

Order Coleoptera, family Helophoridae

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INTRODUCTION

The Helophoridae is a relatively small hydrophiloid family with ca. 190 known species classified into a single genus, *Helophorus* Fabricius, 1775. Adults of the genus are easily recognizable by the elongate body and five longitudinal furrows on the pronotum. The majority of species occur mostly in Palaearctic and Nearctic regions and only a few species are known from the Afrotropical and Oriental regions (Hansen, 1999; Short & Hebauer, 2006). Adult beetles are saprophagous and usually inhabit shallow standing water bodies, only a few species are terrestrial. In contrast, larvae are terrestrial, living in moist habitats near water, preying on various small invertebrates. A few species have herbivorous larvae feeding on various Brassicaceae or Poaceae (Angus, 1992). The taxonomy, larval morphology, cytogenetics and biology of the Palearctic species was treated in great detail in papers by Robert B. Angus and the information concerning the west-Palaearctic species was summarized by Angus (1992).

Two species, *Helophorus angustatus* Motschulsky, 1890, and *H. mervensis* Semenov, 1900, were recorded from the Arabian Peninsula so far, although many more species occur in adjacent areas (Hebauer, 1997). The first of the mentioned species was collected also in the United Arab Emirates in the survey conducted by Antonius van Harten. These records are summarized in this paper, and habitus and genitalia photos of the species are provided.

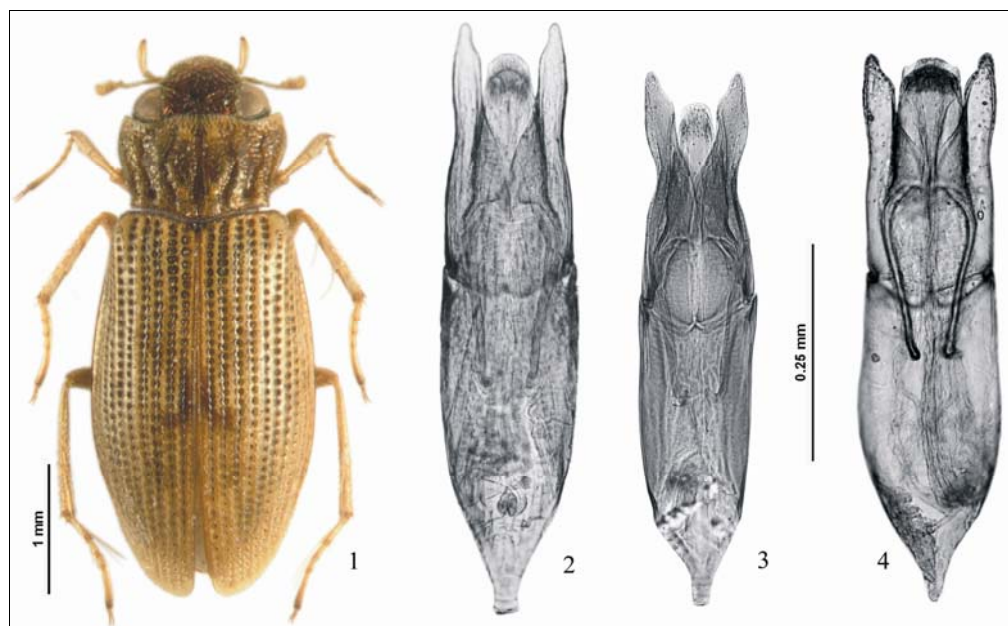
MATERIALS AND METHODS

A portion of the specimens examined were dissected, male genitalia were cleared in lactic acid and placed on a plastic card below the beetle in water-soluble dimethyl hydantoin formaldehyde resin (DMHF). The photographs of male genitalia were taken using Nikon TS100 light microscope, habitus photo using Olympus Camedia C-5060 camera attached to Olympus SZX9 binocular microscope. The specimens from the United Arab Emirates listed below were deposited in the National Museum, Praha, Czech Republic (NMPC, M. Fikáček) and United Arab Emirates Invertebrate Collection (UAEIC). They were compared with material from Iran housed in NMPC and identified by R. B. Angus (London).

SYSTEMATIC ACCOUNT

Helophorus (Rhopalhelophorus) angustatus Motschulsky, 1890 Plates 1–4
Material examined: Fujairah, 1♂, 20–27.v.2006, light trap, leg. A. van Harten. Mahafiz env., SSW of ad-Dhaid, 1♂, 1 ex., 24–30.v.2006, light trap, leg. A. van Harten. Sharjah-Khor Kalba, near tunnel, 24–30.v.2006, 1 ex., light trap, leg. A. van Harten. Wadi Bih dam, 1♂, 2 ex., 7–13.v.2007, light trap, leg. A. van Harten.

Differential diagnosis: The species is easily recognizable by combination of elongate body and characteristic, posteriorly very distinctly narrowed pronotum. In addition, the antennae have only 8 antennomeres, all tibiae and tarsi bear very distinct fringe of long natatory hairs and apical, slightly explanate portion of elytra usually bears very distinct small denticles on the margin. Aedeagus is narrow, with phallobase slightly longer than parameres; parameres of UAE specimens are weakly to very distinctly constricted at midlength and their inner margin



Plates 1–4. *Helophorus angustatus* Motschulsky. 1: Habitus of the specimen from the UAE (Mahafiz env.); 2: Aedeagus of male from the UAE (Sharjah-Khor Kalba); 3: Aedeagus of male from the UAE (near Mahafiz); 4: Aedeagus of male from Iran (Siahmakan Elil).

bears an angle in apical 0.15; median lobe is narrow, with basal sturts ca. as long as apical portion.

Variability: The species seems to be rather variable both in external morphology and the morphology of aedeagus. Aedeagophores of the specimens from the UAE examined differ very distinctly in the extent of the constriction of the parameres at their midlength; constriction is very weak in males from Sharjah x Khor Kalba and Wadi Bih dam, but very distinct in the male from Mahafiz (most probably because of a deformation in the latter specimen, R. Angus pers. comm.) (Plates 2–3). The aedeagophores of the specimens from Sharjah x Khor Kalba and Wadi Bih dam agree generally with the photograph of the aedeagus of the syntype of *H. angustatus* (only the apical portion of parameres is narrower in the syntype than in the UAE specimens, see Angus, 1969) (Plate 2). The aedeagus of the specimen from Iran examined (SW Iran, Siahmakan Elil, 17–18.iv.1977, Loc. no. 295, Expedition National Museum Praha, coll. NMPC, det. Angus) is shorter and wider, with slightly constricted parameres and a much wider median lobe (Plate 4). In this, the Iran specimen agrees with the photograph of the aedeagus of the holotype of *H. punctatosulcatus* Kuwert, 1892, published by Angus (1971).

Externally, the species shows rather large variability in size (length 3.0–6.2 mm, specimens from UAE examined reach 3.5–4.0 mm), ranging from smaller narrower specimens to rather robust, large ones. Large specimens from Iran (see previous paragraph for locality data) bear weakly subcostate alternate intervals of elytra and the denticles on elytral apex are reduced in these specimens.

Biology: Nothing is known about the biology of this species. As it bears long natatory setae on tibiae and tarsi, it is probably an aquatic species. Similarly as other *Helophorus* species, it is attracted at light.

Distribution: The species is distributed in the Near East (Armenia, Iran, Iraq), Egypt, northern part of the Arabian Peninsula and central Asia (Kazakhstan, Kyrgyzstan), where it reaches the Syr Darya river (Angus, 1992; Hebauer, 1997; Hansen, 1999).

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