



Contribution to the parasitoid fauna of Turkey with a new brachistine species, *Schizoprymnus (Schizoprymnus) cani* Koldaş sp. n. (Braconidae: Brachistinae: Hymenoptera)

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Abstract

In this study, we describe a new species, *Schizoprymnus (Schizoprymnus) cani* Koldaş sp.n., from Edirne, Turkey. The new species differs from *S. (S.) telengai* Tobias by having (1) antennae with 20–21 segments (antennae with 14–18 segments in *S. (S.) telengai*; (2) ovipositor sheath 1.17 times longer than metasoma (ovipositor sheath 0.5 times metasoma in *S. (S.) telengai*; (3) legs reddish yellow (legs are dark coloured in *S. (S.) telengai*). Diagnostic morphological characters and detailed illustrations are provided. The types of new species are deposited in the Entomological Museum of Trakya University, Edirne, Turkey (EMTU).

Keywords Braconidae · Brachistinae · *Schizoprymnus* · New species · Edirne · Turkey

Abbreviations

POL Postocellar line
OOL Ocular-ocellar line
OD Maximum diameter of lateral ocellus

Introduction

Brachistinae wasps (Hym.: Braconidae) are small parasitoids. They attack several species of Curculionidae and Apionidae (Coleoptera), which also include very important agricultural pests (Belokobylskij 1998; Belokobylskij et al. 2004). *Schizoprymnus* has the immovably joined three anterior metasomal tergites forming a carapace, the main diagnostic character of the tribe Triaspidini. This carapace ventrally is more or less strongly incurved in many species of *Schizoprymnus*, but less incurved in some species of this genus (Belokobylskij et al. 2004).

In the West Palaearctic, twelve genera of this subfamily have been recorded till now: *Aspigonus* Wesmael, 1835, *Calyptoides* Cockerell, 1921, *Chelostes* van Achterberg, 1990, *Cuniculobracon* van Achterberg & Falcó, 2001, *Dicyrtaspis* van Achterberg, 1980, *Diospilus* Haliday, 1833, *Eubazus* Nees, 1812, *Foersteria* Szépligeti, 1896, *Polydegmon* Förster, 1863, *Schizoprymnus* Förster, 1863, *Taphaeus* Wesmael, 1835, *Triaspis* Haliday, 1835 (Yu et al. 2016).

Schizoprymnus Förster is one of the largest genus of the subfamily Brachistinae. There are about 194 species of *Schizoprymnus* worldwide and 40 species are known from the West Palaearctic (Yu et al. 2016). Till present, 23 species have been recorded from Turkey (Koldaş and Çetin Erdoğan 2022).

Here we describe a new species of *Schizoprymnus*, *S. (S.) cani* Koldaş sp. n., from Edirne, European Turkey.

Materials and methods

Two specimens of the new species were collected on 20.06.1987 from a cultivated field of *Triticum aestivum* L. in Edirne-Yolüstü village, about 41 m altitude. The definitions, ratios and abbreviations in this article are based on Tobias (1986) Belokobylskij (1998); van Achterberg (1990) and Papp (1997, 1999). Morphological observations,

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pictures and measurements were made using a Leica M205 FA stereomicroscope. Geographical coordinates of the sites were added to the paper. Type specimens of the new species are deposited in the collections of the Entomological Museum of Trakya University, Edirne, Turkey (EMTU).

***Schizoprymnus (Schizoprymnus) cani* sp. n.**

Description. Female. Body length 2.4 mm; forewing length 2.2 mm.

Head (Fig. 1a–c, i). Antenna short and thick, 20–21 segmented. 1.2 times the total length of the head and mesosoma. First segment 2.6 times as long as its apical width, 0.9 times as long as second segment. The penultimate antennal segment approximately equal to its apical width; square; width of head in dorsal view 2.0 times of its length; head behind eyes narrowed; length of eye 1.1 times as long as length of temple in dorsal view. Ocelli small; OOL = 1.3 POL; (OD: 4, POL: 8, OOL: 10); longitudinal diameter of eye 1.6 times longer than its transverse diameter in lateral view;

width of clypeus 1.8 times its median height; intertentorial area approximately equal to tentorio-ocular area; head bright, face superficially punctate, shiny, frons depressed medially.

Mesosoma (Fig. 1d, e). Mesosoma length 1.4 times its height in lateral view. Notauli distinct, its sculpture crenulate; precoxal sulcus broad, roughly punctate; scutellum bright, with sparse setae; propodeum rugose; lateral tubercles weakly developed; hind femur 3.6 times as long as its maximum width. Pterostigma 2.5 times as long as its maximum width, r vein arising from middle of pterostigma. 1-R1 slightly shorter than pterostigma; 2-R1 is shorter than half the length of the pterostigma. Vein cu-a of fore wing slightly postfurcal.

Metasoma (Fig. 1f–h). Length in dorsal view 1.5 times its middle width, oval; superficially punctate, with irregular rugae; apical edge with a slight depression in the middle; 2.5 times its height in the last third in lateral view; metasoma apically closed and weakly recurved, carapace largely open in ventral view; with postero-ventral

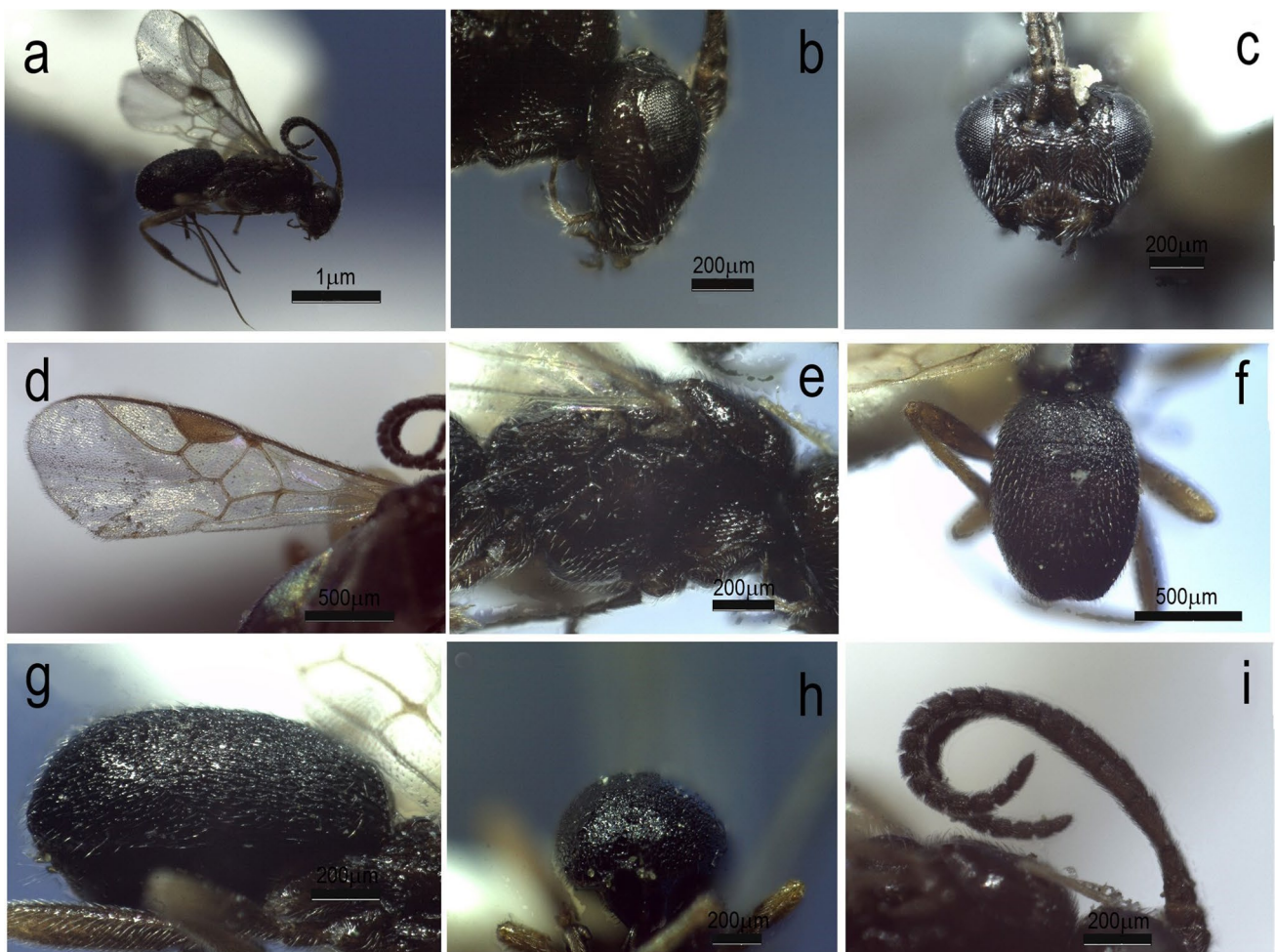


Fig. 1 a–i *Schizoprymnus (Schizoprymnus) cani* Koldaş sp. n., female: **a** general habitus, lateral view, **b** head, lateral view, **c** head, anterior view, **d** fore wing, **e** mesosoma, lateral view, **f** metasoma, dorsal view, **g** metasoma, lateral view, **h** metasoma apical view, **i** antenna



Fig. 2 a–c *Schizoprymnus (Schizoprymnus) telengai* Tobias, female: **a** general habitus, lateral view, **b** fore wing, **c** metasoma, dorsal view

groove and latero-ventrally with small teeth; ovipositor sheath long, 1.17 times the length of metasoma.

Colour. Brownish black, metasoma black, wing membrane infuscated; parastigma and pterostigma, veins brownish yellow; legs reddish yellow.

Material examined. Holotype – female, Turkey, “TR, Edirne-Yolüstü Köyü, 20.VI.1987, 41°47’48 N–26°33’26E, (50 m). Paratype – 1♀, same data as holotype (EMTU).

Etymology. The species is dedicated to Can, son of Tülin Koldaş.

Discussion

The new species very closely resembles *Schizoprymnus (Schizoprymnus) telengai* Tobias, 1976 from which it may be distinguished by its morphological features: In *S. (S.) cani* sp. n. antenna 20–21 segmented (Fig. 1a, i); marginal cell slightly shorter than pterostigma (Fig. 1d); the suture between 2nd and 3rd tergites is distinct (Fig. 1f); ovipositor sheath is 1.17 times the length of the metasoma and 0.56 times fore wing; legs reddish yellow (Fig. 1a); body 2.4 mm. In *S. (S.) telengai*, antenna 14–18 segmented (Fig. 2a); marginal cell much shorter than pterostigma (Fig. 2b); suture between 2nd and 3rd tergites is generally weakly developed (Fig. 2c); length of the ovipositor sheath is 0.5 times metasoma and 0.27 times fore wing; legs are dark coloured (Fig. 2a); body 2.2–3.5 mm.

Conclusions

Brachistinae parasitoids play a key role in ecosystems. Surveying and identifying brachistine parasitoids is important not just for agronomy, but also for planning conservation of ecosystems. In this study, we described one

new species of *Schizoprymnus*, thus increasing the total number to 24 species in Turkey.

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Author contributions This manuscript is a part of the PhD thesis of the first author. Authors collected the material. TK identified the brachistine specimens. ÖÇE edited, revised, drafted and corrected manuscript. Both authors read and approved the final manuscript.

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Declarations

Ethical approval Not applicable.

Conflict of interest The authors declare that they have no conflict of interest disclosed in this work.

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