ISSN 1211-8788 *Acta Musei Moraviae, Scientiae biologicae* (Brno)
100(1): 115–121, 2015

Catopsimorphus (*Catopsimorphus*) *orszuliki* sp.nov. (Coleoptera: Leiodidae: Cholevinae) from Turkey

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Vávra J. Ch. 2015: *Catopsimorphus* (*Catopsimorphus*) *orszuliki* sp.nov. (Coleoptera: Leiodidae: Cholevinae) from Turkey. *Acta Musei Moraviae, Scientiae biologicae* (Brno) **100(1):** 115–121. – A new species of *Catopsimorphus* Aubé, 1850 (Coleoptera: Leiodidae: Cholevinae), *Catopsimorphus* (*C.*) *orszuliki* sp.nov., is described from Çevrimpinar in eastern Turkey. The new species is the largest known representative of the nominotypical subgenus, its total body size (more than 5 mm) nearly one-third larger than the largest known species to date. It also differs in the proportions of the antennomeres and in its elongate and apically narrowly-pointed male metatrochanter (small and rounded in most other species). All known specimens were found in a nest of *Messor* sp. (Hymenoptera: Formicidae).

Key words. Coleoptera, Leiodidae, Cholevinae, *Catopsimorphus* (*Catopsimorphus*), taxonomy, new species, Turkey, Palaearctic Region

Introduction

The genus *Catopsimorphus* Aubé, 1850 currently comprises 21 species classified in three subgenera: *Attiscura* Gozis, 1886, *Weiratherella* Jeannel, 1929 and *Catopsimorphus* Aubé, 1850 (Perreau 2004). To the subgenus *Attiscura* belong 5 species and to *Weiratherella* 7 species. The largest number of species (9) belong to the subgenus *Catopsimorphus*: *C.* (*C.*) *anatolicus* Giachino et Vailati, 2000, *C.* (*C.*) *cappadocianus* (Růžička, 1994), *C.* (*C.*) *cygneus* (Szymczakowski, 1970), *C.* (*C.*) *foreli* (Wasmann, 1894), *C.* (*C.*) *judaeus* Saulcy, 1865, *C.* (*C.*) *magnicollis* (Reitter, 1894), *C.* (*C.*) *marani* Roubal, 1936, *C.* (*C.*) *orientalis* Aubé, 1850 and *C.* (*C.*) *samaritanus* Saulcy, 1865.

All species of *Catopsimorphus* s. str. occur in the Mediterranean subregion, some of them in the Near East and Transcaucasia as well. They are associated with ants of the genus *Messor* Forel, 1890 (Hymenoptera: Formicidae), and their development very probably takes place in the nests of these ants. Adults are mostly found in such ants' nests (e.g. Jeannel 1936, Růžička 1994), although single specimens sometimes appear beyond them (e.g. Roubal 1936).

The current contribution describes a new species of *Catopsimorphus* s. str. from eastern Turkey, to date the largest representative of the genus *Catopsimorphus*.

Material and methods

Habitus photographs were taken with a Canon MP-E 65mm macro lens on a Canon 550D body. Multiple layers of focus were combined in Zerene Stacker 1.04 software

(Zerene Systems 2012; http://www.zerenesystems.com/cms/stacker) at the Faculty of Environmental Sciences of the Czech University of Life Sciences in Prague.

Body length is measured from the anterior margin of the clypeus to the tips of the elytra; width of head is taken as its maximum across the eyes; length of elytra is measured from the apex of the scutellum to the tips of the elytra.

Exact label data are cited for the type material. Author's remarks and addenda appear in square brackets, while separate label lines are indicated by a slash (/), separate labels by a double slash (//).

Type specimens of *Catopsimorphus* (*Catopsimorphus*) *orszuliki* are labelled with red labels and 'HOLOTYPUS, ALLOTYPUS [or] PARATYPUS ♂ [or] ♀ / *Catopsimorphus* (s. str.) / *orszuliki* sp. n. / Jiří Vávra des. 2014'.

Genitalia and abdominal segments were mounted in selected specimens in DMHF (Dimethyl Hydantoin-Formaldehyde) resin (a water-soluble medium), indicated [MD] in the text.

The type specimens are deposited in the following collections:

JRUC . . . . . Jan Růžička coll., Prague, Czech Republic
JVAC . . . . . Jiří Ch. Vávra coll., Ostrava, Czech Republic
KORC . . . . . Kamil Orszulik coll., Frýdek-Místek, Czech Republic
MMBC . . . . . Moravské zemské muzeum, Brno, Czech Republic (Jiří Kolibáč)
MNHN . . . . . Muséum National d'Histoire Naturelle, Paris, France (Azadeh Taghavian)
MPEC . . . . . Michel Perreau coll., Paris, France
NHMW . . . . . Naturhistorisches Museum, Wien, Austria (Harald Schilhammer)
NMPC . . . . . Národní muzeum, Prague, Czech Republic (Jiří Hájek)
PGIC . . . . . Pier Mauro Giachino coll., Torino, Italy
TMBC . . . . . Magyar Természettudományi Múzeum, Budapest, Hungary (Ottó Merkl)

The following abbreviations are used throughout the text: a.s.l. – above mean sea level; AT – allotype; env. – environs; HT – holotype; MD – mounted in Dimethyl Hydantoin-Formaldehyde (see above); PT – paratype; sv – spiculum ventrale.

Taxonomy

Catopsimorphus (*Catopsimorphus*) *orszuliki* sp.nov. (Figs 1–13)

Type locality. Turkey, Bingöl province, Çevrimpinar, 1300 m a.s.l., 38°55′56.55″N, 40°22′08.13″E.
Type material. Holotype: ♂ (JVAC), 'TR or., province Bingöl / CEVRIMPINAR, at 6.30 am / 17.5.2005, Bingöl env. / K. Orszulik leg., *Messor* sp. [white label, printed]'. Allotype: ♀ [MD] (JVAC), same data as holotype. Paratypes: 10 ♂♂, 4 ♀♀ (1 ♂, 1 ♀ [MD] in JRUC; 2 ♂♂ [1 ♂ MD], 2 ♀♀ [MD] in JVAC; 1 ♂ in KORC; 1 ♀ in MMBC; 1 ♂ in MNHN; 1 ♂ in MPEC; 1 ♂ in NHMW; 1 ♂ in NMPC; 1 ♂ in PGIC; 1 ♂ in TMBC), same data as holotype.

Description. Males. Body length 5.1–5.4 mm (holotype 5.4 mm). Body (Fig. 1) oval, large and flat, Winged. Head brown to black-brown; pronotum brown, mostly with blackish disc (in holotype and 6 paratypes). Elytra, legs and maxillary palpi light brown. Antennae brown, two basal antennomeres lighter. Pubescence light.

Antennae long (Fig. 3), from the third antennomere onwards dorsoventrally flattened, 1.3–1.4× (holotype 1.4×) longer than pronotum. Antennomeres, beginning at



Figs. 1–2. General habitus of *Catopsimorphus* (*Catopsimorphus*) *orszuliki* sp.nov. in dorsal view. 1 – male (HT, 5.4 mm); 2 – female (AT, 5.3 mm). Photographs by J. Růžička.

the narrowest (2) becoming wider up to the widest (10), antennomere 11 slightly narrower than the preceding one. Antennomeres 1–7 distinctly longer than wide, 8 feebly transverse, 9 and 10 as long as wide to slightly transverse, terminal (11) antennomere longer than 9 and 10 combined.

Head transverse, 1.4–1.5× (holotype 1.5×) wider than long. Surface very finely and sparsely punctate, punctures separated by a space equivalent to three diameters, interspaces with very fine indistinct microsculpture. Surface of head more lustrous than that of pronotum. Pubescence fine, short and recumbent. Eyes developed, small, not projecting from the outline of head.

Pronotum transverse, 1.6–1.8× (holotype 1.7×) wider than long and 1.8–2.0× (holotype 2.0×) wider than width of head. Basal margin weakly emarginated next to corners, posterior corners bluntly rectangular. Punctation of pronotum very fine and somewhat denser than on head. Microsculpture within punctation very fine but more

distinct than on head, pronotum thus appearing duller. Whole surface covered with fine, dense, short, and adherent pubescence.

Scutellum distinct, triangular, pubescent on whole surface, finely and densely granular-punctate.

Elytra ovate, flat, separately rounded apically, 1.2–1.3× (holotype 1.2×) longer than their combined width, 2.0–2.1× (holotype 2.1×) longer than pronotum and their maximum combined width equal to the maximum width of pronotum. Punctation of elytra dense and irregular, punctures coarse and rasp-like, much larger than those on head and pronotum, separated by 2–3 diameters. Interspaces smooth and lustrous. Pubescence over the entire surface semierect, somewhat longer and coarser than on pronotum; finer and recumbent setae only in inconspicuous longitudinal series of punctures. Sides of elytra explanate in 4/5 of their length, explanate border as wide as the first antennomere.

Protarsus slightly longer than protibia, with three dilated basal tarsomeres gradually narrowing distally. First protarsomere much wider than apical margin of protibia. Protibia straight, from base strongly dilated on its inner side, widest at its mid-length; inner margin with very fine, short setae in apical portion. Meso- and metatarsus simple, with tarsomeres not dilated, somewhat shorter than meso- and metatibia respectively. Mesotibia slightly curved, in basal portion slightly S-shaped; metatibia rectilinear. Both meso- and metatibia with numerous spines on outer margins. Mesotrochanter simple, oval, without tooth on lower margin. Metatrochanter (Fig. 7) projecting into a long, acute point.

Abdominal terga without impressions. Outer margin of sternite VIII broadly emarginate around midway (Fig. 9). Genital segment oval with prolonged and bluntly-pointed basal portion (Fig. 8). Aedeagus in dorsal view evenly narrowing in basal portion, parallel-sided in median portion and in apical portion strongly tapering into narrow but blunt point (Fig. 4), in lateral view regularly arcuate with slightly concave median portion (Fig. 6). Parameres distinctly exceeding apex of aedeagus (Fig. 4), in lateral view very broad (Fig. 5), widest in apical portion and regularly rounded apically, apex with two short setae.

Females. Body length 5.1–5.3 mm (allotype 5.3 mm). Body (Fig. 2) oval, large and flat, coloured as in males. Pronotum transverse, 1.7–1.8× (allotype 1.7×) wider than long and 1.8–1.9× (allotype 1.9×) wider than head.

Elytra 2.2–2.3× (allotype 2.2×) longer than pronotum. Tips of elytra sharper than in males. Punctation of elytra much finer than in males, only slightly larger than on pronotum. Punctation irregular, punctures separated by 3–4 diameters. Interspaces with fine, but distinct, microsculpture, dull. Pubescence of elytra more erect than in males, recumbent, seriate setae therefore more distinct. Longitudinal series of punctures on elytra more distinct, especially in central portions of elytra.

Protarsus simple, with non-dilated tarsomeres. Mesotibia very slightly and regularly curved for entire length.

Sternite VIII (Fig. 12) rounded on outer margin, with long and faintly tapering spiculum ventrale on inner margin (Figs. 11, 12), which is very slightly sclerotized apically. Tergites IX and X (Fig. 10) slightly sclerotized, except for apical portion of

tergite X and lateral margins of tergite IX. Tergite X pear-shaped with dilated apical portion and regularly rounded margin with 4 setae (Fig. 10). Stylus (Fig. 13) long, narrowing distally, with 4 long setae in apical portion.

Collecting circumstances. All specimens of the new species were collected in a nest of ants of the genus *Messor* Forel, 1890 (Hymenoptera: Formicidae) at 6:30 a.m. The ants' nest was under a stone in a light oak forest (*Quercus* spp.) at an elevation of *c*. 1300 m a.s.l.

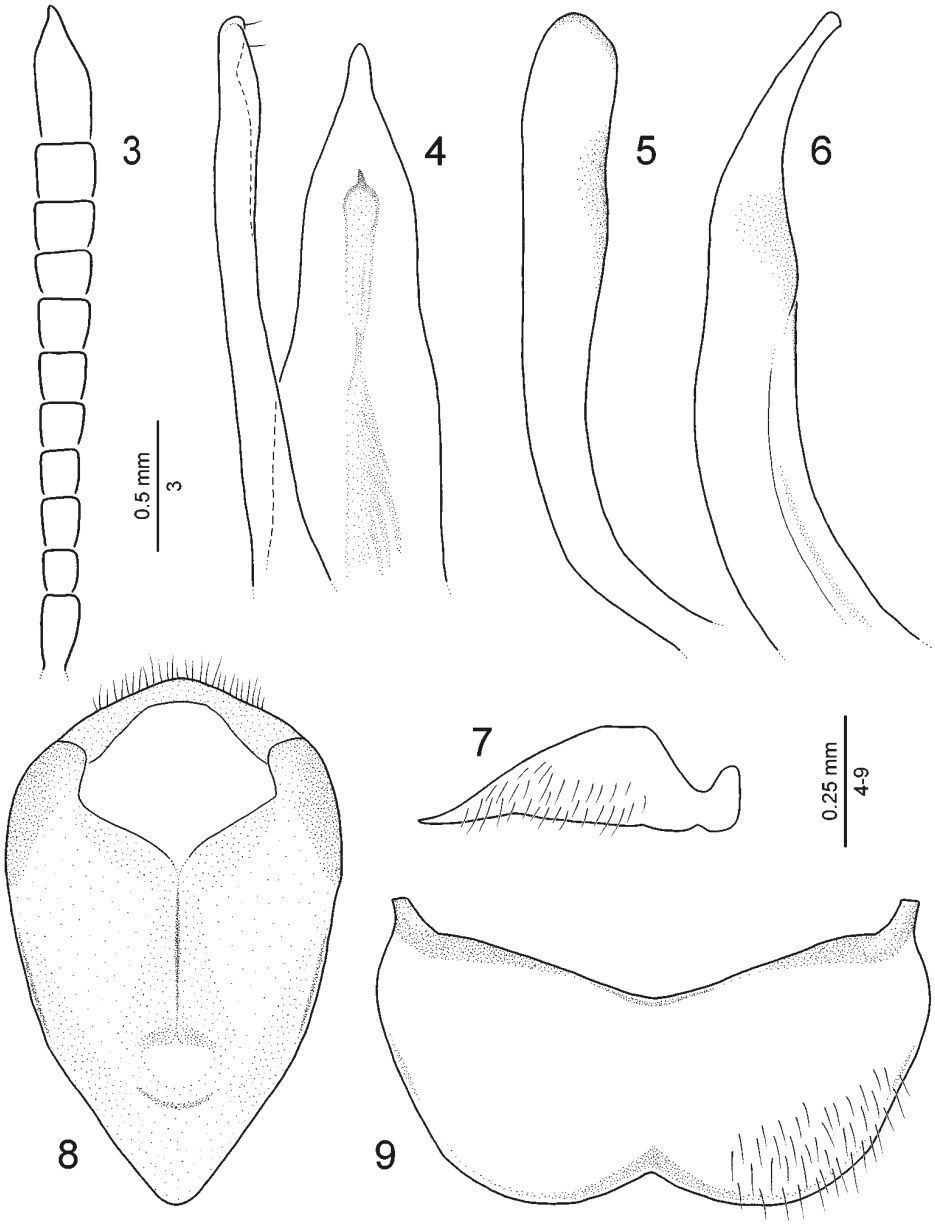
Distribution. Turkey (Bingöl province): Çevrimpinar.

Etymology. Dedicated my friend, Kamil Orszulik (Frýdek-Místek, Czech Republic), an excellent collector of beetles.

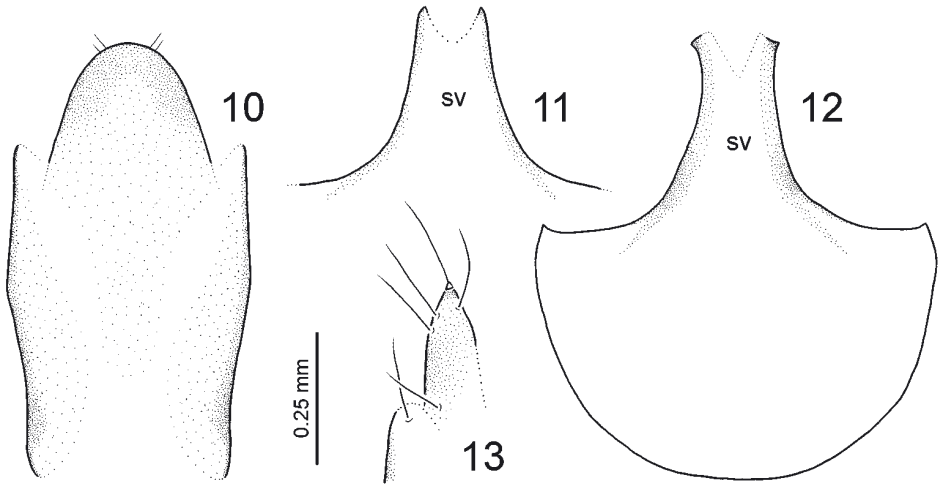
Differential diagnosis. The new species is placed in the subgenus *Catopsimorphus* s. str. in view of its ovate body shape, form of antennae, and the length and shape of the fore-tibiae, as well as the length of the meso- and metatarsi. It differs from members of the subgenus *Weiratherella* in the ovate shape of the elytra, shorter fore-tibiae and especially in the shape of the antennae, with antennomeres dorsoventrally flattened beginning at the third and becoming steadily wider from the second to the tenth antennomere; from the species of the subgenus *Attiscura* it differs in more elongate elytra, longer meso- and metatarsi and distinctly longer antennae with antennomeres IV–VI longer than wide. From all other species of the subgenus *Catopsimorphus* s. str., *C. orszuliki* sp.nov. differs in its size (body length 5.1–5.4 mm), the shape of metatrochanter (Fig. 7), projecting into a long, acute point, and in the shape of the antennomeres (Fig. 3); antennomeres I–VII are distinctly longer than wide and VIII is only slightly transverse. In all species of *Catopsimorphus* s. str. body length does not exceed 3 mm, except for *C.* (*C.*) *marani* Roubal, 1936, which reaches 3.5 mm and *C.* (*C.*) *orientalis* Aubé, 1850 which reaches 3.8 mm at most. In the species *C.* (*C.*) *cappadocianus* (Růžička, 1994), *C.* (*C.*) *cygneus* (Szymczakowski, 1970), *C.* (*C.*) *foreli* (Wasmann, 1894), *C.* (*C.*) *judaeus* Saulcy, 1865, *C.* (*C.*) *magnicollis* (Reitter, 1894) and *C.* (*C.*) *samaritanus* Saulcy, 1865 antennomeres V, VI and VIII are transverse; in *C.* (*C.*) *marani* antennomere VIII is distinctly transverse, and also much narrower than VII; in *C.* (*C.*) *orientalis* antennomeres V–VI are subquadrate and VIII distinctly transverse; in *C.* (*C.*) *anatolicus* Giachino et Vailati, 2000 antennomeres are V–VI also subquadrate and III distinctly longer than IV, whereas in *C.* (*C.*) *orszuliki* sp.nov. antennomere III is shorter than IV, or almost as long.

Acknowledgements

It is my pleasant duty to express my thanks to Kamil Orszulik (Frýdek-Místek, Czech Republic), who supplied both the material of the new species for study and the information on the collecting circumstances. I am very obliged to Jan Růžička (Prague, Czech Republic) for his help with photographs, Josef Jelínek and Lukáš Sekerka (both Prague, Czech Republic) for their help with the translation of the manuscript into English, and to Josef Jelínek, Jiří Kolibáč, Michel Perreau (Paris, France) and Jan Růžička for valuable comments on the text.



Figs. 3–9. *Catopsimorphus* (*Catopsimorphus*) *orszuliki* sp.nov., males. 3 – right antenna in dorsal view (PT); 4 – aedeagus in dorsal view (HT); 5 – paramere in lateral view (HT); 6 – aedeagus in lateral view (HT); 7 – metatrochanter in ventral view (PT); 8 – genital segment in ventral view (PT); 9 – sternite VIII in ventral view (PT).



Figs. 10–13. *Catopsimorphus* (*Catopsimorphus*) *orszuliki* sp.nov., females. 10 – tergites IX and X in dorsal view (PT); 11, 12 – sternite VIII in ventral view, sv – spiculum ventrale (11 – PT, 12 – AT); 13 – stylus in dorsal view (PT).

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