

A new species of *Sphaerobothris* Semenov & Richter from Armenia (Coleoptera: Buprestidae)

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Sphaerobothris (s. str.) *aghababiani* sp. n. is described from environs of Meghri, Arax valley, Armenia and compared with *S. globicollis* (Reitter) from Central Asia. This is the first *Sphaerobothris* species from Transcaucasia and the third one in Palaearctic. *S. aghababiani* sp. n., like other *Sphaerobothris* species, develops on *Ephedra*.

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Introduction

The subgenus *Sphaerobothris* Semenov-Tian-Shanskij & Richter, 1934 was established for the Turanian desert species *Chrysobothris globicollis* Reitter, 1895. Recently Bellamy & Volkovitsh (1997) elevated *Sphaerobothris* to generic rank and transferred the North African *Chrysobothris* (*Hoggarobothris*) *dinauxi* Théry, 1935 and the North American *C. ulkei* LeConte, 1860 and *C. platti* Cazier, 1938 to this genus. Accordingly, *Sphaerobothris* comprises 2 subgenera: *Sphaerobothris* s. str. (3 species) and *Hoggarobothris* (1 species). Meanwhile there are a number of North American and presumably some South American (for example, *C. myia* Gory) chrysobothrine species which should possibly be transferred to *Sphaerobothris*, though American species apparently have to be separated as their own subgenus or subgenera. The main biological feature of *Sphaerobothris* species is their association with the primitive gymnosperm *Ephedra* (Ephedrales, Ephedraceae) which is known as larval host plant for *S. globicollis*, *S. aghababiani* sp. n., *S. ulkei*, and *S. platti*; there are no biological records for *S. (Hoggarobothris) dinauxi*, but its association with *Ephedra* is highly probable (Bellamy & Volkovitsh, 1997).

The larva of an unknown chrysobothrine species was found within *Ephedra* roots in the environs of Meghri (Armenia) by A.V. Alexeev in 1968, and it was supposed to belong to *S. globicollis* (Reitt.) (Bellamy & Volkovitsh, 1997). However, the beetles collected in the same area in June 1997 turned to be a new species; the description of this species follows.

Sphaerobothris (s. str.) *aghababiani* sp. n. (Figs 1-6)

Holotype. ♂, Armenia, env. of Meghri, Artsvakar, 21.VI.1997 (M.Yu. Kalashian). Deposited in the Zoological Institute RAS, St.Petersburg.

Paratypes. 20 ♂, 11 ♀ from the same locality, 25.VI., 1.VII.1997, 2.VII.1998 (K. Aghababian). Deposited in the Zoological Institute RAS, St.Petersburg; collections of M.Yu. Kalashian (Yerevan), S. Bily (Prague), and V. Kuban (Brno).

Description. Body of medium size (length 10.5-13.6 mm, width 3.9-5.1 mm), weakly convex, slightly flattened dorsally, coppery bronze with more or less distinct greenish sheen or greenish copper dorsally, brightly coppery bronze ventrally. Head flattened or weakly convex as viewed from above; eyes slightly projecting from the head outline. Frons 1.41 (1.28-1.61) times as wide as transverse diameter of eye and 0.67 (0.65-0.70) times as wide as frons above antennal fossae, with nearly straight sides converging

to vertex (Fig. 3). Frons anteriorly with straight, smoothed, transverse ledge separating the depressed lower frontal part, and with indistinct, shallow, oblique depressions above it (Fig. 3); lower frontal part sometimes with poorly marked longitudinal median depression joining with another transverse one under the ledge and with two less distinct oblique depressions above antennal fossae, covered with transverse concentric rugosity formed by fusing punctures and with long decumbent hairs. Vertex with fine median groove or line sometimes reaching and dividing the transverse ledge. Clypeus with coarse punctation; anterior margin with deep angular incisure, not elevated (Fig. 3).

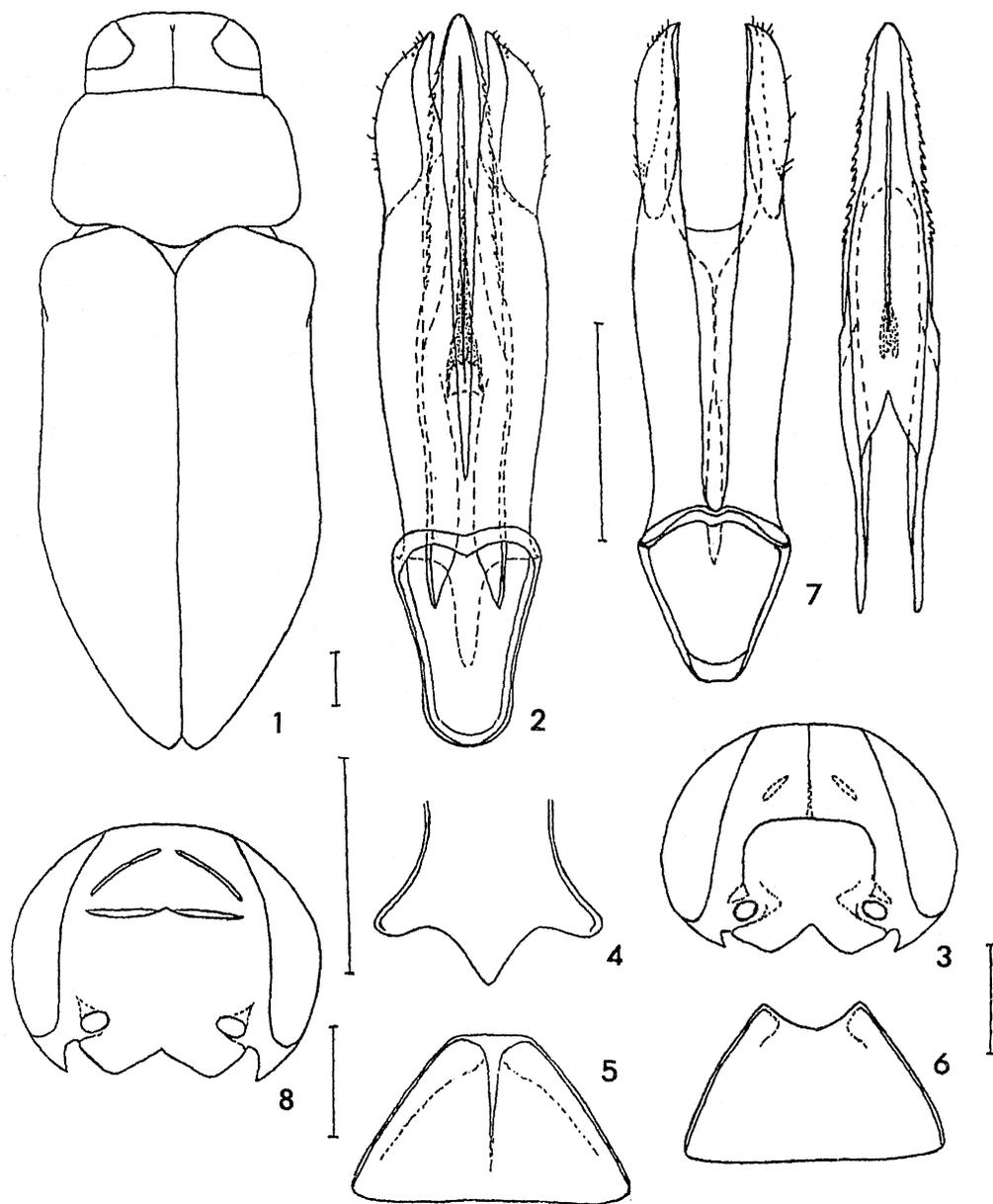
Pronotum flattened, slightly transverse, 1.55 (1.48-1.59) times as wide at base as long, widest at the basal quarter, more rarely at the basal third; sides shortly converging to base and almost straightly, sometimes bisinuately converging from the widest point to anterior quarter and then shortly to anterior angles. Anterior margin with slightly produced, arched median lobe, finely bordered;

posterior margin markedly bisinuate, with distinct angular median projection (Fig. 1). Pronotal disc with marked, deep median groove along its entire or nearly entire length; with inconspicuous, shallow, oblique, lateral depressions at anterior third. Lateral carina straight, fine, complete, reaching anterior angles, not visible from above being concealed by sides. Pronotal surface with smoothed sparse punctures on shagreened background; sides with a little denser punctures forming indistinct transverse rugosity on posterior angles only. Prosternum with straight, bordered anterior margin; prosternal process with three apical teeth of equal length (Fig. 4); hypomera with dense punctures. Scutellum small, acutely triangular, greenish bronze.

Elytra weakly convex, 1.90 (1.83-1.98) times as long as wide at base; sides subparallel or slightly diverging to posterior third, then nearly straightly or hardly arcuately converging towards separately rounded apices bearing very small indistinct serration; elytral disc with smoothed but distinct cari-

Table. Comparison of two species of *Sphaerobothris*

<i>S. aghababiani</i> sp. n.	<i>S. globithorax</i> (Reitter)
Body slightly flattened, not subcylindrical (Fig. 1)	Body markedly convex, subcylindrical
Clypeus with deep triangular incision anteriorly (Fig. 3)	Clypeus with shallow angulate or arcuate incision anteriorly (Fig. 8)
Frons with sides almost straight, converging towards vertex (Fig. 3)	Frons with sides markedly arcuate, converging towards vertex (Fig. 8)
Frons above antennal fossae 1.50 (1.44-1.55) times as wide as vertex between the eyes	Frons above antennal fossae 1.64 (1.54-1.75) times as wide as vertex between the eyes
Frons anteriorly with straight smoothed transverse ledge which separates depressed lower frontal part, and with indistinct shallow oblique depressions above it; vertex with fine median groove or line usually reaching transverse ledge (Fig. 3)	Frons anteriorly with medially curved, distinct transverse ledge or keel, which overhang the widely depressed lower frontal part, and with oblique, smooth, marked callosities converging to vertex above it; vertex with fine median line reaching the point where callosities are touching (Fig. 8)
Pronotum at base 1.55 (1.48-1.55) times as wide as long, flattened, widest at the basal 1/4 or 1/3; disc with marked deep median groove along its entire or nearly entire length; posterior margin with distinct angular median projection (Fig. 1); lateral carina straight, reaching anterior angles; surface with smoothed sparse punctures on shagreen background forming indistinct transverse rugosity on posterior angles only	Pronotum at base 1.74 (1.64-1.75) times as wide as long, globose, widest at the middle or before the middle; disc without or with indistinct median groove at basal half; posterior margin broadly arcuate; lateral carina curved, not reaching anterior angles; surface with coarse, dense punctures forming distinct transverse rugosity at the base
Apical teeth of prosternal process subequal (Fig. 4)	Lateral apical teeth of prosternal process markedly shorter than middle one
Elytra with only basal depressions, these not differing in colour from remaining surface; covered with very fine sparse punctures on shagreened background	Elytra with 3 pairs of greenish depressions often filled with wax; covered with dense coarse punctures
Abdominal sternites laterally with fine white decumbent hairs forming indistinct longitudinal stripes	Abdominal sternites laterally with large triangular patches of dense hairs and wax, usually placed in shallow depressions covered with very dense fine punctures
Aedeagus as in Fig. 2	Aedeagus as in Fig. 7



Figs 1-8. 1-6, *Sphaerobothris aghababiani* sp. n.: 1, habitus; 2, aedeagus; 3, head (frontal view); 4, prosternal process; 5, anal sternite of female; 6, anal sternite of male; 7, 8, *S. globicollis* (Reitter): 7, aedeagus; 8, head (frontal view).

nae and with only basal shallow depressions which are not differing in colour from remaining surface; covered with very fine punctures on shagreened dull background.

Fore femora with broad obtuse tooth; tibiae slender. Metacoxae narrowing towards lateral sides, with hind margin straight.

Plantar brushes poorly developed on two basal tarsomeres, larger towards distal end.

Abdomen coppery bronze, brightly shining, covered with dense asperate punctures; sides with denser and smaller punctures and fine, white, decumbent hairs forming indistinct stripes; suture between 1st and 2nd ab-

dominal sternites inconspicuous; hind margin of 2nd sternite straight or weakly concave.

Male. Fore and middle tibiae strongly incurved. Prosternal process with dense coarse punctures and erect hairs. Anal sternite with deep arcuate incisure apically (Fig. 6). Aedeagus as in Fig. 2.

Female. Fore and middle tibiae hardly incurved, nearly straight. Prosternal process with single punctures and hairs. Anal sternite nearly truncated apically, with distinct fine median carina (Fig. 5).

Comparison. *Sphaerobothris aghababiani* sp. n. differs from *S. globithorax* (Reitter) as given in the Table.

Comparison of the larvae of *S. aghababiani* sp. n. and *S. globithorax* (Reitter) revealed significant differences between these species in the mouthparts armature and some other characters which are much greater than those between the first and the larvae of *Chrysobothris affinis* (Fabricius), *C. chrysostigma* (Linnaeus), and *C. sp.* (Mexico).

Ecology. Larvae develop within the roots of *Ephedra* sp.; life cycle presumably biennial (A.V. Alexeev, personal communication). All adult specimens were collected by sweeping of *Ephedra* branches.

Etymology. The new species is named in honour of K. Aghababian who collected most specimens of the type series.

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References

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