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Two new species of the genus *Mulsanteus* GOZIS, 1875 from Turkey (Insecta: Coleoptera: Elateridae)

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ABSTRACT. Two new species of the genus *Mulsanteus* GOZIS, 1875 from Turkey are described and illustrated: *Mulsanteus adanensis* n. sp., and *M. kahramanensis* n. sp.

Key words: entomology, taxonomy, new species, Coleoptera, Elateridae, *Mulsanteus*, Turkey.

INTRODUCTION

Species of the genus *Mulsanteus* GOZIS, 1875 are distributed in the Palearctic Region, the Oriental Region, the Wallacea, and the Australian Region (Papuan Sub-region). The species of this genus from Southeast Asia have been recently studied by SCHIMMEL & TARNAWSKI (2007), and as a result of this study, 45 species are hitherto known from this region. Only three species are known so far from Turkey: *Mulsanteus guillebeaui* (MULSANT & GODART, 1853), *M. manuelae* PLATIA & GUDENZI, 1998, and *M. schaumii* (CANDÈZE, 1881).

Through Mr. R. DOBOSZ, the Upper Silesian Museum, Bytom, Poland, we recently received a large collection of Elateridae for study. This material has been collected in the past years in Turkey, and represents many rare and interesting species of the Elateridae family. Among this material we found two new species of the genus *Mulsanteus*, which we are describing and illustrating in this paper.

ABBREVIATIONS AND METHODS

ABBREVIATIONS

The following abbreviations are used in this study:

CSV	Coll. SCHIMMEL, Vinningen, Germany;
CTW	Coll. TARNAWSKI, Wrocław, Poland;
USMB	Upper Silesian Museum, Bytom, Poland.

METHODS

The examination of the collected material has been executed using a binocular ZEISS, Stemi 2000-Can ocular micrometer. Photographs were taken with a NIKON E4500 camera with an adaptor TV2/3rdC 0.63x to the binocular.

Body length of the specimens has been measured from the apical margin of frons up to the apex of elytra, and body width along basal angles of pronotum, using the micron insert of the binocular.

The examined specimens have been fixed on white pasteboards. The genitalia of the males have been pulled out of the abdomen, cleaned and fixed next to the body of the specimen by using water-soluble transparent glue.

Types of new species have been marked with red labels indicating the type status (Holotype or Paratype), and the names of the species and of the author.

DESCRIPTION OF NEW SPECIES

***Mulsanteus adanensis* n. sp.**

(Figs. 1-2)

TYPE LOCATION

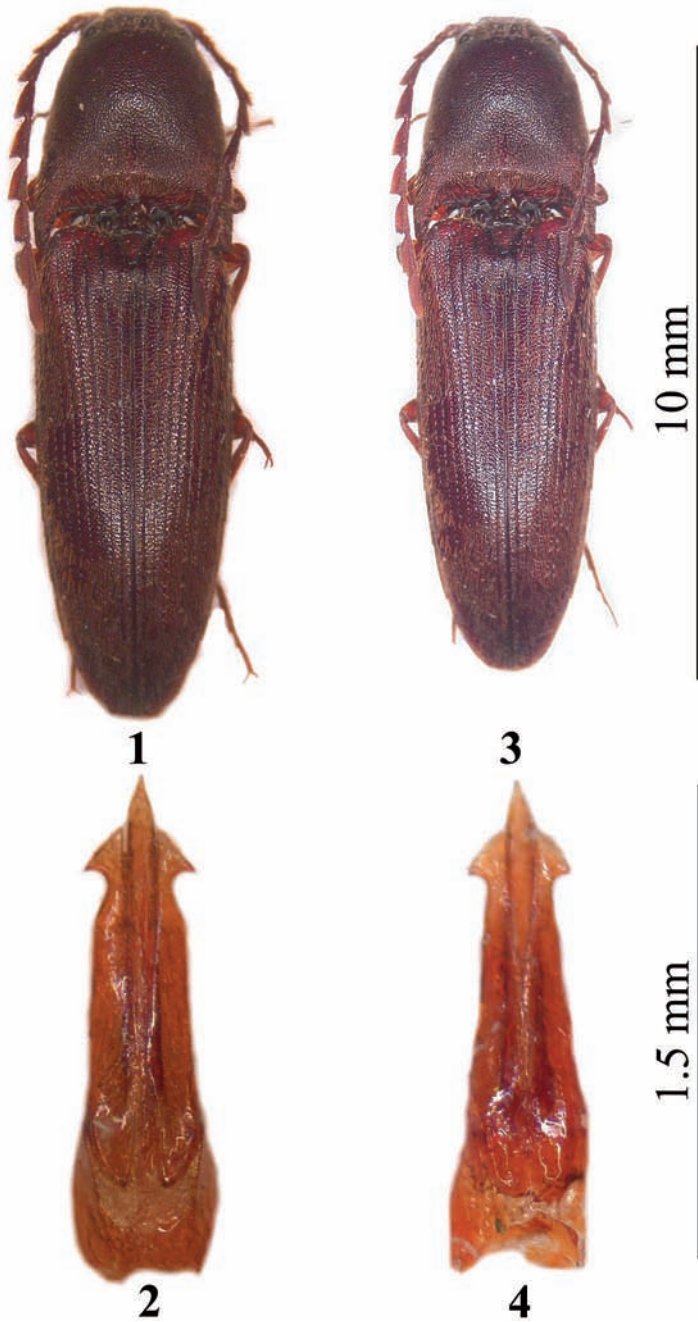
Turkey: Province Adana.

TYPE MATERIAL

Holotypus ♂ (USMB): Turkey, Province Adana, Hasanbeyli village, 980 m, 18.-19 VII 2006, leg. R. DOBOSZ. Paratypes 5 ♂♂ (USMB, CSV): Same data as Holotype, 4 spm.; Turkey, Province İçel, surrounding of Daripinari, 607 m, 24 VII 2004, leg. R. DOBOSZ.

DIAGNOSIS

Holotypus ♂: Elongate, wedge-shaped, moderately raised and shiny species; length: 11.5 mm, width: 3.2 mm; reddish-brown, mesothorax blackish-brown, apices of the last antennomere yellow; pubescence light-yellowish, long, semi-erect, bristly and dense, on pronotum declined to basis and to lateral sides, on elytra declined to apex; apices of posterior angles of pronotum with a tuft of longer and protruding bristles; pubescence of antenna with conspicuously long and protruding hairs.



1–2. *Mulsanteus adanensis* n. sp.: 1 – habitus, 2 – aedeagus; 3–4. *Mulsanteus kahramanensis* n. sp.:
3 – habitus, 4 – aedeagus

DESCRIPTION

Head with dense and umbilicate punctures, interstices reduced to small and shiny wrinkles, pubescence short and declined to apex; head declined from centre to apex, frons slightly raised above the base of antenna, boundary completely edged; eyes prominent and spherical, together approximately half of the width of the head; antenna long, outreaching the posterior angles of pronotum by the length of the last three antennomeres; second antennomere globular, very short, as long as wide, and slightly extended at apex; third antennomere of the same length, but semi-globular, truncate at apex, and both combined are conspicuously shorter than fourth and each of the following antennomeres; the latter serrate, with obtuse-angled lateral apices; last antennomere oval, sub-apically bevelled.

Pronotum sub-trapezoidal, along median line slightly longer than wide at the posterior angles (length/width ratio 1.02:1.00), prominently and regularly raised at centre, arcuate laterally, and with a relatively prominent slope posteriorly; posterior angles of pronotum very slightly divergent, and with a prominently raised carina, which is reaching up to basal fifth. Apices truncate, and bent downwards (best visible from lateral view); pronotum without any trace of furrow or mould; puncture of pronotum very dense, coarse, umbilicate, regular rounded to drop-forming, with interstices reduced to small and shiny wrinkles.

Scutellum cuneate, slightly convex at base, laterally straight, and acute at apex; surface slightly raised, and edged at basis, punctures dense, fine and umbilicate; pubescence dense, fine, and just visible, declined from basis to apex.

Elytra sub-parallel, elongate and wedge-shaped, behind middle narrowed to apex. Apex curved, without inner tooth. Base of elytra slightly smaller than that of pronotum and slightly depressed at scutellum, margins raised, shoulders prominent (winged species). Striae of elytra covered with fine and dense, simple puncture, interstices of striae finely punctured, shiny, and flat, not raised. Pubescence short, bristly, and declined to apex.

Pro-, meso- and metathorax with dense and rugose puncturation, interstices of punctures raised and shiny. Pubescence short and decumbent.

Legs elongate, moderately long and thin, tarsomeres up to claws of decreasing length, ventrally with hardly visible, fine pubescence, and fine upholstery, tibia covered with longer and protruding bristles.

Aedeagus with a sub-parallel, apically slightly narrowed and bevelled, the paramere noticeably extending median lobe; parameres cuneiform, with prominent, hook-like lateral edge, and long apical hairs.

Females are unknown.

DIFFERENTIAL DIAGNOSIS

M. adanensis is closely allied to *M. kalabzai*, but may be easily distinguished from this species by the larger size, by larger antennae that outreach the posterior angles of pronotum by the length of the last three antennomeres; by the dense puncturation of pronotum and head, and by the form of aedeagus.

ETYMOLOGY

Named after the type locality.

DISTRIBUTION

Turkey: Provinces Adana and İçel.

***Mulsanteus kahramanensis* n. sp.**

(Figs. 3-4)

TYPE LOCATION

Turkey: Province Kahraman Maras.

TYPE MATERIAL

Holotypus ♂ (USMB): Turkey, Province Kahraman Maras, 50 km south of Göksun, 26 VII 2006, 750 m, leg. R. DOBOSZ. Paratype ♂ (CSV): Turkey: Province Adıyaman, Cesme Pension ad Lucem, Nemrut Dağı N.P., 1390 m, 27-28 VII 2004, leg. R. DOBOSZ.

DIAGNOSIS

Holotypus ♂: Elongate, wedge-shaped, raised, and moderately shiny species. Length: 10.7 mm, width: 2.8 mm. Reddish-brown, mesothorax blackish-brown, apices and lateral sides of the last five antennomeres yellow; pubescence light-yellowish, long, semi-erect, bristly and dense, on pronotum declined to basis and to lateral sides, on elytra declined to apex; apices of posterior angles of pronotum with a tuft of longer and protruding bristles; pubescence of antenna with conspicuously long and protruding hairs.

DESCRIPTION

Head with dense and umbilicate punctures, interstices 1.5-1x their diameter, pubescence short and declined to apex; head declined from centre to apex, frons slightly raised above the base of antenna, boundary completely edged; eyes prominent and spherical, together approximately half of the width of the head; antenna long, outreaching the posterior angles of pronotum by the length of the last two antennomeres; second antennomere globular, very short, as long as wide, and slightly extended at apex; third antennomere of the same length, but semi-globular, truncate at apex, and both combined are conspicuously shorter than fourth and each of the following antennomeres; the latter serrate, with obtuse-angled lateral apices; last antennomere oval, sub-apically bevelled.

Pronotum sub-trapezoidal, along median line slightly longer than wide at the posterior angles (length/width ratio 1.03:1.00), prominently and regularly raised at centre, arcuate laterally, and with a relatively prominent slope posteriorly; posterior angles of pronotum slightly divergent, and with a prominently raised carina, which reaches up to basal fifth, apices truncate, and bent downwards (best visible from lateral view); pronotum without any trace of furrow or mould; puncturation of pronotum

dense, coarse, umbilicate, regularly rounded to drop-shaped, with interstices once to twice their diameter.

Scutellum cuneate, slightly convex at base, laterally straight, and acute at apex; surface slightly raised, and edged at basis, puncture dense, fine and simple; pubescence dense, fine, and just visible, declined from basis to apex.

Elytra sub-parallel, elongate and wedge-shaped, behind middle narrowed to apex. Apex curved, without inner tooth. Base of elytra slightly smaller than that of pronotum and slightly depressed at scutellum, margins raised, shoulders prominent (winged species). Striae of elytra covered with fine and dense, simple punctures, interstices of striae finely punctured, shiny, and flat, not raised. Pubescence short, bristly, and declined to apex.

Pro-, meso- and metathorax with dense and rugose puncturation, interstices of points raised and shiny. Pubescence short and adjacent.

Legs elongate, moderately long and thin, tarsomeres up to claws of decreasing length, ventrally with hardly visible, fine pubescence, and fine upholstery, tibia covered with longer and protruding bristles.

Aedeagus with a sub-parallel, apically slightly narrowed and bevelled, the paramere noticeably extending median lobe; apical lobe of parameres crescent-shaped, with prominent, hook-like lateral edge, and long apical hairs.

Females are unknown.

DIFFERENTIAL DIAGNOSIS

M. kahramanensis is closely allied to *M. schaumi*, but may be easily distinguished from this species by the sub-trapezoidal form, and the more sparse puncturation of pronotum, by the shorter antennae, which are outreaching the posterior angles of pronotum by the length of the last two antennomeres, and by the form of aedeagus.

ETYMOLOGY

Named after the type location.

DISTRIBUTION

Turkey: Provinces Kahraman Maras and Adiaman.

KEY TO SPECIES OF THE GENUS *MULSANTEUS* FROM TURKEY AND IRAN

(*M. kalabzai* MERTLIK & DUŠÁNEK, 2006 which has been described from Iran, is included in this key as there is a possibility that this species will be found in Turkey as well)

1. Pronotum sub-trapezoidal, narrowed sub-basally, apices divergent 2.
- . Pronotum trapezoidal, straight sub-basally, apices not divergent 5.
2. Antennae outreaching the posterior angles of pronotum for the length of the last three antennomeres 3.
- . Antennae outreaching the posterior angles of pronotum for the length of the last two antennomeres 4.

3. Antennomeres covered with short and bristly hairs
 *M. schaumi* (CANDÈZE, 1881)
 – Antennomeres covered with long protruding hairs *M. adanensis* n. sp.
4. Fourth to tenth antennomere serrate, with obtuse-angled lateral apices
 *M. kahramanensis* n. sp.
 – Fourth to tenth antennomere serrate, with acute-angled lateral apices
 *M. kalabzai* MERTLIK & DUŠÁNEK, 2006
5. Second antennomere clearly longer than third antennomere
 *M. guillebeaui* (MULSANT & GODART, 1853)
 – Second and third antennomere equal in length
 *M. manuelae* PLATIA & GUDENZI, 1998

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