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## Taxonomic review of the genus *Helops* Fabricius, 1775 (Coleoptera: Tenebrionidae) of Turkey

### Таксономический обзор рода *Helops* Fabricius, 1775 (Coleoptera: Tenebrionidae) Турции

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**Key words:** Coleoptera, Tenebrionidae, *Helops*, Turkey, taxonomy, distribution, new species.

**Ключевые слова:** Coleoptera, Tenebrionidae, *Helops*, Турция, таксономия, распространение, новый вид.

**Abstract.** Five species of the genus *Helops* s. str. Fabricius, 1775 are known from Turkey: *Helops caeruleus stevenii* Krynicki, 1834 (Georgia near the border of Turkey, can be found in Rize Province, Turkey), *Helops rossii* Germar, 1817 (Istanbul and Bursa provinces), *Helops glabriventris glabriventris* Reitter, 1885 (Izmir and Isparta provinces; Taurus Mts.: Mugla, Antalya, Konya, Mersin provinces), *Helops cyanipes* Allard, 1877 (Amanos and Central Taurus Mts.: Mersin, Kahramanmaraş, Gaziantep and Hatay provinces), *Helops punctatissimus* sp. n. (Bitlis Province). A new synonymy is established: *Helops* Fabricius, 1775 = *Mesohelops* Reitter, 1922, syn. n. Bionomics, morphology of male genitalia and key to the Turkish species are given.

**Резюме.** Из Турции известно 5 видов рода *Helops* s. str. Fabricius, 1775: *Helops caeruleus stevenii* Krynicki, 1834 (Грузия, возле турецкой границы, может быть найден в провинции Ризе Турции), *Helops rossii* Germar, 1817 (провинции Стамбул и Бурса), *Helops glabriventris* Reitter, 1885 (провинции Измир и Ыспарта; горы Тавр: провинции Мугла, Анталья, Конья и Мерсин), *Helops cyanipes* Allard, 1877 (Аманос и Центральный Тавр: провинции Мерсин, Караманмараш, Газиантеп и Хатай), *Helops punctatissimus* sp. n. (провинция Битlis). Установлена новая синонимия: *Helops* Fabricius, 1775 = *Mesohelops* Reitter, 1922, syn. n. Приведены экология, морфология гениталий самца и определительная таблица для турецких видов.

*Helops* s. str. Fabricius, 1775 is a small genus (the type genus of the tribe Helopini) with 6 species and 4 subspecies distributed in the Mediterranean region, Central Europe, Crimea, the Caucasus and Northern Iran [Nabozhenko, Löbl, 2008]. *Helops caeruleus* (Linnaeus, 1758) was conserved as the type species of the genus [Nabozhenko et al., 2008]. The greatest diversity of *Helops* is observed in

Anatolia (4 species). Two subspecies of *Helops caeruleus* are known from the Caucasus and Northern Iran. Two species are distributed in Europe and 2 endemic subspecies in the Maghreb. American species of the genus *Helops* must be transferred to the other genera of the tribe Helopini after an accurate revision; the genus *Helops* is a polyphyletic group with the inclusion of the New World species [Nabozhenko et al., 2016b].

The genus *Helops* is very broadly defined until the 20th century. It included almost all known Helopini without subgeneric division [Küster, 1850, 1851] or with multiple subgenera and sections [Laporte, 1840; Seidlitz, 1896]. Allard [1876, 1877] included to the genus species of *Helops* and *Probaticus* Seidlitz, 1896 sensu Reitter [1922]. The last revision was made by Reitter [1922] who reduced the genus to 7 species and 1 subspecies and synonymized the genus *Anteros* Laporte, 1840 with *Helops*. The Reitter's system of Palaearctic *Helops* was supported by other entomologists and it is used to the present time. Reitter [1922] also described the subgenus *Mesohelops* Reitter, 1922 with two species: *Helops cyanipes* Allard, 1877 and *H. valdani* Guérin-Méneville, 1859. Later Grimm [1991] added *Helops thoracicus* Grimm, 1991 to the subgenus. *Helops valdani* belongs to the genus *Probaticus* Seidlitz, 1896 (the subgenus *Pelorinus* Vauloger de Beaupré, 1900) [Nabozhenko, Löbl, 2008]. Differential characters used by Reitter for *Mesohelops* are doubtful for a subgeneric level: punctuation of elytra, lesser size of elevated protrusion on mentum, colour of cuticle. First two characters are suitable only for interspecies diagnostics, and colour of *Helops* (*Mesohelops*) *cyanipes* is very variable from black to blue. All characters of two species of the subgenus *Mesohelops* are identical to the nominotypical subgenus. As a result, the following synonymy is established: *Helops* Fabricius, 1775 = *Mesohelops* Reitter, 1922, syn. n.

Further species of *Helops* with images of genitalia and keys were revised in the taxonomic works of Antoine [1949] and Espa  ol [1963] for Maghreb and Ardoine [1958] for France. Bogatchev [1949] described a new subspecies *Helops caeruleus talyshensis* from Hyrcan forests of South Precaspian region. Picka [1984] added one new subspecies of *Helops glabriventris* Reitter, 1885 from Crete (Greece). Grimm [1991] described a new species from Cyprus. Taxonomic review of Caucasian and Iranian *Helops* was made by Abdurakhmanov and Nabozhenko [2011]. Larvae and pupae are known (excluding old work with non-informative figures and descriptions) for *Helops caeruleus stevenii* Krynicki, 1834 [Byzova, Gilyarov, 1956; Cherney, 2005] and *Helops insignis maroccanus* Fairmaire, 1873 [Pardo Alcaide, 1942].

The Middle East species of the genus *Helops* are poorly studied. In addition to the above-mentioned works only some faunistic records were published by Koch [1935] and Finkel et al. [2002] for Israel and by Kaszab [1968], Ferrer and Soldati [1999] for Turkey.

Bionomics of species of the genus *Helops* is well studied only for *H. caeruleus* n. *H. rossi* Germar, 1817 (see bibliography in Gebien [1943], Hellrigl et al. [2012] etc.). All species of *Helops* s. str. are lichenophagous beetles and feed on epiphytic foliose and fruticose lichens. Beetles are active at night. Species of *Helops* hide in the daytime in mouldering wood, under the flacking bark of large old trees or stumps, while many other Helopini hide in the daytime in soil under trees. Larvae and pupae also develop in mouldering wood [Byzova, Gilyarov, 1956]. Within Palaearctic Helopini only larvae of some species of *Deretus* Gahan, 1900 [Purchart, Nabozhenko, 2012] and *Allardius* Ragusa, 1898 [Bellavista, Sparacio, 2012] develop in mouldering trees, while the most of other species of the tribe have soil-dwelling larvae [Nabozhenko et al., 2016a]. In Turkey two species, *Helops caeruleus* and *H. rossii*, are distributed in low mountain and plain oak forests, and the species *H. cyanipes* and *H. glabriventris* inhabit coniferous forests. *Helops cyanipes* occurs on old mouldering *Pinus nigra* and *Cedrus libani*; *H. glabriventris* can be found on *Abies cilicica*, rarely on old *Juniperus excelsa*. Maghreb species *Helops insignis* Lucas, 1846 inhabits *Cedrus atlantica* n. *Abies maroccana*.

Below we describe a new species of the genus *Helops* s. str. from South Eastern Anatolia which was found in woodland of old *Juniperus excelsa*.

## Material and methods

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

ZIN – Zoological Institute of the Russian Academy of Sciences (St. Petersburg, Russia, Mark Volkovitsh);

HNHM – Hungarian Natural History Museum (Budapest, Hungary, Ott   Merkl);

ZDEU – Zoological Department of Ege University (Bornova-Izmir, Turkey, Bekir Keskin);

CN – private collection of Maxim Nabozhenko (Rostov-on-Don, Russia);

AL – private collection of Andrzej Laso   (Bialystok, Poland);

VT – private collection of Vladim   Tich   (T  rebo  , Czech Republic).

Bibliography for each species is completed only for regional faunistic works.

Photographs of *Helops caeruleus stevenii* were made by K.V. Makarov (Moscow State University of Education, Moscow, Russia) and taken from the site [www.zin.ru\Animalia\Coleoptera](http://www.zin.ru/Animalia/Coleoptera). Other photographs were made by D.G. Kasatkin (Rostov Branch of All-Russian Center for Plant Quarantine, Rostov-on-Don, Russia).

## Results

### Subfamily Tenebrioninae

#### Tribe Helopini

##### Subtribe Helopina

Genus *Helops* s. str. Fabricius, 1775

Type species *Helops caeruleus* (Linnaeus, 1875).

**General morphology of adults.** Body large (length 14–27 mm), slender, weakly or moderately convex, completely or partly with blue, purple or green-blue shade (Color plate 1: 1–6; Color plate 2: 7–9). Eyes large, strongly transverse. Punctuation of head often dense and very coarse. Mentum with strongly protruded elevation at middle. Antennae long, reaching elytral third or quarter. Male antennomere 11 larger than 10<sup>th</sup> one, female antennomere 11 smaller or subequal to 10<sup>th</sup> one. Pronotum cordiform, margins with thickened bead, disc with coarse and dense punctuation. Prothoracic hypomera with coarse large punctures, with punctures and wrinkles or with only coarse short irregular wrinkles. Elytra with protruded humeral angles, distinct striae. Epipleura not reaching thickened (not flattened) apex. Flightless, wings strongly reduced, very small, without costal and rarely radial veins. Mesocoxal cavities closed externally by mesepimera and metaventrite, trochantin presented. Abdominal ventrites with coarse and dense punctuation, without hair brush; ventrite 5 beaded apically, without long and strong suberected setae near apex. Legs slender. Pro- and mesotibiae of male with very dense line of erected brush. Male protarsomeres 1–3 weakly widened.

Male genitalia and terminalia (Figs 19–23, 24–28, 29–33, 34–38, 39–43). Aedeagus long; apical piece lanceolate, without longitudinal impression dorsally, covered with short spines only at widest apical part. Ventral alae of apical piece merged and completely conceal penis. Basal piece near 2 times longer than apical piece. Penis with two narrow baculi merged and broadened at basal third and with pair sclerotized part at middle. Apical lobes of gastral spicula large, pubescent apically; rods of gastral spicula straight, not merged apically and with long, often involute processes near base of lobes. Inner sternite VIII densely pubescent with long strong setae marginally; lobes with dense fine punctuation and structures for rigidity of construction: pair sclerite at middle and additional sclerotized parts at middle, coming from lateral sides to middle.

Female genital tubes. Spermatheca long, strongly branched, main duct with 3 additional long branched ducts and 2–3 short not branched ducts; basal duct short. Accessory gland long, with one-way valve, which has very short branch externally.

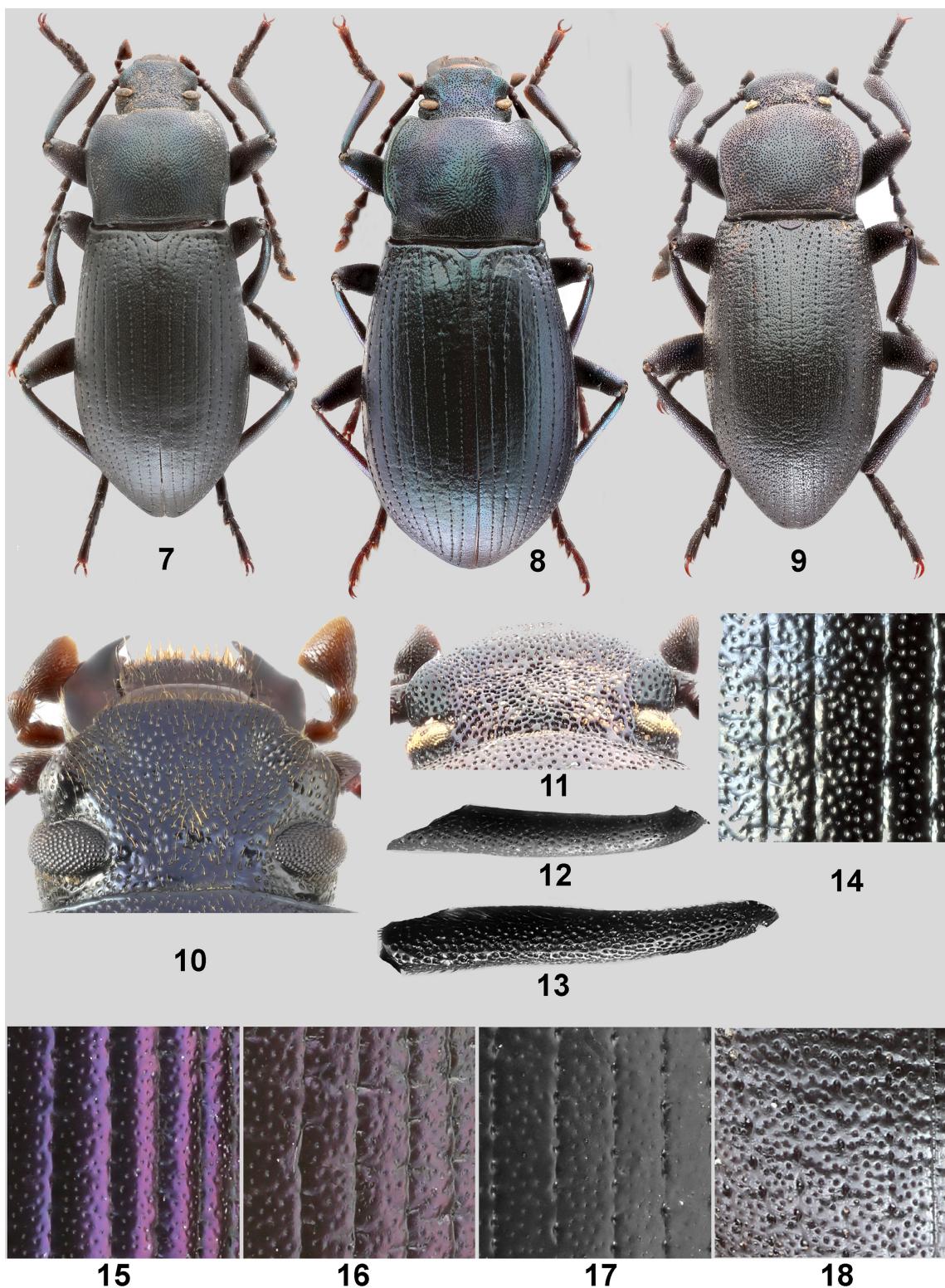
**Note.** Male genitalia of *Helops* poorly differ because species of the genus *Helops* are allopatric (at least in the Middle East).

Figs 1–6. *Helops* spp., habitus.

1 – *H. caeruleus stevenii*, male; 2 – the same, female; 3 – *H. rossii*, male; 4 – the same, female; 5 – *H. glabriventris glabriventris*, male; 6 – the same, female.

Рис. 1–6. *Helops* spp., габитус.

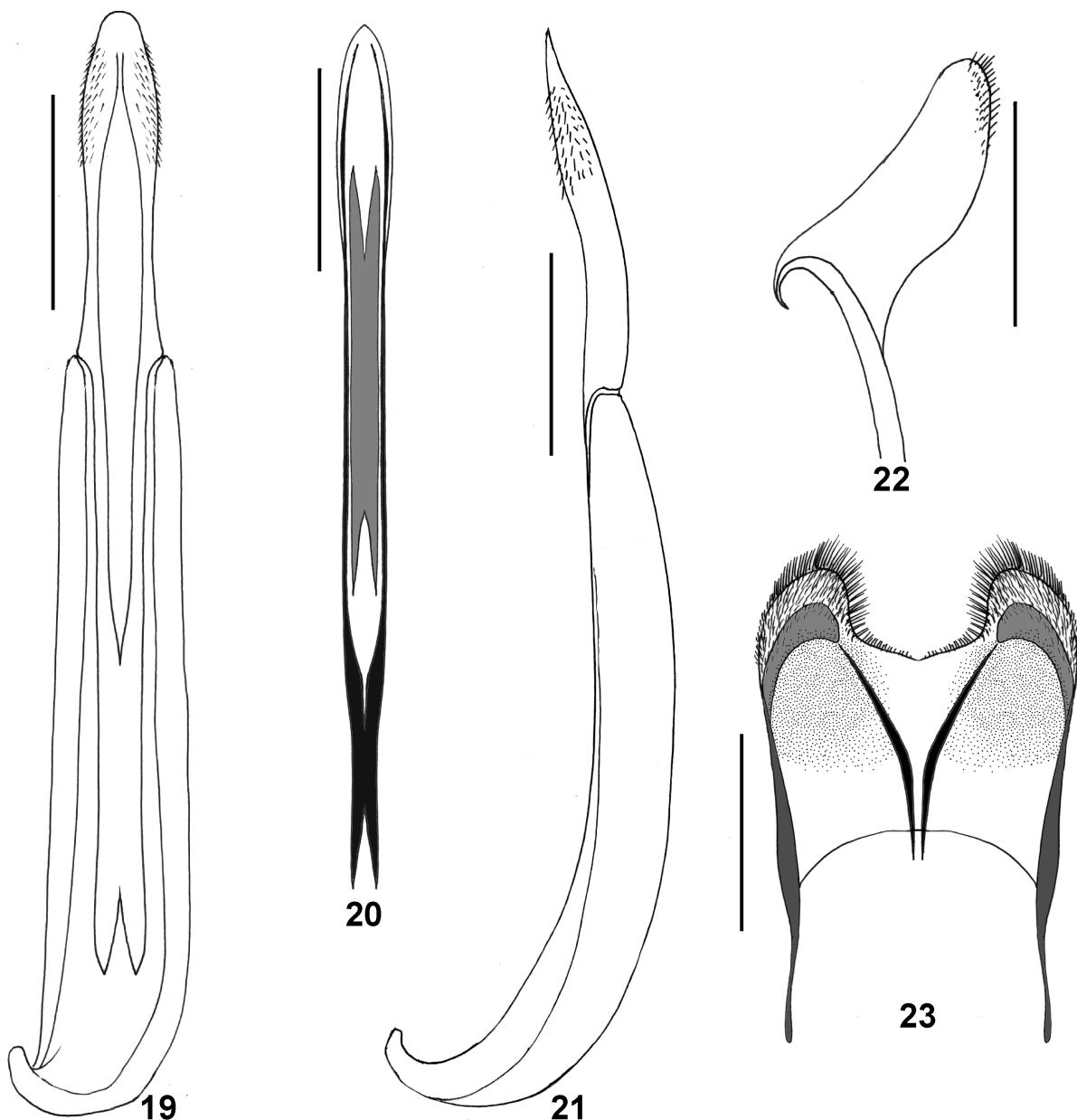
1 – *H. caeruleus stevenii*, самец; 2 – то же, самка; 3 – *H. rossii*, самец; 4 – то же, самка; 5 – *H. glabriventris glabriventris*, самец; 6 – то же, самка.

Figs 7–18. *Helops* spp., habitus, details of structure.

7 – *H. cyanipes*, male, habitus (Çamlıayla, Mersin Province); 8 – the same, female (south of Hatay Province); 9 – *H. punctatissimus* sp. n., male; 10 – *H. caeruleus stevenii*, head; 11 – *H. punctatissimus* sp. n., head; 12 – *H. cyanipes*, punctuation of metatibia; 13 – *H. punctatissimus* sp. n., the same; 14–18 – punctuation and sculpture of elytra: 14 – *H. caeruleus stevenii*, 15 – *H. rossii*, 16 – *H. glabriventris glabriventris*, 17 – *H. cyanipes*, 18 – *H. punctatissimus* sp. n.

Рис. 7–18. *Helops* spp., габитус, детали строения.

7 – *H. cyanipes*, самец, габитус (Чамлыяйла, провинция Мерсин); 8 – то же, самка (юг провинции Хатай); 9 – *H. punctatissimus* sp. n., самец; 10 – *H. caeruleus stevenii*, голова; 11 – *H. punctatissimus* sp. n., голова; 12 – *H. cyanipes*, пунктировка задней голени; 13 – *H. punctatissimus* sp. n., то же; 14–18 – пунктировка и скulptура надкрылий: 14 – *H. caeruleus stevenii*, 15 – *H. rossii*, 16 – *H. glabriventris glabriventris*, 17 – *H. cyanipes*, 18 – *H. punctatissimus* sp. n.

Figs 19–23. *Helops caeruleus sevenii*, male genitalia and terminalia.

19 – aedeagus, ventral view; 20 – median piece (penis); 21 – aedeagus, lateral view; 22 – lobe of gastral spicula, lateral view; 23 – male inner sternite VIII, ventrally.

Рис. 19–23. *Helops caeruleus sevenii*, гениталии и терминалии самца.

19 – эдеагус вентрально; 20 – пенис; 21 – эдеагус латерально; 22 – лопасть гастральной спикулы, латерально; 23 – VIII внутренний стернит самца, вентрально.

*Helops caeruleus stevenii* Krynicki, 1834  
(Color plate 1: 1, 2; Color plate 2: 10, 14; Figs 19–23)

Reitter, 1922: 31; Abdurakhmanov, Nabozhenko, 2011: 305.

**Material.** Georgia, Batumi, 1♂, 1♀ (ZIN).

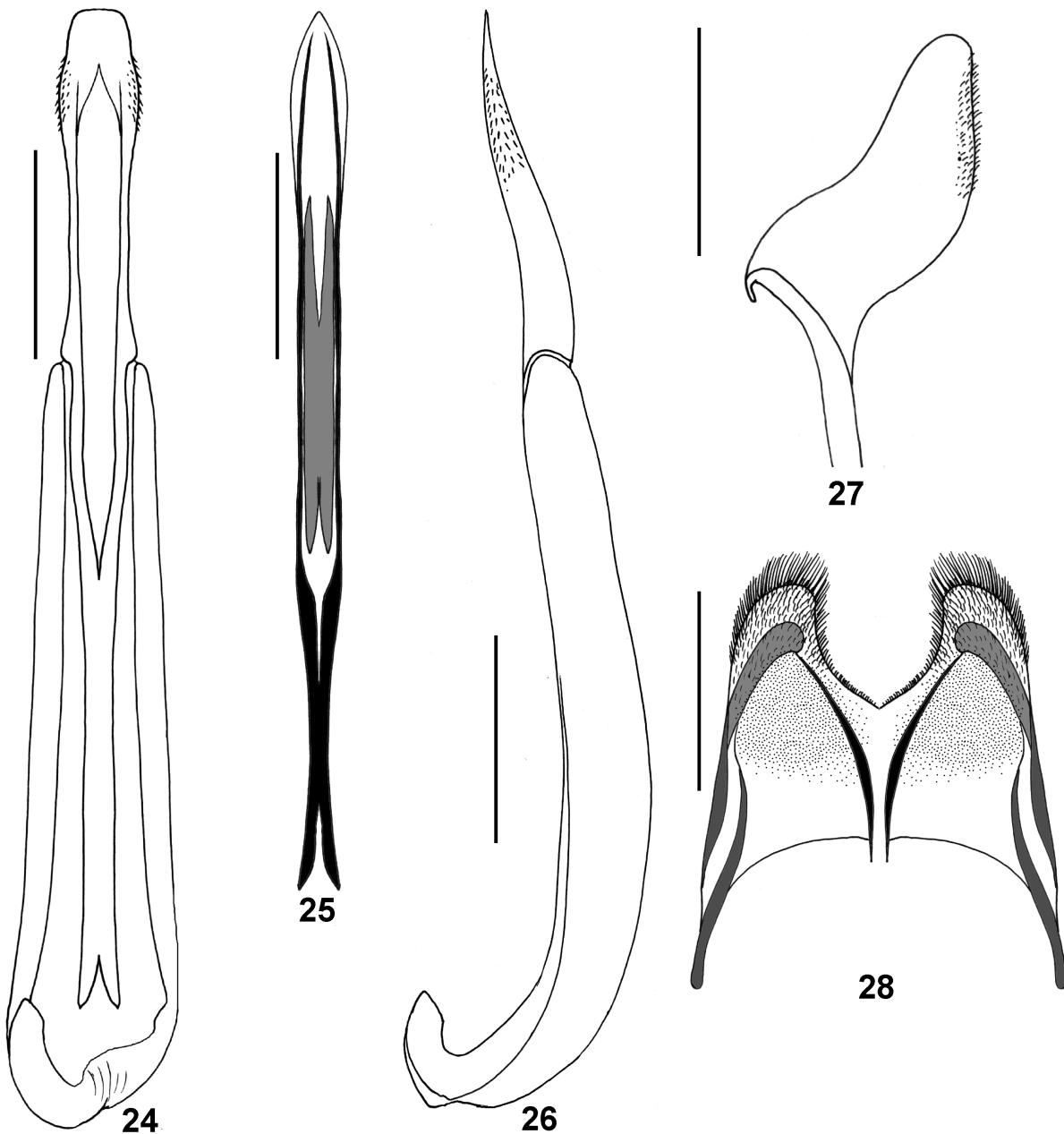
**Notes.** The nominotypical subspecies was listed for Anatolia by Nabozhenko and Löbl [2008]. Reitter [1922] recorded *H. caeruleus stevenii* for "Kleinasiens". Later Abdurakhmanov and Nabozhenko [2011] corrected that *H. caeruleus stevenii* is distributed in North Eastern Anatolia. We have not any material from Turkey, but the subspecies is known from Batum in Georgia [Radde, 1899;

ZIN collection], near the border of Turkey and can be found in Rize Province.

*Helops rossii* Germar, 1817  
(Color plate 1: 3, 4; Color plate 2: 15; Figs 24–28)

Kaszab, 1968: 460; Ferrer, Soldati, 1999: 64.

**Material.** 3♂, Turkey, Bursa Prov., Cumalikizik, 23–25.05.2008, on Quercus cerris (leg. I.V. Shokhin) (CN); 1♀ (CN), 5♂, 6♀ (ZDEU, in ethanol), Turkey, Istanbul Prov., Alem Dağ, near Ömerli, 150–170 m, 41°05'13.6"N / 29°22'10.0"E, 10.04.2014, on Quercus robur (leg. M.V. and S.V. Nabozhenko, B. Keskin).



Figs 24–28. *Helops rossii*, male genitalia and terminalia.

24 – aedeagus, ventral view; 25 – median piece (penis); 26 – aedeagus, lateral view; 27 – lobe of gastral spicula, lateral view; 28 – male inner sternite VIII, dorsally.

Рис. 24–28. *Helops rossii*, гениталии и терминалии самца.

24 – эдеагус вентрально; 25 – пенис; 26 – эдеагус латерально; 27 – лопасть гастральной спикулы, латерально; 28 – VIII внутренний стернит самца, дорсально.

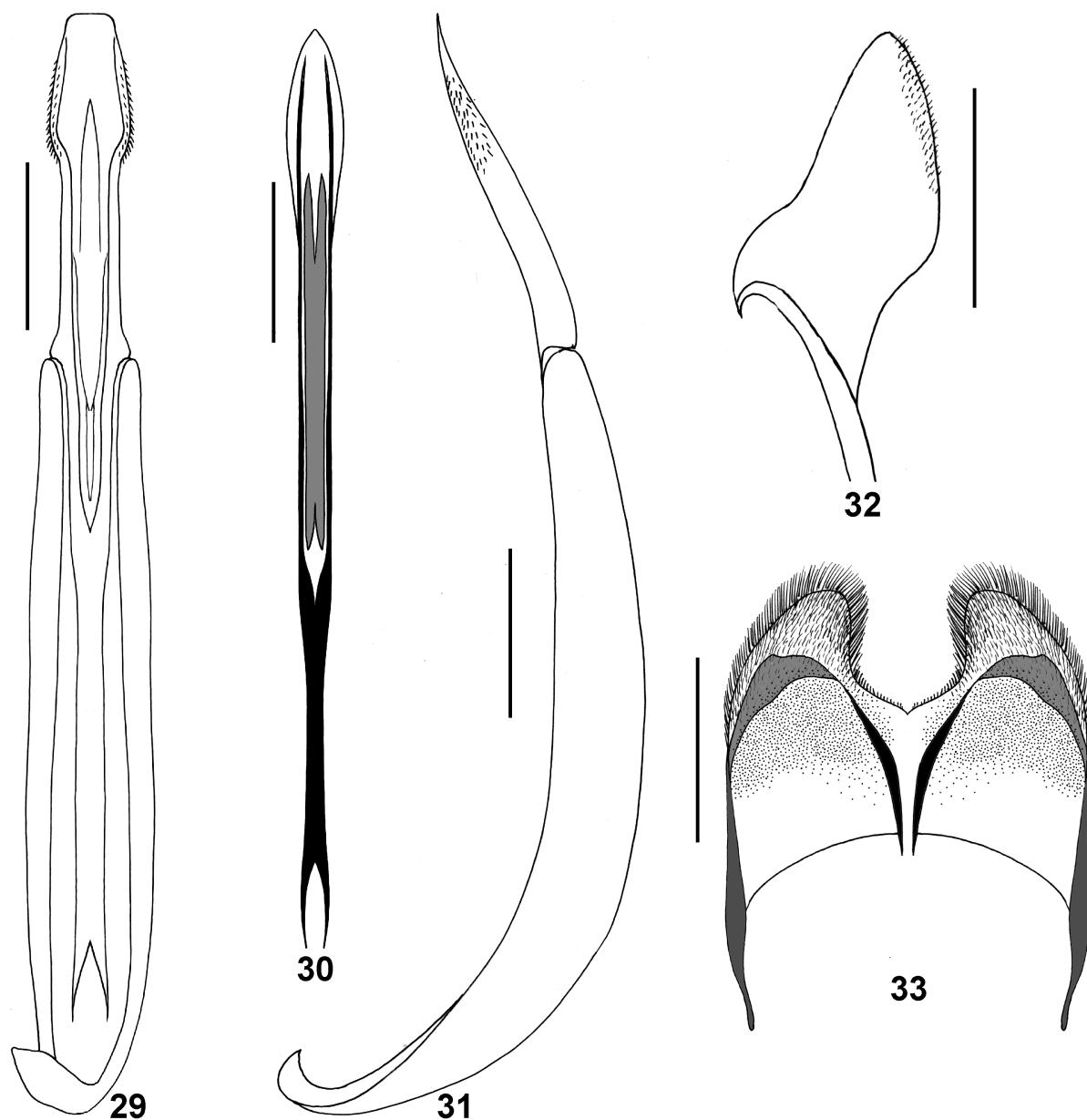
**Notes.** Ferrer and Soldati [1999] listed this species for Yarpuz (Antalya Province). We collected only numerous *Helops glabriventris* in this place. This record must be supported by additional material.

**Distribution.** Southern Europe from France to European part of Turkey, North Western Anatolia.

*Helops glabriventris glabriventris* Reitter, 1885  
(Color plate 1: 5, 6; Color plate 2: 16; Figs 29–33)

Reitter, 1885: 382; Seidlitz, 1896: 702; Reitter, 1922: 31; Ferrer, Soldati, 1999: 64.

**Material.** 3♂, 1♀, Turkey, İzmir Prov., Balçova District, 38°22.108'N / 27°1.934'E, 150 m, 2.03.1996 (leg. B. Keskin) (ZDEU); 1♂, 1♀, Turkey, Muğla Prov., Fethiye District, 1.07.1997 (leg. D. Keith) (ZDEU); 1♂, 1♀, Turkey, Antalya Prov., Akseki, Irmazan Pass, 27.05.2001 (leg. Snížek) (VT); 1♂, Turkey, Mersin Prov., N Erdemli, 28.05.2001 (coll. P. Bialooki) (VT); 1♀, Turkey, Mersin Prov., Orta Toroslar, 700 m, 8 km N Erdemli, 2.04.2004 (N. Rahmé, L. Nádai, K. Székely) (HNHM); 1♂, 2♀, Turkey, Muğla Prov., Babadağ Mts., Fethiye District, above Ovacık, 1300 m, on Cedrus libani, 13–15.04.2008 (leg. M.V. Nabozhenko, B. Keskin) (CN); 2♂, 2♀, Turkey, Isparta Prov., Davraz Dağı, 37°48'744"N / 30°46'912"E, 1586 m, 11.05.2009 (leg. M.V. and S.V. Nabozhenko, B. Keskin) (CN); 11♂, 7♀ (CN), 4♂, 3♀ (ZDEU), Turkey, Antalya Prov., Akseki District, Yarpuz Pass, 37°10'246"N / 31°55'324"E, 1821 m, 15.05.2009, on Abies cilicica and Juniperus excelsa (leg. M.V. and S.V. Nabozhenko, B. Keskin); 5♂, 3♀ (CN), 4♂ (ZDEU), Turkey, Konya Prov., Kartal Dağı, Hadim District, Küplüce, 36°59'081"N / 32°43'102"E, 1688 m, 16.05.2009 (leg. M.V. and S.V. Nabozhenko, B. Keskin);



Figs 29–33. *Helops glabriventris glabriventris*, male genitalia and terminalia.  
 29 – aedeagus, ventral view; 30 – median piece (penis); 31 – aedeagus, lateral view; 32 – lobe of gastral spicula, lateral view; 33 – male inner sternite VIII, ventrally.

Рис. 29–33. *Helops glabriventris glabriventris*, гениталии и терминалии самца.  
 29 – эдеагус вентрально; 30 – пенис; 31 – эдеагус латерально; 32 – лопасть гастральной спикулы, латерально; 33 – VIII внутренний стернит самца, вентрально.

4♂, Turkey, Antalya Prov., Akseki District, 11.07.2011 (leg. A. Üzüm, R. Kudrata) (ZDEU); 1♀, Turkey, İzmir Prov., Buca District, Kaynaklar, 38°21.808'N / 27° 18.503'E, 150 m, 30.04.2015 (leg. B. Keskin) (ZDEU).

**Distribution.** Greece (Euboea) [Kühnelt, 1965], Turkey (Western Taurus Mountains from Mugla to Göksun River, one population is known from Mersin Province (Erdemli); İzmir Province).

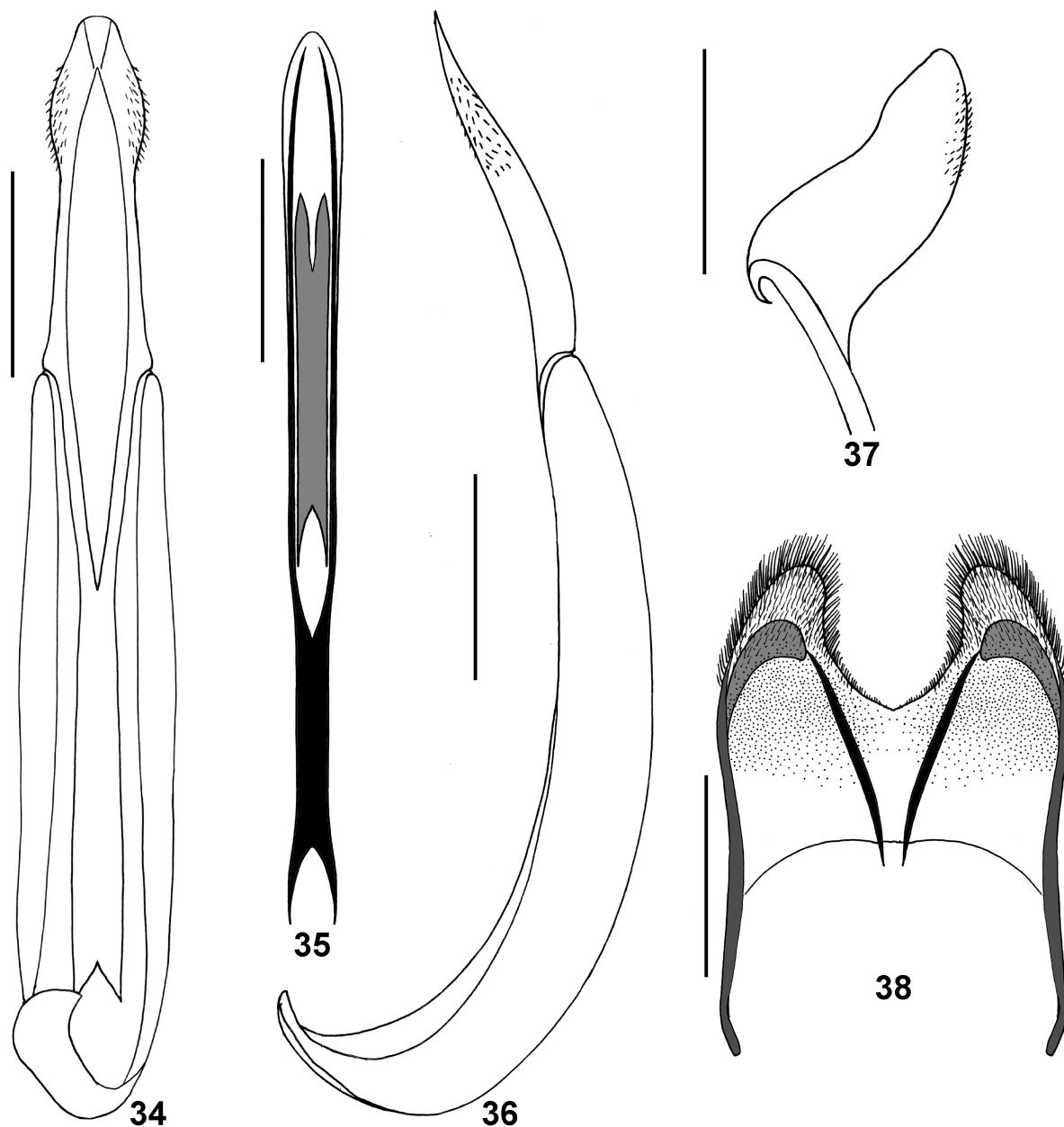
*Helops cyanipes* Allard, 1877  
 (Color plate 2: 7, 8, 12, 17; Figs 34–38)

Allard, 1877: 256; Seidlitz, 1896: 701 (*Helops* (*Anteros*)); Reitter, 1902: 209 (*Helops* (*Raiboscelis*)); Reitter, 1922: 31 (*Helops*

(*Mesohelops*)); Kaszab, 1968: 460; Ferrer, Soldati, 1999: 64 (*Helops* (*Mesohelops*)).

= *carinimentum* Reitter, 1885: 383.

**Material.** 1♀, Turkey, Mersin Prov., Namrun (Çamlıhayla), 18.07.1984 (leg. C. Can) (ZDEU); 2♂, 3♀, Turkey, Mersin Prov., Tarsus, E of Çamlıhayla, 30.05.2001 (leg. Snižek) (VT); 1♂, Turkey, Hatay Prov., Topaktaş, 36°49'N / 36°20'E, 1170 m, 21–22.07.2006 (leg. R. Królik) (AL); 1♀, Turkey, Mersin Prov., above Arslanköy, 1800 m, 16.04.2007, on Abies cilicica (leg. M.V. Nabozhenko) (CN); 1♂, 1♀, Turkey, Mersin Prov., Güzeloluk, 1400 m, 16–18.05.2008 (leg. I.V. Shokhin) (CN); 2♂, 1♀, Turkey, Mersin Prov., above Arslanköy, 1800 m, 18.05.2009, on Abies cilicica (leg. M.V. and S.V. Nabozhenko, B. Keskin) (ZDEU); 1♂ (CN), 3♂, 1♀ (ZDEU), Turkey, Mersin Prov., Çamlıhayla, 37°10'307"N / 34°31'239"E, 1900 m, 18.05.2009 (leg. M.V. and S.V. Nabozhenko, B. Keskin); 1♂, 1♀, Turkey, Hatay Prov., W Antaky, S Amanos Dağları, 36°18'36.6"N /



Figs 34–38. *Helops cyanipes*, male genitalia and terminalia.

34 – aedeagus, ventral view; 35 – median piece (penis); 36 – aedeagus, lateral view; 37 – lobe of gastral spicula, lateral view; 38 – male inner sternite VIII, ventrally.

Рис. 34–38. *Helops cyanipes*, гениталии и терминалии самца.

34 – эдеагус вентрально; 35 – пенис; 36 – эдеагус латерально; 37 – лопасть гастральной спикулы, латерально; 38 – VIII внутренний стернит самца, вентрально.

36°03'12.7"E, 1480 m, 18.05.2010 (leg. M.V. and S.V. Nabozhenko, B. Keskin) (CN); 1♂, Turkey, Gaziantep Prov., İslahiye District, W Tandır Köyü, Huzurlu Yayıları, 36°58'25.7"N / 36°29'14.2"E, 1730 m, 19.05.2010 (leg. M.V. and S.V. Nabozhenko, B. Keskin) (CN); 1♀, Turkey, Kahramanmaraş Prov., Göksun District, Püren Geçidi, 37°57'16.5"N / 36°33'36.2"E, 1404 m, 20.05.2010 (leg. M.V. and S.V. Nabozhenko, B. Keskin) (CN); 1♂, the same locality, 15.04.2014 (leg. B. Keskin) (ZDEU); 1♂, Turkey, Mersin Prov., Çamlıhayalı District, Sibil, 30.05.2010 (leg. D.G. Kasatkina) (CN); 1♂, Turkey, Mersin Prov., Mut District, Sertavul Pass, 36°51.231"N / 33°17.889"E, 1450 m, 30.05.2011 (leg. B. Keskin) (ZDEU); 3♂, 3♀, Turkey, Mersin Prov., Erdemli District, Toros, 36°54.369"N / 34°6.119"E, 1735 m, 31.05.2011 (leg. B. Keskin) (ZDEU).

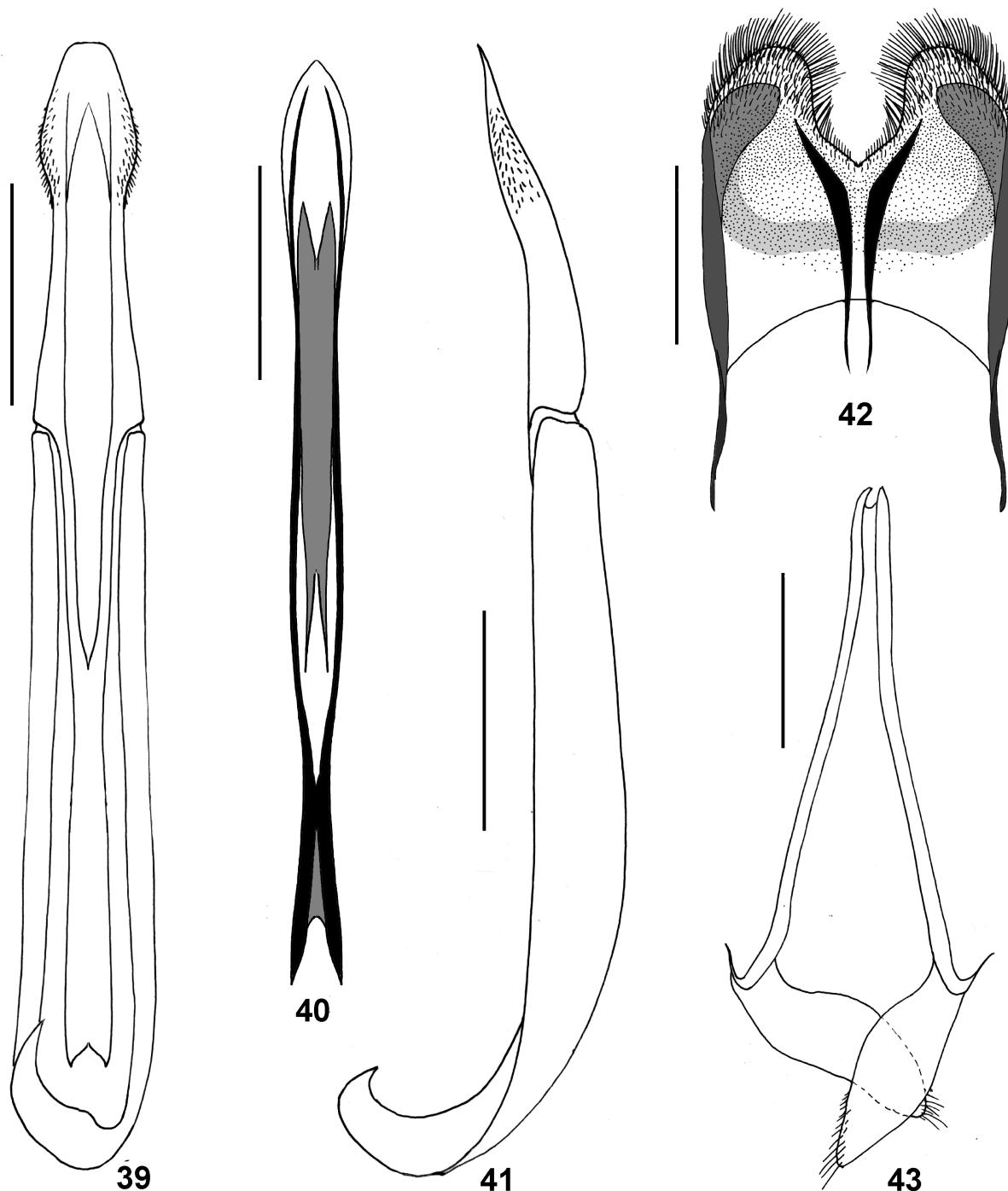
**Distribution.** Turkey (Central Taurus Mountains east of Göksun River, Amanos Mountains), Syria, Lebanon, Israel [Koch, 1935; Finkel et al., 2002].

#### *Helops punctatissimus* sp. n.

(Color plate 2: 9, 11, 13, 18; Figs 39–43)

**Material.** Holotype, ♂ (will be deposited in ZIN): Turkey, Bitlis Prov., E Tatvan, 38°28'18.06"N / 42°19'13.54"E, 23.04.2009 (leg. M.V. and S.V. Nabozhenko).

**Description.** Male. Body black, moderately shiny, head and protibiae with very weak bluish shade. Head widest at eye level. Eyes large, strongly transverse. Head width 1.54 times width of interocular space. Outer margins of genae regularly rounded. Lateral margin of head with very weak and short sinuation between genae and frontoclypeus. Head with continuous depression between frons and frontoclypeus. Frons weakly convex.



Figs 39–43. *Helops punctatissimus* sp. n., male genitalia and terminalia.

39 – aedeagus, ventral view; 40 – median piece (penis); 41 – aedeagus, lateral view; 42 – male inner sternite VIII, ventrally; 43 – gastral spicula.

Рис. 39–43. *Helops punctatissimus* sp. n., гениталии и терминалии самца.

39 – эдеагус вентрально; 40 – пенис; 41 – эдеагус латерально; 42 – VIII внутренний стернит самца, вентрально; 43 – гастральная спикала.

Punctuation of head dorsally very coarse and dense (puncture diameter 3–4 times as long as interpuncture distance), punctures not merged; vertex with dense merged punctuation. Antennomeres long, with 3 apical antennomeres extending beyond base of pronotum, antennomeres 2–8 with blue shine, antennomeres 1 and 9–11 black.

Pronotum weakly transverse (1.14 times wide as long), cordiform, widest before middle, 1.6 times wider than head. Lateral margins weakly rounded, emarginated in basal quarter. Anterior margin weakly broadly emarginated, base straight.

Anterior angles weakly obtuse, posterior ones right. Disc of pronotum regularly convex, without impressions, all margins with simple, not thickened bead (excluding middle of anterior and basal margins, where bead more widened). Punctuation of disc the same as on head, sparser at middle and merged on side, punctures round. Outer margins of prothoracic hypomera not flattened; hypomera with coarse, very dense not merged punctures, without wrinkles. Prosternal process smooth, without punctuation, beaded, with short cone apically.

Elytra elongate (1.6 times as long as wide), 1.2 times wider and 2.24 times longer than pronotum, 1.96 times wider than head. Elytral interstriae flat, with dense punctuation (puncture diameter subequal to distance between punctures) of small deep punctures and sparse, not depressed transverse wrinkles. Strial punctures round, deep, not connecting. Epipleura not impressed, with very coarse irregular wrinkles.

Meso- and metaventrite, mesepimera, mes- and metepisterna with very dense and coarse merged punctuation. Abdominal ventrites with very dense punctuation, from coarse on 1<sup>th</sup> ventrite to fine on 5<sup>th</sup> ventrite, without wrinkles. Ventrite 5 completely beaded.

Pro- and mesotibiae curved, weakly club-shaped, with very dense brush of long black setae on inner side. Protibiae longitudinally impressed along middle of inner side. Tarsi with dense brush of black hairs on ventral side. Protarsi transverse, mesotarsi longitudinal.

Body length 15 mm, width 5.7 mm.

**Etymology.** The name is translated from Latin as "densely punctuated".

**Differential diagnosis.** This new species is similar to *Helops caeruleus*, from which it differs in the structure of elytral striae (in *Helops caeruleus* strial punctures are connected to continuous grooves, in *H. punctatissimus* sp. n. strial punctures consist of not merged round punctures), less elevated protrusion on mentum, which weakly visible at lateral view, denser and coarser punctuation and black colour of the body.

#### Key to species of the genus *Helops* of Turkey

- 1(2). Prothoracic hypomera with coarse irregular wrinkles. Elytra with strongly depressed coarse and dense transverse wrinkles, rarely without depressed wrinkles (population from Kartal Dağ, Konya). Frons strongly convex, transverse depression between frons and frontoclypeus divided into two lateral impressions by frons ..... *H. glabriventris*
- 2(1). Prothoracic hypomera with coarse, sometimes merged punctures. Elytra without wrinkles or with weakly depressed wrinkles. Frons weakly convex, transverse depression between frons and frontoclypeus continuous.
  - 3(7). Head with long recumbent reddish or white hairs.
    - 5(6). Elytral interstriae flat. Scutellum with short recumbent setae. Pronotum with acute posterior angles ..... *H. caeruleus stevenii*
  - 6(5). Elytral interstriae convex. Scutellum not setated. Pronotum with obtuse or right posterior angles ..... *H. rossii*
- 7(3). Head only with very short fine setae.
  - 8(9). Protrusion of mentum strongly elevated and distinctly visible at lateral view. Punctuation of elytral interstriae fine and sparse, punctures at apical half 3–4 times shorter than strial punctures. Punctuation of femora and tibiae moderately coarse, not dense, puncture diameter equal or less than interpuncture distance ..... *H. cyanipes*
  - 9(8). Protrusion of mentum strongly elevated and distinctly visible at lateral view. Punctuation of elytral interstriae coarser and denser, punctures at apical half subequal to strial punctures. Punctuation of femora and tibiae very dense and coarse, puncture diameter 2–3 times as long as interpuncture distance ..... *H. punctatissimus* sp. n.

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