



## A new species of the subgenus *Deudora* of the genus *Sphenoptera* (Coleoptera: Buprestidae) from the Eastern Mediterranean

## Новый вид из подрода *Deudora* рода *Sphenoptera* (Coleoptera: Buprestidae) из Восточного Средиземноморья

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**Abstract.** *Sphenoptera* (*Deudora*) *polaceki* sp. nov. from the Eastern Mediterranean (Bulgaria, Turkey and Greece) is described and compared with closely related species. *Sphenoptera* (*Deudora*) *tamerlani* Obenberger, 1929 is recorded for the first time from Tajikistan.

**Резюме.** *Sphenoptera* (*Deudora*) *polaceki* sp. nov. описан из Восточного Средиземноморья (Болгария, Турция, Греция); дано сравнение нового вида с близкими видами. *Sphenoptera* (*Deudora*) *tamerlani* Obenberger, 1929 впервые отмечен для Таджикистана.

**Key words:** systematics, Buprestidae, Chrysochroinae, Sphenopterini, new species, new record

**Ключевые слова:** систематика, Buprestidae, Chrysochroinae, Sphenopterini, новый вид, новая находка

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### Introduction

The subgenus *Deudora* Jakovlev, 1899 of the genus *Sphenoptera* Dejean, 1833 includes 62 species and one subspecies distributed in the southwestern Palaearctic region from the Mediterranean Basin to the Arabian Peninsula, Afghanistan and countries of Central Asia (Kalashian, 2016). During our studies on *Sphenoptera*, a new peculiar species of *Deudora* from the Eastern Mediterranean was revealed. A description of this species is provided below.

### Material and methods

Specimens were examined using a Micromed MC-2 Zoom and a MBS-10 stereomicroscopes,

and the measurements were made using an ocular micrometer. Photographs were taken using a Canon EOS 800D digital camera equipped with a Canon MP-E 65-mm f/2.8 1–5× or an Irix 150-mm f/2.8 macro lens and attached to a Stack Shot Macro Rail package (Cognisys Inc.). Helicon Focus Pro software was used for stacking the photos.

Label data are cited verbatim; the following abbreviations are used: [h] – handwritten, [p] – printed; data of different labels are separated by a slash (/). If necessary, current geographical names are given in square brackets ([...]), as well as some other data. Author's labels with a designation of the type status (holotype, paratype) are not cited in the text.

The following abbreviations are used in the text: BMNH – the Natural History Museum

(British Museum, Natural History), London, the United Kingdom; MKCY – private collection of Mark Kalashian, Yerevan, Armenia; MNCA – private collection of Manfred Niehuis, Albersweiler, Germany; NMPC – Národní Muzeum v Praze, Prague, Czech Republic; VKCB – private collection of Vítězslav Kubáň, Šlapanice near Brno, Czech Republic.

## Taxonomic part

### Order Coleoptera

### Family Buprestidae

### Subfamily Chrysochroinae

### Tribe Sphenopterini

Genus *Sphenoptera* Dejean, 1833

Subgenus *Deudora* Jakovlev, 1899

### *Sphenoptera (Deudora) polaceki* sp. nov.

(Figs 1, 2, 6, 7)

*Holotype*. Male, “[Turkey, Chanakkale Prov.] Besika [Beşik] Bay [p] / G.C. Champion Coll. B.M. 1927-409 [p]” (BMNH).

*Paratypes*. **Bulgaria**: 1 female, “Arkutino, 10 m [a.s.l.], 26.VI.1982 [h] / BULGARIA mer. or., Chasakijata, M. Kotštál lgt. / ex coll. K. Poláček (Vysoké Mýto, Czech Republic) [p]” (VKCB); 1 female, “BLR, 28.6.[19]81, Arkutino [p]” (MKCY). **Turkey**: 1 female, “[Edirne Prov.] Erikli, Kesan, 5.5.2013, leg. Wintzek/ *Sphenoptera (Deudora)* sp., det. M. Niehuis, 2014 [p]” (MNCA); 1 female, “GREECE, Peloponnes, Arcadia prov., VOVRVOURA (W env.), 37°19'38"N, 22°28'25"E, ca. 1050 m, 12–13.VI.2005, Kašpar Ludvik lgt. [p]” (VKCB).

**Description**. Body of moderate size, body length 9.4–10.3 mm, width 3.85–4.3 mm (in holotype, 10.3 and 4.3 mm, respectively), robust, 2.4–2.5 times as long as wide.

Coloration of dorsal surface copper-bronze to dark bronze, sometimes with distinct violet or purple reflection (possibly due to unknown method of fixation); coloration of ventral surface black. Dorsal surface distinctly microreticulate, matt; ventral surface not shagreened, rather shiny. Dorsal surface completely glabrous; ventral surface with short thin pubescence forming stripes along lateral margins.

Head as wide as or barely narrower than anterior margin of pronotum. Eyes moderately con-

vex, not protruding beyond head outline. Clypeus crescent-shaped, microreticulate, separated from frons by distinct suture. Frons moderately convex, medially flattened or very slightly depressed, without supraantennal keels, with rather irregular rough macropunctures being condensed anteriorly, sparser and finer posteriorly; micropunctuation distinct, dense, nearly regular. Vertex in male (holotype) 2.5 times and in females (paratypes) 2.15–2.35 times as wide as eye. Antennae in male (holotype) 1.85 times and in females (paratypes) 1.6–1.7 times as long as vertical diameter of eye, serrate starting from almost equilateral fifth antennomere; subsequent antennomeres distinctly transverse.

Pronotum 1.50–1.61 times as wide as long, widest near posterior angles; pronotum anteriorly rather strongly arcuately widened to approximately anterior third of pronotum, then more slightly widened and nearly parallel-sided posteriorly, up to somewhat sharp posterior angles. Anterior margin of pronotum distinctly bisinuate, outlined with distinct, entire groove; posterior margin bisinuate, with moderately wide subtransverse median lobe in front of scutellum. Lateral keels nearly straight, reaching approximately anterior one-fourth of pronotum, visible from above in posterior half or two-thirds. Disc convex, flattened along middle, with small shallow depression before median lobe. Surface distinctly and densely micropunctate; macropunctures irregular, moderately rough, denser along pronotal sides, sparser medially. Scutellum subtriangular, with widely rounded lateral angles.

Elytra 1.75–1.80 times as long as wide, widest just behind humeri, slightly and barely sinuately narrowed to approximately posterior two-fifth, then rather strongly narrowed and slightly convex to jointly irregularly arcuate apices; each elytron with short sharp sutural tooth. Elytra convex, with rather distinctly elevated odd intervals and flattened even ones, with rows of rough hyphen-shaped punctures; intervals with irregular moderately dense, rather small macropunctures and dense micropunctures.

Prosternal process flat, with few irregular deep punctures; at level of procoxae, punctures fused into short deep outlining wrinkles. Hypomera with coarse flat irregular punctures; other





1



2



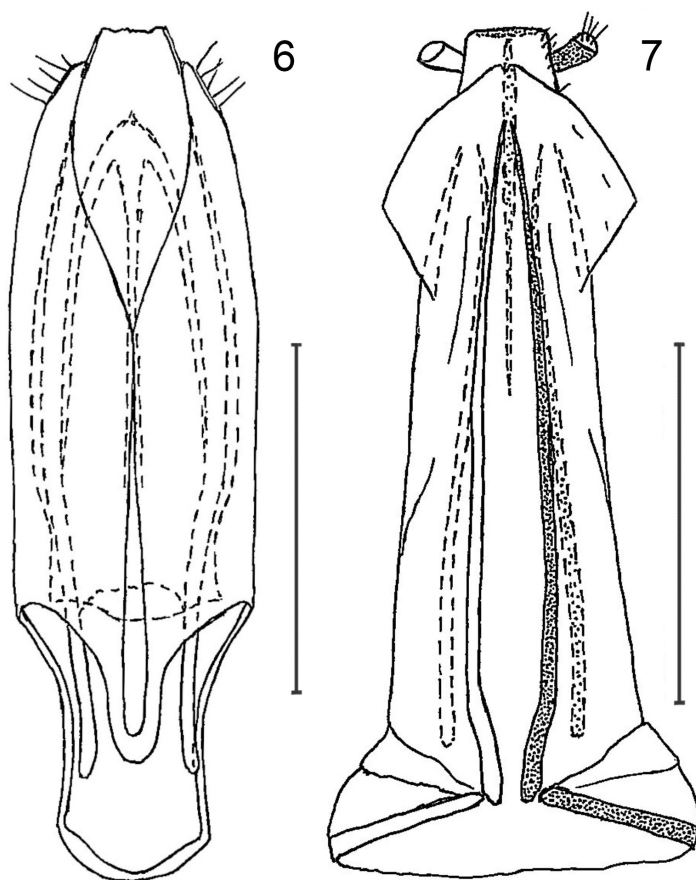
3



4



5



**Figs 6, 7.** *Sphenoptera (Deudora) polaceki* sp. nov. 6, aedeagus (holotype); 7, ovipositor (paratype from Bulgaria). Scale bars: 1 mm.

portions of ventral surface with deep round punctures being rougher and denser laterally where they forming stripes along sides of ventral surface, somewhat smoothed medially and backwards but remaining rather deep until anal ventrite.

Male genitalia as in Fig. 6.

Ovipositor as in Fig. 7.

**Sexual dimorphism.** In male (Fig. 1), pro- and mesotibiae strongly incurved; mesotibiae with subrectangular tooth on inner margin apically. In female (Fig. 2), protibiae moderately incurved; mesotibiae nearly straight, without tooth. Anal ventrite in male widely emarginate distally, with

rounded angles, in female rather narrowly rounded distally.

**Comparison.** The new species is close to the group of *Deudora* species with the pronotum anteriorly outlined with a complete groove and similar characters of sexual dimorphism, namely *S. (D.) simplex* Jakovlev, 1893 (Fig. 4), distributed from Transcaucasia (Armenia, Azerbaijan) and Iran through Turkey to the Balkans (Thracia) and the Aegean Islands, *S. (D.) tamerlani* Obenberger, 1929 (Fig. 3), from Uzbekistan and Tajikistan, and *S. (D.) kepelensis* Zykov et Alexeev, 1992 (Fig. 5), known from Turkmenistan, Tajikistan, Afghanistan, and Uzbekistan (Kalashian, 2016). All three species can be easily distinguished from *S. (D.) polaceki* sp. nov. by the slenderer body [in *S. (D.) simplex*, the body is 2.70–2.75 times as long as wide, in *S. (D.) tamerlani*, 2.60–2.70 times as long as wide, and in *S. (D.) kepelensis*, 2.65–2.70 times as long as wide; the elytra are 1.85–1.90 times as long as wide in all species] and by the shining dorsal surface of body with indistinct microreticulation and sparser micropunctation. The elytra in all three species are more even than in *S. (D.) polaceki* sp. nov., with odd intervals finely convex and with finer and shortly hyphen-shaped punctures of the rows.

**Distribution.** The new species is known so far from the Eastern Mediterranean area: Greece, most northwestern Turkey and the Black Sea coast of Bulgaria.

**Habitat.** In Bulgaria (Arkutino) and, probably, in Turkey, the adults were collected in distinct coastal sandy biotopes. The specimen from Greece originated from a clearing with sandy soil in arid light forest.

**Etymology.** The new species is dedicated to the blessed memory of Karel Poláček (1920–2017), Czech entomologist and pedagogue, the teacher of many young entomologists, including

**Figs 1–5.** *Sphenoptera (Deudora)* spp., habitus. 1, 2, *S. (D.) polaceki* sp. nov. (1, holotype, male; 2, paratype, female from Bulgaria); 3, *S. (D.) tamerlani* Obenberger, 1929 (male from Tajikistan); 4, *S. (D.) simplex* Jakovlev, 1893 (female, Armenia, Vayotsdzor Province, Gnishik Village, 11.V.1998, Kalashian leg., MKCY); 5, *S. (D.) kepelensis* Zykov et Alexeev, 1992 (paratype, female, Turkmenistan, Badkhyz Reserve, Kepele Valley, 12.V.1990, Ragozhinskiy leg., MKCY). Photos by T. Ghrejan.

one of the authors of the present paper (VK). He provided VK with the first specimen of this species for study and was the first to draw attention to its distinctness.

***Sphenoptera (Deudora) tamerlani***

Obenberger, 1929

(Fig. 3)

*Material examined.* **Tajikistan:** “Tajik SSR, Ramit – Hissar Mts., 26.iv.1981, Jelínek lgt.”, 1 male; “USSR, Tajik SSR, Hissar mts., 800 m, 30 km N of Dushambe [Dushanbe], CHOR-BEL [38°41'32.918"N, 68°47'23.639"E], 24.–25.6.1983, Vit. Kubáň leg.”, 6 males, 8 females (MKCY, VKCB).

**Notes.** This species was described from Uzbekistan (Samarkand). The lectotype is kept in NMPC (designated in Kalashian et al., 2005). Here, the species is reported from Tajikistan for the first time. According to the observations of VK, the beetles were collected in an overgrazed ruderal habitat on soft *Astragalus* sp. (Fabaceae).

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