

New and Little Known Species of the Planthopper Genus *Mycterodus* Spinola (Homoptera, Issidae) from the Eastern Mediterranean

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Abstract—Three new species of the genus *Mycterodus* Spinola are described: *M. phoenicicus* sp. n. from Lebanon and *M. syriacus* sp. n. from Syria, both belong to the subgenus *Aegaeum* Gnezdilov, and *M. marki* sp. n. from Turkey, belongs to the subgenus *Aconosimus* Dlabola. Figures of the described species and of the holotype of *M. anaticeps* Puton are given. *M. efesicus* Dlabola is for the first time recorded from Greece (Samos I.); *M. alatus* Logvinenko, *M. caucasicus* (Melichar), and *M. johannes* Gnezdilov & Drosopoulos are new to the fauna of Turkey.

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INTRODUCTION

The present paper includes the descriptions of three new species of the genus *Mycterodus* Spinola, *M. phoenicicus* sp. n. from Lebanon, *M. syriacus* sp. n. from Syria, and *M. marki* sp. n. from Turkey. This is the first record of the genus *Mycterodus* from Lebanon and the second record of the genus from Syria. According to the personal communication of Dr Hani Abdul-Nour *M. phoenicicus* sp. n. was collected on *Cedrus libani* A. Rich. Up till now from Syria only one species of the genus has been known, *M. anaticeps* Puton described from Akbés from a female (Puton, 1895), which differs well from *M. syriacus* sp. n. by its elongate coryphe (Figs. 4, 7). According to the structure of penis *M. phoenicicus* sp. n. and *M. syriacus* sp. n. belong to the subgenus *Aegaeum* Gnezdilov and *M. marki* sp. n. belongs to the subgenus *Aconosimus* Dlabola.

According to the original treatment of the subgenus *Aegaeum* Gnezdilov, 2003 (type species: *Hysterotermum lesbicum* Dlabola), the absence of ventral aedeagal hooks and the presence of long hook-shaped processes of phallobase were considered as diagnostic features of the subgenus (Gnezdilov, 2003). The actually mentioned hook-shaped processes of phallobase are ventral aedeagal hooks directed apically. Except for *M. lesbicum* (Dlabola, 1981) and *M. bicornutus* Dlabola, 1986 originally included in the subgenus, *M. torosicus* Dlabola, 1980, *M. hakkaricus* Dlabola, 1980, *M. capitatus* Dlabola, 1982, *M. tekneticus* Dlabola,

1982, and *M. spinicordatus* Dlabola, 1983 distributed in Turkey have a similar structure of the penis. Thus the subgenus *Aegaeum* is characterized by the presence of 1–2 pairs of ventral aedeagal hooks directed apically and dorsolateral phallobase lobes bearing rows of teeth.

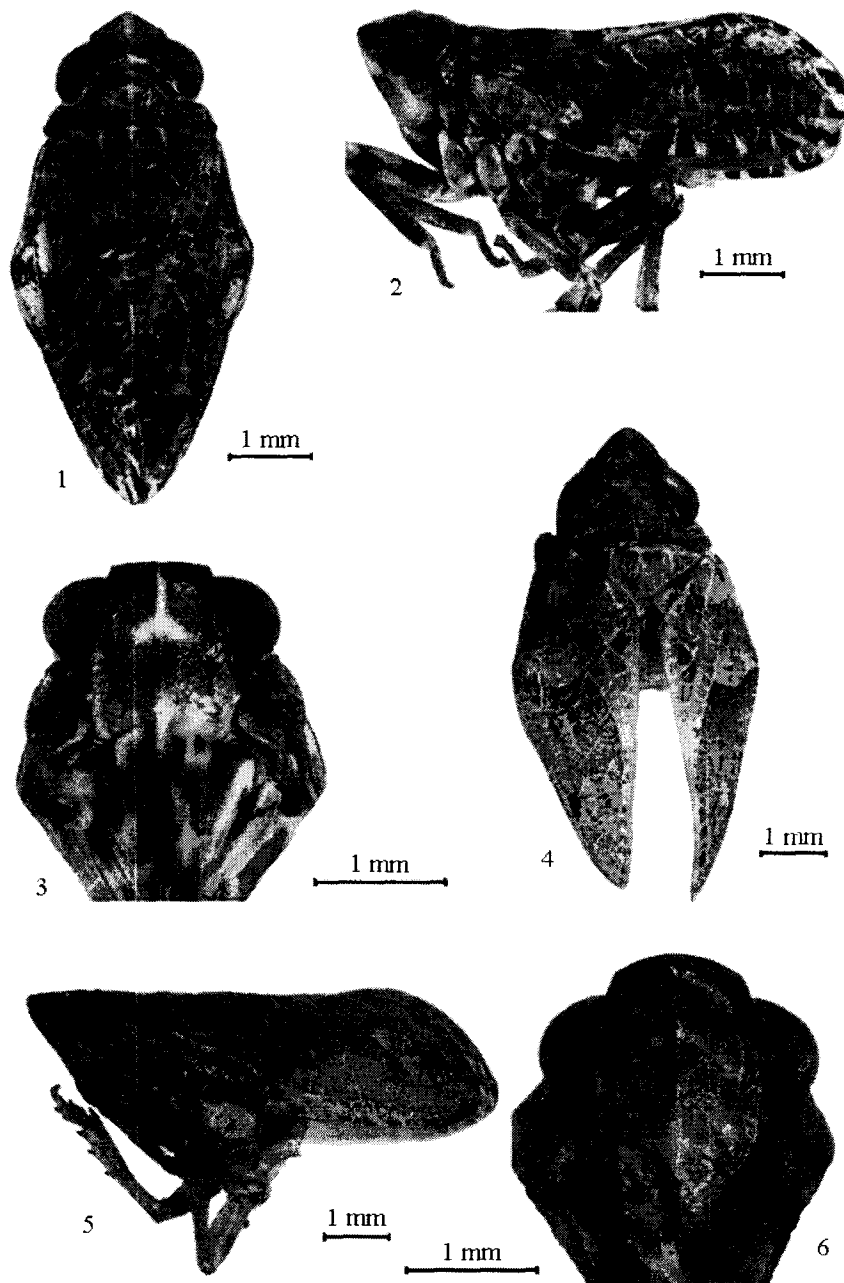
The current subgeneric division of the genus *Mycterodus* (Dlabola, 1997) requires elaboration with obligatory studying of male genitalia structure of all described species.

MATERIAL AND METHODS

Type specimens of new species described below are deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia (ZIN).

The material examined is deposited in the following museums: ZMAN, Universiteit van Amsterdam, Zoölogisch Museum, The Netherlands; OXUM, Oxford University Museum, UK; BMNH, The Natural History Museum, London, UK; MNHN, Muséum National d'Histoire Naturelle, Paris, France.

Male genitalia were macerated in KOH and figured in glycerin jelly using a light microscope Micmed-1. Photographs of the specimens were made using Leica MZ8 with JVC video camera KY F70B and Nikon video camera SMZ 1500, images are produced using the software Synoptics Automontage.



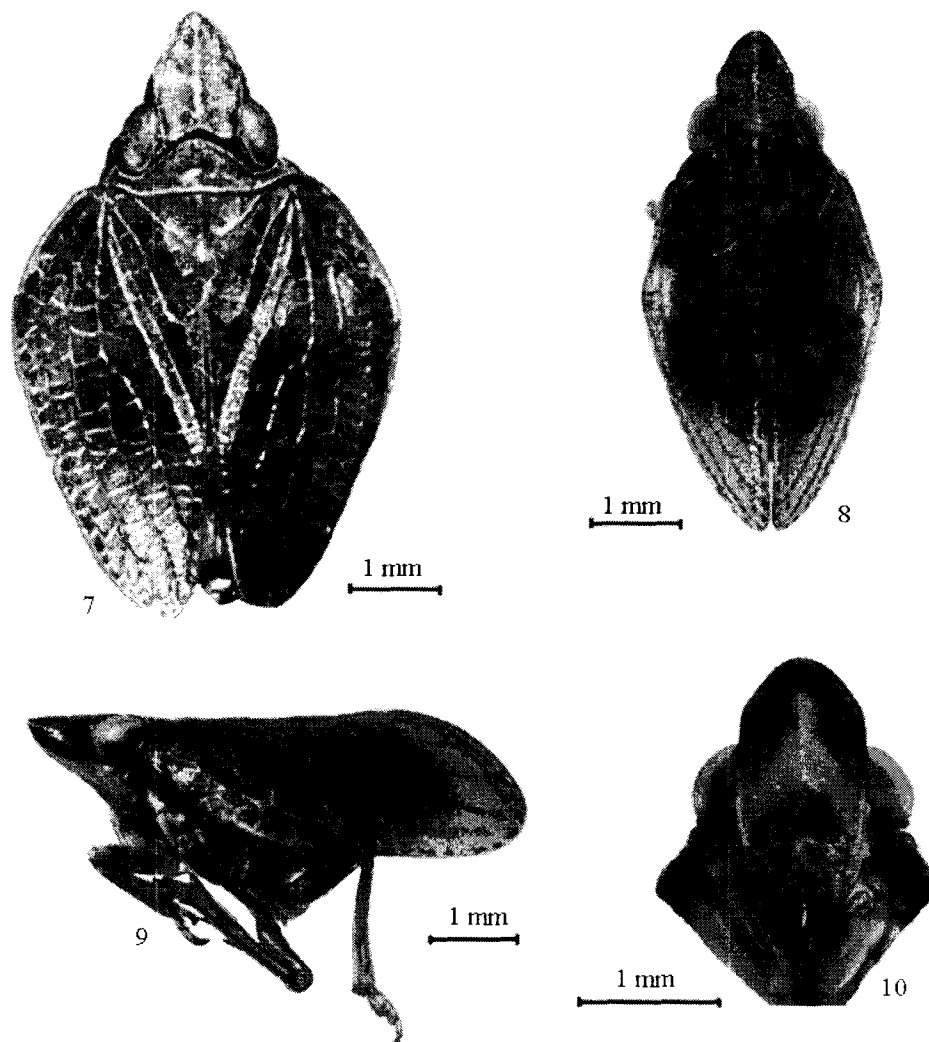
Figs. 1–6. *Mycterodus* spp.: (1, 2) *Mycterodus phoenicicus* sp. n., paratype, general view [(1) dorsal view; (2) lateral view]; (3) *M. phoenicicus* sp. n., paratype, metope; (4) *M. syriacus* sp. n., holotype, dorsal view; (5, 6) *Mycterodus syriacus* sp. n., holotype, general view [(5) lateral view; (6) metope].

TAXONOMY

Mycterodus (Aegaeum) phoenicicus Gnezdilov, sp. n.
(Figs. 1–3, 11–17)

Material (ZIN). Holotype: ♂, Lebanon, Ehden (forêt), 1600 m, 26.VII.2005, H. Abdul-Nour leg. Paratypes: 1 ♂, 3 ♀, same data.

Description (Figs. 1–3). Metope comparatively narrow, weakly enlarging to clypeus, with distinct median and sublateral keels (Fig. 3). Median keel expands to the base of postclypeus; sublateral keels, weak in lower part of metope, joined in its upper part below its upper margin. Coryphe weakly elongate, anterior margin rightly angularly convex, posterior margin acutely



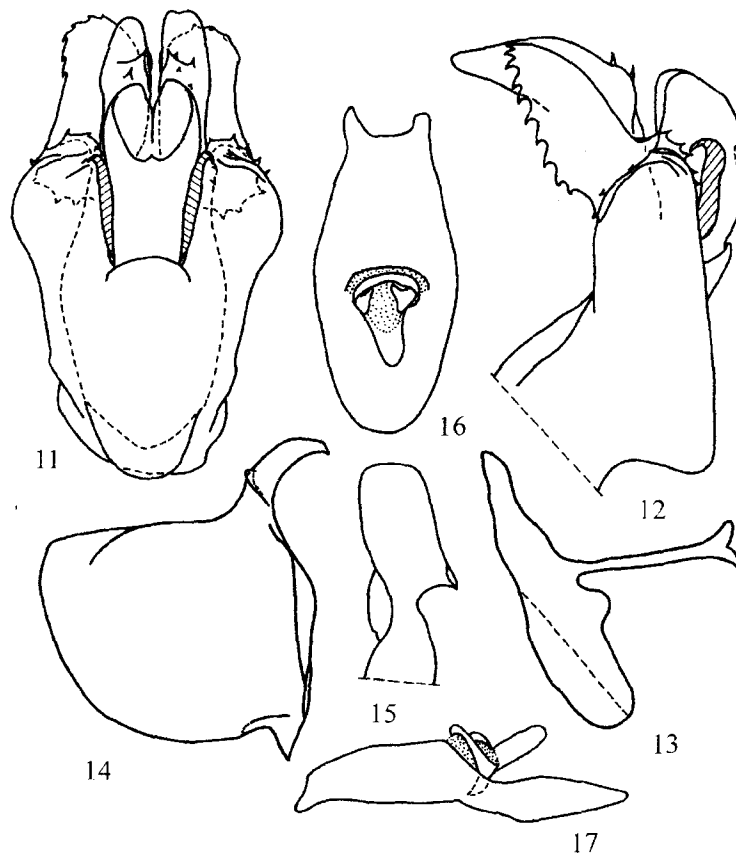
Figs. 7–10. (7, 8) *Mycterodus* spp., general view [(7) *M. anaticeps* Puton, holotype, dorsal view; (8) *M. marki* sp. n., paratype, dorsal view]; (9, 10) *M. marki* sp. n., paratype, general view [(9) lateral view; (10) metope].

angularly concave (Fig. 1). Pronotum without keels. Scutellum with lateral keels and median groove. Fore wings elongate, narrowing apically, with narrow hypocostal plate. $R\ 2\ M\ 3\ CuA\ 1$ (Fig. 2). Hind wings well developed, expand to abdominal apex. Hind tibia with 2 lateral spines. First metatarsomere with 2–4 + 1 intermediate spines apically. Hind margin of female sternum VII convex medially.

Coloration. General coloration pale grayish brown with fuzzy black spots on fore wings. Metope with V-shaped pale spot medially across median keel. Lower part of metope, base of postclypeus, and genae pale. Lateral parts of clypeus and apex of rostrum black. Hind wings dark brown. Abdominal tergites dark brown or black. Abdominal sternites pale yellowish

brown. Fore and middle trochanters pale. Spines of legs dark brown or black. Gonoplasts black.

Male genitalia (Figs. 11–17). Hind margin of pygofer weakly convex. Anal tube elongate, rounded apically, weakly narrowed basally and apically (dorsal view) (Figs. 16, 17). Anal column short (0.25 times as long as anal tube). Phallobase with large angular projection ventrally. Each dorsolateral phallobase lobe with row of large teeth in its upper part (Figs. 11, 12). Ventral phallobase lobe short. Apical aedeagal processes divided into 2 parts: one part bearing phallosoma, other part in shape of pair of elongate projections narrowing apically and bearing 3 teeth dorsally. Aedeagus with pair of short ventral hooks curved and directed apically. Connective with long “ladle”



Figs. 11–17. *Mycterodus phoenicicus* sp. n., holotype, male genitalia: (11) penis, ventral view; (12) penis, lateral view; (13) connective, lateral view; (14) style, lateral view; (15) capitulum of style, dorsal view; (16) anal tube, dorsal view; (17) anal tube, lateral view.

(Fig. 13). Style with almost straight hind margin and right caudo-dorsal angle (Fig. 14). Capitulum of style on short neck (lateral view), wide, almost rectangular, not narrowing apically (dorsal view) (Fig. 15). Apical tooth of style large, subapical tooth in shape of wide lobe.

Total length. Males: 5.5 mm, females: 6.0–6.1 mm.

Comparison. The species is closely related to *M. capitatus* Dlabola in the presence of divided apical aedeagal processes.

Mycterodus (Aegaeum) syriacus Gnezdilov, sp. n.
(Figs. 4–6, 18–23)

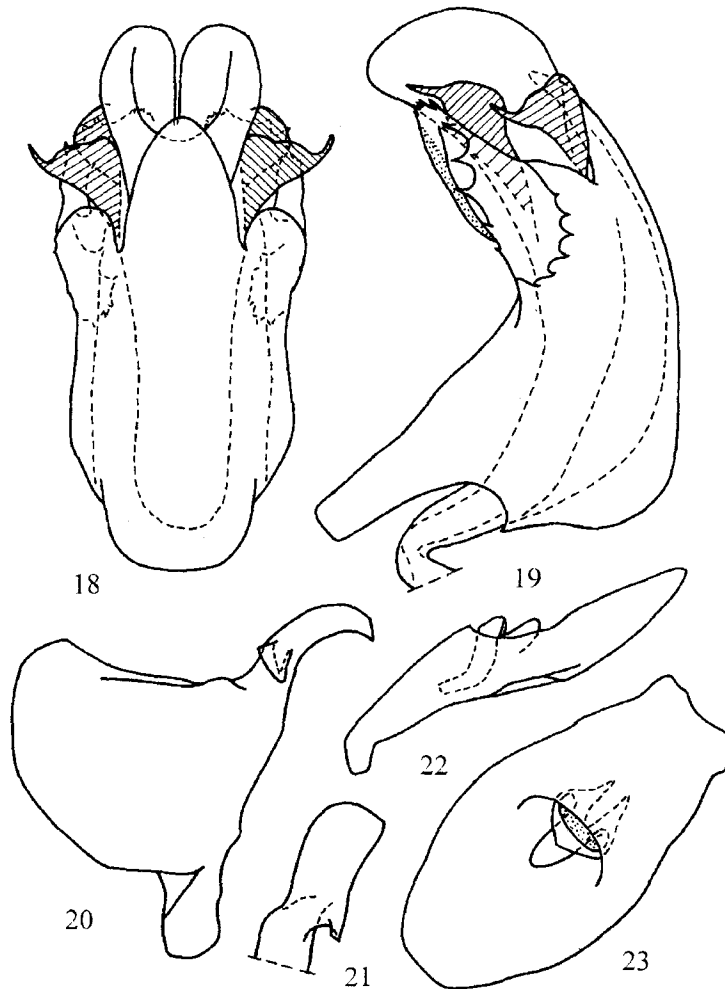
Material (ZIN). Holotype: ♂, Syria, Frunluq forest, N of Lattaquieh, near to Turkish border, 29.V.2004, H. Abdul-Nour leg.

Description (Figs. 4–6). Metope elongate, with median keel expanding to postclypeus and sublateral keels joined below its upper margin (Fig. 6). Coryphe

elongate, cross-striated; anterior margin acutely angular, posterior margin weakly concave (Fig. 4). Pronotum short, without keels. Scutellum with lateral keels. Fore wings elongate, with wide hypocostal plate. *R* 2 *M* 3 *CuA* 1, transverse veins well marked (Fig. 5). Hind wing narrow, oval. Hind tibia with 2 lateral spines. First metatarsomere with 3 + 1 intermediate spines apically.

Coloration. General coloration yellowish brown. Fore wings with fuzzy dark brown band medially. Spines of hind legs black.

Male genitalia (Figs. 18–23). Pygofer with weakly convex hind margin. Anal tube elongate, truncate apically, weakly narrowed basally and apically (dorsal view) (Figs. 22, 23). Anal column short (0.2 times as long as anal tube). Phallobase angularly convex ventrally (Fig. 19). Each dorsolateral phallobase lobe with two rows of large teeth in its upper part (Figs. 18, 19). Aedeagus with two pairs of ventral hooks enlarged before apices and directed apically. Apical aedeagal



Figs. 18–23. *Mycterodus syriacus* sp. n., holotype, male genitalia: (18) penis, ventral view; (19) penis, lateral view; (20) style, lateral view; (21) capitulum of style, dorsal view; (22) anal tube, lateral view; (23) anal tube, dorsal view.

processes enlarged apically. Ventral phallobase lobe long and wide. Style with weakly concave hind margin, caudo-dorsal angle obtuse (Fig. 20). Capitulum of style on short neck (in lateral view), wide, almost rectangular, not narrowing apically (dorsal view) (Fig. 21). Apical tooth of style large, subapical tooth in shape of wide lobe.

Total length 7.0 mm.

Comparison. According to the general structure of the penis, the species is closely related to *M. bicornutus* Dlabola, but differs in the presence of two pairs of ventral aedeagal hooks.

***Mycterodus (Aegaeum) capitatus* Dlabola, 1982**

Material. Turkey: 1 ♂, 1 ♀, Road 635 between Göltarla and Catallar, 36°31'35"N 30°00'39"E, 850 m,

mixed grasses, 10.V.2001, D. Mann & M. Barclay leg. (BMNH, OXUM); 1 ♂, 1 ♀, Antalya, Rte Cakilar-Saklikent, 1500–1800 m, 17.V.1991, H. Teunissen leg. (ZMAN).

Note. Dlabola (1982) missed in his figures (figs. 261–263) ventral aedeagal hooks directed apically. Apical aedeagal processes bifurcate apically.

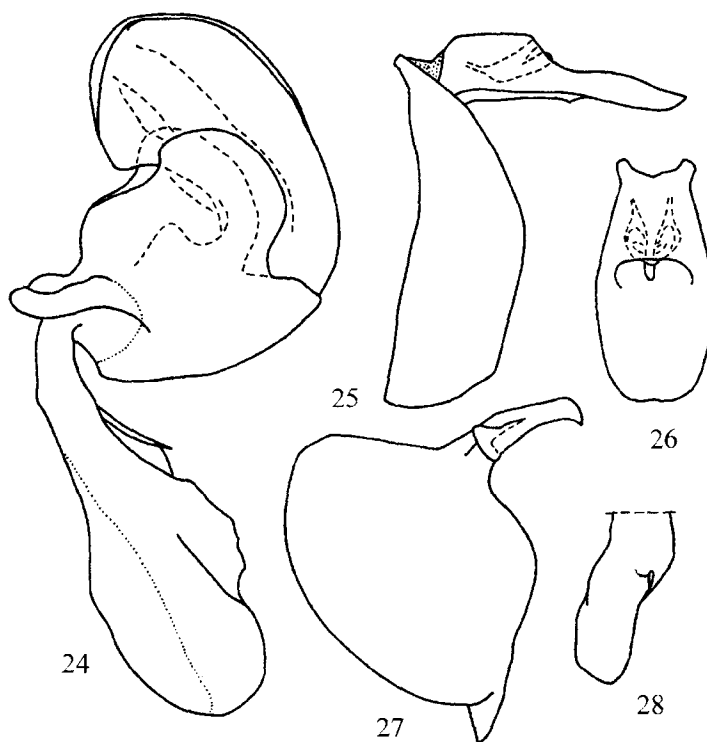
***Mycterodus (Mycterodus) anaticeps* Puton, 1895**
(Fig. 7)

Material (MNHN). Syria: ♀, holotype, Akbés.

Total length 7.5 mm.

***Mycterodus (Mycterodus) drosopoulosi* Dlabola, 1982**

Material (ZMAN, ZIN). Greece: 2 ♂, 1 ♀, "b. Athen.," "Aeq. 1960," C. et O. Vogt leg.



Figs. 24–28. *Mycterodus marki* sp. n., holotype, male genitalia: (24) penis and connective, lateral view; (25) pygofer and anal tube, lateral view; (26) anal tube, dorsal view; (27) style, lateral view; (28) capitulum of style, dorsal view.

Note. According to the structure of male genitalia, the species is closely related to *M. hamatus* Dlabola, 1971. Dlabola (1982) missed in his figure of the penis of *M. drosopoulovi* (fig. 248) a pair of long weakly sclerotized projections of the phallobase apex directed basally.

Mycterodus (Mycterodus) efesicus Dlabola, 1971

Material (ZMAN). Greece: 1 ♂, Samos, Moni Evangelistria, Kerkis Mt., 700 m, 9.VI.1990, J.P. Duffels leg.

Mycterodus (Semirodus) johannesi Gnezdilov & Drosopoulos, 2005

Material (MNHN). 1 ♂, [Turkey], Çanakkale Province, Gökçeada [I.], 24–25.V.1998, on Gramineae.

Mycterodus (Comporodus) caucasicus
(Melichar, 1906)

Material (ZIN). Turkey, Artvin Province, Altıparmak: 1 ♂, 15 km NNE Yusufeli, 12.VI.1997; 1 ♂, 25 km NNW Yusufeli, 12.VI.1997, M.G. Volkovitsh leg.

Mycterodus (Aconosimus) marki Gnezdilov, sp. n.
(Figs. 8–10, 24–28)

Material (ZIN). Holotype: ♂, Turkey, 18–30 km WNW of Bingöl, 9.VI.1999, M.G. Volkovitsh leg. Paratype: ♀, same data.

Description (Figs. 8–10). Metope elongate, with median keel expanding to postclypeus and sublateral keels joined before its upper margin (Fig. 10). Coryphe elongate, anterior margin strongly acutely angular, posterior margin weakly concave (Fig. 8). Pronotum short, without keels. Scutellum with lateral keels. Fore wings elongate, with narrow hypocostal plate. $R\ 2\ M\ 2\ CuA\ 1$, transverse veins weak (Fig. 9). Hind wing rudimentary, oval. Hind tibia with 2 lateral spines. First metatarsomere with 4 + 1 intermediate spines apically.

Coloration. Upper side dark brown, lower side pale brown. Metope with V-shaped pale band. Genae and upper margin of postclypeus pale. Fore wings with reddish longitudinal veins. Hind wings dark brown. Thoracic and abdominal tergites and spines of hind legs black. Legs pale brown, with dark brown stripes and spots.

Male genitalia (Figs. 24–28). Pygofer with convex hind margin (Fig. 25). Anal tube elongate, truncate apically, weakly narrowed basally and apically (dorsal view) (Fig. 26). Anal column short (0.17 times as long as anal tube). Phallobase wide and short (Fig. 24). Dorsolateral phallobase lobes semicircular, glib. Ventral phallobase lobe wide and short. Aedeagus without hooks. Apical aedeagal processes wide, enlarged apically. Connective massive. Style with straight hind margin, caudo-dorsal angle obtuse (Fig. 27). Capitulum of style on short neck, wide, almost rectangular, not narrowing apically (dorsal view) (Fig. 28). Apical tooth of style large, subapical tooth in shape of wide lobe.

Total length: 5.3 mm in male, 5.6 mm in female.

Etymology. The species is named after the collector, the well known coleopterologist Mark G. Volkovitch.

Comparison. The species is closely related to *M. kobachidzei* (Dlabola, 1958) and *M. azerbeidzhanicus* Dlabola, 1983, but distinguished by the wider phallobase and aedeagus and the long coryphe.

Mycterodus (Aconosimus) anatolicus Dlabola, 1981

Material. Turkey: 1 ♂, Akarca, 25 km WNW of Mersin, 750 m, 14.V.1959 (ZMAN); 1 ♂, Osmaniye, Nurdagi Gecidi, 1140 m, 4.VI.2001, M.G. Volkovitch leg. (ZIN).

Mycterodus (Aconosimus) alatus Logvinenko, 1968

Material (ZIN). Turkey: 1 ♂, 1 ♀, 8 km S Oltu, 10.VI.1997, B.A. Korotyaev leg.; Artvin Province: 1 ♂, 1 ♀, Yusufeli, 11.VI.1997, B.A. Korotyaev,

M.G. Volkovitch leg.; 1 ♂, Işhan, 15 km SE Yusufeli, 11.VI.1997; 1 ♂, 25 km NNW Yusufeli, 12.VI.1997, leg. M.G. Volkovitch.

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