

Intraspecific variation and comparative notes: The following characters were found to be subject to particular intraspecific variation: coloration, eye size, relative elytral length, and density of puncturation. In addition, the shape of the apex of the aedeagus (ventral view), especially the size of the subcircular excavation (i. e. the width of the lateral apical processes) is variable; the apical excavation is often somewhat larger than illustrated in Fig. 50. From all other Eastern Mediterranean congeners of similar size and dark coloration, except *M. pocofer* (see diagnosis below that species), *M. pythonissa* is readily distinguished by external characters alone, especially by the clear-cut and relatively fine puncturation and the shiny appearance of head and pronotum. The species is highly similar to *M. dilutus* (ERICHSON), which is distributed in the Western Mediterranean, as well as in Central and Western Europe. *M. pythonissa* has a slightly more coarsely and more sparsely punctured pronotum, is usually of darker coloration, has mostly larger eyes, longer elytra, and a less dense elytral puncturation, but is positively separated from *M. dilutus* only by the morphology of the aedeagus, particularly by the apically distinctly truncate ventral process (ventral view).

Comments: The original description of *Lithocharis pythonissa* Saulcy is based on a single female from Jerusalem. Remarkably, in the Saulcy collection a pin was found with two conspecific females glued on the same card, but otherwise with the correct labels. One of the two females is glued in the centre of the card and here considered to represent the holotype, the other is located to its right. It seems that after the description Saulcy may have found another specimen with the same locality data and subsequently glued it on the same card. An examination of the types of *M. erevanensis* Coiffait, *M. macedonicus* Coiffait, and *M. haafi* Scheerpeltz revealed that they are conspecific with *Medon pythonissa* (Saulcy), so that they are here placed in the synonymy of that species, including *M. mersinus* Bordoni, a previous synonym of *M. haafi* (see ASSING & WUNDERLE 2001a).

Distribution and bionomics: *Medon pythonissa* is widespread in the Eastern Mediterranean (Map 8); it is here recorded from Macedonia, Greece (including Crete, Karpathos, and Rhodos), Cyprus, southeastern Bulgaria, the Caucasus region (Georgia, Krasnodar,

Ukraine, Anatolia, and Israel (material examined; see also ASSING & WUNDERLE (2001a)). GUSAROV (1992) already reported the species (as *M. mersinus*) from Crimea (=Krymskaya Oblast') and Abkhazskaya Respublika (Georgia). The record from northern Anatolia by FAGEL (1970) refers to a different species (ASSING & WUNDERLE 2001a). *M. pythonissa* apparently inhabits a wide range of habitats, but was most often found in woodland litter. The labels attached to the material examined indicate altitudes between 0 and 1600 m. Teneral specimens were observed in April. *Medon pythonissa* was often found together with other congeners, especially *M. semiobscurus*.



Figs. 53 – 56: *Medon pocofer* (Peyron): Aedeagus in lateral and in ventral view (53, 54); posterior margin of male sternite VII (55); outline of posterior margin of male sternite VIII (56). Scale: 0.2 mm.

3.14. *Medon pocofer* (Peyron, 1857) (Figs. 53 – 56, Map 8)

Lithocharis pocofera Peyron, 1857: 718 ff.

Material examined (total from the studied region: 1 ex.): In addition to the material listed below, specimens from France and Italy were seen.

Yugoslavia: Montenegro: 1 ex., Herzeg-Novi, 1910, leg. Hilf (NHMW).

Diagnosis: In external appearance (size, coloration, puncturation, microsculpture) similar to *M. pythonissa*, but distinguished by external characters alone:

Elytra on average of lighter coloration, yellowish brown to ferrugineous, body therefore more distinctly bicoloured; antennomere I usually not infusate.

Head transverse, 1.12 – 1.15 times as wide as long (in *M. pythonissa* about as wide as long) and at least in posterior median area with shallow microreticulation. Pronotum with coarser puncturation. Abdomen slightly more shining and with somewhat sparser puncturation.

♂: posterior margin of sternite VII slightly more deeply excavate and with two combs of usually 5–8 palisade setae (Fig. 55); shape and chaetotaxy of sternite VIII not distinctive (Fig. 56); aedeagus as in Figs. 53 – 54.

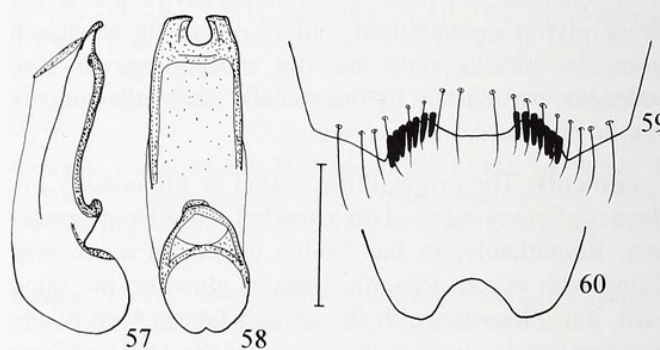


Map 9: Distribution of *Medon rufiventris* (Nordmann) in the Eastern Mediterranean and adjacent regions, based on revised records.

Comparative notes: For separation from the similar *M. pythonissa*, quite possibly its sister species, with which *M. pocofer* was frequently confused in the collections examined, see diagnosis above. From *M. rufiventris*, *M. pocofer* is distinguished especially by larger size, denser puncturation of head and pronotum, a more deeply and broadly excavate posterior margin of the male sternite VII, and by the much larger aedeagus. All other congeners occurring in the region have a less shining head, either because of very dense and coarse puncturation or due to much more pronounced microsculpture.

Comments: The types, which according to HORN et al. (1992) are kept either in Beyrouth or in Paris, were not examined; they were not found in the MNHN (N. BERTI, Paris, pers. comm. 2002). The species was previously referred to as either *Medon pocofera* or *Medon pocoferus*; the correct spelling of the adjectival species name, however, is *pocofer* (A. SMETANA, Ottawa, pers. comm. 2002).

Distribution and bionomics: According to COIFFAIT (1984), *M. pocofer* occurs in Western Europe and the Western Mediterranean, including Northwest Africa. The only record from the Eastern Mediterranean is from Montenegro (Map 8). *M. pocofer*, a littoral species (COIFFAIT 1984), is the only Western Palaearctic *Medon* restricted to coastal habitats.



Figs. 57 – 60: *Medon rufiventris* (Nordmann): Aedeagus in lateral and in ventral view (57, 58); posterior margin of male sternite VII (59); outline of posterior margin of male sternite VIII (60). Scale: 0.2 mm.

3.15. *Medon rufiventris* (Nordmann, 1837) (Figs. 57 – 60, Map 9)

Lathrobium rufiventre Nordmann, 1837: 147 f.

Medon anaticus Coiffait, 1969: 704 ff.; **syn. n.**

Material examined (total from studied region: 45 exs.):

Besides the specimens listed below, material was seen from France (Landes), Luxemburg, and Italy (Elba).

Austria: 6 exs., Burgenland, Zurndorf, leg. Franz (NHMW, cAss).

Romania: 3 exs., Krassó-Szörény, Băile Herculane [‘Herkulesfürdő’], leg. Breit, Diener, Stiller (HNHM, NHMW); 1 ex., ‘‘Transsylvan.’’ (NHMW).

Croatia: 3 exs., locality not specified, leg. Reitter (HNHM, NHMW).

Bosnia-Herzegovina: 1 ex., Čeli, leg. Reiss (NHMW).

Yugoslavia: 1 ex., ‘‘Serbien’’, leg. Merkl (NHMW).

Greece: Pelopónnisos: 1 ex., N Kalavrita, Mega Spileo, 1350 m, 24.IV.1999, leg. Brachat (cAss); 1 ex., Mt. Chelmos, N Souvardo, 1350 m, 24.IV.1999, leg. Wolf (cSch); 1 ex., Taygetos, path to Prof. Ilias, 800 m, *Acer* leaf litter, 25.III.1997, leg. Wunderle (cWun); 4 exs., Metoji, 12.–14.VI.1925, leg. Liebmann (DEIC); 1 ex., ‘‘Cumani’’, leg. Brenske (HNHM). **Kefallinia:** 1 ex., Argostolion, pine forest, under bark, 7.IV.1985, leg. Sprick (cAss). **Kriti:** 3 exs., Samaria valley, 21.–22.III.1973, leg. Fölscher & Meybohm (MHNG, cAss). **Dodekanes:** 1 ex., Nikariá, 36°50N, 25°53E, leg. v. Oertzen (NHMW).

Turkey: Antalya: 1 ex., NW Alanya, Günzelbağ, 21.–26.IV.1984, leg. Brachat (cSch); 1 ex., Aydıncık, Uründü, 1200 m, 31.XII.1990, leg. Wunderle (cWun); 3 exs. [1 ex. teneral], Antalya, N Kalkan, Dumanlı Dağı, 36°23’45N, 29°25’57E, 1340 m, cedar-pine forest, under bark of old pine tree, 5.X.2002, leg. Assing (cAss). **Isparta:** 1 ex., S Eğirdir, Kovada Gölü, 12.IV.1984, leg. Brachat (cSch). **Mersin:** 2 exs., Anamur, Abanoz, 36°21N, 32°56E, 1240 m, 20.V.2000, leg. Meybohm (cAss); 1 ex., Çamlıyayla (‘‘Namrun’’), 11.–26.V.1960, leg. Schubert (NHMW); 1 ex., same data, but 10.V.–3.VI.1963 (cAss). **Adana:** 2 exs., Feke, 21.–24.VII.2000, leg. Smatana (cAss, cSch).

Russia: 4 exs., 50 km NWW of Krasnodar, S Oktyabrsky, ‘‘Krasny Les’’ forest, under loose bark (3 exs.) and in litter (1 ex.), 5.V.1995, leg. Solodovnikov (cSol).

Locality ambiguous: 1 ex., ‘‘Süd-Ungarn’’ (NHMW)

Diagnosis: 3.5 – 4.5 mm. Externally similar to *M. pythonissa*, but distinctly smaller. Usual coloration: dark brown to blackish brown, with (at least part of) the elytra, the abdominal apex, and the appendages ferruginous to brown.

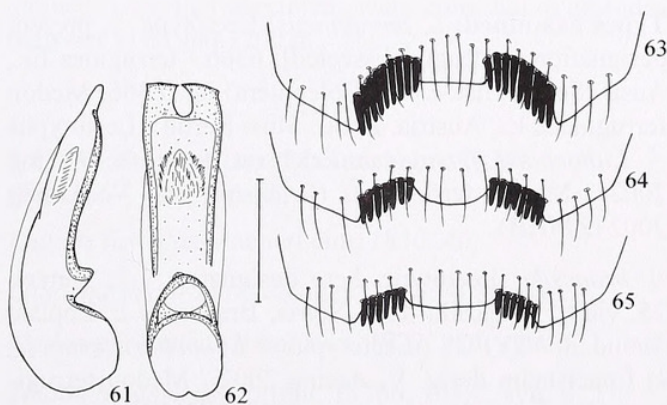
Punctuation of head and pronotum similar to that in *M. pythonissa*, of somewhat variable density, but usually even sparser; interstices without microsculpture and shining; punctuation of pronotum often finer and sparser than that of head. Head of variable shape, subquadrate to transverse, with subparallel temples or dilated posteriad. Elytra of variable length, at suture at least slightly longer than pronotum; punctuation variable, but usually denser, finer, and less defined than that of pronotum. Hind wings present. Abdomen with distinct transverse microsculpture; tergite VII with palisade fringe.

♂: sternite VII of similar shape and chaetotaxy as in *M. pythonissa*, but the two combs of palisade setae closer together (Fig. 59); sternite VIII not distinctive (Fig. 60). Aedeagus of similar morphology as in *M. pythonissa*, but much smaller (Figs. 57 – 58).

Comparative notes and systematics: For separation from *M. pythonissa* see description above. From all other congeners occurring in the eastern Mediterranean, *M. rufiventris* is distinguished by external characters alone, especially the relatively fine, not umbilicate punctuation, and the shiny appearance of head and pronotum. The similar punctuation of the forebody and the similar morphology of the male sexual characters suggest that *M. rufiventris* is closely related to *M. pythonissa*, *M. dilutus*, and *M. pocofer*.

Comments: The types of *M. anatolicus* (type locality: Bademli, Isparta) were not seen. According to the original description, *M. anatolicus* is distinguished from *M. rufiventris* by the more parallel temples of the head, by the shape of the posterior margin of the male sternite VII, and by the aedeagus. A comparative examination of material from various regions (Italy, Greece, Turkey), however, showed that the shape of the head is very variable, and no differences were discovered in the male primary and secondary sexual characters. The specimens seen from southern Turkey, not far from the type locality of *M. anatolicus*, are in perfect agreement with the original description of that species and without doubt conspecific with the material of *M. rufiventris* from other regions. Therefore, *M. anatolicus* Coiffait is here placed in the synonymy of the senior name *M. rufiventris* (Nordmann).

Distribution and bionomics: The species is rare, but widespread in the Western Palaearctic region, its distribution ranging from the south of Central Europe to northwestern Africa, the Balkans (HORION 1965), the Caucasus region, and southern Anatolia, from where it is here reported for the first time (Map 8). According to HORION (1965) and personal observations, it is mostly found associated with rotting tree trunks. One specimen collected in early October was teneral.



Figs. 61 – 65: *Medon ferrugineus* (Erichson): Aedeagus in lateral and in ventral view (61, 62); posterior margin of sternite VII of males from different parts of Anatolia: Tunceli (63), Sinop (64), Sakarya (65). Scale: 0.2 mm.



Map 10: Distribution of *Medon ferrugineus* (Erichson) in the Eastern Mediterranean, based on revised records.

3.16. *Medon ferrugineus* (Erichson, 1837)
(Figs. 61 – 65, Map 10)

Lithocharis ferruginea Erichson, 1840: 613 f.

Lithocharis brancsiki Eppelsheim, 1880: 287 f.; synonymy by EPPELSHEIM (1894), here confirmed.

Medon nitidus Petri, 1891: 14; synonymy confirmed.

Medon orduanum (sic) Bordoni, 1980a: 94; **syn. n.**

Types examined: *L. ferrugineus*: Lectotype ♂, present designation [aedeagus dissected]: 6366 / ferruginea Er., Austr. Sch. / Hist.-Coll. (Coleoptera) Nr. 6366, *Medon ferrugineus* Er. Austria, Zool. Mus. Berlin / Lectotypus ♂ *Lithocharis ferruginea* Erichson desig. V. Assing 2002 / *Medon ferrugineus* (Erichson) det. V. Assing 2002 (ZMHB).

L. brancsiki: Lectotype, here designated: 1♂: Fauvel, 25, vidit / Brancsiki mihi, Styria, Brancsik / c. Epplsh. Steind. d. / TYPUS / Lectotypus ♂ *Lithocharis brancsiki* Eppelsheim desig. V. Assing 2002 / *Medon ferrugineus* (Erichson) det. V. Assing 2002 (NHMW).

M. nitidus: Syntypes: 2♀♀ [both on one pin]: Siebenbürgen / Syntypus / coll. Stierlin, *M. nitidus* Petri / *Medon ferrugineus* (Erichson) det. V. Assing 2002 (DEIC).

M. orduanus: Holotype ♂: Turquie Ordu, env. d'Ordu, Cl. Besuchet / HOLOTYPUS / *Medon orduanum* n. sp. Det. A. Bordoni 1975 / *Medon ferrugineus* (Erichson) det. V. Assing 2001 (MHNG). Paratype ♀: same data as holotype, but "PARATYPUS" (MHNG).

Additorial material examined (total: 164 exs.):

Austria: Niederösterreich: 7 exs., Wien (NHMW); 1 ex., Laaerberg, leg. Schlereth (NHMW); 1 ex., Hagenberg, 30.IX.1934 (NHMW); 1 ex., Hainburg, leg. Mader (NHMW). **Burgenland:** 37 exs., Zurndorf, leg. Franz (NHMW, cAss); 8 exs., Leithagebirge, leg. Franz (NHMW, cAss); 1 ex., Leithagebirge, Zeilerberg, 30.VIII.1985, leg. Assing (cAss); 2 exs., Zeilerberg, 28.VIII.-9.IX.1988, leg. Melber (cAss); 1 ex., Parndorfer Heide, 27.VIII.1985, leg. Assing (cAss); 5 exs., Neusiedlersee (NHMW).

Czech Republic: 2 exs., Moravia, leg. Pichler (NHMW); 1 ex., Moravia, Prossnitz (NHMW).

Slovakia: 6 exs., Bratislava, leg. Weber, Zoufal (NHMW); 1 ex., Trenčín, leg. Kocsi (ZMHB); 1 ex., "Torna", leg. Chyzer (NHMW).

Hungary: 1 ex., Körtvélyes (NHMW); 1 ex., Pécel (NHMW).

Romania: 1 ex., Oravița (HNHM); 6 exs., Sighisoara ("Schäsbürg"), leg. Petri (DEIC, NHMW); 11 exs., Comana Vlasca, leg. Montandon (DEIC, HNHM, NHMW); 7 exs., Dobrukscha, Kloster Kokos [= Cocos; 45°13'51N, 28°26'12E], leg. Breit (DEIC, NHMW); 6 exs., Băile Herculane, leg. Deubel, Ganglbauer (NHMW).

Bulgaria: 1 ex., Stara Planina, Maglizh ("Maglige"), VII-VIII.1912, leg. Hilf (NHMW).

Bosnia-Herzovina or Croatia: 1 ex., Kupanje, leg. v. Hopffgarten (NHMW).

Macedonia: 1 ex., Keratschkol, leg. Schatzmayr (NHMW); 1 ex., Skopje, 26.V.-5.VI.1955, leg. Schubert (cAss); 15 exs., Vardar plain, leg. Schatzmayr (NHMW, cAss).

Turkey: Sakarya: 16 exs., 20 km S Adapazari, Şerefige, 14.V.1976, leg. Besuchet (MHNG, cAss). **Sinop:** 2 exs., 23 km N Boyabat, S Bektas, 1100 m, 20.V.1976, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., Lala near Sinop, 20.V.1976, leg. Besuchet & Löbl (MHNG). **Ankara:** 1 ex., Kizilcahamam, pinewood, 14.VI.1966, leg. leg. Ressler (NHMW). **Kastamonu:** 2 exs., 15 km N Tosya, Ilgazdağ, 1600-1700 m, 19.V.1976, leg. Besuchet & Löbl (MHNG). **Samsun:** 3 exs., Karadag Pass, NE Hafsia, 27.V.1989, leg. Schönnmann & Schillhammer (NHMW, cAss); 1 ex., Samsun, leg. Korb (NHMW). **Ordu:** 1 ex., Ordu env., 17.V.1967, leg. Besuchet (MHNG). **Trabzon:** 2 exs., Sumela near Trabzon, leg. Dieck (NHMW); 1 ex., Trabzon, leg. Dieck (DEIC). **Bingöl:** 1 ex., E Bingöl, 1300 m, V.-VI.1976, leg. Schubert (NHMW); 1 ex., Karliova, IV.1979, leg. Schubert (NHMW). **Tunceli:** 1 ex., Tunceli-Ovacik, 1100 m, 5.VI.1986, leg. Besuchet, Löbl & Burckhardt (cAss); 1 ex., Pülümür SE Erzincan, 18.V.1964, leg. Korge (cKor).

Locality ambiguous: 2 exs., "Hungar." (NHMW); 1 ex., "Brancsiki mihi Hungar. sept. Dr. Chyzer" (NHMW).

Diagnosis: 3.5 – 4.6 mm. Externally very similar to *M. brunneus*, but distinguished as follows:

On average smaller. Of similar coloration as *M. brunneus*, but head usually not darker than pronotum. Punctuation of head similar to that of *M. brunneus*, but even coarser. Punctuation of pronotum of similar size as that of head, but not umbilicate and less clear-cut; otherwise as in *M. brunneus*. Elytra dimorphic, either distinctly wider (approx. 1.15 x) and at suture longer (approx. 1.10 x) than pronotum, or indistinctly wider and at suture shorter (approx. 0.85 x) than pronotum; punctuation finer and less defined than that of pronotum, but distinctly coarser, sparser, and more defined than in *M. brunneus*. Hind wings either fully developed or reduced. Punctuation sparser than in *M. brunneus*; tergite VII with narrow palisade fringe.

♂: posterior margin of sternite VII of variable shape and chaetotaxy, shallowly to distinctly concave, in the middle straight to convex, and with two combs of 5-10 palisade setae of variable length (Fig. 63); sternite VIII not distinctive (Fig. 64). Aedeagus of similar general morphology as in *M. pythonissa*, *M. pocifer*, and *M. rufiventris* (Figs. 61 – 62).

Comparative notes: For separation from *M. brunneus* see description above. As can be inferred from the similar morphology of the aedeagus and the male sternite VII, *M. ferrugineus* is most closely related to *M. pythonissa* and related species, from which it is easily distinguished by the much coarser and denser punctuation of the head and pronotum and by the umbilicate punctuation of the head.

Comments: The original description of *Lithocharis ferruginea* Erichson is based on an unspecified number of male syntypes. In order to fix a single name-bearing type and thus to unambiguously define the name, the male type from the Erichson collection is here designated as the lectotype.

Most of the specimens identified as *Lithocharis brancsiki* in the Eppelsheim collection carry type labels. However, since EPPELSHEIM (1880) states to have seen material only from "Steiermark" (collected by Brancsik) and "Slavonien" (collected by Hopffgarten), only one of the specimens in the Eppelsheim collection can be considered a syntype. The whereabouts of the other syntype(s) are unknown. *Medon ferrugineus* is easily confused with *M. brunneus*, so that the single syntype in the Eppelsheim collection is here designated as the lectotype in order to fix a single name-bearing type and to secure the long-standing synonymy of *M. brancsiki* with *Medon ferrugineus*. The lectotype of *Lithocharis brancsiki* is conspecific with the lectotype of *Medon ferrugineus* (Erichson), so that the previously established synonymy is confirmed.

According to the original description of *M. orduanus*, the single paratype is deposited in the collection of the author (BORDONI 1980a), so there is some doubt that the paratype indicated above has type status. An examination of the types revealed that they are conspecific with *M. ferrugineus*, so that *M. orduanus* is here placed in the synonymy of the senior name. In the original description, BORDONI (1980a) compares *M. orduanus* with *M. erevanensis* Coiffait and *M. anaticus* Coiffait, but there is no reference to *M. ferrugineus*.

Distribution and bionomics: The distribution of *M. ferrugineus*, apparently a Ponto-Mediterranean element, ranges from Austria, Slovakia, and the Czech Republic in the northwest to eastern Anatolia in the southeast (material examined; HORION 1965) (Map 10). The examined Anatolian specimens were collected at altitudes between 1100 and 1700 m.

3.17. *Medon fuscus* (Mannerheim, 1830) (Figs. 66 – 71, Map 11)

Rugilus fuscus Mannerheim, 1830: 40.

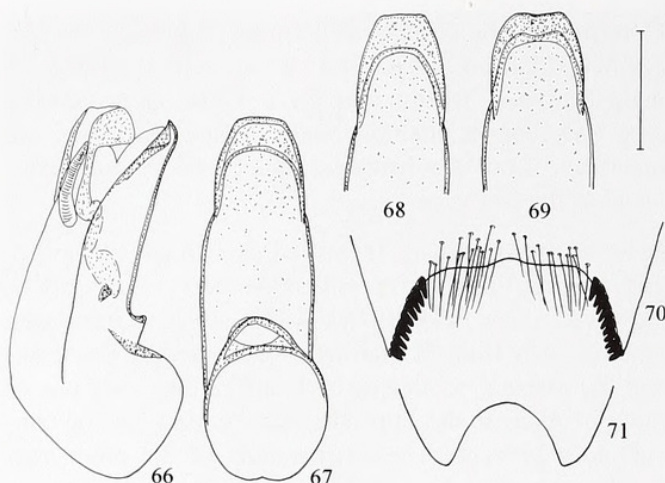
Lithocharis aurantica Saulcy, 1864: 40; **resyn.**

Medon abchasicus Bernhauer, 1922: 124; **syn. n.**

Medon bulgaricus Coiffait, 1970b: 105 f.; **syn. n.**

Medon gajaci Coiffait, 1973: 114 ff.; **syn. n.**

Medon paradobrogicus Decu & Georgescu, 1994: 49 f.; **syn. n.**



Figs. 66 – 71: *Medon fuscus* (Mannerheim): Aedeagus of male from Greece in lateral and in ventral view (66, 67); apical part of aedeagus of males from Isparta (Turkey) (68) and Antalya (Turkey) (69); posterior margin of male sternite VII (70); outline of posterior margin of male sternite VIII (71). Scale: 0.2 mm.

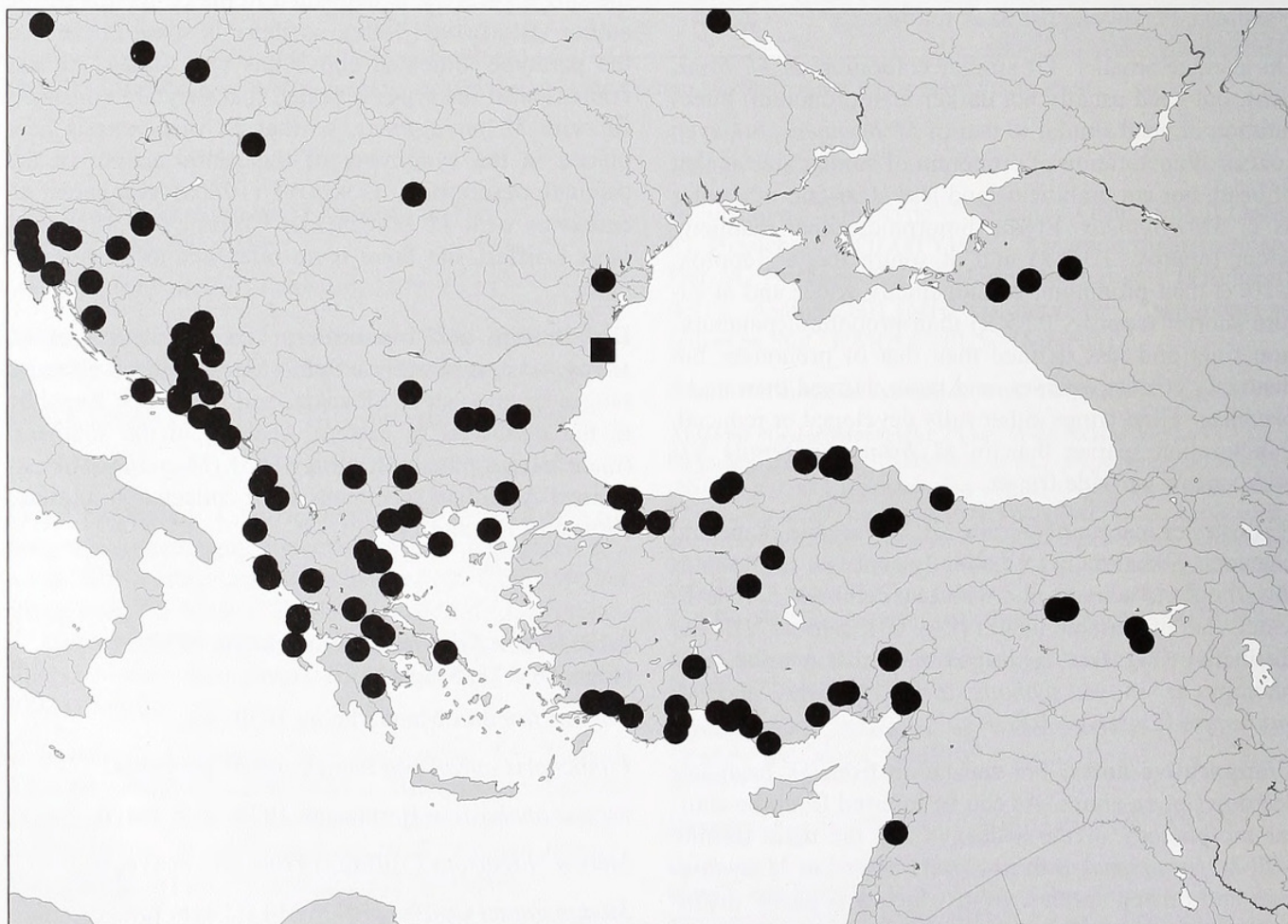
Types examined: *L. auranitica*: Lectotype ♂: Arag el Emir / *auranitica* / ♂♀ / Collect. de Sauley / Muséum

Paris Coll. A. Argod / G. Fagel elig., 1965, *Lithocharis auranitica* de Sauley, Lectotype / *Medon fuscus* (Mannerheim) det. V. Assing 2003 (MNHN).

M. abchasicus: Syntypes: 1♀: Abchasien, Kaukas. / *brunneus* Er. *dichter punkt. u. länger*, Bang H. / *abchasicus* Brh. Typus / Chicago NHMus M. Bernhauer Collection / *Medon abchasicus* ♀ V. I. Gusarov det. 2000 / *Medon fuscus* (Mannerheim) det. V. Assing 2002 (FMNH); 1♀: Abchasien, Kaukas. / *abchasicus* Brh. Cotypus / Chicago NHMus M. Bernhauer Collection / *Medon abchasicus* ♀ V. I. Gusarov det. 2000 / *Medon fuscus* (Mannerheim) det. V. Assing 2002 (FMNH).

M. gajaci: Holotype ♂: Anatolie, G. CENET, Gajac / Korigos V. Mersin / HOLOTYPE / Museum Paris Coll Coiffait / *Medon gajaci* Coiff., H. Coiffait det. 1972 / *Medon fuscus* (Mannerheim) det. V. Assing 2003 (MNHN).

M. bulgaricus: Holotype ♂: Bulgarie, 27.VI.68, Maslen Nos Strandja, alt. 50 m, P. Beron / HOLOTYPE / Museum Paris Coll Coiffait / *Medon bulgaricus* Coiff., H. Coiffait det. 1970 / *Medon fuscus* (Mannerheim) det. V. Assing 2003 (MNHN).



Map 11: Distributions of *Medon fuscus* (Mannerheim) (filled circles) in the Eastern Mediterranean and adjacent regions, based on revised records, and of *M. dobrogicus* Decu & Georgescu (square, unrevised).

Additional material examined (total from studied region: 493 exs.): In addition to the material listed below, more specimens from Italy, England, Germany, and Austria were examined.

Czech Republic: 2 exs., Moravia, Brod, leg. Wanka (NHMW); 2 exs., Bohemia, Praha, leg. Skalitzky (NHMW); 1 ex., Bohemia, Brno (NHMW).

Slovakia: 1 ex., Trenčín (ZMHB).

Slovenia: 1 ex., Ljubljana, leg. Hummler (NHMW); 2 exs., "Canale", leg. Paganetti (NHMW); 1 ex., Police, Gor. Radgona, 1.V.1996, leg. Drovenik (cAss).

Slovenian or Italian territory: 2 exs., "Görz" (NHMW).

Hungary: 1 ex., Bag, leg. Fodor (ZMHB).

Italy: 4 exs., Trieste, "Küstenland" (NHMW); 2 exs., Trieste, Grignano (NHMW); 1 ex., Trieste (NHMW).

Romania: 1 ex., Cluj Napoca ("Klausenburg") (NHMW); 21 exs., Dobrukscha, Kloster Kokos, leg. Breit (NHMW); 1 ex., "Transsilvania" (DEIC); 1 ex., locality illegible, leg. Liebmann (DEIC).

Croatia: 6 exs., Josipdol -> Karlova, car-net, 9.V.1990, leg. Wunderle (cAss); 2 exs., Zagreb, leg. Stiller (HNHM); 2 exs., Gospi (HNHM); 2 exs., Ludbreg, leg. Apfelbeck (HNHM); 2 exs., Metkovi, leg. Reitter (HNHM, ZMHB); 2 exs., Dubrovnik, Bera Samino Brdo, 2.VIII.1968, leg. Endrödy-Younga (HNHM); 1 ex., coast, Opatije, leg. Mandl (NHMW); 1 ex., Ivancica (NHMW); 1 ex., Zawalje (NHMW); 1 ex., Hvar, 15.IV.1929, leg. Schulze (ZMHB).

Bosnia-Herzegovina: 2 exs., Kraljeva-Mostre, car-net, 5.V.1990, leg. Wunderle (cAss, cWun); 1 ex., Travnik (HNHM); 3 exs., Zavidovići, leg. Kendi (HNHM); 1 ex., Jablanica, leg. Zoufal (ZMHB); 1 ex., Bjelasnica planina (DEIC); 1 ex., Mostar (HNHM); 1 ex., Sarajevo (HNHM); 1 ex., Ruiste, leg. Czerny (NHMW); 1 ex., Maklen pass, 1902, leg. Leonhard (DEIC); 2 exs., "Herzegowina", leg. Reitter (HNHM, ZMHB).

Yugoslavia: Montenegro: 3 exs., Budva, leg. Liebmann, Paganetti, Reitter (DEIC, HNHM, ZMHB); 5 exs., Budva, 12.V.1939, leg. Liebmann (DEIC); 1 ex., Kameno, leg. Paganetti (HNHM); 62 exs., Herzeg-Novi, leg. Hilf, Liebmann, Mocarski, Paganetti (DEIC, ZMHB, NHMW).

Albania: 5 exs., Krujë, leg. Mader (HNHM, ZMHB, NHMW); 8 exs., Elbasan, leg. Mader (HNHM, ZMHB); 4 exs., N-Albania, Elbasan, leg. Mader (NHMW); 1 ex., Vorra, leg. Mader (NHMW); 2 exs., Avlona, leg. v. Oertzen (ZMHB); 1 ex., Terbac, V.1931, leg. Winkler, Lona, Bischoff (NHMW); 3 exs., locality not specified (HNHM).

Bulgaria: 1 ex., Melnik, 29.IV.1985, leg. Wrase (cSch); 12 exs., Stara Planina, Maglizh ("Maglige"), VII.-VIII.1912, leg. Hilf (NHMW); 2 exs., Trevna, V.-VI.1912, leg. Hilf (NHMW); 1 ex., Kalofer, leg. Breit (NHMW); 1 ex., SW-Bulgaria, General Todоров, Rupite, 1.V.1984, leg. Hieke (ZMHB); 1 ex., Sliven, 20.VI.1908, leg. Rambousek (DEIC).

Macedonia: 34 exs [2 exs. with teratological aedeagus], Vardar plain, leg. Schatzmayr (NHMW, cAss).

Greece: Mainland: 1 ex., Thessalia, Ossa Oros, 3 km SE Stómió, 39°52'N, 22°45'E, 100 m, 4.IV.1998, leg. Assing (cAss); 1 ex., Thessalia, Gónnoi, 2.-3.VIII.1986, leg. Barries & Cate (cSch); 2 exs., Khalkidhiki, Cholomon, 900 m, caught flying, 30.III.1989, leg. Assing (cAss); 9 exs., Athos, leg. Schatzmayr (ZMHB, NHMW); 1 ex., Fthiotis, 30 km W Lamia, W Kalithea, 38°54'N, 22°04'E, 500 m, oakwood, 16.IV.2000, leg. Assing (cAss); 1 ex., Voiotia, Oros Elikonas, NE Kiriaki, 38°23'N, 22°49'E, 900 m,

Abies forest, 4.IV.2001, leg. Assing (cAss); 1 ex., Évros, Méga Dhérion, 26.IV.1990, leg. Schmalzfuss (cSch); 1 ex., Samothráki, 1 km W Kremiotisa, 16.VI.1993, leg. Jäch (NHMW); 4 ex., Thessaloniki (NHMW, ZMHB); 2 ex., Thessalia, Pelion (NHMW); 1 ex., Olympos (NHMW); 1 ex., Nisista, Xeravunei, leg. Beier (NHMW); 1 ex., Parnassos, leg. Paganetti (NHMW); 1 ex., "Attika" (NHMW); 1 ex., S-Evvoia, Karystos, leg. v. Oertzen (ZMHB). **Pelopónnisos:** 1 ex., 40 km SE Tripoli, E Agios Petros, 37°20'N, 22°35'E, 900 m, 22.III.1997, leg. Assing (cAss); 1 ex., 8 km NE Kalavrita, bank of Vouraikos river, 38°05'N, 22°10'E, 700 m, 30.III.1997, leg. Assing (cAss). **Levkás:** 21 exs., Karia, dark creek valley, leaf litter, 25.IX.1993, leg. Assing (cAss, cSch, cWun); 1 ex., Kallighoni, 26.III.1971, leg. Löbl (MHNG). **Kefalínia:** 1 ex., Argostolion, 18.X.1972, leg. Benick (cAss); 1 ex., locality not specified, leg. Paganetti (DEIC). **Kérkira** (Corfu): 1 ex., Val de Ropa (NHMW); 1 ex., Potamos, 1905, leg. Leonhard (DEIC); 2 exs., locality not specified, "G. Fagel det. auranitica Sauley" (ISNB); 1 ex., locality illegible, leg. Leonhard (DEIC); 1 ex., locality not specified, leg. Reitter (HNHM).

Turkey: Istanbul: 1 ex., Yalova, VII.1972, leg. Schubert (NHMW); 1 ex., Yalova, leg. Schubert (NHMW); 3 exs., Alem-Dagh, leg. Gottwald, v. Bodemeyer (ZMHB); 1 ex., Istanbul (DEIC). **Kocaeli:** 1 ex., Goek-Dagh [40°37'N, 29°56'E], leg. v. Bodemeyer (ZMHB). **Zonguldak:** 40 exs., Eregli-Baliköy, 15.V.1976, leg. Besuchet & Löbl (MHNG, cAss); 2 exs., S Zonguldak, 23.V.1976, 500 m, leg. Besuchet & Löbl (MHNG). **Bolu:** 1 ex., Abant Gölü, 1450 m, V.1967, leg. Fagel (ISNB). **Kastamonu:** 1 ex., Küre, 600 m, 18.V.1976, leg. Besuchet & Löbl (cAss). **Sinop:** 1 ex., S Ayancik, 6.-12.VII.1973, leg. Schubert (NHMW); 8 exs., Cangal, 7.-15.VI.1960, leg. Schubert (NHMW); 5 exs., Cangal/Ayancik, V.1962, leg. Schubert (NHMW, cAss). **Amasya:** 1 ex., Borabay gölü, 4.VI.1969, leg. Cottarelli (MHNG); 1 ex., Borabay near Amasya, 26.-31.V.1961, leg. Schubert (NHMW). **Ordu:** 3 exs., Ünye, VIII.1971, leg. Schubert (NHMW, cAss). **Ankara:** 1 ex., Sabanca, V.62, leg. Schubert (NHMW); 1 ex., Ankara, 4.IV.1911, leg. Náday (HNHM). **Muğla:** 3 exs., N Marmaris, 36°58'49"N, 28°17'29"E, 65 m, floodplain forest, *Platanus* litter, 5.VII.2002, leg. Assing (cAss); 1 ex., Toparlar, 36°59'N, 28°39'E, riparian forest, 29.IV.2001, leg. Meybohm (cAss); 4 exs., same locality, 2.V.1975, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., Fethiye, Kadyanda, 36°43'N, 29°14'E, 850 m, 28.IV.2001, leg. Meybohm (cAss); 7 exs., SE Köyceğiz, 36°56'50"N, 28°43'56"E, 10 m, flood-plain wood, 28.III.2002, leg. Assing, Wunderle (cAss, cWun). **Antalya:** 1 ex., Antalya, road to Saklikent, 1000 m, rotting grass near stream, 11.V.2000, leg. Meybohm (cAss); 1 ex., same data, but oak forest (cAss); 1 ex., NW Alanya, Günzelbağ, 21.-26.IV.1984, leg. Brachat (cSch); 5 exs., Alanya, Sapadere, leg. Franz (NHMW); 9 exs., Manavgat, 0-50 m, 2.-5.I.1991, leg. Assing, Wunderle (cAss, cWun); 1 ex., Manavgat, Gündogmus, 900 m, 1.-7.I.1991, leg. Wunderle (cWun); 2 exs., 30 km W Alanya, Incekum, 36°38'N, 31°47'E, 20 m, 21.V.2000, leg. Meybohm (cAss); 2 exs. [collected together with *M. subfuscus*], E Kumluca, 36°21'50"N, 30°22'27"E, 385 m, litter of *Laurus* and *Platanus*, 3.IV.2002, leg. Wunderle (cWun); 14 exs., W Kemer, road to Ovacik, 36°36'18"N, 30°28'38"E, 325 m, litter of *Quercus* and other deciduous trees, 2.IV.2002, leg. Assing, Wunderle (cAss, cWun). **Isparta:** 1 ex., Eğredir-Çandır, 900 m, 6.V.1975, leg. Besuchet & Löbl (cAss). **Mersin:** 3 exs., Anamur, Kösekbasi, 36°08'N, 32°46'E, 150 m, 18.V.2000, leg. Meybohm (cAss); 30 exs., Tarsus-Gülek, 550 m, 30.IV.1978, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., 30 km NW Erdemli, S Yagda, 36°44'N, 34°03'E, 1310 m, *Abies* forest, 29.XII.2000, leg. Wunderle (cWun); 2 exs., Çamlıyayla, 1800 m, V.1963, leg. Schubert (NHMW, cAss); 1 ex., Çamlıyayla, 12.-18.V.1966, leg. Schubert (NHMW). **Adana:** 3 exs., Tekir, 1300 m, 30.IV.1978, leg. Besuchet & Löbl (MHNG); 5 exs., Feke, 21.-24.VII.2000, leg. Smatana (cSch, cAss); 2 exs., Osmaniye, 1200 m, VI.1967, leg. Schubert (NHMW, cAss). **Antakya:** 5 exs., 7 km E Yeşilkent, 350-

400 m, 4.V.1978, leg. Besuchet & Löbl (MHNG, cAss). **Bitlis:** 1 ex., Tatvan, 1900 m, leg. Schubert (NHMW); 3 exs., Hizan, 10.VI.1987, leg. Schönmann & Schillhammer (NHMW). **Bingöl:** 1 ex., Bingöl, 1700 m, V.1977, leg. Schubert (NHMW); 1 ex., E Bingöl, 1300 m, V.-VI.1976, leg. Schubert (cAss).

Russia: 1 ex., Krasnodar territory, near Kropotkin, flood-plain forest, litter, 27.VII.1995, leg. Solodovnikov (cSol); 1 ex., 50 km NW of Krasnodar, S Oktyabrsky, "Krasny Les" forest, under loose bark, 5.V.1995, leg. Solodovnikov (cSol); 13 exs., Kuban river near Krasnodar, flood-plain forest, litter, 28.V. & 11.VI.1993, 14.IV.1995, leg. Solodovnikov (cSol).

Lebanon: 1 ex., Lakloun, 1500-1800 m, V.1964, leg. Fagel (ISNB).

Ukraine: 1 ex., Kiev, Kanev, 28.IX.1983, leg. Zerche (DEIC).

Locality ambiguous: 2 exs., Topla, leg. Paganetti (HNHM); 3 exs., Domanč (HNHM); 1 ex., "Dalmatia" (ZMHB); 3 exs., "Süddalmat." (DEIC).

Diagnosis: 4.3 – 5.3 mm. Head usually blackish, rarely light-coloured; coloration of pronotum, elytra, and abdomen variable, ranging from almost uniformly reddish brown to blackish brown, mostly with at least part of the elytra and the abdomen lighter; appendages light brown.

Head with very dense umbilicate, relatively shallow, mostly well-defined, sometimes partly confluent puncturation; interstices reduced to narrow ridges and usually microsculptured; surface almost completely mat. Puncturation similar to that of head, but somewhat sparser and often less clear-cut; interstices without or with very shallow microsculpture; usually at least posterior half of midline impunctate and more or less shining. Puncturation of elytra very dense and finer than that of head and pronotum. Abdomen mat, with very fine and dense puncturation, and with distinct microsculpture.

♂: posterior margin of sternite VII deeply excavate, in the middle usually with shallow concavity, on either side of this concavity with long dark setae, and laterally with combs of approximately 7-12 short palisade setae (Fig. 70); sternite VIII posteriorly broadly and deeply concave (Fig. 71; aedeagus as in Figs. 66 – 69).

Comparative notes: From the preceding species, *M. fuscus* is separated especially by the male sexual characters, but also by its large size in combination with the dense umbilicate puncturation and the mat appearance of the head.

Intraspecific variation: Pronounced intraspecific variation was observed not only for various external characters (coloration, size, puncturation, microsculpture), but also for the shape of the aedeagus (see Figs. 66 – 69) and of the male sternite VII. On several occasions, teratologically malformed aedeagi were observed, which are reduced in size to various degrees and of somewhat different shape. Remarkably, specimens with teratological aedeagi may also have differently shaped sternites VII, with a much broader and shallower posterior excavation and with distinctly shorter combs of palisade se-

tae. Specimens from the north and northwest of the range of distribution tend to be of lighter coloration and to have a somewhat sparser puncturation than material from the south and southeast.

Comments: FAGEL (1966) examined the types of *M. auraniticus*, designated a lectotype, and revalidated the species, which had been synonymized with *M. fuscus* by FAUVEL (1873). Fagel apparently misinterpreted *M. fuscus*; the lectotype of *M. auraniticus* is clearly conspecific with that species and the synonymy proposed by FAUVEL (1873) is correct.

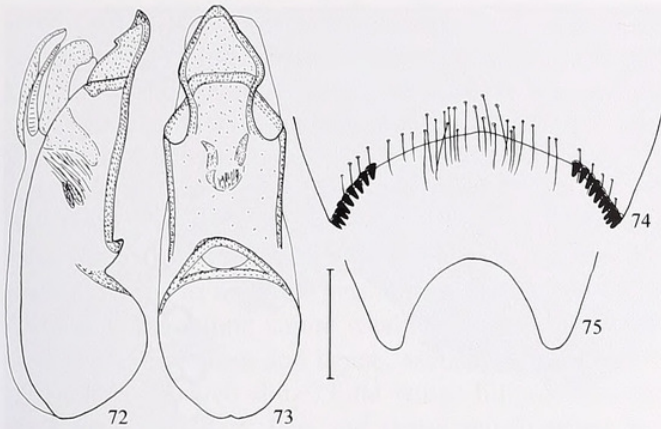
The description of *M. abchasicus* is based on two female syntypes, both of which were examined. Based on external characters, they belong to *M. fuscus*, which is known to occur in the Western Caucasus, so that *M. abchasicus* is here placed in the synonymy of *M. fuscus*.

COIFFAIT (1973) described *M. gajaci* from Mersin, based on one male and several females. The holotype is a teneral male with a malformed aedeagus, which explains the peculiar shape of the aedeagus illustrated by COIFFAIT (1973). It is doubtlessly conspecific with *M. fuscus* and *M. gajaci* is consequently a junior synonym.

The description of *M. bulgaricus* is based on a single male, in every respect a typical representative of *M. fuscus*. The distinguishing characters indicated by COIFFAIT (1970b) are misleading and are within the range of intraspecific variation of *M. fuscus*, with which *M. bulgaricus* is here synonymized.

In the original description of *M. paradobrogicus*, DECU & GEORGESCU (1994) compare the species exclusively with the cavernicolous *M. dobrogicus*. All the external and sexual characters described and illustrated, however, are within the range of intraspecific variation of *M. fuscus*. The aedeagus is the same as illustrated in Figs. 66 and 69, suggesting that *M. paradobrogicus* is a junior synonym of *M. fuscus*.

Distribution and bionomics: *M. fuscus* is widespread from Western Europe (France, England) to southern Italy, the southern Balkans, Turkey, Ukraine, the Caucasus, and the Middle East (Map 11). In Greece, the species is much rarer than *M. brunneus*; in Turkey, it is more widespread and often more common than other species of the *fuscus* group. *M. fuscus* is usually found in leaf litter and rotting debris in various forest biotopes (HORION 1965; and material examined). Most of the specimens from the southern Balkans and Turkey were collected at relatively low altitudes, but some of the records from central southern Anatolia, eastern Anatolia, and Lebanon are from elevations of 1500 – 1900 m; on at least two occasions (Antalya) the species was collected together with *M. subfuscus*. In a floodplain forest near Marmaris, the species was found together with *M. umbilicatus*, *M. caricus*, and *M. semiobscurus*.



Figs. 72 – 75: *Medon beroni* Coiffait: Aedeagus in lateral and in ventral view (72, 73); posterior margin of male sternite VII (74); outline of posterior margin of male sternite VIII (75). Scale: 0.2 mm.

3.18. *Medon beroni* Coiffait, 1969 (Figs. 72 – 75, Map 12)

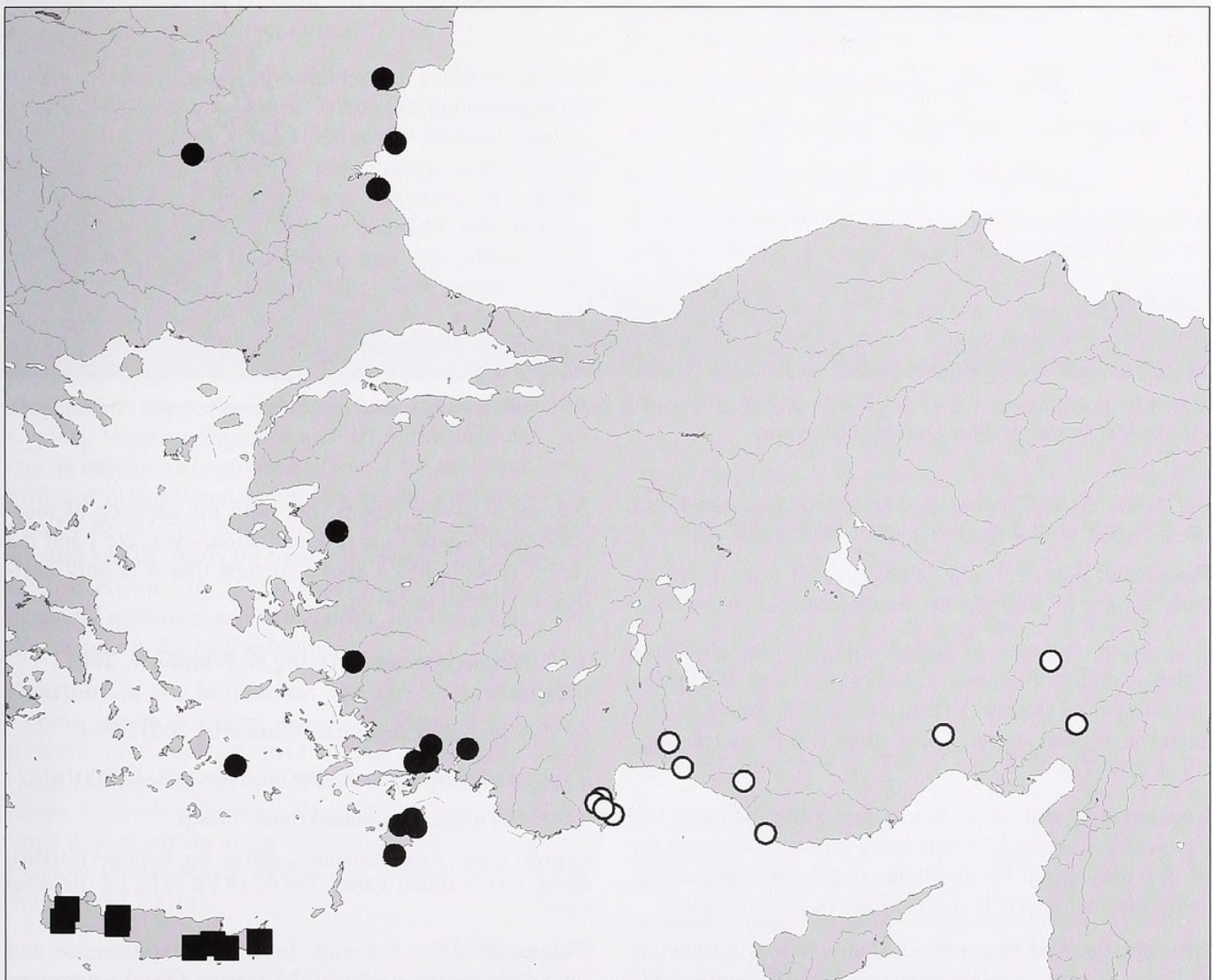
Medon beroni Coiffait, 1969: 713 f.

Medon creticus Scheerpeltz i. l.

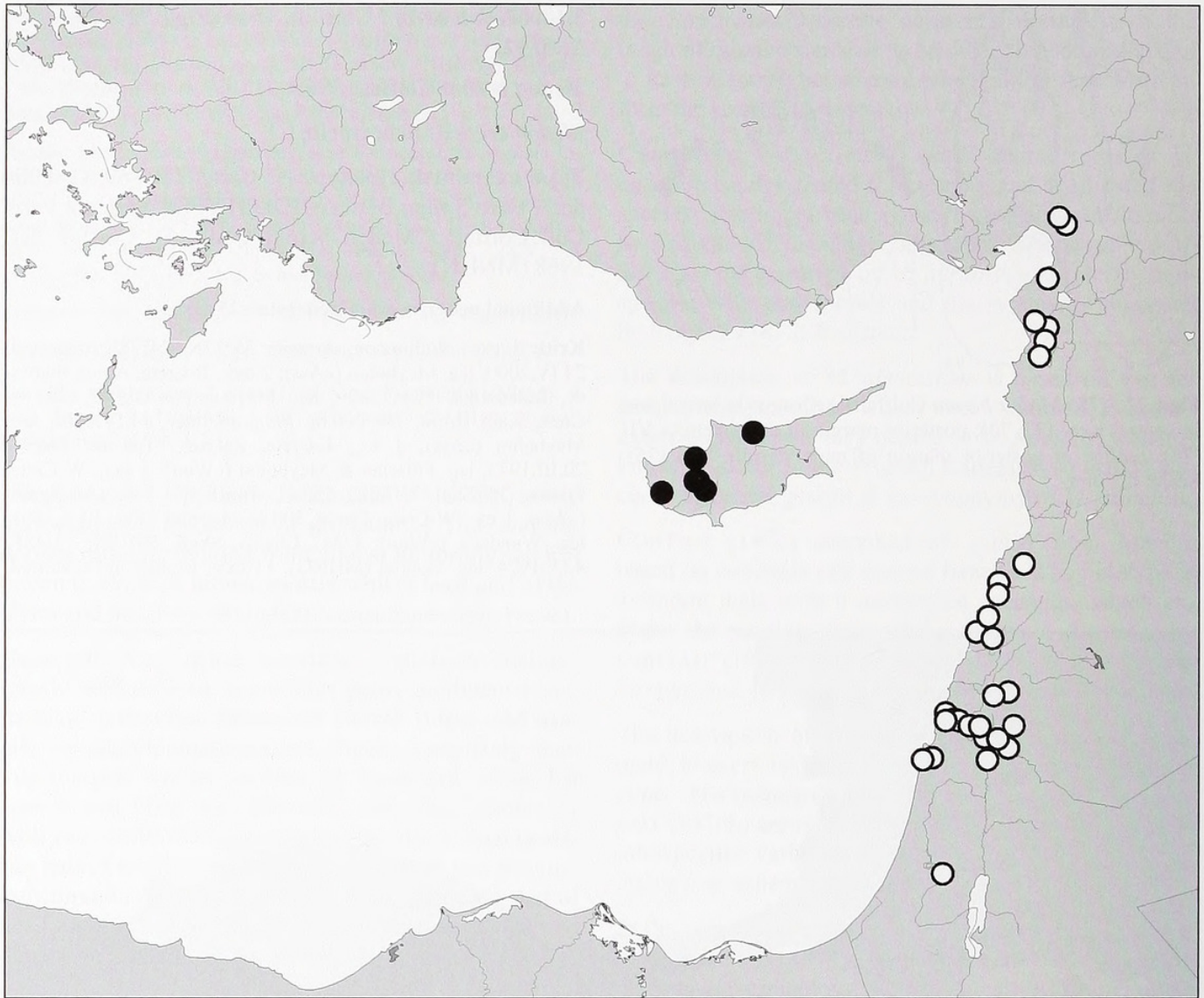
Type examined: Holotype ♂: Crète, 15-1-69, G. Ullidoni, Gero Spilja, Beron / HOLOTYPE / Museum Paris Coll Coiffait / *Medon beroni* Coiff., H. Coiffait det. 1968 (MNHN).

Additional material examined (total: 25 exs.):

Kríti: 3 exs., Rethimnon, Armeni, 35°17N, 24°28E, oakwood, 24.IV.2000, leg. Meybohm (cAss); 2 exs., E-Crete, Agios Nikolaos, Kalamafka, 17.IV.2000, leg. Meybohm (cAss); 2 exs., E-Crete, Kato Horio, 100-200 m, *Platanus* litter, 14.IV.2000, leg. Meybohm (cAss); 1 ex., E-Crete, Zakros, "Tal der Toten", 20.III.1973, leg. Fülischer & Meybohm (cWun); 2 exs., W-Crete, Prases, 35°22N, 23°50E, 550 m, 14.III.2001, leg. Meybohm (cAss); 1 ex., W-Crete, Deres, 500 m, chestnut litter, 13.X.1991, leg. Wunderle (cWun); 1 ex., Chania, Skafi, 35°18N, 23°48E, 4.IX.1974, leg. Senglet (MHNG); 11 exs., locality not specified,



Map 12: Distributions of *Medon beroni* Coiffait (squares), *M. subfuscus* Fagel (open circles), and *M. umbilicatus* Coiffait (filled circles) in the Eastern Mediterranean, based on revised records.



Map 13: Distributions of *Medon cyprensis* Assing & Wunderle (filled circles) and *M. lindbergi* Scheerpeltz (open circles) in the Eastern Mediterranean, based on revised records.

leg. Paganetti (NHMW, cAss); 1 ex., Rethymnon, 13.VI.1984, leg. Franz (NHMW); 1 ex., Viano, leg. v. Oertzen (ZMHB).

Diagnosis: 4.8 – 6.0 mm. Distinguished from the externally similar *M. fuscus* by the male sexual characters:

♂: posterior margin of sternite VII less deeply, more broadly, and more concavely excavate (Fig. 74); posterior margin of sternite VIII as in Fig. 75; aedeagus, especially ventral process, of distinctive morphology (Figs. 72 – 73).

Comparative notes: *M. beroni* is readily distinguished from other Eastern Mediterranean representatives of the *M. fuscus* group by the male sexual characters, especially the characteristic morphology of the aedeagus.

Distribution and bionomics: *Medon beroni* is endemic to Crete, where it is less common than *M. cerrutii* and where it is the only representative of the *M. fuscus* group (Map 12). According to COIFFAIT (1969), the

species is cavernicolous, but both the absence of morphological adaptations (pigmentation, eyes, etc.) and the recent records listed above suggest that it is only accidentally found in caves.

3.19. *Medon cyprensis* Assing & Wunderle, 2001 (Map 13)

Medon cyprensis Assing & Wunderle, 2001a:39 f.

Types examined: see ASSING & WUNDERLE (2001a).

Additional material examined (total: 7 exs.):

Cyprus: 6 exs., Agios Dhimitrios, 600 m, leg. Besuchet (MHNG, cSch); 1 ex., Livadhi Valley, 700 m, 19.VII.1977, leg. Besuchet (cSch).

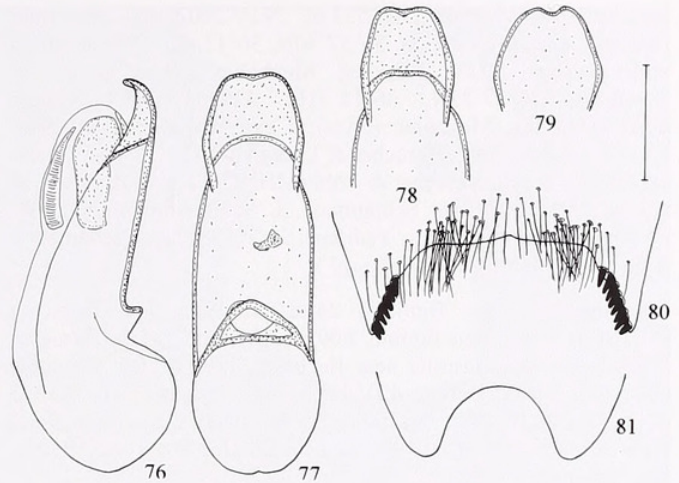
Diagnosis: 4.5 – 6.4 mm. In external appearance and sexual characters similar to *M. beroni*. Usual coloration: head dark brown to blackish; pronotum, elytra, and abdomen castaneous; appendages ferruginous.

Punctuation of head very dense, but not very coarse, interstices reduced to narrow ridges; surface mat. Pronotum often with shallow longitudinal impressions on either side of midline; punctuation fine, distinctly finer than that of head, not rugose, and dense, but less dense than that of head; interstices approximately as wide as punctures and with indistinct microsculpture; surface with some shine. Elytra relatively long, at suture (from scutellar apex to hind margin) approximately 1.2 times as long as pronotum; suture weakly elevated; punctuation finely granulose and dense; surface in most specimens with subdued shine; hind wings fully developed. Abdomen with very fine and dense punctuation and with shallow microsculpture; surface mat; tergum VII with palisade fringe.

♂: sternum VII posteriorly with broad and deep excavation, laterally with comb-like rows of 7-9 dark stout and dark palisade setae, middle of hind margin finely incised, without setae; sternite VIII posteriorly broadly and deeply concave; aedeagus with long ventral process of distinctive shape. For figures of the male sexual characters see ASSING & WUNDERLE (2001a).

Comparative notes: In the similar and probably closely related *Medon beroni* from Crete, the punctuation of the head is distinctly coarser and partly rugosely confluent, the punctuation of the pronotum is composed of partly confluent and ill-defined punctures of various sizes, the pronotal midline is impunctate and shining, the punctuation of the elytra and the abdomen is coarser, the palisade setae at the hind margin of the male sternum VII are somewhat shorter and more numerous (9-11), and the ventral process of the aedeagus is shorter, apically acute in ventral view, and less slender in lateral view. From the two congeners known from Cyprus, *Medon pythonissa* and *M. maronitus*, the species is readily distinguished not only by the completely different primary and secondary sexual characters, but also by its external morphology. *M. maronitus* is much smaller and of distinctly lighter coloration (yellowish to reddish brown). In *M. pythonissa*, the punctuation of head and pronotum is much coarser and less dense, with the interstices distinctly shining.

Distribution and bionomics: The species is endemic to Cyprus, where it is rarer than *M. pythonissa* and where it is the only representative of the *M. fuscus* group (Map 13). It occurs in both the Troodos and the Kyrenia range. Numerous specimens were sifted from moist leaf litter near a stream at an altitude of 750 m and in the Paphos forest at an altitude of 400 m (ASSING & WUNDERLE 2001a).



Figs. 76 – 81: *Medon lindbergi* Scheerpeltz: Aedeagus of male from Israel in lateral and in ventral view (76, 77); apical part of aedeagus of male from Antakya in ventral view (78); apical part of aedeagus in antero-dorsal view (79); posterior margin of male sternite VII (80); outline of posterior margin of male sternite VIII (81). Scale: 0.2 mm.

3.20. *Medon lindbergi* Scheerpeltz, 1958 (Figs. 76 – 81, Map 13)

Medon lindbergi Scheerpeltz, 1958: 9 ff.

Medon scheerpeltzianus Fagel, 1966: 26 ff.; **syn. n.**

Medon loebli Bordoni, 1980b: 199 f.; **syn. n.**

Types examined: *M. lindbergi*: Lectotype ♂, here designated: ♂ / Voyage en Turquie, Dr. K. LINDBERG, 56, Loc.Nr.: 306 / Harbiyé. “La grande grotte”, 8.10. / ex coll. Scheerpeltz / TYPUS *Medon Lindbergi* O. Scheerpeltz / Lectotypus ♂ *Medon lindbergi* Scheerpeltz desig. V. Assing 2001 (NHMW). Paralectotypus ♀: same labels as lectotype (NHMW).

M. scheerpeltzianus: Holotype ♂ [aedeagus missing]: Liban: Kartaba, 1200-1400 m /25, V.1964 – G. Fagel / G. Fagel det. *scheerpeltzianus* n. sp. / TYPE / R. I. Sc. N. B. I. G. 24885 / *Medon lindbergi* Scheerpeltz det. V. Assing 2001 (ISNB). Paratypes: 7 exs., same data as holotype (ISNB); 2♂♂, 1♀: ♂ / Kartaba, 1200-1400 m, 132, V.1964 – G. Fagel / Dr. Fagel don. I.1965 / ex coll. Scheerpeltz / *Medon* (*Medon* s. str.) nov. spec. (NHMW); 1♀: same data, but “124” (NHMW); 1♀: same data, but “128” (NHMW).

M. loebli: Holotype ♂: ISRAEL: Galilee, Jordan, 3 km N. Lac Kenneret, 6.VI.73, Löbl / HOLOTYPUS / *Medon loebli* n. sp. det. Bordoni 1980 / *Medon lindbergi* Scheerpeltz det. V. Assing 2001 (MHNG). Paratype ♀: same data as holotype (MHNG).

Additional material examined (total: 342 exs.):

Turkey: Antakya: 1 ex., WSW Yeşilkent, 36°55N, 36°19E, 990 m, mixed deciduous forest, 28.XII.2000, leg. Assing (cAss); 1 ex., Kizildag, Yaylica, 36°09'34N, 36°01'19E, 191 m, 28.IV.12002, leg. Meybohm (cAss); 1 ex., Iskenderun, Soguko-

luk, 36°30'03N, 36°08'35E, 533 m, 29.IV.2002, leg. Meybohm (cAss); 6 exs., E Yeşilkent, 36°57'30N, 36°15'42E, 389 m, sifted under bushes, 30.IV.2002, leg. Meybohm (cAss); 1 ex., E Yeşilkent, 36°57'27N, 36°15'11E, 420 m, under stones, 30.IV.2002, leg. Meybohm (cAss); 2 exs., Kışlak-Şenköy, 800–850 m, 2.V.1978, leg. Besuchet & Löbl (MHNG); 26 exs., Harbiye, 2.V.1978, leg. Besuchet & Löbl (MHNG); 4 exs., Payas, river valley, 25.V.1987, leg. Schönmann & Schillhammer (NHMW, cAss); 2 exs., Yayladağı – Yeditepe, 23.V.1987, leg. Schönmann & Schillhammer (NHMW).

Lebanon: 19 exs., Damour, 24.&28.III.1975, leg. Besuchet (MHNG); 1 ex., Beit Eddine, 900 m, 29.III.1975, leg. Besuchet (MHNG); 1 ex., Hasroun near Becharré, 1500 m, leg. Besuchet (MHNG); 2 exs., Jobail, 4.IV.1975, leg. Besuchet (MHNG); 3 exs., Jeita, 26.III.1975, leg. Besuchet (MHNG); 3 exs., Ain Dara, Nahr Jesayer, 900 m, V.1966, leg. Fagel (ISNB); 1 ex., Beirut, leg. Plason (NHMW).

Israel: 24 exs., Galilee, Eilon, N. Betzet, 20.IV.1982, leg. Besuchet & Löbl (MHNG); 9 exs., Galilee, Tel Dan, 24.IV.1982, leg. Besuchet & Löbl (MHNG); 6 exs., Tel Dan, 29.V.1973, leg. Löbl (MHNG); 29 exs., Galilee, Montfort, 19.IV.1982, leg. Besuchet & Löbl (MHNG); 18 exs., Hagalil, Montfort, Keziv River, VII.1981, leg. Kiener (MHNG); 3 exs., Galilee, Safad, 500 m, 26.IV.1982, leg. Besuchet & Löbl (MHNG); 54 exs., Safad, 500 m, 14.VI.1973, leg. Löbl (MHNG); 1 ex., Galilee, Mt. Meron, 1100 m, 21.IV.1982, leg. Besuchet & Löbl (MHNG); 35 exs., Mt. Meron, 900 m, 27.V.1973, leg. Löbl (MHNG); 23 exs., Galilee, 3 km E Ginosar, 24.V.1973, leg. Löbl (MHNG); 1 ex., same data, but 900 m (MHNG); 2 exs., W-Galilee, Enzir, 21.VIII.1985, leg. Jäch (NHMW, cAss); 1 ex., Galilee, En Aravot, 10.VIII.1985, leg. Jäch (NHMW); 2 exs., Galilee, N Bezet, 20.VIII.1985, leg. Jäch (NHMW); 6 exs., Golan, Banias, 24.IV.1982, leg. Besuchet & Löbl (MHNG); 15 exs., 2 km E Banias, 2.VI.1973, leg. Löbl (MHNG); 1 ex., Golan, Enzvi, 16.VII.1985, leg. Jäch (NHMW); 1 ex., Golan, Gilbon, 300 m, 15.IV.1982, leg. Besuchet & Löbl (MHNG); 2 exs., Golan, Mahjar, 200 m, 27.IV.1982, leg. Besuchet & Löbl (MHNG); 27 exs., coast, Mt. Carmel, 100 m, 17.IV.1982, leg. Besuchet & Löbl (MHNG); 1 ex., coast, Beit Tzevi, 18.IV.1982, leg. Besuchet & Löbl (MHNG); 2 exs., Judea, Mevasseret, 30.IV.1982, leg. Besuchet & Löbl (MHNG); 5 exs., Hagalil, Kabri near Nahariyya, VI.1981, leg. Kiener (MHNG).

Diagnosis: Externally similar to and as variable as *M. fuscus*, but distinguished as follow:

♂: posterior margin of sternite VII more deeply excavate, more distinctly trapezoid, on either side of middle with more numerous dark setae, and laterally with 6–10 palisade setae (Fig. 80); sternite VIII not distinctive (Fig. 81). Ventral process of aedeagus apically bent dorsad (lateral view), apex in ventral view usually weakly concave, and in antero-dorsal view with small concavity (Figs. 76 – 79).

Comparative notes: *M. lindbergi* is separated from other species of the *fuscus* group especially by the morphology of the aedeagus.

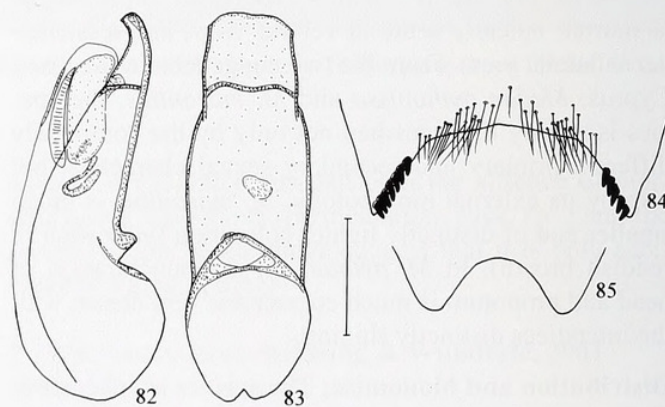
Comments: The original description of *M. lindbergi* is based on two “Typen” and four “Paratypen” (SCHEERPeltz 1957). Since no holotype is specified, all the types must be considered syntypes. Four syntypes were not found in the Scheerpeltz collection. The possibility that they belong to a different species cannot be ruled

out, so that a lectotype designation was necessary in order to secure the present interpretation of the species.

According to Fagel (1966), who bases his diagnosis on a written statement by Scheerpeltz, *M. scheerpeltzianus* is distinguished from *M. lindbergi* by several external characters (shape of head and pronotum, eye size, length of elytra) and by the male primary and secondary sexual characters. The external characters are subject to considerable intraspecific variation, and I have found no evidence that the material seen from Lebanon and Israel is specifically distinct from the types of *M. lindbergi*. Moreover, an examination of types of *M. scheerpeltzianus* and additional material revealed that the male primary and secondary sexual characters are identical (see also the illustrations in COIFFAIT (1976a, 1984)).

The aedeagus of the holotype of *M. loebli* was dissected prior to the present study and is somewhat deformed. However, as can be inferred from the illustrations in the original description, from the external morphology and the male secondary sexual characters of the holotype, as well as from an examination of abundant additional material collected in and near the type locality, the types of *M. loebli* are conspecific with those of *M. lindbergi*. Consequently, *M. scheerpeltzianus* Fagel and *M. loebli* Bordoni are here placed in the synonymy of the senior name *M. lindbergi* Scheerpeltz.

Distribution and bionomics: The distribution of *M. lindbergi* ranges from central southern Anatolia to Israel (Map 13). The material examined was collected at rather low altitudes (100 – 1100 m).

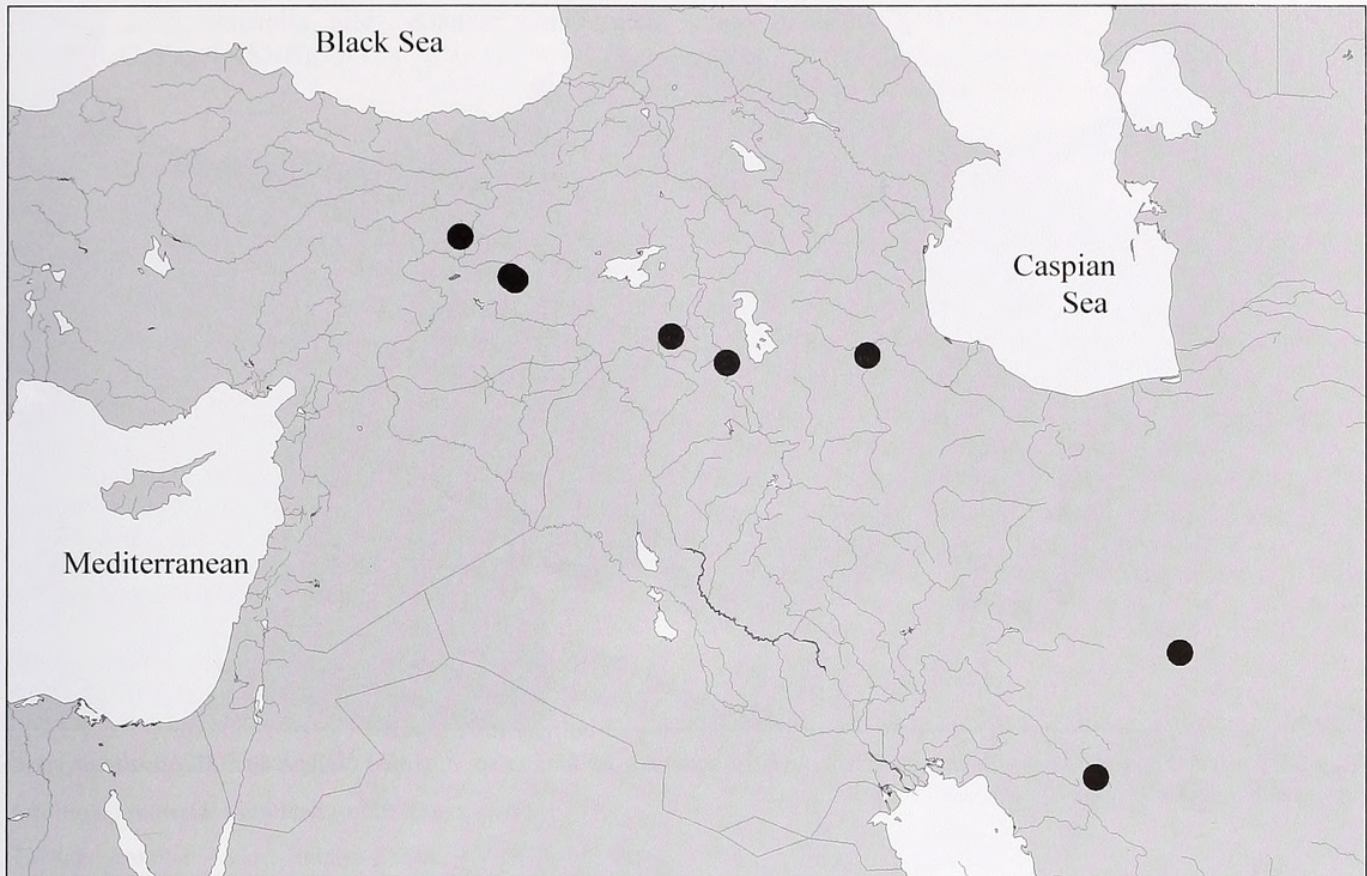


Figs. 82 – 85: *Medon fuscoides* Coiffait: Aedeagus in lateral and in ventral view (82, 83); posterior margin of male sternite VII (84); outline of posterior margin of male sternite VIII (85). Scale: 0.2 mm.

3.21. *Medon fuscoides* Coiffait, 1969 (Figs. 82 – 85, Map 14)

Medon fuscoides Coiffait, 1969: 712 f.

Medon amidanum Bordoni, 1978: 56 ff.; **syn. n.**



Map 14: Distribution of *Medon fusculoides* Coiffait, based on revised records.

Type examined: *Medon amidanus*: Holotype ♂: TURCHIA, vil. Diyarbakir, grotta Korkha (Lice), 23.IV.68, P. Brignoli leg. / Coll. Ist. Zoologia Università Roma / HOLOTYPUS / *Medon amidanum* n. sp. Det. A. Bordini 1977 (USRS). Paratype ♂: TURCHIA, vil. Diyarbakir, grotta Korkha (Lice), 23.IV.68, P. Brignoli leg. / Coll. Ist. Zoologia Università Roma / PARATYPUS / *amidanum* n. sp. (cBor).

Additional material examined (total: 21 exs.):

Turkey: **Tunceli:** 1 ex., N Tunceli, river bank, 26.VII.1965, leg. Korge & Heinz (cKor). **Diyarbakir:** 9 exs., ca. 61 km S Bingöl, cave near partly subterranean river, 9.VII.1974, leg. Heinz (cKor, cAss). **Hakkâri:** 1 ex., Karakale near Hakkâri, bank of Zap river, 1400 m, 14.VIII.1969, leg. Heinz (cKor).

Iran: 1 ex., Ardekan, N Shiraz, 2000 m, 30.VII.1969, leg. Heinz (cAss); 1 ex., N Shiraz, Yasoodj, 1800 m, 1.VIII.1969, leg. Heinz (cKor); 2 exs., SW Urmia, Khaneh, 1550 m, 11.VIII.1969, leg. Heinz (cKor); 6 exs. [mostly teneral], 25 km S Mianeh, 19.VII.1969, leg. Heinz (cKor, cAss).

Diagnosis: External morphology as in *M. fuscus*.

♂: posterior margin of sternite VII less distinctly trapezoid than in *M. fuscus* and *M. lindbergi* (Fig. 84); sternite VIII not distinctive (Fig. 85). Aedeagus similar to that of *M. lindbergi*, but apex of ventral process in ventral view of more subquadrate shape and in lateral view less acute. (Figs. 82 – 83).

Comparative notes: *M. fusculoides* is distinguished from other species of the *fuscus* group only by the morphology of the aedeagus, especially the shape of the ventral process.

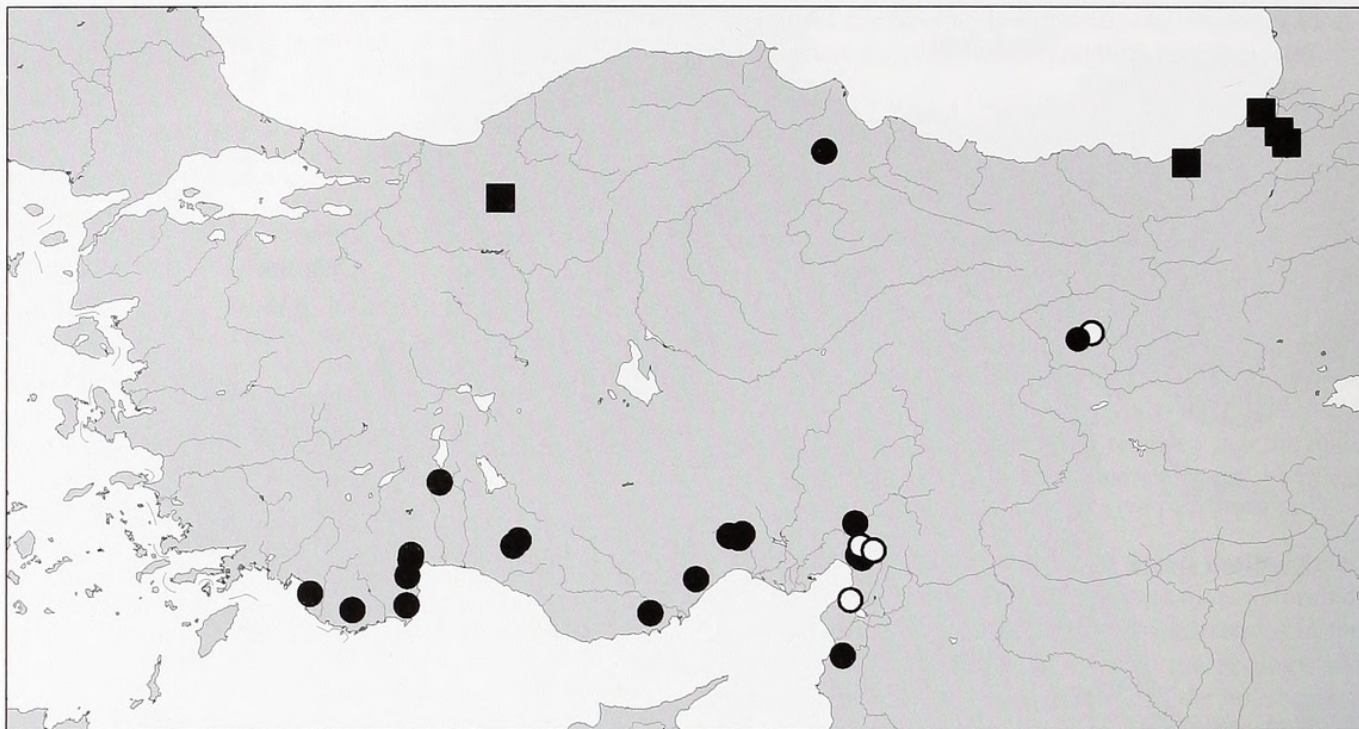
Comments: The description of *M. fusculoides*, especially the figures of the aedeagus in COIFFAIT (1969), and an examination of the types of *M. amidanus* and of non-type material from northern Iran and from Anatolia leave no doubt that *M. amidanus* is conspecific with – and a junior synonym of – *M. fusculoides*.

Distribution and bionomics: The species has become known from the type locality in Armenia and from several localities in eastern Anatolia and Iran (Map 14). The types of *M. amidanus* and some additional specimens were collected in caves; two specimens were found on or near river banks. Several beetles taken in July were teneral.

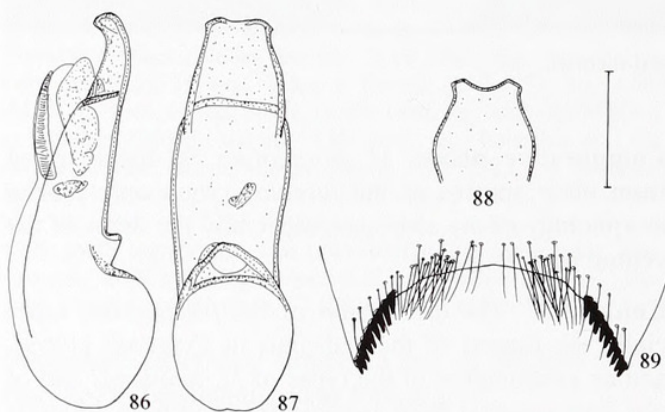
3.22. *Medon abantensis* Bordini, 1980 (Figs. 86 – 89, Map 15)

Medon abantense Bordini, 1980c: 76 f.

Type examined: Holotype ♂: Abant (Bolu), 1450, 24-VI-69 / Turchia, leg. Osella / HOLOTYPUS / *Medon abantense* n. sp. Det. A. Bordini 1975 (MSNV).



Map 15: Distributions of *Medon abantensis* Bordon (large squares), *M. lamugo* sp. n. (filled circles), and *M. lamellatus* sp. n. (open circles) in Turkey, based on revised records.



Figs. 86 – 89: *Medon abantensis* Bordon: Aedeagus in lateral and in ventral view (86, 87); apical part of aedeagus in antero-dorsal view (88); posterior margin of male sternite VII (89). Scale: 0.2 mm.

Additional material examined (17 exs.):

Turkey: **Artvin:** 4 exs., 5 km E Hopa, 100 m, 10.VI.1986, leg. Besuchet, Löbl, Burckhardt (MHNG, cAss); 2 exs., S Artvin, 800 m, 7.VI.1986, leg. Besuchet, Löbl, Burckhardt (MHNG); 1 ex., Artvin, 650 m, 13.V.1967, leg. Besuchet (MHNG). **Rize:** 10 exs., Rize env., leg. Franz (NHMW, cAss).

Diagnosis: Highly similar to *M. fusculoides*, but elytra narrower and shorter in relation to pronotum, at suture 1.06 – 1.09 times as long as pronotum (in *M. fusculoides* approximately 1.2 times as long as pronotum).

♂: posterior margin of sternite VII of similar shape and chaetotaxy as in *M. fusculoides* (Fig. 88); sternite VIII not distinctive. Aedeagus similar to that of *M. fuscu-*

loides, but apical part of ventral process in ventral view longer, narrower, more trapezoid, and apically more distinctly concave (Figs. 86 – 88).

Comparative notes: For separation from *M. fusculoides* see description above. In *M. lindbergi*, the male sternite VII is of more trapezoid shape, and the apex of the ventral process of the aedeagus is in ventral view shorter and in lateral view more acute. In *M. subfuscus*, the apex of the ventral process of the aedeagus is shorter and more distinctly concave in ventral view. In most other Turkish species of the *M. fuscus* group the apex of the ventral process is not or only weakly bent dorsad in lateral view.

Distribution and bionomics: *M. abantensis* is apparently present in the whole of northern Anatolia, since it was collected both in the northwest (Bolu) and the northeast (Artvin, Rize) (Map 15). The species was collected at a wide range of altitudes (100 – 1600 m).

3.23. *Medon subfuscus* Fagel, 1969 (Figs. 90 – 93, Map 12)

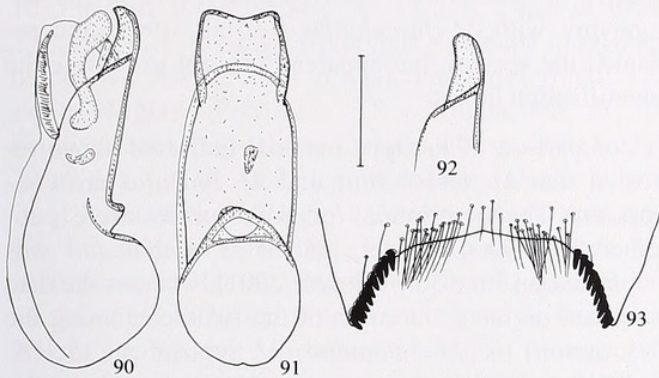
Medon subfuscus Fagel, 1969: 112 ff.

Medon karatense i. l.: Bordon, 1975: 441.

Medon besucheti Bordon, 1980a: 118; **syn. n.**

Types examined: *M. subfuscus*: Holotype ♂: Anatolia mér., Bey Dag, V.1968 G. Fagel / G. Fagel det. *subfuscus* n. sp. / TYPE / R. I. Sc. N. B. I. G. 24885 (ISNB). Paratypes: 3♂♂, 1♀: same data as holotype

(ISNB); 2♂♂: Anatolia mér., Alanya: Dim Irmak, VI.1968, G. Fagel (ISNB).



Figs. 90 – 93: *Medon subfuscus* Fagel: Aedeagus in lateral and in ventral view (90, 91); apical part of aedeagus of other male in lateral view (92); posterior margin of male sternite VII (93). Scale: 0.2 mm.

M. besucheti: Holotype ♂: Turquie Adana, Karatepe, 3-5-67, Cl. Besuchet / HOLOTYPE / *Medon besucheti* n. sp. Det. A. Bordini 1975 / *Medon subfuscus* Fagel det. V. Assing 2001 (MHNG).

Additional material examined (total: 33 exs.):

Turkey: Antalya: 4 exs., Antalya-Kemer, 4.V.1975, leg. Besuchet & Löbl (MHNG, cAss); 5 exs., 18 km SE Gazipaşa, 27.IV.1978, leg. Besuchet & Löbl (MHNG, cAss); 1 ex., 5 km S Altinyaka, 36°29'N, 30°20'E, 550 m, bank of stream, sifted leaf litter near tree trunk, 30.III.2001, leg. Rose (cRos); 6 exs., N Sagirin, Köprülü canyon, 37°04'37"N, 31°13'56"E, 30 m, sifted leaf litter, 22.III.2002, leg. Rose (cRos, cAss); 1 ex. [collected together with *M. fuscus*], E Kumluca, 36°21'50"N, 30°22'27"E, 385 m, litter of *Laurus* and *Platanus*, 3.IV.2002, leg. Wunderle (cWun); 3 exs., 60 km SSW Antalya, Çirali, 36°25'54"N, 30°25'59"E, 220 m, litter of deciduous trees and shrubs, 25.III.2002, leg. Assing (cAss). **Mersin:** 1 ex., Çamlıyayla, 11.-26.V.1960, leg. Schubert (NHMW); 1 ex., forest NW Çamlıyayla, 1000-1600 m, 3.VIII.1971, leg. Heinz (cKor). **Adana:** 11 exs. [partly teneral], Feke, 21.-24.VII.2000, leg. Smatana (cAss, cSch).

Diagnosis: External morphology as in *M. fuscus*.

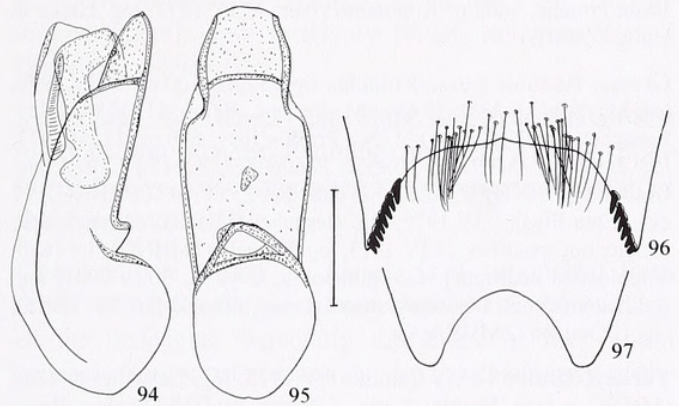
♂: posterior margin of sternite VII with broader and less distinctly trapezoid excavation, otherwise as in *M. fuscus* (Fig. 93); sternite VIII not distinctive. Apex of ventral process of aedeagus of somewhat variable shape (even in specimens of the same population), in ventral view broadly concave and in lateral view slightly to distinctly bent dorsad (Figs. 90 – 92).

Comparative notes: *M. subfuscus* is distinguished from other species of the *fuscus* group only by the morphology of the aedeagus, especially the shape of the ventral process.

Comments: An examination of the types revealed that *M. besucheti* Bordini is conspecific with and consequently a junior synonym of *M. subfuscus* Fagel. *M. karatepense* is evidently an in-litteris name BORDONI (1975: 441) originally intended to apply to a species he

later described as *M. besucheti*, which can be inferred from the observations that the locality indicated for both names is the same and that *M. karatepense* is not listed by BORDONI (1980a).

Distribution and bionomics: The known distribution is confined to southern Anatolia and ranges from Antalya in the west to Adana in the east (Map 12). The types of *M. subfuscus* were collected in leaf litter and flood debris (FAGEL 1969); one examined specimen was sifted from moist leaf litter near a tree trunk, others from leaf litter of Mediterranean trees and shrubs. The altitudes indicated on the labels range from 30 to 550 m. Several specimens taken in July were teneral. On at least two occasions the species was collected together with the more common and more widespread *M. fuscus*.



Figs. 94 – 97: *Medon umbilicatus* Coiffait: Aedeagus in lateral and in ventral view (94, 95); posterior margin of male sternite VII (96); outline of posterior margin of male sternite VIII (97). Scale: 0.2 mm.

3.24. *Medon umbilicatus* Coiffait, 1970 (Figs. 94 – 97, Map 12)

Medon umbilicatus Coiffait, 1970: 102 ff.

Medon mimulus Fagel, 1970: 157 f.; **syn. n.**

Medon lydicum Bordini, 1980a: 114 ff.; **syn. n.**

Medon rhodicum Franz, 1987: 76 ff.; **syn. n.**

Types examined: *M. umbilicatus*: Holotype ♂: Bulgarie, 27.VI.68, Maslen Nos Strandja, alt. 50 m, P. Beron / HOLOTYPE / Museum Paris Coll Coiffait / *Medon bulgaricus* Coiff., H. Coiffait det. 1970 (MNHN).

M. mimulus: Holotype ♂: Anatolia mér., Marmaris, V.1969 G. Fagel / G. Fagel det. *fuscoides* n. sp. [sic] / TYPE / Holotypus *Medon mimulus* Fagel rev. V. Assing 2001 / *Medon umbilicatus* Coiffait det. V. Assing 2001 (ISNB). Paratypes: 1♂, 3♀♀: same data as holotype (ISNB).

M. lydicus: Holotype ♂: Turquie Izmir, Bergama-Kozak, 18.VII.1969, Cl. Besuchet / HOLOTYPUS / *Medon lydicum* n. sp. Det. A. Bordini 1975 / *Medon mimulus* Fagel det. V. Assing 2001 (MHNG). Paratypes: 7 exs. [1♂ teneral, 1♂ with teratological aedeagus]: same data as holotype (MHNG); 4 exs.: same data, but "*Medon semiobscurus* (Fauvel) det. V. Assing 2001" (MHNG).

M. rhodicus: Holotype ♂: Insel Rhodos, Schmetterlingstal / *Medon rhodicum* det. H. Franz / Holotypus / *Medon umbilicatus* Coiffait det. V. Assing 2002 (NHMW). Paratypes: 16 exs., same data as holotype (NHMW): 1 ♂: Insel Rhodos, leg. H. Franz (NHMW).

Additional material examined (total: 140 exs.):

Bulgaria: 1 ex., Burgas, Vlas p. Emona, 13.VIII.1986, leg. Moravec (cAss); 1 ex., Black Sea Coast, Cinemoreč, 3.VIII.1998, leg. Muilwijk (cWun); 12 exs., Maglizh, VII.-VIII.1912, leg. Hilf (NHMW, cAss); 6 exs., Varna (NHMW, cAss); 5 exs., 5 km W Jasna Poljana, bank of Ropotamo river, 17.IX.1977, leg. Hieke & Uhlig (ZMHB).

Greece: Ródhos: 2 exs., Kolimbia Epta Piges, 100 m, 10.IV.1999, leg. Meybohm (cAss); 32 exs.: M. Kariona, 400 m, 11.IV.1977, leg. Besuchet (MHNG, cAss); 1 ex., Profitis Ilias, 650 m, 11.IV.1977, leg. Besuchet (MHNG); 30 exs., Petaloudes, 8.&15.IV.1977, leg. Besuchet (MHNG); 2 exs., same data, but 25.IV.1973 (MHNG); 12 exs., Epta Pigai, 9.IV.1977, leg. Besuchet (MHNG, cAss); 5 exs., locality not specified, 23.IV.1973, leg. Besuchet (MHNG); 1♂ [with teratological aedeagus], Georgioupollis, Urysses, 30.IV.2001, leg. Bellmann (cRos). **Dhodhekánisos:** 4 exs., Nikariá [36°51', 25°55'], leg. v. Oertzen (ZMHB, cAss).

Turkey: Izmir: 3 exs., Çamlık, 8.V.1975, leg. Besuchet & Löbl (MHNG, cAss). **Muğla:** 5 exs., Gökova, 30.IV.1975, leg. Besuchet & Löbl (MHNG, cAss); 14 exs. [partly teneral], N Marmaris, 36°58'49N, 28°17'29E, 65 m, floodplain forest, *Platanus* litter, 5.VII.2002, leg. Assing (cAss); 4 exs., Gölgeli Dağları, 20 km NE Köyceğiz, below Ağla, 37°01'20N, 28°44'27E, 600 m, litter of *Platanus* and other deciduous trees, 6.X.2002, leg. Assing (cAss).

Diagnosis: External morphology as in *M. fuscus*.

♂: posterior margin of sternite VII with deeper trapezoid excavation than in *M. subfuscus* (Fig. 96); sternite VIII not distinctive (Fig. 97). Apex of ventral process of aedeagus in ventral view weakly convex and in lateral view relatively broad, not bent dorsad (Figs. 94 – 95).

Comparative notes:

M. umbilicatus is distinguished from other species of the *fuscus* group only by the morphology of the aedeagus, especially the shape of the ventral process.

Comments: According to COIFFAIT (1984: 68), who placed *M. mimulus* in the synonymy of *M. lindbergi*, the types of *M. mimulus* do not exist. BORDONI (1980a), too, states that he had not seen the types of that species, although he had examined the types of all the other *Medon* species described by Fagel. However, the Fagel collection contains a series of specimens with type labels and locality labels matching the data in the original description of *M. mimulus*, and with identification labels

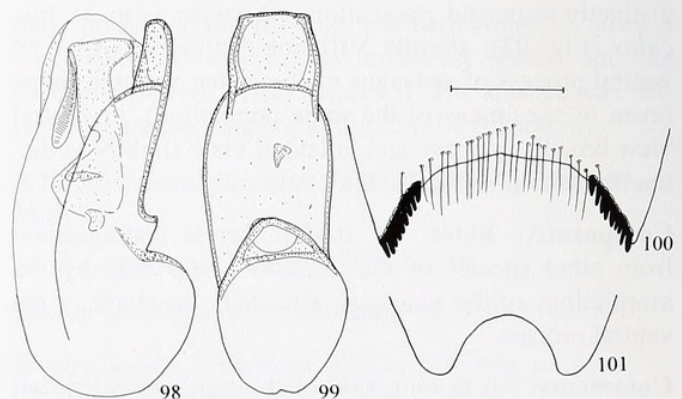
giving "*fuscoides*" as the name. Therefore, it must be concluded that Fagel originally planned to name the species *M. fuscoides*, then became aware of the homonymy with *M. fuscoides* Coiffait, 1969, and renamed the species, but apparently forgot to replace the identification labels.

A comparison of the type material indicated above revealed that *M. umbilicatus* and *M. mimulus* are conspecific. The descriptions of both species were published in 1970. However, that of *M. umbilicatus* was published on June 30 (HERMAN 2001), whereas the date provided on the front cover of the issue containing the description of *M. mimulus* is September 15 (A. SMETANA, Ottawa, pers. comm. 2002). Consequently, *M. umbilicatus* Coiffait takes precedence and *M. mimulus* is here placed in the synonymy of that species.

In the type series of *M. lydicus*, two species are represented. Since the holotype is conspecific with *M. umbilicatus*, *M. lydicus* Bordini is a junior synonym; some paratypes of *M. lydicus* belong to *M. semiobscurus* (Fauvel).

An examination of the types of *M. rhodicus* Franz revealed that they are not specifically distinct from *M. umbilicatus*, so that *M. rhodicus* is here synonymized with the senior name *M. umbilicatus*.

Distribution and bionomics: The known distribution ranges from Bulgaria to Muğla in southwestern Anatolia and includes Rhodos, where the species is apparently the sole representative of the *M. fuscus* group; in addition, it was once found in the Southern Sporades (Dhodhekánisos) (Map 12). The types of *M. mimulus* were collected in moist leaf litter (FAGEL 1970). The altitudes specified on the labels attached to the specimens examined are relatively low (100 – 650 m). Teneral beetles were collected in July. In a floodplain forest near Marmaris, the species was found together with *M. caricus*, *M. fuscus*, and *M. semiobscurus*.



Figs. 98 – 101: *Medon lanugo* sp. n.: Aedeagus in lateral and in ventral view (98, 99); posterior margin of male sternite VII (100); outline of posterior margin of sternite VIII (101). Scale: 0.2 mm.

3.25. *Medon lanugo* sp. n. (Figs. 98 – 101, Map 15)

Holotype ♂: TR – Mersin, road Silifke → Gülnar, 1015 m, No. 9, 36°20'38N, 33°35'06E, *Quercus* litter, 27.12.2000, V. Assing / Holotypus ♂ *Medon lanugo* sp. n. det. V. Assing 2001 (cAss). Paratypes (total: 138 exs.): **Muğla:** 5♂♂, 3♀♀: TR – Muğla, No. 21, SE Fethiye, Baba Dağ, above Ovacik, 680 m, 36°33'23N, 29°09'49E, 30.III.2002, leg. Wunderle (cWun, cAss); 2♀♀, same data, but leg. V. Assing (cAss). **Antalya:** 1♂, 1♀: N36°57' E030°29', Türkei Umg. Antalya, Tal sö Termessos, 300 m, Meybohm 22.4.2001 (cAss); 1♂, 1♀: N36°26' E030°25', Türkei südl. Antalya, Kumluca, 20 km nö, 330 m, Meybohm 24.4.2001 (cAss); 1♂: Türkei Umg. Antalya, Straße nach Saklikent, 1000 m, Kiefernwald, Meybohm, 11.5.2000 (cAss); 1♂: same data, but "Eichenstreu" (cAss); 1♂: ♂ / Kl.-As. / Pamphylich. / Taurus / Owadjik-Gr. / Weirather, / Innsbruck. / 33a / ex coll. Scheerpeltz / TYPUS *Medon* Weiratheri O. Scheerpeltz (NHMW); 1♂, 1♀: TR – Antalya, 2000 m, Umg. Manavgat, 9, 1.I.1991 ASSING (cAss); 2♂♂: S-Türkei: Region Akseki, 4 km NW Akseki, N-Hang, 1250 m, 16b, Stech-Eichen-Streu und Moos gesiebt, 16.III.2000, leg. Rose (cRos); 1♂, 2♀♀: TR – Antalya, No. 8, 20 km N Kas, S Karaovabeli Pass, *Quercus*, 830 m, 36°23'12N, 29°42'34E, 26.III.2002, V. Assing (cAss); 1♀: same data, but leg. P. Wunderle (cWun); 3♂♂, 3♀♀, TR – Antalya, 1120 m, W Kemer, S Hisar, No. 24, *Quercus*, *Carpinus*, 36°44'02N, 30°26'23E, 2.IV.2002, V. Assing (cAss); 3♂♂, 3♀♀: same data, but leg. P. Wunderle (cWun). **Isparta:** 1♂: TURQUIE ISPARTA, Eğredir – Çandır, 900 m, 6.V.75, BESUCHET LÖBL (cAss). **Tunceli:** 2♂♂, 5♀♀: TURQUIE: Tunceli, Tunceli-Ovacik, 1100 m, 5.VI.1986 / Besuchet-Löbl Burckhardt (MHNG, cAss). **Mersin:** 1♂: same data as holotype (cAss); 4♂♂, 4♀♀, same data, but leg. Wunderle (cWun, cAss); 1♂: TR – Mersin, ca. 25 km NW Erdemli, 1085 m, 36°42'19N, 34°09'52E, *Quercus* litter, No. 19, 29.12.2000, V. Assing (cAss); 1♂, 1♀, same data, but leg. Wunderle (cWun); 2♂♂, 3♀♀: TR – Mersin, ca. 30 km NNW Tarsus, 580 m, No. 8, 37°10'00N, 34°45'40E, fallow with decid. trees, 26.12.2000, V. Assing (cAss); 2♂♂, 3♀♀, TR. – Mersin, ca. 30 km NNW Tarsus, 430 m, No. 7, 37°08'43N, 34°44'29E, *Pinus*, *Q. ilex*, *Juglans*, 26.12.2000, P. Wunderle (cWun); 10♂♂, 8♀♀, Namrun, Anat. m., 11.-26.5.60, leg. F. Schubert (NHMW, cAss); 2♂♂, 1♀, Namrun, Anat. mer., 4/76, leg. F. Schubert (NHMW). **Adana:** 1♂, 1♀: TR – Adana, 1, Karatepe, Laurisilva, 200 m, 24.IV.-1.V.2002, 37°17'12N, 36°14'22E, Meybohm & Brachat (cAss); 1♀: TR – Adana, 1a, N Osmaniye, Karatepe, Laurisilva, 37°17'03N, 36°14'04E, 1.V.2002, leg. Meybohm (cAss). **Antakya:** 1♂, 4♀♀: TR. – Antakya, Nur Dagl., WSW Yeşilkent, 990 m, 36°54'59N, 36°18'54E, mixed decid. forest, N. 14, 28.12.2000, V. Assing (cAss); 1♂,

same data, but leg. Wunderle (cWun); 1♂: TR. – Antakya, Nur Dagl., WSW Yeşilkent, 990 m, 36°54'50N, 36°18'33E, mixed decid. forest, N. 15, 28.12.2000, P. Wunderle (cWun); 11♂♂, 14♀♀: Turquie Atakya, 7 km E Yeşilkent, 350-400 m, 4.V.78, Besuchet Löbl (MHNG, cAss); 1♂: Yayladagi, 450 m, Antakya, 17.5.73, leg. F. Schubert (cAss). Samsun: 1♂, 2♀♀: TÜRKİE – 1989, leg. Schönmann et Schillhammer / Prov. SAMSUN, Karadag Pass, ne Hafsa, 27.5. (NHMW, cAss).

Diagnosis: External morphology as in *M. fuscus*.

♂: posterior margin of sternite VII of similar shape as in *M. subfuscus*, long marginal setae between the combs of palisade setae sparser than in *M. subfuscus* and allied species and not distinctly grouped in two clusters (Fig. 100); sternite VIII not distinctive (Fig. 101). Apex of ventral process of aedeagus in ventral view truncate and in lateral view relatively broad, not bent dorsad (Figs. 98 – 99).

Etymology: The name (Lat.: fluff, first beard) is a noun in apposition (gender: feminine) and refers to the fringe of relatively sparse long setae at the posterior margin of the male sternite VII.

Comparative notes: *M. lanugo* is distinguished from other species of the *fuscus* group by the morphology of the aedeagus, especially the shape of the ventral process, from most species also by the chaetotaxy of the male sternite VII.

Distribution and bionomics: *M. lanugo* is widespread in southern Anatolia, its known distribution ranging from Muğla in the west to Antakya in the southeast and Tunceli in the east. On one occasion it was also found in northern Anatolia (Samsun) (Map 15). The species has been collected in various types of woodland, but apparently most often in deciduous forests, at altitudes between 200 and 2000 m.

3.26. *Medon sparsiventris* Eppelsheim, 1889 (Figs. 102 – 108, Map 16)

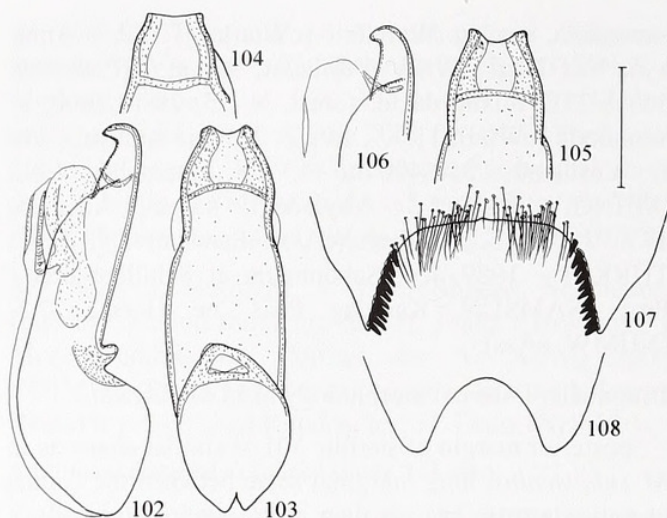
Medon sparsiventris Eppelsheim, 1889: 176 f.

Medon frater Bernhauer, 1922: 123 f.; **syn. n.**

Medon wittmeri Coiffait, 1976c: 63 f.; **syn. n.**

? *Medon kopetdaghi* Gusarov 1995: 49 ff.

Types examined: *M. sparsiventris*: Syntypes: 1♀: Lenkoran, Leder Reitter / 8 / sparsiventris Fvl. / c. Epplsh. Steind. d. / sparsiventris Epp. Deutsch. ent. Zeit. 1889, S. 176 / TYPUS / Syntypus *Medon sparsiventris* Eppelsheim rev. V. Assing 2002 (NHMW); 1♀: Lenkoran, Leder Reitter / c. Epplsh. Steind. d. / Syntypus *Medon sparsiventris* Eppelsheim rev. V. Assing 2002 (NHMW).



Figs. 102 – 108: *Medon sparsiventris* eppelsheim: Aedeagus in lateral and in ventral view (102, 103); apical part of aedeagus of lectotype of *M. frater* Bernhauer in ventral view (104); apical part of aedeagus of holotype of *M. wittmeri* Coiffait in ventral and in lateral view (105, 106); posterior margin of male sternite VII (107); outline of posterior margin of male sternite VIII (108). Scale: 0.2 mm.

M. frater: Lectotype ♂, present designation: Elburs-Gebirge, Iran, Nord-Persien, B. v. Bodemeyer / frater Brnh. Typus / Chicago NHMus. M. Bernhauer Collection / *Medon frater* ♂ V. I. Gusarov det. 2000 / Lectotypus ♂ *Medon frater* Bernhauer desig. V. Assing 2002 / *Medon sparsiventris* Eppelsheim det. V. Assing 2002 (FMNH).

M. wittmeri: Holotype ♂: Gole Lovae, 750/1400 m / Iran 1970, 3.5., Wittmer, v. Bothmer / HOLOTYPUS / *Medon wittmeri* H. Coiffait det. 1975 / *Medon wittmeri* Coiff. V. I. Gusarov rev. 1992 / *Medon frater* det. V. Assing 2002 (NHMB). Paratype: 1 ♀: same data as holotype (NHMB).

Additional material examined (total: 6 exs.):

Iran: 1 ♂, 1 ♀, Elburs, Masandaran, E Alasht, 1400 m, 27.&28.VI.1978, leg. Martens & Pieper (cSch, cAss); 2 ♂♂, Elburs, Masandaran, Talar valley, 12 km NW Zierab, 300 m, 28.VI.1978, leg. Martens & Pieper (cRou, cAss).

Azerbaijan: 2 ♂♂, "Lenkoran, Leder, Reitter" (NHMW, cAss).

Diagnosis: Coloration very variable, reddish brown to dark brown; sometimes bicoloured, with the head distinctly darker than the remaining body. In external morphology somewhat intermediate between *M. brunneus* and *M. fuscus*, distinguished from the latter as follows:

Eyes weakly prominent and much smaller, their diameter approximately 1/3 the length of temples in dorsal view. Elytra of somewhat variable length, but shorter and narrower than in *M. fuscus*, only 1.02 – 1.07 times as wide and at suture 0.88 – 1.0 times as long as pronotum. Abdomen usually with sparser and finer puncturation.

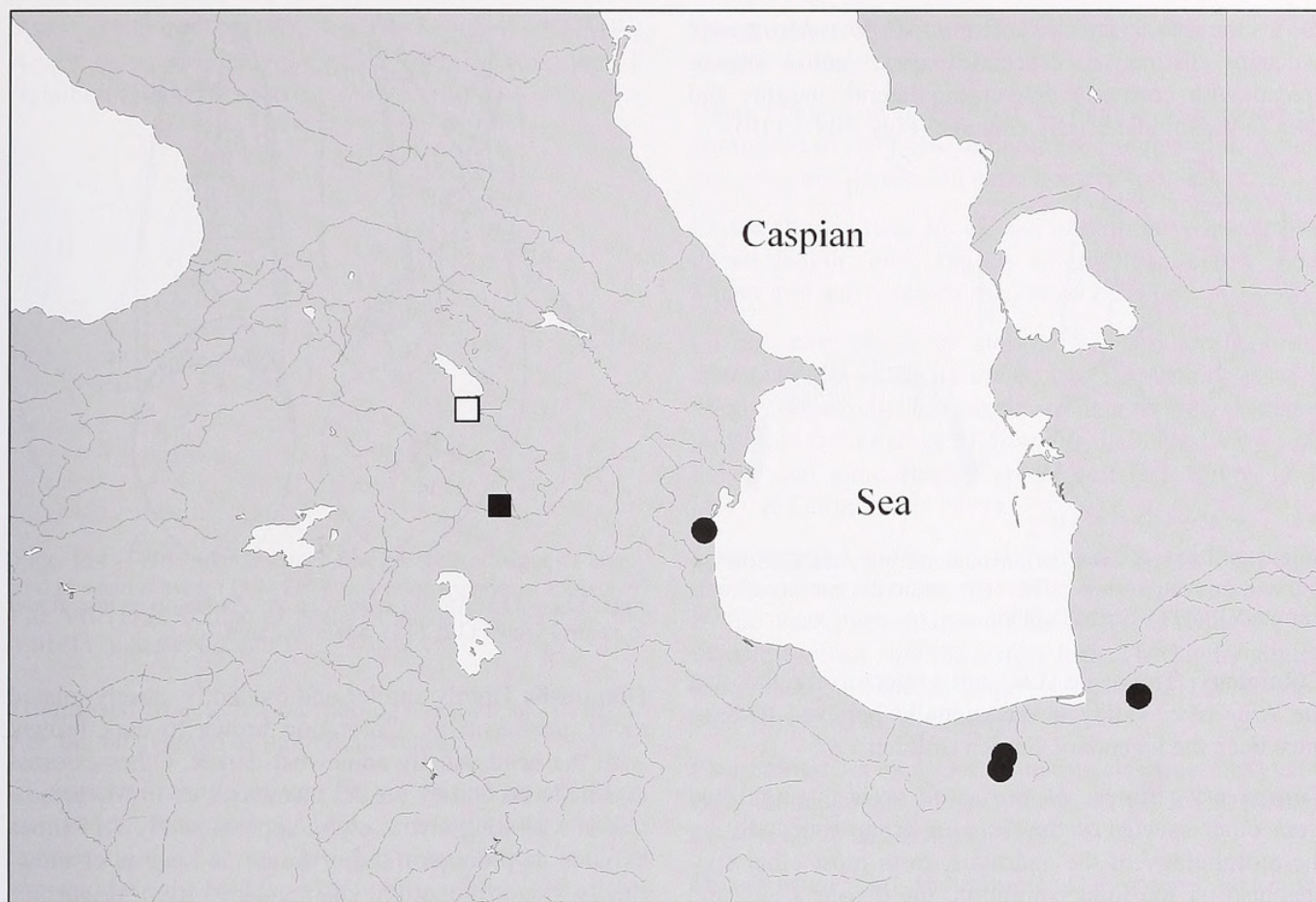
♂: posterior margin of sternite VII of similar shape and chaetotaxy as in *M. fuscus*, but long setae on either side of the middle yellowish (Fig. 107); sternite VIII not distinctive (Fig. 108); aedeagus with ventral process apically bent dorsad in lateral view and weakly to distinctly excavate in ventral view (Figs. 102 – 106).

Comparative notes: *M. sparsiventris* is distinguished from Eastern Mediterranean and Caucasian species of the *fuscus* group by the morphology of the aedeagus, from most species also by the shorter and narrower elytra, the smaller eyes, and the yellowish setae at the posterior margin of the male sternite VII.

Comments: The original description of *M. sparsiventris* is based on two female syntypes, both of which were examined. Since its description the species has been placed near *M. brunneus*. Fortunately, male non-type specimens from the type locality and probably collected together with the types were discovered among unidentified material in the collections of the NHMW. An examination of the male sexual characters revealed that *M. sparsiventris* belongs to the *M. fuscus* group.

In the original description of *M. frater*, neither the number of types nor a holotype is specified, so that the male type specimen in the Bernhauer collection must be regarded as a syntype. In order to fix a single name-bearing type and thus to secure the interpretation of the name, this syntype is here designated as the lectotype. It is conspecific with the types of *M. sparsiventris*, so that *M. frater* Bernhauer is here synonymized with *M. sparsiventris* Eppelsheim.

COIFFAIT (1976c) compared *M. wittmeri* neither with *M. frater* (apparently because he believed the latter to belong to the *M. brunneus* group, which can be concluded from a footnote in COIFFAIT (1984: 35)), nor with *M. sparsiventris*, which he treated as a species incertae sedis. A comparison of the types of these species, however, revealed that they are conspecific, so that *M. wittmeri* is here placed in the synonymy of the senior name *M. sparsiventris*. The original description of *M. kopetdaghi*, whose types are temporarily inaccessible (V. GUSAROV, Lawrence, pers. comm. 2002), suggests that that species, too, may be a synonym. The distinguishing external characters indicated by GUSAROV (1995) are within the range of intraspecific variation of *M. sparsiventris* and also the shape of the aedeagus does not provide convincing evidence that *M. kopetdaghi* is specifically distinct. However, there seems to be a difference in the size of the aedeagus. Therefore, a decision regarding the status of this name can only be made when the type material becomes available for examination. Since *M. kopetdaghi* is very closely related to – if not conspecific with – *M. sparsiventris*, it belongs to the *M. fuscus* group, not the *M. exquisitus* group as stated by GUSAROV (1995).



Map 16: Distributions of *Medon sparsiventris* Eppelsheim (filled circles, based on revised records), *M. paradisiacus* sp. n. (black square), and *M. sequax* sp. n. (white square).

Distribution and bionomics: The species is known only from the Elburs mountain range in Iran and from Azerbaijan (Map 16); the labels attached to some of the non-type specimens indicate altitudes of 300 and 1400 m.

3.27. *Medon paradisiacus* sp. n. (Figs. 109 – 111, Map 16)

Medon araxis Reitter i. l.

Medon araxidis Reitter i. l.

Types: Holotype ♂: ♂ / Caucasus, Araxesthal, Leder. Reitter / araxidis Reitt / sparsiventris Epp. / ex coll. Skalitzy / Holotypus ♂ *Medon paradisiacus* sp. n. det. V. Assing 2002 (NHMW). Paratypes (total: 6 exs.): 1♀: same data as holotype (NHMW); 1♂: Caucasus, Araxesthal, Leder. Reitter (cAss); 1♀: Caucasus, Araxesthal, Leder. Reitter / *Medon araxidis* m. / cc. Eppelsh. Steind. d. (NHMW); 1♀: ♀ / Caucasus, Araxesthal, Leder. Reitter / Bernh. det. / araxidis / *Medon araxidis* i. l. = brunneus var. / sparsiventris Epp. / coll. Schuster (cAss); 1♀: ♀ / Caucasus, Araxesthal, Leder. Reitter / sparsiventris Eppelsh. / ex coll. Scheerpeltz (NHMW); 1♂: Caucasus, Araxesthal, Leder. Reitter / 118 / D.E.I.

coll. von Heyden / *Medon sparsiventris* Epph. araxidis Rtt. (DEIC).

Diagnosis: In external morphology similar to *M. fuscus*, but distinguished as follows:

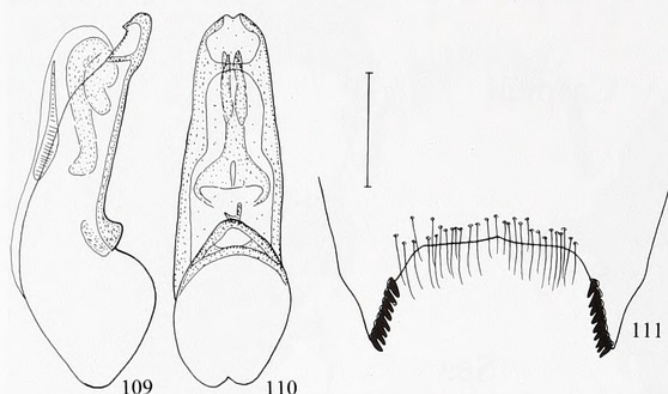
Light-coloured species, light brown to reddish brown, with the abdominal apex and the appendages slightly lighter.

Head (measured from anterior margin of clypeus) at least slightly longer than wide and only slightly (1.05 – 1.08 times) wider than pronotum; eyes of reduced size, temples 2.5 – 3.0 times as long as eyes; puncturation slightly less coarse and less dense than in *M. fuscus*; antennae relatively long and slender. Pronotum with slightly less coarse and less dense puncturation than in average *M. fuscus*, interstices more or less shining and at most with very indistinct microsculpture.

Elytra 1.05 – 1.15 times as wide as pronotum, at suture as long as pronotum or slightly shorter. Posterior margin of abdominal tergite VII with very fine palisade fringe.

♂: posterior margin of sternite VII of similar shape and chaetotaxy as in *M. fuscus*, long setae in the middle brownish and moderately dense (Fig. 111); sternite VIII

as in the other species of the *M. fuscus* group; aedeagus distinctive, especially apex ventral aspect: apicad with convexly converging lateral margins and apex in the middle briefly concave (Figs. 109 – 110).



Figs. 109 – 111: *Medon paradisiacus* sp. n.: Aedeagus in lateral and in ventral view (109, 110); posterior margin of male sternite VII (111). Scale: 0.2 mm.

Etymology: The name (Lat.: adj.) refers to the fact that the Aras river valley is occasionally believed to have once been the legendary Garden of Eden.

Comparative notes: *M. paradisiacus* is distinguished from other species of the *fuscus* group especially by the morphology of the aedeagus, from most other species also by the light coloration, the oblong head, and the small eyes.

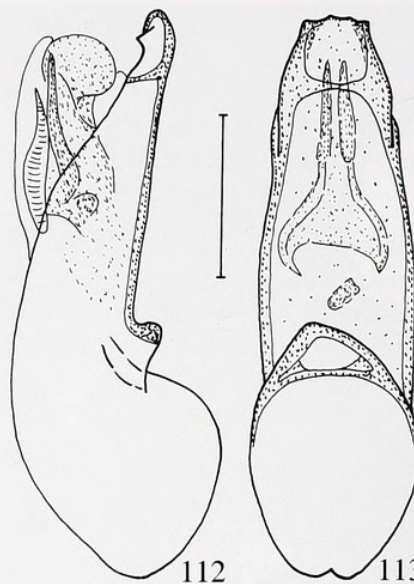
Comments: *Medon araxis* Reitter and *M. araxidis* Reitter are in-litteris names. Though never described, they were erroneously synonymized with *M. sparsiventris* Eppelsheim (EPPELSHEIM 1894, FAUVEL 1895).

The types of *Medon fuscoides* Coiffait, which was described from Armenia, were not examined, but judging from the details indicated in the original description (e. g. “la tête plus foncée”, “Tête ... plus large que longue”, “les tempes une fois e demie plus longues que les yeux”, etc.) and especially the illustration of the aedeagus (COIFFAIT 1969, 1984), it is most unlikely to be conspecific with *M. paradisiacus*.

Distribution and bionomics: The type locality “Arax-esthal” is apparently identical with the surroundings of Ordubad in Azerbaijan, near the Iranian border (L. ZER-CHE, Eberswalde, pers. comm. 2002) (Map 16). Ecological data are unknown.

3.28. *Medon sequax* sp. n. (Figs. 112 – 113, Map 16)

Types: Holotype ♂: ARMENIA: SE Yerevan (40), SE Yeghegnadzor, 13.5.2001, 3–4 km E Gyulidus, ca. 1850 m, 39°53.29'N 45°28.97'E, leg. Shaverdo & Schillhammer / Holotypus ♂ *Medon sequax* sp. n. det. V. Assing 2002 (NHMW). Paratypes: 1♂, 1♀: same data as holotype (NHMW, cAss).



Figs. 112 – 113: *Medon sequax* sp. n.: Aedeagus in lateral and in ventral view (112, 113). Scale: 0.2 mm.

Diagnosis: Highly similar and evidently closely related to *M. paradisiacus*. Coloration brown to dark brown, with the head usually somewhat darker. Other external and male secondary sexual characters as in *M. paradisiacus* with long elytra; elytra approximately 1.15 times as wide as pronotum and at suture as long as or indistinctly longer pronotum. Distinguished from *M. paradisiacus* only by the morphology of the aedeagus:

♂: aedeagus apically almost truncate and apico-laterally angled (Figs. 112 – 113).

Etymology: The name (Lat.: adj. quickly following, pursuing) refers to the fact that the species was discovered only after the manuscript had been submitted.

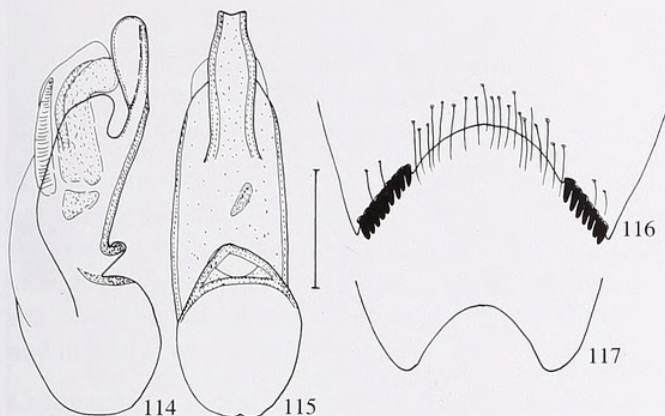
Comparative notes: *Medon sequax* is distinguished from the similar *M. paradisiacus* only by the morphology of the aedeagus. For separation from other congeners of the *M. fuscus* group see comparative notes below *M. paradisiacus* and the key in section 4.

Distribution and bionomics: The type locality is situated some 150 km NNW of that of *M. paradisiacus*, in the mountains south of Lake Sevan (Map 16). The types were collected at an altitude of 1850 m.

3.29. *Medon lamellatus* sp. n. (Figs. 114 – 117, Map 15)

Types: Holotype ♂: TURQUIE: Tunceli, Tunceli-Ovacik, 1100 m, 5.VI.1986 / Besuchet-Löbl, Burckhardt / Holotypus ♂ *Medon lamellatus* sp. n. det. V. Assing 2001 (MHNG). Paratypes (total: 20 exs.): 1♂, 9♀♀: same data as holotype (MHNG, cAss); 1♂, 1♀: Turquie Antakya, Soğukoluk, 700 m, 3.V.1978, Besuchet Löbl (MHNG, cAss); 2♂♂, 1♀: Osmaniye, Asm., 1200 m, 6.67, leg. F. Schubert (NHMW, cAss); 1♂: Osmaniye,

Asm., 1100 m, V-VI/67, leg. F. Schubert (NHMW); 4♂♂: ostw. Osmaniye/A, 12-1700 m, Asm., leg. F. Schubert (NHMW, cAss).



Figs. 114 – 117: *Medon lamellatus* sp. n.: Aedeagus in lateral and in ventral view (114, 115); posterior margin of male sternite VII (116); outline of posterior margin of male sternite VIII (117). Scale: 0.2 mm.

Diagnosis: In external morphology similar to *M. fuscus*, but on average of lighter coloration.

♂: posterior margin of sternite VII of distinctive shape, excavation deep and concave, in comparison to other species of the *M. fuscus* group less broad and not trapezoid, in the middle with relative sparse setae (Fig. 116); sternite VIII as in the other species of the *M. fuscus* group (Fig. 1157); aedeagus highly distinctive: ventral process in ventral view with narrow and long, in lateral view elongate, lamellate, and distinctly separated from remainder of aedeagus (Figs. 114 – 115).

Etymology: The name (Lat.: adj.) refers to the distinctive shape of the ventral process of the aedeagus.

Comparative notes and systematics: *Medon lamellatus* is distinguished from other species of the *fuscus* group by the morphology of the aedeagus, especially the shape of the ventral process, and also by the chaetotaxy of the male sternite VII. The general morphology of the aedeagus somewhat resembles that of *M. cyprensis*, which is endemic to Cyprus and has a non-umbilicate puncturation of the pronotum, a distinctly wider posterior excavation of the male sternite VII, as well as a broader ventral process of the aedeagus (ventral view).

Distribution and bionomics: *Medon lamellatus* was found in several localities in eastern central and in central southern Anatolia (Map 15), at altitudes of 700 and 1700 m. In the locality in Tunceli, it was apparently collected together with *M. lanugo* and *M. ferrugineus*, in one locality near Osmaniye with *M. fuscus*.

3.30. *Medon dobrogicus* Decu & Georgescu, 1994 (Map 11)

Medon dobrogicus Decu & Georgescu, 1994:47 ff.

Diagnosis: Coloration rufous, weakly pigmented. Of similar size as *M. fuscus*.

Head oblong; eyes reduced to minute rudiments and composed of only few unpigmented ommatidia. Antennae long and slender, all antennomeres oblong.

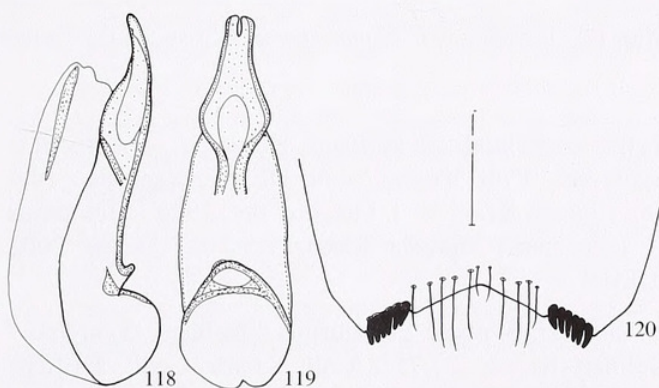
Elytra shorter than in *M. fuscus*; hind wings of reduced length, only slightly longer than elytra. Legs longer and more slender than in *M. fuscus*.

♂: posterior margin of sternite VII similar shape and chaetotaxy as in *M. fuscus*, but excavation less distinctly trapezoid. Aedeagus in lateral view indistinguishable from that of *M. fuscus*, in ventral view with longer and more slender apical part (see figure 11 in DECU & GEORGESCU 1994).

Comparative notes: *M. dobrogicus* is readily distinguished from all other species of the *M. fuscus* group by the weak pigmentation of the body, the reduced eyes, the short wings, and the longer legs. The highly similar morphology of the aedeagus suggests that it is most closely related to *M. fuscus*.

Comments: As the types of this species were not examined, the diagnosis relies on the description and illustrations in DECU & GEORGESCU (1994).

Distribution and bionomics: The species is known only from its type locality, the cave “Pestera de la Movile” in southern Dobrukscha, Romania, where it was collected in the deeper and older parts. *M. fuscus* (types of the synonym *M. paradobrogicus*) was found in the same cave, but nearer to the surface.



Figs. 118 – 120: *Medon ripicola* (Kraatz): Aedeagus in lateral and in ventral view (118, 119); posterior margin of male sternite VII (120). Scale: 0.2 mm.

3.31. *Medon ripicola* (Kraatz, 1854) (Figs. 118 – 120, Map 17)

Lithocharis ripicola Kraatz, 1854: 127.

Lithocharis kellneri Kraatz, 1875: 123; synonymy confirmed.



Map 17: Distribution of *Medon ripicola* (Kraatz) in the Eastern Mediterranean, based on revised records.

Types examined: *M. ripicola*: Holotype ♂: Ahrweil. / Syntypus / Coll. Kraatz / coll. DEICEberswalde / *Medon ripicola* Kr. ♂ V. I. Gusarov det. 1996 / Holotypus ♂ *Lithocharis ripicola* Kraatz rev. V. Assing 2002 (DEIC).

M. kellneri: Syntype ♀: Thuring. / Kellner / Syntypus / Kellneri Kraatz 2.7.75 / Coll. Kraatz / coll. DEICEberswalde / *Medon ripicola* (Kr.) ♀ V. I. Gusarov det. 1996 (DEIC).

Additional material examined (total from the studied region: 22 exs.): In addition to the material listed below, specimens from Morocco, Portugal (mainland and Madeira), Spain, Italy, France, Switzerland, and Germany were seen.

Poland: 2 exs., SW Kraków, Wadowice, leg. Natterer (NHMW).

Czech Republic: 1 ex., Bohemia, Doudleby n. Orl, leg. Roubal (NHMW).

Austria: Vorarlberg: 5 exs., locality not specified, leg. Müller (NHMW). **Niederösterreich:** 2 exs., Wien (NHMW); 1 ex., Sto-

ckerau (NHMW); 1 ex., Klosterschau (?), leg. Scheerpeltz (NHMW); 1 ex., Lobau, leg. Mandl (NHMW). **Burgenland:** 1 ex., Zurndorf, leg. Franz (NHMW). **Steiermark:** 1 ex., Graz, leg. Strupi (NHMW); 1 ex., Tüffer, leg. Franz (NHMW).

Romania: 1 ex., Băile Herculane (NHMW).

Croatia: 1 ex., Josipdol-Karlovac, car-net, 9.V.1990, leg. Wunderle (cWun); 1 ex., Ludbreg, leg. Apfelbeck (HNHM); 1 ex., Zagreb, leg. Stiller (cAss); 1 ex., Istria, leg. Reitter (HNHM).

Yugoslavia: Montenegro: 1 ex., Pojane (NHMW).

Bulgaria: 1 ex., Struma, Kresana-Defilé, 13.VI.1937, leg. Breit (NHMW);

Diagnosis: General appearance (size, coloration, punctuation) similar to that of *M. apicalis*.

3.5 – 5.0 mm. Head dark brown to blackish brown; pronotum distinctly lighter, ferruginous; elytra ferruginous to brown; abdomen reddish brown to dark brown; appendages testaceous to ferruginous.

Head with very dense, relatively shallow, and moderately coarse puncturation, punctures more clearly defined than in *M. apicalis*; surface almost completely mat.

Pronotum shining, with relatively fine, shallow, and dense puncturation. Elytra of similar length and with similar puncturation as in *M. apicalis*.

♂: posterior margin of sternite VII with triangular excavation, two combs of usually 5 – 7 palisade setae, and in the middle with sparse, long and dark setae (fig. 120); sternite VIII not distinctive; aedeagus with ventral process of highly distinctive morphology, both in ventral and in lateral view (Figs. 118 – 119).

Comparative notes: The only Eastern Mediterranean species with a finely and shallowly punctate ferruginous pronotum are *M. apicalis* and *M. maronitus*. They are distinguished from *M. ripicola* by a more strongly microsculptured head with ill-defined puncturation and especially by the completely different male primary and secondary sexual characters. The only species with an aedeagus showing at least some resemblance to that of *M. ripicola* is *M. lamellata*, which, however, has a much more coarsely punctured head and pronotum.

Comments: In the species list accompanying the original description of *Lithocharis ripicola*, KRAATZ (1854) states that he collected one specimen on the bank of the Ahr river. Since only the type locality "Ufer der Ahr" is mentioned in the description, the said specimen must be regarded as the holotype. A second specimen with a syntype label and the locality label "Germ." was found in the Kraatz collection, but it cannot be attributed type status.

The original description of *Lithocharis kellneri* is based on a male and two females; a holotype is not specified. The male syntype, which according to KRAATZ (1875) is deposited in the Kellner collection, was not examined, so that a lectotype is not designated.

Distribution and bionomics: *Medon ripicola* is widespread in Europe (including Madeira and the Azores) and Northwest Africa (COIFFAIT 1984; HORION 1965; and material examined). In the Eastern Mediterranean, however, it is confined to the northwest (Romania, Croatia, Montenegro, Bulgaria). According to HORION (1965) it usually occurs in moist situations, such as river banks, lakeshores, flood-plain forests, etc.

4. KEY TO THE MALES OF THE MEDON SPECIES OCCURRING IN THE EASTERN MEDITERRANEAN AND ADJACENT REGIONS

Since only few species can be identified based on external characters alone, the following key mainly relies on the male primary and secondary sexual characters, thus

allowing an arrangement reflecting the phylogenetic relationships among the species. In order to facilitate identification, biogeographic data are incorporated in the key.

M. exquisitus Kirschenblat is not included in the key below, since neither the types nor additional material was available for examination. Similarly, the names presumed to be synonyms, but not formally synonymized, and *M. bucharicus* Bernhauer, whose generic affiliations are doubtful and whose distribution is outside the geographic scope of the present paper, are omitted (see species sections, and section 5).

For a full evaluation of the aedeagal characters, the aedeagus should be mounted on transparent slides and examined under a compound microscope.

1. Posterior margin of sternite VII deeply excavate, laterally with combs of numerous (approximately 7-12) short and stout palisade setae, and centrally with numerous dark long setae; sternite VIII posteriorly deeply and broadly concave. The *M. fuscus* group..... 18
 - Posterior margin of sternite VII shallowly concave, bisinuate, or with moderately deep excavation of triangular shape, laterally without or with usually fewer and more slender palisade setae, and centrally either with sparse setae or with numerous shorter setae; sternite VIII posteriorly with smaller excavation..... 2
2. Posterior margin of sternite VII with distinctly modified (i. e. stout and relatively short) setae arranged in distinct patterns..... 3
 - Posterior margin of sternite VII without distinctly modified setae, only with a variable number of long darker setae not arranged in distinct patterns. Small species of light coloration, with the head darker than the remainder of the body. The *M. apicalis* group. 6
3. Posterior margin of sternite VII laterally with distinct combs of (usually >4) apically obtuse palisade setae, in the middle weakly concave to weakly convex, but without modified setae..... 4
 - Posterior margin of sternite VII laterally at most with short combs of (usually <7) apically acute palisade setae, in the middle distinctly convex and with clusters of modified setae. The *M. coriaceus* group..... 8
4. Posterior margin of sternite VII with excavation of triangular shape (Fig. 120); ventral process of aedeagus long and slender, apically bilobed, and distinctly separated from remainder of aedeagus (Figs. 118 – 119). Head very densely, but not coarsely punctured, almost mat, and distinctly

- darker than pronotum; pronotum with fine and shallow puncturation. The *M. ripicola* group. Widespread in the Western Palaearctic, in the Eastern Mediterranean restricted to the northern and northwestern Balkans, southwards to Bulgaria and Montenegro (Map 17). ***M. ripicola*** (Kraatz)
- Posterior margin of sternite VII more or less concavely and less deeply excavate; aedeagus of completely different morphology. Head either much more coarsely or more sparsely punctate, mostly of similar colour as pronotum or only slightly darker; pronotum more coarsely punctured. 5
5. Ventral process of aedeagus in ventral view apically simply convex, not bilobed. The *M. brunneus* group. 14
- Ventral process of aedeagus in ventral view apically more or less truncate and bilobed. The *M. ferrugineus* group 15
6. Slightly larger and darker species. Sternite VII posteriorly weakly bisinuate and with numerous long, dark, and stout setae (Fig. 3); aedeagus of characteristic morphology (Figs. 1 – 2). Widespread in the Western Palaearctic region (Map 1). ***M. apicalis*** (Kraatz)
- Slightly smaller and usually more light-coloured species; aedeagus of different morphology; absent from the Western Mediterranean. 7
7. Head more shining; head and pronotum with coarser and distinctly sparser puncturation; pronotum with more pronounced microreticulation; elytra shorter, at suture 1.05 – 1.10 times as long as pronotum and with coarser puncturation. Posterior margin of sternite VII shallowly concave, not bisinuate, only with few (3-7) stouter setae in the middle (Fig. 10). Aedeagus of distinctive shape, small and with slender ventral process (Figs. 8 – 9). Southwestern Anatolia (Map 2). ***M. beydaghensis*** Fagel
- Head almost mat; head and pronotum with finer and denser puncturation; pronotum with less pronounced microreticulation; elytra usually longer and with finer puncturation. Posterior margin bisinuate and with numerous long dark setae (Fig. 6). Aedeagus with stouter ventral process of different shape (Figs. 4 – 5). Widespread in the Eastern Mediterranean, from Greece to Anatolia, the Caucasus region, and Israel, also recorded from Turkmenistan (Map 1). ***M. maronitus*** Fagel
8. Aedeagus elongate and with slender ventral process. Species from the Balkans, Crete, and Rhodos. 9
- Aedeagus shorter and stouter, ventral process broader, in two species distinctly dilated. Species from southern and western Anatolia, one of them also occurring in the Southern Sporades (Dhodeskéanisos). 12
9. Pronotum with very coarse, confluent, coriaceous puncturation. Posterior margin of sternite VII in the middle somewhat more distinctly pointed, in the middle with relatively long setae, and laterally with combs of about 6 palisade setae (Fig. 22); ventral process of aedeagus relatively broad in lateral view and with distinctive apical structures in internal sac (lateral view) (Figs. 20 – 21). Southwestern Bulgaria, southern Macedonia, and northeastern Greece (Map 4). ***M. coriaceus*** Coiffait
- Pronotum with less coarse puncturation. Posterior margin of sternite VII usually with less numerous palisade setae. Aedeagus of different morphology. Distribution different. 10
10. Posterior margin of sternite VII in the middle with longer and more slender setae (Fig. 14); apex of ventral process of aedeagus in lateral view distinctly rounded (Figs. 12 – 13). Crete (Map 3). ***M. cerrutii*** Coiffait
- Posterior margin of sternite VII in the middle with shorter and stouter setae; apex of ventral process of aedeagus in lateral view not distinctly rounded. Absent from Crete. 11
11. Posterior margin of sternite VII on either side of middle with more numerous and longer modified setae (Fig. 26); apex of ventral process of aedeagus shaped as in Figs. 24 – 25. Rhodos (Map 3). ***M. impar*** sp. n.
- Posterior margin of sternite VII on either side of middle with fewer and shorter modified setae (Fig. 18); apex of ventral process of aedeagus shaped as in Figs. 16 – 17. Balkans, from Croatia to southern Greece (Map 4). ***M. petrochilosii*** Coiffait
12. Posterior margin of sternite VII laterally with combs of approximately 5 palisade setae (Fig. 30); ventral process of aedeagus in ventral view not distinctly dilated (Figs. 28 – 29). Southwestern Anatolia and Southern Sporades (Greece) (Map 3). ***M. caricus*** Fagel
- Posterior margin of sternite VII laterally with combs of usually 2 – 4 palisade setae; ventral process of aedeagus in ventral view distinctly dilated. Central southern Anatolia. 13
13. Ventral process in ventral view apically of subtriangular shape (Figs. 32 – 33). Antakya (Map 5). ... ***M. seleucus*** Bordoni
- Ventral process in ventral view apically of subquadrate shape (Figs. 36 – 37). Mersin (Map 5). ***M. subquadratus*** sp. n.



Assing, Volker. 2001. "A revision of the Medon species of the Eastern Mediterranean and adjacent regions (Insecta: Coleoptera: Staphylinidae: Paederinae)." *Bonner zoologische Beiträge : Herausgeber: Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn* 52, 33–82.

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