

RESEARCH PAPER

Taxonomic review of the genus *Calyptopsis* of Turkey and adjacent areas (Coleoptera: Tenebrionidae: Tentyriini)

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Accepted:
24th July 2018

Published online:
29th August 2018

Abstract. The taxonomic review of the tenebrionid genus *Calyptopsis* Solier, 1835 (Tenebrionidae: Tentyriini) of Turkey and Western Transcaucasia is given. Four new species and one new subspecies are described: *C. capnisiformis volcanica* subsp. nov. (from calderas of extinct volcanoes in Karaman and Manisa provinces), *C. fouquei* sp. nov. (Artvin Province), *C. egecemi* sp. nov. (Izmir Province), *C. kaszabi* sp. nov. (Bayburt Province), *C. otto* sp. nov. (Turkey: Hakkari and Van provinces; NE Iraq: Zagros Mts.). The lectotype of *Calyptopsis lineimargo* Reitter, 1897 is designated. The key and images for the Turkish and Western Transcaucasian species are given. In total, eleven species and one subspecies are known from Turkey, of which eight taxa are endemic for Anatolia.

Key words. Coleoptera, Tenebrionidae, *Calyptopsis*, taxonomy, Turkey, Transcaucasia, Palearctic Region

Zoobank: <http://zoobank.org/urn:lsid:zoobank.org:pub:71176108-A738-46FF-89EF-4658841391F3>

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Introduction

The genus *Calyptopsis* Solier, 1835 is a small group of wingless xerophilous tenebrionids of the tribe Tentyriini with 30 described species distributed in semideserts and xerophytic Mediterranean landscapes from Greece to Afghanistan (ABDURAKHMANOV et al. 2016, VOLOBOEVA & NABOZHENKO 2017). The centre of diversity of the genus is located in Iran, from where eleven described and many undescribed species (will be published in a separate paper) are known. Nine species of the genus *Calyptopsis* are distributed in the Caucasus, but status of some taxa is doubtful. Four species were described from Middle Asia and one from Afghanistan, eight species were recorded for Turkey, three species are known from the Levant and the Balkans.

The genus was revised thrice by Reitter at the end of the 19th century (REITTER 1889, 1897, 1900), after that he described one additional species from Turkey (REITTER 1903). After Reitter's works the greatest contributions to the knowledge of *Calyptopsis* were made by Kaszab, who described several species from Afghanistan and Iran

(KASZAB 1959, 1962, 1963). One species was also described by Schuster (SCHUSTER 1938) from Iranian Balochistan. MEDVEDEV & NEPESOVA (1985) composed a key to three Turkmenian species. A revision of Caucasian species of *Calyptopsis* with a description of three new taxa from Dagestan was made by NABOZHENKO & ABDURAKHMANOV (2009) and ABDURAKHMANOV & NABOZHENKO (2011). Some faunistic works contain new information about composition and distribution of *Calyptopsis* from the Caucasus (ABDURAKHMANOV & NABOZHENKO 2009), Turkey (KASZAB 1940, 1939, 1960, 1961, 1968; FERRER & SOLDATI 1999, TEZCAN et al. 2004), Iran (KÜHNELT 1957, GRIMM 2015), and Greece (KÜHNELT 1965, LIBERTO & LEO 2006, SOLDATI & PESLIER 2016).

The problems in taxonomy of the genus are poorly studied type material, unclear diagnostic characters, and unknown larvae and pupae. As a result many misidentifications and erroneous records were published. Taxonomic characters used by Reitter (sculpture of the head, punctuation of prothoracic hypomera, bordering of pronotum



etc.) are variable and problematic for species diagnosis ABDURAKHMANOV & NABOZHENKO (2009) used additional characters (beading and punctuation of abdominal ventrites and metaventrite, structure of prosternal process, male genitalia), which significantly improved the taxonomy of the Caucasian species of *Calyptopsis*. In this work we found additional taxonomic characters for differential diagnosis, such as sculpture of mesoventrite, structure of protibiae and scutellum.

Bionomics, nutrition, and immature stages of the species of the genus have almost not been studied. Different species of *Calyptopsis* inhabit mainly stony xerophytic areas in semideserts, mountain steppes, and Mediterranean landscapes. During the day the beetles can be found under stones, often together with externally similar darkling beetles of the genus *Dailognatha* Eschscholz, 1829 (Tentyriini), which differs from *Calyptopsis* in deep emargination between frontoclypeus and genae on each side and not separated eyes. Ecological niche separation between these genera is not clear. All known species of *Calyptopsis* are allopatric.

Below we present a review of the Turkish *Calyptopsis* based on different collections and our fieldwork. This work continues taxonomic revisions of Turkish genera of the subfamily Pimeliinae (NABOZHENKO et al. 2016). Records of some species from Turkey are based on misidentifications. For example KASZAB (1961) listed *Calyptopsis deplanata* Faust, 1875 for Suşehri (Sivas Province), but the species is distributed only in Western Turkmenistan. Distribution of *Calyptopsis capnisiformis* Reitter, 1903 must be corrected, because this species inhabits only calderas of extinct volcanoes, and the record of the species from the southern slopes of Taurus (Arslanköy) (FERRER & SOLDATI 1999) is doubtful. The mention of Greek endemic species *Calyptopsis capnisoides* Reitter, 1897 from Turkey is probably *lapsus calami* (must be *C. capnisiformis*) in the paper by KASZAB (1939) (see LIBERTO & LEO 2006).

Material and methods

The study is based on the examination of adult beetles from the following institutions, museums, and private collections:

CN	private collection of Maxim Nabozhenko;
HNHM	Hungarian Natural History Museum, Budapest, Hungary (Ottó Merkl);
MSNG	Museo Civico di Storia Naturale 'Giacomo Doria', Genova, Italy (Roberto Poggi);
SDEI	Senckenberg Deutsche Entomologische Institut, Müncheberg, Germany (Konstantin Nadein);
ZDEU	Zoological Department of Ege University, Bornova, Turkey (Bekir Keskin);
ZIN	Zoological Institute of the Russian Academy of Science, St Petersburg, Russia (Mark Volkovitsh).

Bibliography for each species is given only for original descriptions and records from Turkey. Material is given for Turkey, Armenia, Nakhichevan Autonomous Republic of Azerbaijan and border territories of North Western Iran.

Taxonomy

Calyptopsis capnisiformis capnisiformis Reitter, 1903

(Fig. 1A)

Calyptopsis capnisiformis Reitter, 1903: 44 (original description). KASZAB (1940): 3 (faunistic data); KASZAB (1968): 453 (faunistic data); FERRER & SOLDATI (1999): 55 (faunistic data).

Type locality. 'Karabunar' (now Karapınar, Konya Province, Turkey).

Type material. Type material not studied; however, only this species occurs in the type locality.

Material examined. TURKEY: 3 spec., 'Bunar Bashi / 1906.vii.16. (Pınarbaşı; now 14 localities with this name in Turkey) // Asia min. Dr. Lendl // *Calyptopsis capnisoides* / det. dr. Kaszab // *Calyptopsis capnisiformis* / det. dr. Kaszab' (ZIN); 1 ♂, 'Turkey / Konya Province / near Karapınar Meke tuzlası / 37°41'23.1"N, 33°38'37.7"E 990 m / 17.v.2010 / leg. M.V. and S.V. Nabozhenko, B. Keskin' (CN); 1 ♂ 1 ♀, the same data but '17.iv.2015 / leg. M.V. and S.V. Nabozhenko, B. Keskin, I.A. Chigray' (CN).

Distribution. Turkey: Konya (volcanic area Mekke tuzlası, Bozdağ) (REITTER 1903, KASZAB 1940, present paper), Kayseri (Yeşilhisar), Aksaray (Taşpınar) (KASZAB 1968), Nevşehir provinces (FERRER & SOLDATI 1999).

Comments. KASZAB (1939) recorded *C. capnisoides* Reitter, 1897 for Rodosto (now Tekirdağ, European part of Turkey). LIBERTO & LEO (2006) suggested that this *lapsus calami* means *C. capnisiformis*, which is widespread in arid areas of Central Anatolia. *Calyptopsis capnisoides* was described from Eastern Greece (Thessaloniki) and can be found in European Turkey, but one specimen listed for Tekirdağ (KASZAB 1939) must be compared with the type specimens of *C. capnisoides*.

Calyptopsis capnisiformis volcanica subsp. nov.

(Figs 1B, 7)

Type locality. Turkey, Karaman Province, Karadağ (volcano), 38°07'07.5"N, 34°15'27.2"E, 2200 m a.s.l.

Type material. HOLOTYPE: ♂, 'Turkey / Karaman Province / Karadağ (volcan) 2200 m / 38°07'07.5"N, 34°15'27.2"E / 18.iv.2015 / leg. M.V. and S.V. Nabozhenko, B. Keskin, I.A. Chigray' (ZIN). PARATYPES: 1 ♀, 'Turkey / Manisa Province / Cıkrıkçı / 8.vi.2005 / leg. S. Anlaş' (ZDEU); 1 ♀, 'Turkey / Manisa Province / Cıkrıkçı / 20.viii.2005 (leg. S. Anlaş)' (ZDEU); 1 ♀, 'Turkey / Manisa Province / Cıkrıkçı / 6.ix.2005 / leg. S. Anlaş' (ZDEU).

Description. Male. Body robust, matt or with dull shine. Apex of frontoclypeus (frontoclypeal tooth) acute, vertically projected. Anterior margin of frontoclypeus not separated from the other surface of head. Genae weakly rounded, not sinuated. Head with wide transverse impression on each side between frontoclypeus and anterior margin of supraocular keels. Head widest at genal level. Ratio of maximal width of head to distance between eyes 1.5. Antennae short, with last apical antennomere reaching basal third of pronotum. Ratio of length (width) of antennomeres II–XI: 0.6(0.4) : 0.4(0.4) : 0.5(0.4) : 0.5(0.4) : 0.5(0.4) : 0.4(0.4) : 0.4(0.4) : 0.4(0.4) : 0.4(0.4) : 0.3(0.3). Punctuation of head moderately coarse and dense (puncture diameter 1.5–2× as long as distance among punctures). Mentum weakly shiny, with moderately coarse and dense punctuation of weakly rasp-shaped smoothed punctures (puncture diameter 1.5–2.0× as wide as distance among punctures).

Pronotum transverse (1.5× as wide as long), widest little before middle, 1.5× as wide as head. Ratio of pronotal

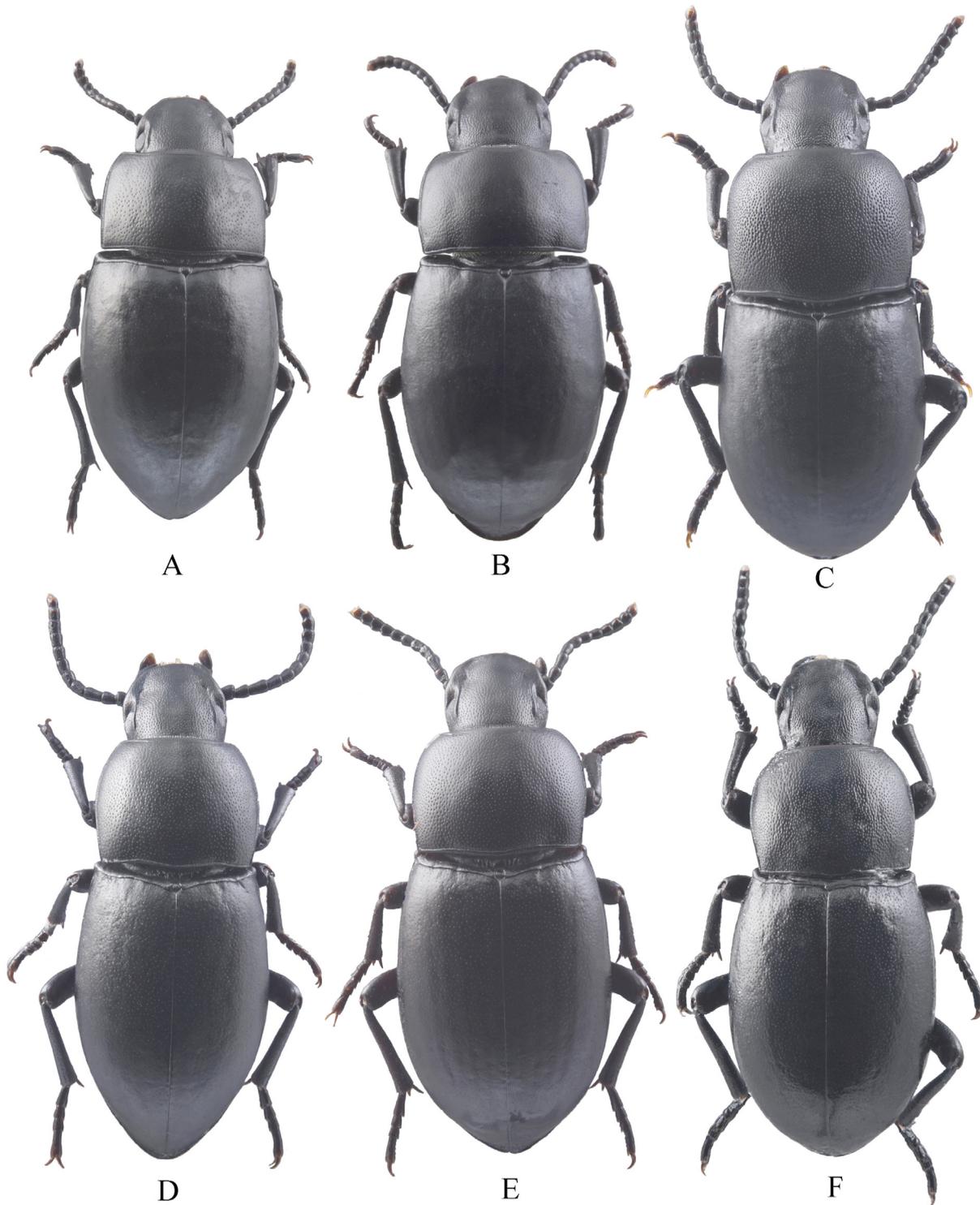


Fig. 1. *Calypopsis* spp., habitus. A – *C. capnisiformis capnisiformis* Reitter, 1903, ♂; B – *C. capnisiformis volcanica* subsp. nov., ♂; C – *C. caucasica* (Kraatz, 1865), ♂; D – *C. emarginata* Reitter, 1889, ♂; E – *C. emarginata*, ♀; F – *C. kaszabi* sp. nov.

width at anterior margin, in middle and at base 5.0 : 7.0 : 6.5. Anterior margin of pronotum widely emarginate, base straight. Lateral margins of pronotum weakly rounded, not sinuated at base. Anterior angles of pronotum acute, narrowly rounded at apex, posterior angles obtuse. All margins of pronotum beaded, bead of anterior margin smoothed in middle. Disc of pronotum moderately convex, without depression in basal part; lateral margins of

disc narrowly vertical in middle. Punctuation of disc fine and sparse (puncture diameter 3–4× as wide as distance among punctures). Inner half of prothoracic hypomera punctate by moderately coarse, dense weakly rasp-shaped punctures (puncture diameter 1.5–2.0× as long as distance among punctures), outer half without punctuation. Prosternal process laminar, strongly protruded, laterally acute, not beaded, with longitudinal depression.

Elytra regularly elliptical, moderately elongate (1.4× as long as wide), slightly convex, 2.3× longer and 1.1× wider than pronotum, 1.6× wider than head. Elytra without striae, with very fine, sparse punctation (puncture diameter 4.0–5.0× as wide as distance among punctures), apical half of elytra with almost invisible punctation. Epipleura smooth. Mesoventrite with long narrow, almost straight, vertical, regularly depressed bracket-shaped foveae. Metaventrte with coarse, moderately dense punctation along anterior margin of mesocoxae, remaining surface of metaventrte smooth.

Abdominal ventrite 1 with moderately coarse and dense punctation along basal margin of metacoxae, remaining surface of this and the other abdominal ventrites smooth. Lateral margins of abdominal ventrite 1 beaded only in anterior half, ventrites 2–5 not beaded.

Legs short. Anterior tibiae fossorial, wide, flattened, often depressed along dorsal surface of outer margin. Pro- and mesotibiae straight, metatibiae slightly curved. Ratio of femur/tibia/tarsus: 3.0 : 2.5 : 2.0 in fore legs, 3.5 : 3.0 : 2.5 in middle legs, and 4.0 : 3.5 : 3.0 in hind legs.

Body length 8.5 mm, width 4.0 mm.

Etymology. The name of the subspecies is derived from word *volcano* to demonstrate that it is spread only on volcanoes; adjective.

Comparative diagnosis. *Calyptopsis capnisiformis volcanica* subsp. nov. differs from the nominotypical subspecies in straight base of pronotum (*C. capnisiformis capnisiformis* has bisinuate base), laminar, strongly protruded and laterally acute prosternal process (*C. capnisiformis capnisiformis* is with rounded, weakly protruded, laterally rectangular prosternal process), often depressed along dor-

sal surface of outer margin of anterior tibiae (anterior tibiae of nominotypical subspecies are not depressed along dorsal surface of outer margin), elliptical elytra (*C. capnisiformis capnisiformis* has trapezoidal elytra).

Calyptopsis caucasica (Kraatz, 1865)

(Figs 1C, 2)

Choristopsis caucasica Kraatz, 1865: 228 (original description).

Calyptopsis caucasica: BOGATCHEV (1938): 120 (faunistic data); KASZAB (1968): 453 (faunistic data); ABDURAKHMANOV & NABOZHENKO (2011): 177 (taxonomy).

Calyptopsis morawitzi Faust, 1877: 37 (original description). REITTER (1900): 131 (synonymy).

Type locality. *Calyptopsis caucasica*: ‘Caucaso’; *C. morawitzi*: ‘In der Nähe des Goktschai See [environs of Sevan (former Gokcha) Lake]’.

Type material examined. *Calyptopsis caucasica*: SYNTYPE: 1 spec., unsexed, ‘Caucase // Syntypus // *Choristopsis / caucasica / mihi / Cauc. Mnizech* // Coll. Kraatz // *Calyptopsis caucasica* Kraatz type det. Schuster.’ (SDEI).

Calyptopsis morawitzi Faust, 1877. LECTOTYPE (designated by ABDURAKHMANOV & NABOZHENKO 2011): unsexed, ‘Goktschei / Morawitz // *Calyptopsis morawitzi* Fst. // *Calyptopsis caucasica* Kr. A. Bogačev det. // Zoological Institute RAS / St.Petersburg // *Calyptopsis caucasica* det. M. Nabozhenko // Lectotypus / *Calyptopsis morawitzi* Faust / des. Nabozhenko 2011.’ (ZIN).

Additional material examined. ARMENIA: 2 spec., ‘Armenia’; 1 spec., ‘Echmiatzin [now Vagarshapat] / 14.V [Cyrillic label]’; 2 spec., ‘Echmiatzin [now Vagarshapat] / 9.v.1976 / from Russian Ent. Society [old Cyrillic label]’; 9 spec., ‘Echmiatzin [now Vagarshapat] / Erivan Province / Eichler / 9 iii 916’; 1 spec., ‘Erivan [now Yerevan] / Rud’kovskaya 906 [Cyrillic label]’; 1 spec., ‘Kaukasus / Erivan [now Yerevan] / Dobrowljanskyi’; 1 spec., ‘Erivan [now Yerevan] / Cauc. Dobrowljanskyi’; 1 spec., ‘Erivan [now Yerevan] / 6-iii-1910 / Katjkov [Cyrillic label]’; 1 spec. ‘Erivan [Cyrillic labels]’; 1 spec., ‘Etschmiatzin [now Vagarshapat] / 9 v // coll. Artobolevsky’; 1 spec., ‘Sardarab [now Armavir] // k. Christoff’; 1 spec., ‘Echmiatzin [now Vagarshapat] // Brandt / 1.vii.79 [1879]

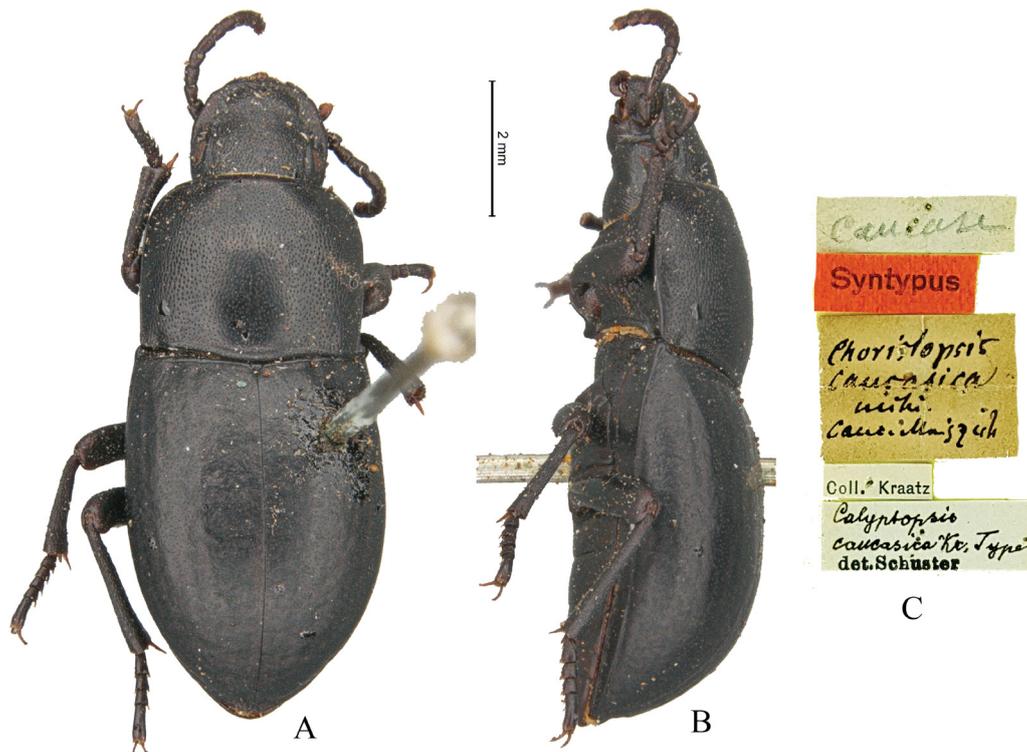


Fig. 2. *Calyptopsis caucasica* (Kraatz, 1865), syntype (SDEI). A – habitus, dorsal view; B – the same, lateral view; C – labels of the syntype.

[Cyrillic labels]'; 2 spec., 'Sardarabad / Caucas. / Fisch // *Gnathosia rugipennis* Fald // Sardarabad [now Armavir] / 1.vii.75 [1875] [Cyrillic label]'. **AZERBAIJAN:** 2 spec.: 'Ordubad [now Nakhichevan, Ordubad] / 24.vi.1911 / Satunin [Cyrillic label]'; 1 spec., 'Caucasus / Araxis / Djulfa // Mus Armen / № 17-24'; 1 spec., 'Caucasus / Araxesthal [now Nakhichevan, Arax valley] / Leder, Reitter'; 4 spec., 'Disar near Ordubad / Nakhich dist. / Znoiko 20.vii.933'. **IRAN:** 1 spec., 'Tavriz / Persia / 6 iv 14 / Andrievsky [Cyrillic label]'; 12 spec., 'Tavriz / Persia / 21 iii 14 [1914] / Andrievsky [Cyrillic label]'. All specimens deposited in ZIN.

Distribution. Armenia, Azerbaijan (Nakhichevan), Iran (Tabriz), Eastern Turkey: Van (Özalp), Iğdır (Tuzluca) provinces. Occurrence in Kars Province (ABDURAKHMANOV & NABOZHENKO 2011) is wrongly mentioned for this species.

Calyptopsis emarginata Reitter, 1889

(Figs 1D,E, 4C)

Calyptopsis emarginata: Reitter, 1889: 28 (original description).

Type locality. Azerbaijan, Baku.

Type material. LECTOTYPE (designated by ABDURAKHMANOV & NABOZHENKO 2011): ♂, 'Caucasus / Araxesthal / Leder, Reitter // Typus / *Calyptopsis emarginata* Rtt. Coll. Reitter.' (HNHM).

Additional material examined. **ARMENIA:** 1 spec., 'near Ardanysh [now Artanish in Yerevan Province] / Gok. Eriv. [now Sevan Lake (Gokcha)]: 1 vii 02 [1902] / Elachich, Klemant'; 5 spec., 'Gyunev [now Areguni] near Nadezh. NW Gokcha / 28 v 02 [1902] / Elachich, Klemant'; 12 spec., 'mt near Khurkur-kaya [unknown to us] / Gokcha [now Sevan Lake] / 5 vii 902 / Elachich, Klemant; 22 spec., Gokcha [now Sevan Lake], slopes near Adtapa [unknown to us]. **AZERBAIJAN:** 2 spec., 'Chagla-Dara Mt. near Kapudzhikh Mt. Nakh / Znoiko / 933 [1933]'. All specimens deposited in ZIN.

Distribution. Armenia, Azerbaijan (including Nakhichevan), Georgia, Iran (REITTER 1889, ABDURAKHMANOV & NABOZHENKO 2001, present paper).

Remarks. This species was recorded from Turkey by FERRER & SOLDATI (1999) only, as they misinterpreted label 'Kara Dagh (Kurdistan) (2200 m), 6.VII.1983 (Richter leg.)'. This specimen was collected by the famous Soviet-Russian entomologist Vera Andreevna Richter in the North Western Iran, East Azerbaijan Province, Arasbaran (or Karadag) mountain system with maximum altitude 2200 m. She never visited Turkey.

On the other hand, *Calyptopsis emarginata* is widespread in Azerbaijan, Armenia, and Iran near the border with Turkey and can be found in Iğdır Province. Bogatshev listed this species for Ararat (now Ağrı, Turkey) in his unpublished manuscript 'Tenebrionidae of Azerbaijan'.

Calyptopsis escherichi Reitter, 1900

(Figs 3A–F, 8B)

Calyptopsis escherichi Reitter, 1900: 133 (original description).

Type locality. 'Angora [now Ankara, Turkey]'.

Type material. Type specimens were not studied and are presumably lost as they are not present in the collection of Reitter in HNHM. Specimens depository was not mentioned in REITTER (1900).

Material examined. 1 ♀, 'Coll. Reitter // *Calyptopsis escherichi* m [handwritten by Reitter] // Eshi-Chehir Anatol. // *Escherichi* Rtt. / det. dr. Kaszab' (HNHM); 1 ♂ 3 ♀♀, 'Bulgar Maden [= Turkey, Niğde Province, near Karagöle, Maden Köy] / Coll. Reitter // *Calyptopsis escherichi* / det. dr. Kaszab' (ZIN).

Distribution. Turkey: Eskişehir, Ankara, and Niğde provinces (REITTER 1900, present paper).

Calyptopsis lineimargo Reitter, 1897

(Fig. 3G)

Calyptopsis lineimargo Reitter, 1897: 310 (original description).

Type locality. 'Akbes [now Akbez, Hatay Province, Turkey]'.

Type material examined. LECTOTYPE (present designation): sex unknown, 'Akbes // Typus *Calyptopsis lineimargo* Rtr. / Coll. Reitter.' (HNHM).

Distribution. The species is known only from the type locality.

Remarks. Reitter described this species from North Syria (Akbez), but at present this town is located in the north of the Turkish province of Hatay. This species distinctly differs from most of the Turkish species in shiny body and rounded anterior margin of head, without tooth in the middle.

Type material of E. Reitter is spread among numerous institutions and the depositories were usually not listed. Hence, the lectotype is designated to conserve identity of this species.

Calyptopsis solieri solieri Reiche & Saulcy, 1857

(Figs 3H,I, 8A,C)

Calyptopsis solieri Reiche & Saulcy, 1857: 199 (original description).

KASZAB (1959): 43 (faunistic data); KASZAB (1968): 453 (faunistic data).

Type locality. 'Jerusalem'.

Type material. Presumably deposited in MNHN but not located (Antoine Mantilleri, pers. com.).

Material examined. 1 ♂, 'Turkey / Şanlıurfa Province / Birecik, Arat Dağı / 14.iii.2013 / leg. E.A. Yağmur' (ZDEU); 1 ♂, 'Turkey / Gaziantep Province / Şahinbey 9.vi.2015 leg. E.A. Yağmur' (ZDEU).

Distribution. Israel, Syria (SCHAWALLER 1982), Southern Turkey: Gaziantep (Fevzipaşa), Kilis, and Diarbakır provinces (KASZAB 1968). The other subspecies, *C. solieri libanica* Koch, 1936, is distributed in Lebanon.

Calyptopsis pulchella pulchella Faldermann, 1837

(Figs 4A,B,D)

Gnathosia pulchella Faldermann, 1837: 36 (original description).

Calyptopsis pulchella: BOGATCHEV (1938): 120 (faunistic data).

For full synonymy see ABDURAKHMANOV & NABOZHENKO (2011).

Type locality. Azerbaijan, Baku.

Type material examined. LECTOTYPE (designated by ABDURAKHMANOV & NABOZHENKO 2011): ♂, 'Baku // *pulchella* Fald. Baku // Zoological Institute RAS, St.Petersburg // Lectotypus / *Calyptopsis pulchella* Falderm., 1837 / des. Nabozhenko' (ZIN). PARALECTOTYPE: ♂, 'Baku [from the same series as lectotype] // Zoological Institute RAS, St.Petersburg // Paralectotypus / *Calyptopsis pulchella* Fald. / des. Nabozhenko' (ZIN).

Additional material examined. **AZERBAIJAN:** 1 spec., 'Ordubad, Arax valley, Nakh. Distr. / Znoiko / 6 vii 933' (ZIN).

Distribution. Armenia, Azerbaijan, Georgia, Iran (Savalan volcano), Eastern Turkey: Erzurum (Oltu), Iğdır (Kazkoparan) provinces (BOGATCHEV 1938). The other subspecies, *Calyptopsis pulchella avarica* Nabozhenko & Abdurakhmanov, 2009, occurs in inner mountains of Dagestan, Untsukul and Gergebil districts (Russia).

***Calyptopsis kaszabi* sp. nov.**

(Figs 1F, 8D–I)

Type locality. Turkey, Bayburt Province, Bayburt town, 1200 m.**Type material.** HOLOTYPE: ♂, 'Turchia - vil. Gümüşhane Bayburt m 1200 / I.vii.75 / Osella leg.' (HNHM).

Description. Male. Body black, shiny, robust. Apex of frontoclypeus (frontoclypeal tooth) obtuse. Anterior margin of head not separated from the other surface. Lateral margins of head weakly sinuated between genae and frontoclypeus. Lateral margins of genae regularly rounded, not sinuated. Supraocular keels extended almost from level of basal margin of eye. Ratio of width of head at eyes to distance between eyes 1.3. Antennae short, with apical antennomere reaching basal third of pronotum. Ratio of length (width) of antennomeres II–XI: 0.4(0.5) : 0.7(0.5) : 1.0(0.6) : 0.6(0.5) : 0.6(0.5) : 0.6(0.5) : 0.5(0.5) : 0.5(0.5) : 0.5(0.5) : 0.4(0.4). Punctuation of head moderately coarse and dense, puncture diameter 1.5× as wide as distance among punctures. Vertex with deep transverse depression, shiny, with coarse and dense rasp-shaped punctuation (puncture diameter 1.5–2.0× as wide as distance among punctures). Mentum weakly shiny, with smoothed punctuation of weakly rasp-shaped punctures and wrinkles.

Pronotum transverse (1.3× as wide as long), widest in middle, 1.6× as wide as head. Ratio of pronotal width at anterior margin, in middle and at base 4.5 : 6.5 : 5.5. Anterior margin of pronotum straight, base weakly bisinuate, weakly rounded in middle. Lateral margins of pronotum moderately rounded, straight near base. Anterior angles of pronotum straight, rounded, posterior angles weakly obtuse, narrowly rounded at apex. All margins of pronotum beaded, only anterior margin with interrupted bead in middle. Disc of pronotum moderately regularly convex. Punctuation of disc regularly moderately coarse and dense (puncture diameter from subequal to 1.5–2.0× as wide as distance among punctures). Prothoracic hypomera with inner two thirds of surface punctate by rasp-shaped punctures. Prosternum with coarse and dense punctuation. Prosternal process moderately convex, not strongly projected, not beaded, with longitudinal impression in middle, with fine and moderately dense punctuation.

Elytra oval (1.3× as long as wide), strongly convex, distinctly depressed along suture in anterior quarter, 2.0 × longer and 1.27× wider than pronotum, 2.0 × wider than head. Base of elytra 1.06× wider than base of pronotum. Elytra without microwrinkles, with distinct fine and sparse punctuation (puncture diameter 3.0× as wide as distance among punctures). Epipleura wrinkled. Mesoventrite with multiple short regularly rounded bracket-shaped foveae connected by apices. Metaventrite with fine, moderately dense punctuation along meso- and metacoxae, remaining surface of metaventrite with smooth sparse punctuation. Metepisterna with smoothed coarse punctuation.

First and second abdominal ventrite completely beaded, third ventrite beaded on less than half its surface, the other ventrites not beaded. All ventrites with fine, moderately dense punctuation.

Legs short. Protibia not fossorial, 3.24× as long as wide. All tibiae straight. Ratio of femur/tibia/tarsus: 4.5 : 3.0 :

2.0 in fore legs, 4.5 : 3.5 : 3.0 in middle legs, and 5.0 : 4.5 : 3.0 in hind legs.

Body length 10 mm, width 4.0 mm.

Etymology. The species is named in honor of the famous specialist on darkling beetles Zoltan Kaszab.

Comparative diagnosis. The new species is most similar to *C. pulchella*, which also has short rounded bracket-shaped foveae on mesoventrite and elytra depressed in basal part along suture, but clearly differs in shiny body (*C. pulchella* has dull body), regular, coarse and dense punctuation of pronotum (*C. pulchella* has coarse and dense punctuation only on sides of pronotum), moderately dense distinct elytral punctuation (*C. pulchella* has very sparse poorly visible elytral punctuation).

Distribution. Only known from the type locality.

***Calyptopsis armeniaca* Baudi di Selve, 1874**

(Figs 5A,B)

Calyptopsis harpaloides? var. *armeniaca* Baudi di Selve, 1874: 97 (original description). BAUDI DI SELVE (1875): 34 (description); REITTER (1897): 309 (noted); REITTER (1900): 135 (noted).

Calyptopsis armeniaca: ABDURAKHMANOV & NABOZHENKO (2011): 180 (species incertae sedis).

Type material. SYNTYPES: 1 ♂ 1 ♀, 'Armenia / Russia / Viag. Doria 1862 // Typus // *Calypt. harpaloides* var. *armeniaca* Baudi.' (MSNG): ♂ with additional label: 'var. *armeniaca*.'

Comments. This taxon was described as a variety of *Calyptopsis harpaloides* and subsequent authors interpreted the taxon in the same way (e.g. REITTER 1897). LÖBL et al. (2008) informally synonymized *C. armeniaca* as they listed it as a junior synonym of *Calyptopsis harpaloides* Baudi di Selve, 1874 without any comments. ABDURAKHMANOV & NABOZHENKO (2011) discussed this taxon and gave it species status with unclear position. We studied types and additional material of *C. harpaloides* from Northern Iran (which will be published in a revision of Iranian species of *Calyptopsis*) and *C. harpaloides armeniaca* from 'Armenian Russia' and suggested that the latter is a distinct separate species, which occurs probably in Eastern Anatolia. Large material collected during multiple Russian and Soviet expeditions (deposited in ZIN, Moscow State University, Institute of Zoology of Armenia, and Georgian Natural Museum Tbilisi) to present day territory of Armenia did not contain this species. Russian Empire included some territories of modern Turkey in 1862 (Kars Province, parts of Iğdır, Ağrı, Ardahan, and Artvin provinces) (BEZUGOLNY et al. 2012). *Calyptopsis armeniaca* probably occurs in these territories of present day Turkey.

Distribution. Eastern Anatolia (ABDURAKHMANOV & NABOZHENKO 2011).

***Calyptopsis otto* sp. nov.**

(Figs 5C–G, 9)

Type locality. Turkey, Van Province, Görentaş, 2156 m (38°07'27.4"N, 43°09'30.7"E)

Type material. HOLOTYPE: ♂, 'Turkey / Van Province / Görentaş 2156 m / 38°07'27.4"N, 43°09'30.7"E / 31.v.2013 / leg. M.V. and S.V. Nabozhenko, B. Keskin, A. Pektaş' (ZIN). PARATYPES: **TURKEY:** 1 ♀, same data as holotype (ZDEU); 1 ♀, 'Turkey / Hakkari Province / Berçelan Yayla 2700 m / 37°38'11.6"N, 43°45'20.2"E / 3.vi.2013 / leg. M.V. and S.V. Nabozhenko, B. Keskin, A. Pektaş' (ZIN); 1 ♀, 'Turkey / Van Province / Erekdag 2077–2600 m / 38°25'53.1"N, 43°29'03.6"E /

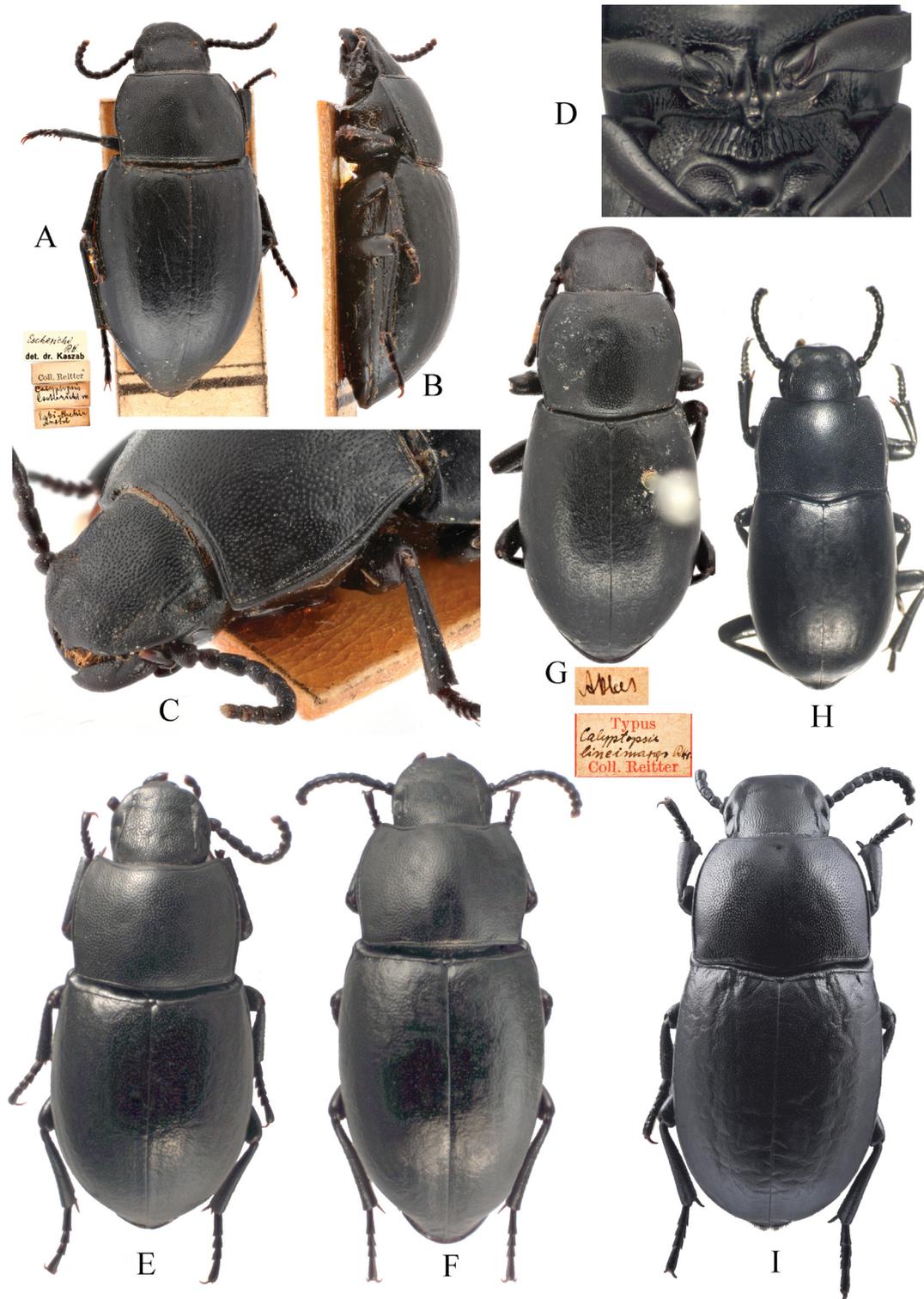


Fig. 3. *Calyptopsis* spp., habitus and details of structure. A, B, C – *C. escherichi* Reitter, 1900, ♀ and labels (Eskişehir, HNHM); D – *C. escherichi*, mesoventrite; E – *C. escherichi*, ♂ (Niğde: Maden köy, ZIN); F – the same, ♀; G – *C. lineimargo* Reitter, 1897, lectotype and labels; H – *C. solieri* Reiche & Saucy, 1857, ♂ (Şanlıurfa Province, Birecik); I – *C. solieri*, ♂ (Gaziantep Province, Şahinbey).

1.vi.2013 / leg. M.V. and S.V. Nabozhenko, B. Keskin, A. Pektaş' (ZDEU).
 IRAQ: 1 ♀, 'Iraq, Hasarost / 13.vii.1971 / M.S. Abdulxassa [unclear name of collector]' (HNHM).

Description. Male. Body slender, with weak greasy shine. Apex of frontoclypeus (frontoclypeal tooth) acute, vertically projected. Anterior margin of frontoclypeus separated from the other surface of head by wide transverse

protuberance, which is separated from the other surface of head by deep transverse depression. Lateral margin of head irregularly weakly rounded, sinuated. Genae weakly emarginate. Supraocular keels extended almost from level of basal margin of eye. Head surface with wide transverse depression on each side between frontoclypeus and anterior margin of supraocular keels. Head widest at eye

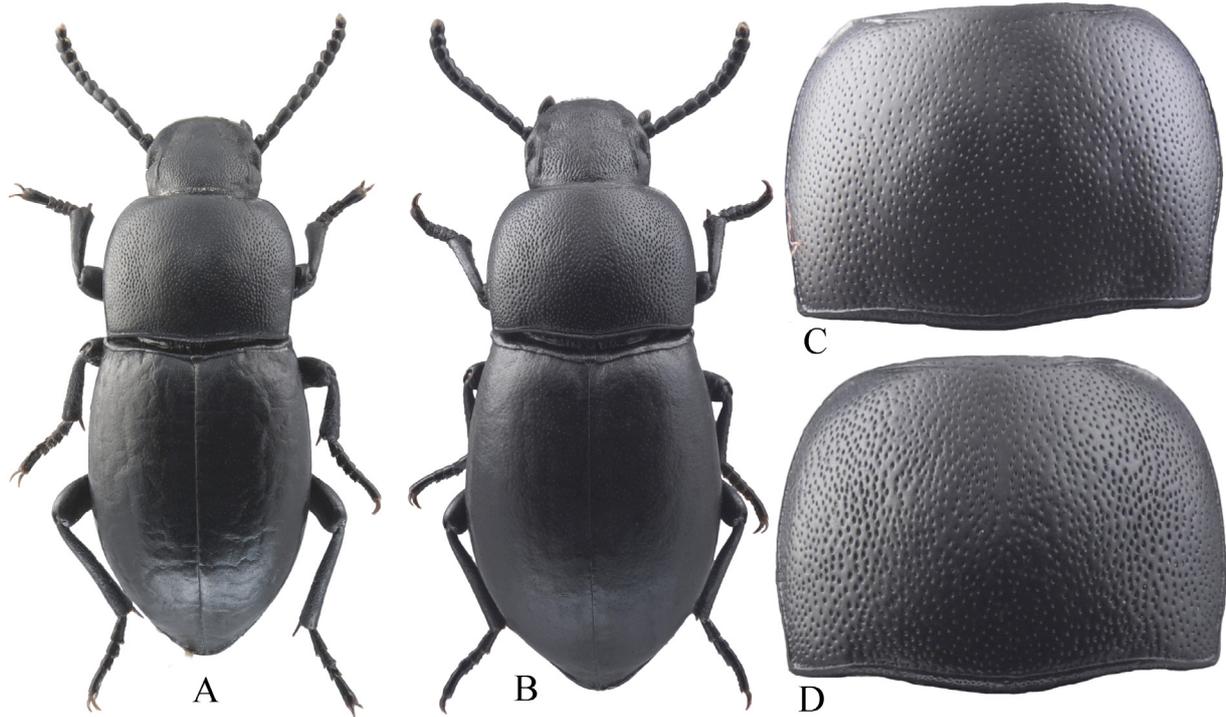


Fig. 4. *Calypopsis* spp., habitus, pronotum. A – *C. pulchella* (Faldermann, 1837), ♂; B – *C. pulchella*, ♀; C – *C. emarginata* Reitter, 1889, pronotum; D – *C. pulchella*, pronotum.

level. Ratio of head width at eye level to distance between eyes 1.5. Antennae short, with apical antennomere reaching basal third of pronotum. Ratio of length (width) of antennomeres II–XI: 0.6(0.5) : 0.6(0.4) : 0.8(0.5) : 0.7(0.4) : 0.6(0.4) : 0.6(0.4) : 0.7(0.5) : 0.5(0.5) : 0.5(0.5) : 0.3(0.4). Punctuation of head moderately coarse and sparse, puncture diameter 1.5–2.0× as wide as distance among punctures. Vertex with deep transverse depression, shiny, with coarse and dense rasp-shaped punctation (puncture diameter 1.5–2.0× as wide as distance among punctures). Mentum weakly shiny, moderately coarsely and densely punctate by rasp-shaped punctures (puncture diameter 1.5–2.0× as wide as distance among punctures).

Pronotum transverse (1.2× as wide as long), widest little before middle, 1.2× as wide as head. Ratio of pronotal width at anterior margin, in middle and at base 5.5 : 7.0 : 6.5. Anterior margin of pronotum widely emarginate, base bisinuate, weakly rounded in middle. Lateral margins of pronotum weakly rounded, slightly sinuated at base. Anterior angles of pronotum acute, narrowly rounded at apex, basal angles obtuse. All margins of pronotum beaded. Disc of pronotum moderately convex, without depressions in basal part. Disc of pronotum with fine, moderately dense punctation. Prothoracic hypomera completely punctate with moderately coarse, dense rasp-shaped punctures (puncture diameter 1.5–2.0× as wide as distance among punctures). Prosternal process laminar, strongly protruded, laterally acute, completely beaded, with longitudinal depression and very fine, moderately dense punctation.

Elytra smooth, with only fine microwrinkles, moderately elongate (1.6× as long as wide), slightly convex, 2.1× longer and 1.6× wider than pronotum, 2.0× wider than head. Elytra without striae, with fine, moderately

dense punctation. Epipleura with poorly visible transverse wrinkles. Mesoventrite with mainly bisinuate bracket-shaped deep foveae. Metaventrite with poorly visible wrinkles and fine, moderately dense weakly rasp-shaped punctures along mesocoxae, remaining surface of metaventrite smooth.

First abdominal ventrite moderately coarsely and densely punctate by large round punctures along basal margin of metacoxae (puncture diameter 1.5–2.0× as wide as distance among punctures), remaining ventrites with smooth punctures on sides and very fine, sparse punctures middle. Only abdominal ventrite 1 completely laterally beaded, ventrite 2 beaded on less than half its surface, ventrites 3–5 not beaded.

Legs short. Anterior tibiae not depressed along dorsal surface of outer margin. Pro- and mesotibiae straight, metatibiae slightly concavely curved. Ratio of femur/tibia/tarsus 3.0 : 3.5 : 3.0 in fore legs, 5.0 : 4.0 : 3.0 in middle legs, and 6.0 : 5.0 : 4.0 in hind legs.

Body length 12.0 mm, width 4.5 mm.

Female. Body more robust. Elytra 1.3–1.45× as wide as long.

Variability. Specimen from Berçelan Yayla differs in finer and sparser punctation of pronotum (puncture diameter 1.5–2.0× as long as distance among punctures; prosternal process moderately protruded (not laminar), rounded, laterally rectangular; elytral punctation very fine and sparse (puncture diameter 3.0–4.0× shorter than distance among punctures). Ovipositor of females in all populations has the same structure.

Etymology. The species is named in honour of Ottó Merkl (HNHM), who continuously and greatly helps us with the provided material.

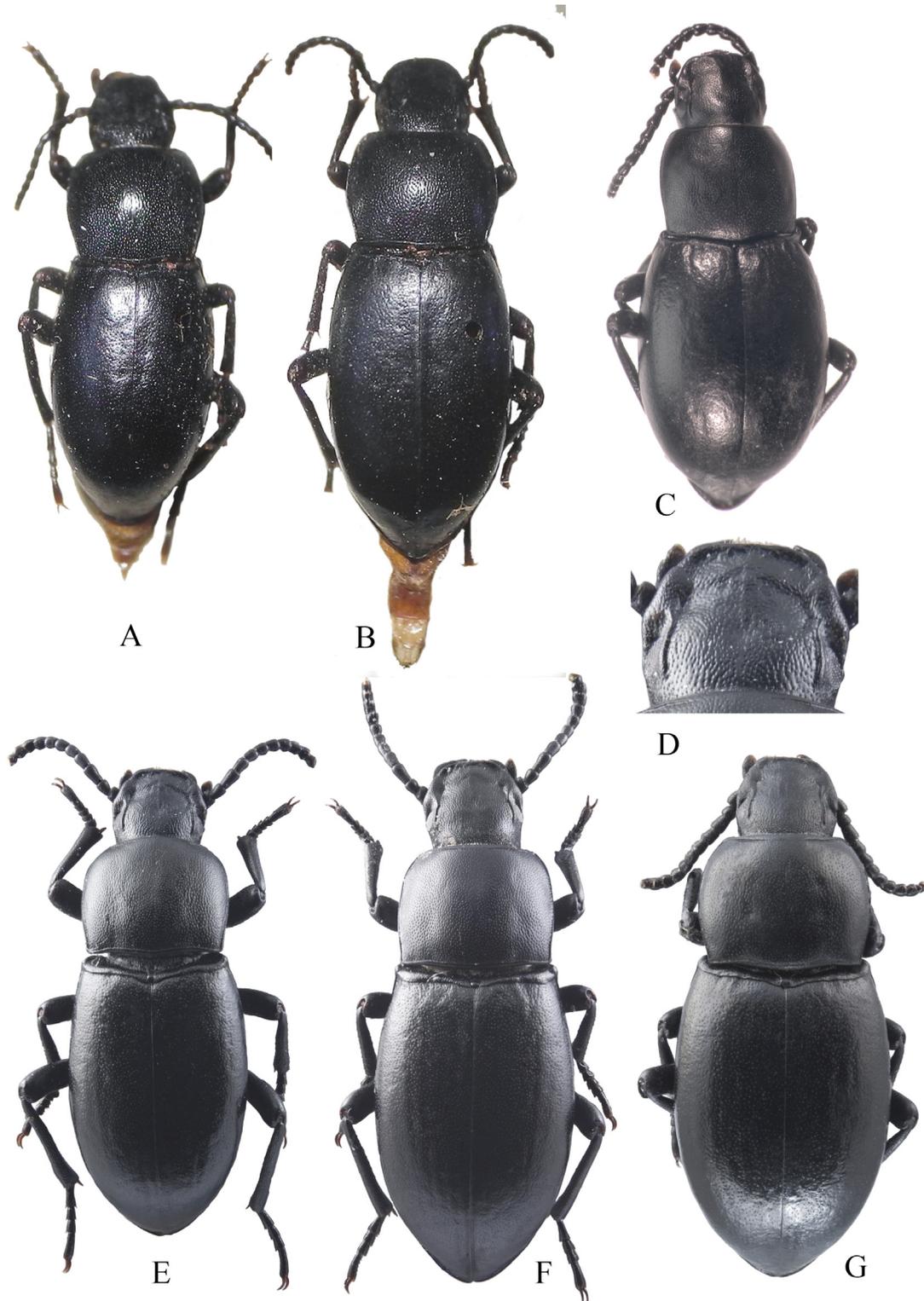


Fig. 5. *Calyptopsis* spp., habitus and details of structure. A–C. *armeniaca* Baudi di Selve, 1874, syntype, ♂; B–*C. armeniaca*, syntype, ♀; C–G–*C. ottoii* sp. nov.: C – ♀ (Van, Erek Dağ); D – head; E – ♂ (Van, Görentaş); F – ♀ (Van, Görentaş); G – ♀ (Hakkari, Berçelan).

Distribution. South-Eastern Turkey, North-Western Iraq.
Comparative diagnosis. The new species belongs to the species-group with beaded anterior margin, head separated from the other surface by transverse convexity. Externally *C. ottoii* sp. nov. is similar to *C. gigas* Kaszab, 1962 from Lorestan (Iran) in form of its body, punctuation of the pronotum and prothoracic hypomera but clearly differs from it

in the head sculpture. *Calyptopsis ottoii* sp. nov. has sharply beaded and elevated anterior margin of the head, which is separated from the other surface by deep depression, while *C. gigas* possesses smooth beaded and not elevated anterior margin of the head, which is not separated from the other surface by transverse depression. The sharply beaded and separated anterior margin of head can be found also in

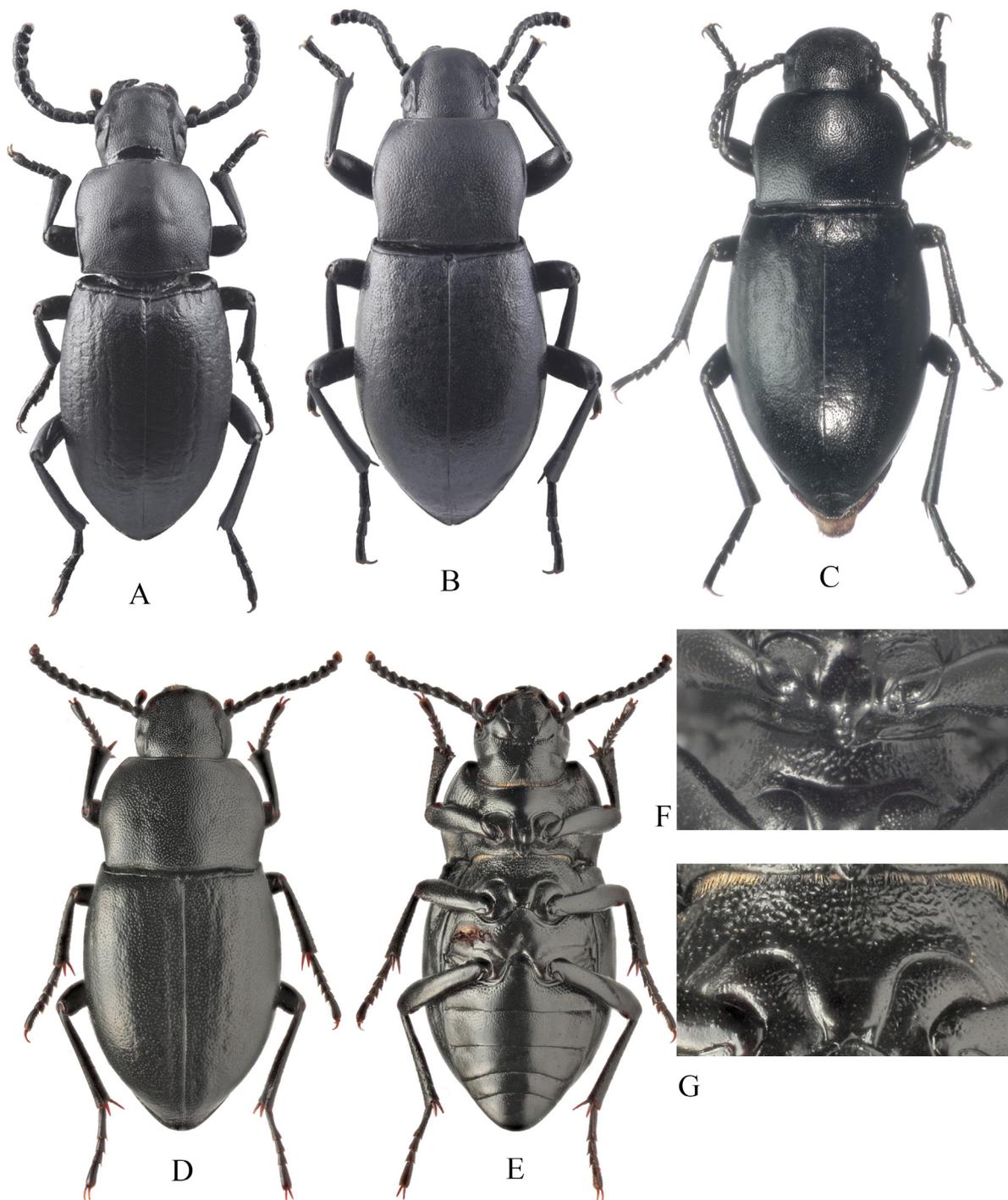


Fig. 6. *Calyptopsis* spp., habitus and details of structure. A – C. *fouquei* sp. nov., ♂; B – C. *egececi* sp. nov., ♂; C – C. *egececi* sp. nov., ♀; D – C. *caraboides* (Brullé, 1832), ♂ (Greece: Ossa, ZIN), dorsal view; E – the same specimen, ventral view; F – C. *caraboides*, mesoventrite (Greece: Ossa); G – the same (Greece: Peloponnessos).

C. theodoridesi Kaszab, 1962 and *C. harpaloides* Baudi di Selve, 1874. The first species differs from *C. ottoi* sp. nov. in robust body with very large pronotum 1.8× shorter than elytra, the second one differs in flattened and robust wide body, and emarginate near base lateral margins of pronotum. The new species has pronotum 2.20–2.35× shorter than elytra. From both species *C. ottoi* sp. nov. also differs in the presence of distinct round impression in the middle of the frons.

Calyptopsis fouquei sp. nov.

(Figs 6A, 10A–E)

Type material locality. Turkey, Artvin Province.

Type material. HOLOTYPE: ♂, 'Artvin dist., 17.iv.1969 // Turchia leg. Osella // *Colposcelis* sp.n. det. Kaszab // *harpaloides* Bdi. det. Kaszab' (HNHM).

Description. Male. Body slender, weakly shiny, almost dull. Apex of frontoclypeus (frontoclypeal tooth) acute, vertically projected. Anterior margin of frontoclypeus not

separated from the other surface of head by transverse convexity and depression. Lateral margins of head weakly rounded. Genae weakly rounded, not sinuated. Head surface with wide transverse depression on each side between frontoclypeus and anterior margin of supraocular keels. Head widest at eye level. Ratio of head width at eye level to distance between eyes 1.3. Antennae short, with apical antennomere reaching middle of pronotum. Ratio of length (width) of antennomeres II–XI: 0.6(0.5) : 0.6(0.4) : 1.1(0.6) : 0.7(0.5) : 0.7(0.5) : 0.7(0.5) : 0.7(0.5) : 0.6(0.5) : 0.5(0.5) : 0.4(0.4). Punctuation of head and genae with moderately coarse and moderately dense weakly rasp-shaped punctures. Vertex with deep transverse depression, shiny, with coarse and moderately dense weakly rasp-shaped punctures. Mentum shiny, coarsely and densely punctate by weakly rasp-shaped punctures (puncture diameter 1.5–2.0× as wide as distance among punctures).

Pronotum weakly cordate (1.2× as wide as long), widest little before middle, 1.5× as wide as head. Ratio of pronotal width at anterior margin, in middle and at base 4.5 : 6.0 : 5.5. Anterior margin of pronotum widely emarginate, base bisinuate, weakly rounded in middle. Lateral margins of pronotum weakly rounded, slightly sinuated at base. Anterior angles of pronotum acute, narrowly rounded at apex, basal angles obtuse. All margins of pronotum beaded, only bead of anterior margin smooth in middle. Disc of pronotum moderately convex, without depression in basal part, with very fine,

sparse punctuation in middle (puncture diameter 2.0–3.0× as wide as distance among punctures). Prothoracic hypomera completely punctate with coarse, moderately dense weakly rasp-shaped punctures. Prosternal process rounded, weakly protruded, laterally square, completely beaded, with longitudinal depression and moderately coarse, dense punctuation (puncture diameter 1.5–2.0× as long as distance among punctures).

Elytra rugose, with depressed wrinkles, moderately elongate (1.5× as long as wide), slightly convex, 2.1× longer and 1.2× wider than pronotum, 1.8× wider than head. Elytra without striae, with very fine, sparse punctuation (puncture diameter 3.0–4.0× as wide as distance among punctures). Epipleura with fine wrinkles. Mesoventrite with bracket-shaped deep foveae. Metaventrite with coarse, moderately dense weakly rasp-shaped punctures along anterior margin of mesocoxae and with fine sparse granulation near base.

Intercoxal process of first abdominal ventrite completely beaded. All abdominal ventrites not beaded laterally, with coarse and transverse wrinkles on sides. Abdominal ventrites 1–3 with fine sparse granulation in middle.

Anterior tibiae not depressed along dorsal surface of outer margin. Pro- and mesotibiae slightly curved, metatibiae straight. Ratio of femur/tibia/tarsus length 4.5 : 3.5 : 2.0 in fore legs, 5.0 : 3.0 : 3.0 in middle legs, and 6.0 : 5.0 : 4.0 in hind legs.

Body length 10.5 mm, width 3.5 mm.

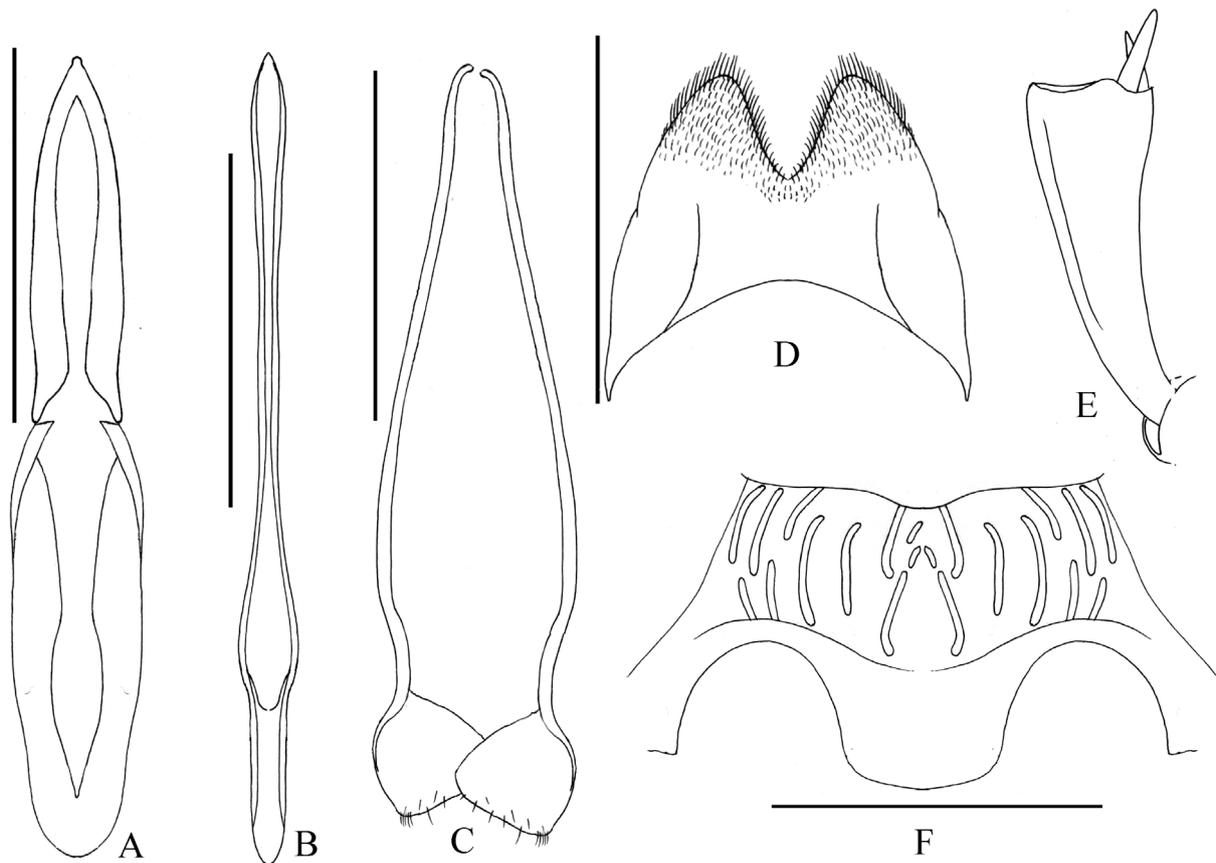


Fig. 7. *Calyptopsis capnisiformis volcanica* subsp. nov., details of structure, ♂. A – aedeagus; B – penis; C – gastral spicula; D – inner sternite VIII; E – protibia; F – mesoventrite.

Etymology. This species is dedicated to the memory of our colleague René Fouquè (1980–2016), the well-known specialist on Tenebrionidae (see SEKERKA 2017).

Comparative diagnosis. This new species differs from all known *Calyptopsis* in granulated base of metaventrite and middle part of abdominal ventrites 1–3. *Calyptopsis fouquei* sp. nov. can be compared with *C. escherichi* from

which it differs in not beaded abdominal ventrites (*C. escherichi* has abdominal ventrite 2 completely beaded laterally, and less than half abdominal ventrite 3 beaded; abdominal ventrites 1, 4 and 5 are not beaded) and slightly rounded, weakly protruded, laterally square prosternal process (*C. escherichi* has laminar, weakly protruded and laterally acute prosternal process).

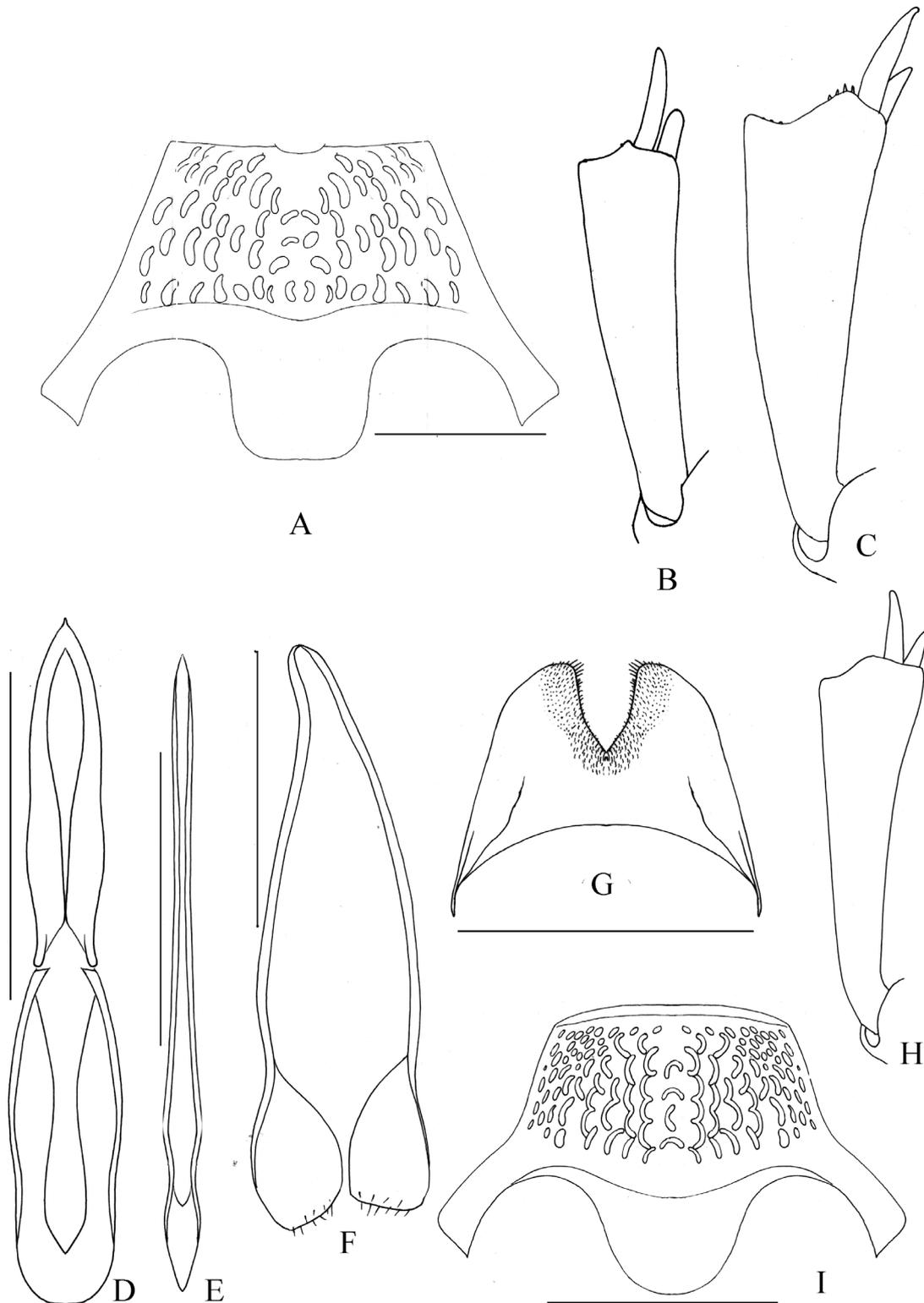


Fig. 8. *Calyptopsis* spp., details of structure, ♂. A – *C. solieri* Reiche & Saulcy, 1857, mesoventrite; B – *C. escherichi* Reitter, 1900, protibia; C – *C. solieri*, protibia; D–I – *C. kaszabi* sp. nov.: D – aedeagus; E – penis; F – gastral spicula; G – inner sternite VIII; H – protibia; I – mesoventrite.

***Calyptopsis egececi* sp. nov.**

(Figs 6B,C, 10F,G)

Type locality. Turkey, Izmir Province, Bozdağ.**Type material.** HOLOTYPE: ♂, 'ZDEU 2006 222 // 15.vi.2006 Bozdağ / Izmir / B. Keskin // *Calyptopsis* Pimeliinae Tenebrionidae B. Keskin det.' (ZDEU). PARATYPE: ♀, same data as holotype (ZDEU).

Description. Male. Body matt, slender. Body length 12.3 mm, width 4.9 mm. Anterior part of head not sculptured, without coarse bead; anterior margin of frontoclypeus rounded, not vertically projected, without tooth. Head widest at level of lower part of eyes. Head weakly longitudinally depressed along supraorbital keels. Upper half of eyes weakly longitudinal; lower half projected (dorsal view). Ratio of head width at eye level to distance between eyes 1.3. Punctuation of head on frons and near eyes moderately coarse and dense (puncture diameter subequal to distance among punctures). Anterior part of head with fine and sparse punctuation. Vertex with coarse punctuation basally and near eyes. Antennae thin, widened from base to apex. Ratio of length (width) of antennomeres II–XI: 0.6(0.5) : 0.9(0.4) : 0.7(0.5) : 0.7(0.5) : 0.7(0.5) : 0.7(0.5) : 0.6(0.5) : 0.5(0.5) : 0.5(0.5) : 0.4(0.4).

Pronotum widest in middle, 1.52× as wide as head. Anterior margin of pronotum widely and deeply emarginated, base weakly bisinuate. Lateral margins moderately rounded, widely emarginated in basal third. Anterior angles acute, strongly projected; posterior angles right, distinct.

Disc of pronotum regularly slightly convex, completely beaded, with fine and sparse punctuation (puncture diameter 1.5–2.0× shorter than distance among punctures). Prosternum smooth in middle, without punctuation, only with smoothed sparse punctuation near anterior margin of procoxae. Prothoracic hypomera completely with smoothed coarse and dense not rasp-shaped punctuation (puncture diameter 2.0× as wide as distance among punctures). Prosternal process with longitudinal depression in middle, strongly projected, rectangular (in lateral view).

Elytra elongate (1.4× as long as wide), 1.9× as wide as head, 1.25× as wide and 2.0× as long as pronotum, with matt and weakly shiny areas and the same punctuation as on pronotum. Scutellum not reaching outer margin of basal elytral bead.

Mesoventrite with transverse wrinkles in middle and long oblique wrinkles on sides (these wrinkles rasp-shaped, impressed only from inner side), with coarse punctuation along anterior margin and very fine and sparse punctuation on latero-basal sides. Intercoxal process of mesoventrite smooth. Mesepisterna with large not deep round foveae. Mesepimera and metepisterna with sparse smoothed punctures. Metaventrite with large sparse foveae in anterior 2/3 and rasp-shaped coarse punctures along mesocoxae. Basal part of metaventrite with sparse and fine rasp-shaped punctuation.

Lateral margins of first abdominal ventrite completely beaded, of second ventrite beaded only anteriorly. Abdomi-

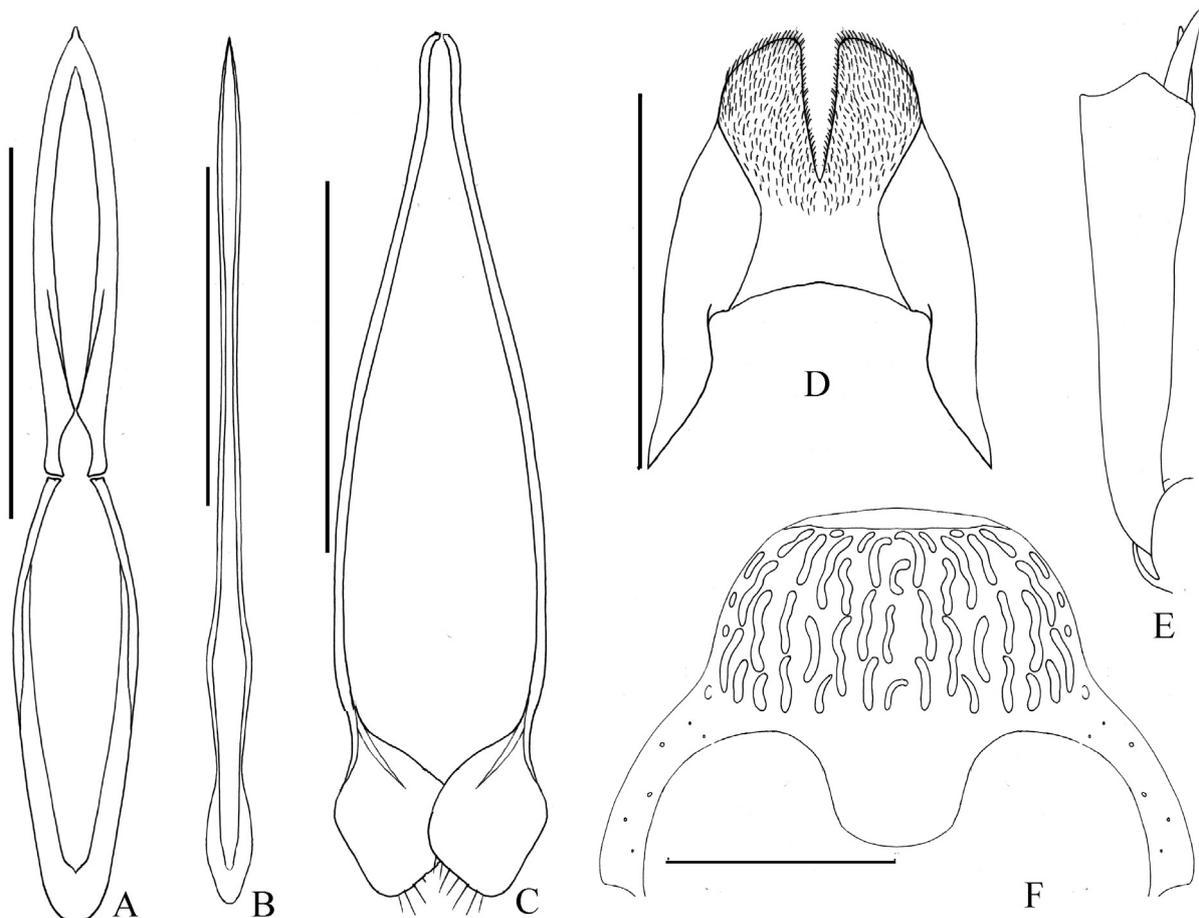


Fig. 9. *Calyptopsis otto* sp. nov., details of structure, ♂: A – aedeagus; B – penis; C – gastral spicula; D – male inner sternite VIII; E – protibia; F – mesoventrite.

nal ventrites 1–4 with coarse sparse punctation on sides and fine sparse punctation in middle. First abdominal ventrite with very fine and sparse rasp-shaped punctation. Fifth abdominal ventrite with regular fine and sparse punctation and straight truncate apex.

Legs slender, long. Tibiae thin, straight. Protibiae not fossorial, longitudinally depressed on inner side.

Female. Body little more robust.

Etymology. The species is named after Egecem Keskin, the son of the third co-author.

Differential diagnosis. *Calyptopsis egecemi* sp. nov. is the most similar to *C. caraboides* (Brullé, 1832) (Figs 6D–G)

from Greece but distinctly differs in absence of the frontoclypeal tooth, sculpture of mesoventrite (*C. caraboides* has transverse regularly depressed or oval foveae), strongly projected acute anterior angles of pronotum (*C. caraboides* has obtuse not projected anterior angles) and thin, regularly widened to apex antennae (*C. caraboides* has regularly thickened antennae). Within the Turkish species, *C. egecemi* sp. nov. can be compared with *C. lineimargo*, which also has regularly rounded anterior margin of head without vertical border, but clearly different from it in the structure of thin, regularly widened to apex antennae, form of pronotum with acute projected angles and sculpture of mesoventrite.

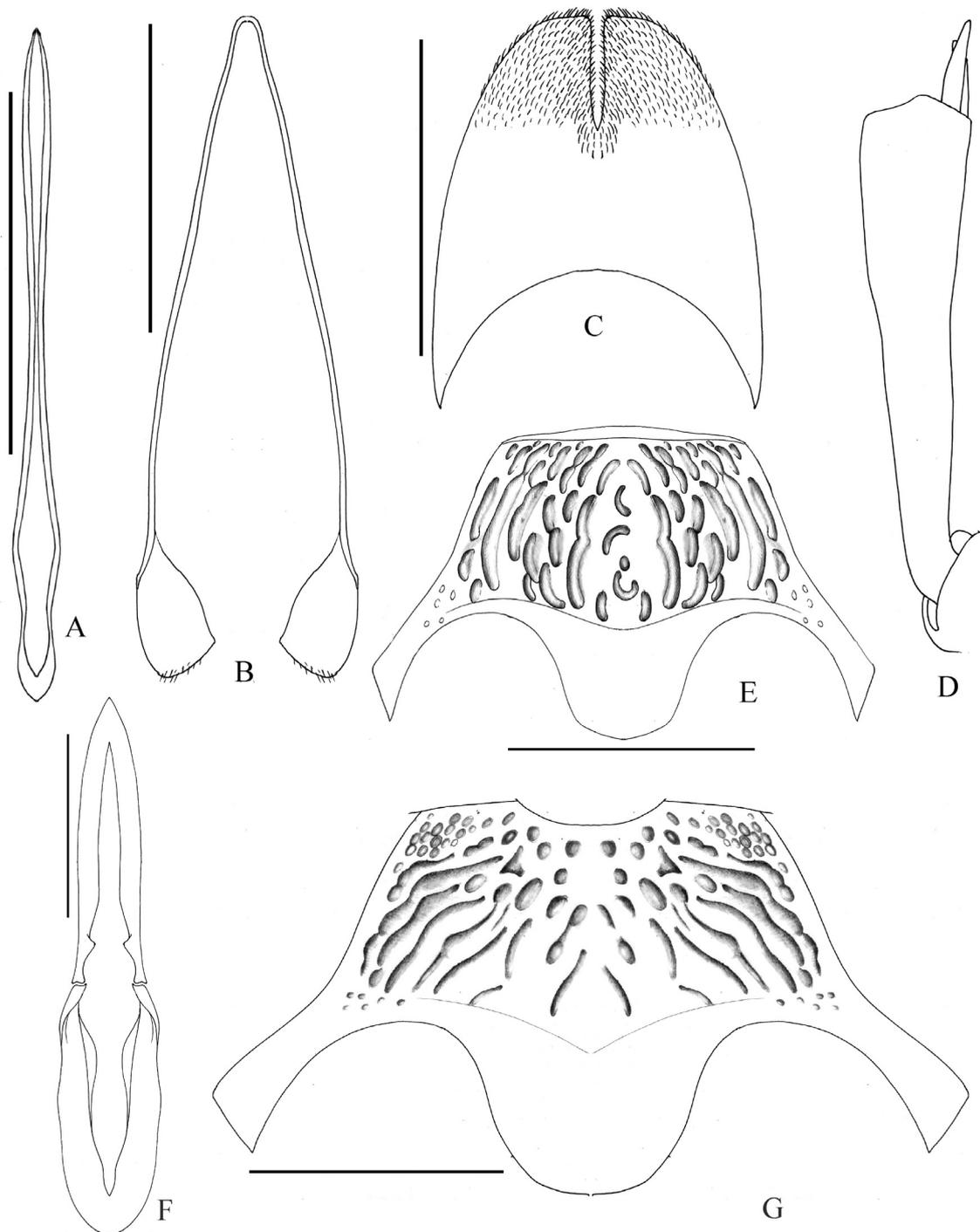


Fig. 10. *Calyptopsis* spp., details of structure, ♂. A–D – *C. fouquei* sp. nov.; F, G – *C. egecemi* sp. nov. A – penis; B – gastral spicula; C – male inner sternite VIII; D – protibia; E, G – mesoventrite; F – aedeagus.

Key to species of the genus *Calyptopsis* of Turkey and Western Transcaucasia

- 1(2) Mesoventrite with transverse and oblique long coarse wrinkles. Antennae widening from base to apex. Anterior angles of pronotum acute, strongly projecting. Scutellum not reaching margin of elytral bead. Protibiae with depression along entire length on ventral side. *C. egecemi* sp. nov.
- 2(1) Mesoventrite with longitudinal long or short bracket-shaped or bean-shaped foveae. Antennae thick in entire length. Scutellum reaching level of margin of elytral bead or longer. Protibiae without depression on ventral side.
- 3(4) Metaventrite basally and abdominal ventrites 1–3 medially with sparse distinct microgranules. *C. fouqueti* sp. nov.
- 4(3) Metaventrite basally smooth, with very fine and sparse punctation, abdominal ventrites with fine punctation in the middle or smooth.
- 5(6) Anterior margin of head sharply and completely separated from the remaining surface by elevated bead. *C. otto* sp. nov.
- 6(5) Anterior margin of head not separated from the remaining surface, sometimes with weak smooth bead laterally.
- 7(8) Anterior margin of head rounded, without vertical margin or tooth in the middle. *C. lineimargo* Reitter, 1897
- 8(7) Anterior margin of head with vertical margin and sometimes with weak, wide tooth in the middle.
- 9(10) Mesoventrite with bean-shaped wide foveae. *C. solieri* Reiche & Saulcy, 1857
- 10(9) Mesoventrite with bracket-shaped narrow foveae.
- 11(12) Body slender, elongate. Pronotum completely covered by very dense and coarse punctation (puncture diameter subequal or more than interpuncture space); punctures elongate on sides. *C. armeniaca* Baudi di Selve, 1874
- 12(11) Body robust, oval. Pronotum with sparse and fine or moderately dense punctation (puncture diameter less than interpuncture space), sometimes with coarser and denser punctation only on sides.
- 13(18) Mesoventrite with long almost straight sparse foveae.
- 12(17) Protibiae fossorial, flattened, short and wide, 2.53× as long as wide. Punctation of pronotum sparse and fine. Punctation of elytra very sparse and fine, almost not visible. Bases of elytra and pronotum subequal or elytral base not more than 1.06× as wide as base of pronotum. *C. capnisiformis* Reitter, 1903
- 15(16) Prosternal process laminar, strongly protruding and acute in lateral view. Base of pronotum straight. Elytra elliptical, with more rounded lateral margins. *C. capnisiformis volcanica* subsp. nov.
- 16(15) Prosternal process rounded, weakly protruded, laterally rectangular. Base of pronotum bisinuate. Elytra trapezoidal, with weakly rounded lateral margins. *C. capnisiformis capnisiformis* Reitter, 1903
- 17(12) Protibiae not fossorial, not flattened, 3.3× as long as wide. Punctation of pronotum and elytra dense, moderately coarse. Elytral base 1.1× as wide as base of pronotum. *C. escherichi* Reitter, 1900
- 18(13) Mesoventrite with short rounded dense foveae.
- 19(20) Body shiny. Foveae on mesoventrite connected in long longitudinal chains of brackets. *C. kaszabi* sp. nov.
- 20(19) Body dull, elytra often matt. Foveae on mesoventrite are located in the form of shingles.
- 21(22) Pronotum large, almost of the same width as elytra, with subequal length and width, 1.5× shorter than elytra. *C. caucasica* (Kraatz, 1865)
- 22(21) Pronotum not large, elytra 1.15–1.23× as wide as pronotum, 1.24–1.37× as wide as long, 2.0–2.1× shorter than elytra.
- 23(24) Pronotum with coarse and dense punctation, especially on sides. Elytra narrowly distinctly depressed along suture in anterior third. *C. pulchella pulchella* (Faldermann, 1837)
- 24(23) Pronotum with regular sparse and fine punctation. Elytra not depressed along suture. *C. emarginata* Reitter, 1889

Acknowledgements

The authors thank two reviewers and Lukaš Sekerka (Prague) for valuable comments and corrections, Ottó Merkl (HNHM) for providing material and photos of the types of the genus *Calyptopsis* from HNHM, Roberto Poggi (MSNG) for photos of the types of *Calyptopsis* described by Baudi di Selve, Konstantin Nadein (SDEI) for providing photos of *Calyptopsis caucasica*, Svetlana Nabozhenko (Institute of Arid Zones SSC RAS, Rostov-on-Don) and Ivan Chigray (Southern Federal University, Rostov-on-Don) for their help with collecting the material, Aleksey Kovalev (ZIN) for the photos of *Calyptopsis caraboides*, Tamás Németh and Aranka Grabant (HNHM) for photos of Reitter's types of *Calyptopsis* from HNHM. We cordially thank Vladimir Shmatko (Institute of Arid Zones SSC RAS) for photos of all the other species of *Calyptopsis*.

The study was supported by the Russian Foundation for Basic Research (grant 18-04-00243-A) for Maxim Nabozhenko, by the basic research project No. 0205-2014-0001 of the Caspian Institute of Biological Resources of Dagestan Scientific Center of the Russian Academy of Sciences 'Formation of biological and landscape diversity and development of the mechanisms of controlling biological resources in the East Caucasus' for Maxim Nabozhenko and †Gayirbeg Abdurakhmanov. The work of Bekir Keskin was carried out within the framework of projects Nos. 2013 BIL 010 and 2009 BIL 005 of Ege University Research Foundation.

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