

## New species of *Broscosoma* Rosenhauer, 1846 (Coleoptera: Carabidae) from China

Arvīds Barševskis

Barševskis A. 2010. New species of *Broscosoma* Rosenhauer, 1846 (Coleoptera: Carabidae) from China. *Baltic J. Coleopterol.*, 10 (1): 19 – 22.

A new species of genus *Broscosoma* Rosenhauer from China has been described. The article presents the description of the *Broscosoma valainisi* sp.n. and the photography of the holotype. This is the first species of the genus *Broscosoma* Rosenhauer that is known from Shanxi Province in China. In total there are 21 species of the genus *Broscosoma* Rosenhauer known in the world.

Key words: *Broscosoma*, new species, Carabidae, China.

Arvids Barševskis, Institute of Systematic Biology, Daugavpils University, Vienības Str. 13, Daugavpils, LV-5401, Latvia; e-mail: arvids.barsevskis@biology.lv

### INTRODUCTION

The fauna of the genus *Broscosoma* Rosenhauer, 1846 (Coleoptera: Carabidae) has not been thoroughly studied yet. There are 20 species known in the Palaearctic (each of the two species have two subspecies described) (Bousquet 2003, Sciaky & Facchini 2005). Most of the taxons of this genus, i.e. 15 taxons have been described in the last 35 years, and almost all of them are from the eastern part of Asia (mainly from China and Nepal (Habu 1972, 1973, Lassale 1982, Deuve 1983, 1985, 1990, 1992, Belousov & Kataev 1990, Morvan 1995, Dvořák 1998, Deuve & Tian 2002, Facchini 2002, Sciaky & Facchini 2005). Most of the species of the genus *Broscosoma* Rosenhauer have been discovered in a few findings in very small areas in mountains.

Two of the species of the genus *Broscosoma* Rosenhauer: *B. relictum* Weissmandl, 1936 and

*B. baldense* Rosenhauer, 1846 (having two subspecies *B. baldense baldense* Rosenhauer, 1846 and *B. baldense pasubianum* Weissmandl, 1936) can be found in Europe – in Italy, but *B. semenovi* Belousov & Kataev, 1990 – in the Caucasus. Six species are now known from Nepal only: *B. convexum* Deuve, 1983; *B. deuvei* Lassalle, 1982; *B. guttuliforme* Deuve, 1985; *B. monticola* Habu, 1973, Sciaky & Facchini 2005, Facchini 2002, *B. rolex* Morvan, 1995; *B. schawalleri* Deuve, 1990. *B. gracile* Andrewes, 1927 and *B. ribbei* Putzeys, 1877 (having two subspecies *B. ribbei ribbei* Putzeys, 1877 and *B. ribbei rougeriei* Deuve & Tian, 2002)ga Habu, 1973, can be found in the north-eastern India (in the Sikkim Province), but what concerns the last species – apart from the findings in the north-eastern India, it can be found also in Nepal, but another subspecies – in Yunnan Province in China. One species - *B. doenitzi* Harold, 1881 has been discovered in Japan, but another one -

*B. uenoi* Habu, 1973 – in Taiwan. Seven species of the genus *Brosocosoma* Rosenhauer can be found in the continental part of China, namely, in the provinces of Tibet and Sichuan: *B. businskae* Dvořak, 1998; *B. farkaci* Sciaky & Facchini, 2005; *B. kalabi* Deuve, 1993; *B. moriturum* Semenov, 1900; *B. sichuanum* Deuve, 1990; *B. stephani* Sciaky & Facchini, 2005; *B. tibetanum* Facchini, 2002; (Bousquet 2003, Sciaky & Facchini 2005).

In 2005 the revision of the species of the genus *Brosocosoma* Rosenhauer in the fauna of China was carried out (Sciaky & Facchini 2005); it describes two species that are new for the fauna of China; the list of the species of this genus in the world fauna has been published as well.

The present article is focused on the description of a new species of the genus *Brosocosoma* Rosenhauer that has been collected in Shanxi Province in China, where no species of this genus has been registered before. At present there are 21 species of the genus *Brosocosoma* Rosenhauer known in the world.

## MATERIALS AND METHODS

The holotype is kept in the author's collection in Daugavpils, Latvia. The beetle is pasted on a white plate, which is fixed on an entomological needle. There are two printed labels attached: the first label is white and presents the data on the place, coordinates, the height above sea level where the species has been collected, the date of collection and the collector's name; the second label is red and contains the inscription "Holotypus *Brosocosoma valainisi* sp. n. A.Barševskis det., 2010."

The research has been carried out using the stereomicroscope Zeiss Stereo Discovery V12. The photo camera AxioCam and the software AxioVision Rel. 4.4. have been used to take and process the photo of the type material.

## DESCRIPTION

### *Brosocosoma valainisi* sp. n.

**Holotype.** Female. China: Shanxi, Tschingling Mts. Taibeichan Nat. Res., 33°53'N 107°49'E, 2000 m, 10.08.2005., V.Patrikeev leg.

**Type locality.** China, Shanxi. This is the first species of the genus *Brosocosoma* Rosenhauer that has been found in Shanxi Province in China.

**Description.** Female. The body is slender, convex, dark brown. Its surface is dark, plain but with bronze metallic lustre. Its length is 8.11 mm. The length of elytra is 4.02 mm, but their maximum width is 2.69 mm. The length of its thorax is 2.19 mm, but its maximum width is 1.64 mm.

The beetle's head is pointed, with visibly convex surface, dark, lustrous, its front side is russet-brown. Its mouth organs and antennae are russet-brown, the antennae are a little lighter in colour. Its eyes, similar to most of the species of this genus, are small and not projecting outward. The frontal grooves irregular and deep, in the back side they are placed distantly from each other towards the eyes.

The thorax is extended, the correlation between its length and width is 1.3. It is noticeably contracted in the main part and forms a neck-like joint before the elytra. Its upper part is curved, smooth and lustrous. On the thorax disk there is a centre line that is a little impressed in its front part.

The legs are dichromatic and lustrous. The femora are dark-brown or black, but in the bottom and top parts they are lighter, i.e., they are brown with russet-brown tarsus.

The elytra are noticeably egg-shaped with widely rounded shoulders. They are black or dark-brown, a little lighter in the top part. The surface is smooth, without micro-sculpture, it has bronze sheen. The beetle has well defined punctate. The



Fig. 1. *Broskosoma valainisi* sp. n.

first punctate line is impressed in and markedly punctate and it reaches the apex of the elytra. The rest of the punctate lines are smoothed down. The correlation index of the elytra length and width is 1.49.

The male is not known.

**Comparison.** This species is very similar to *B. sichuanum* Deuve, 1990 and *B. stefani* Sciaky & Facchini, 2005. It differs from the former one with the different colouring and more slender and extended habitus. The colour of *B. sichuanum* Deuve is green or bluish green, head with collar constriction impunctate or sparsely punctate, but the colouring of *B. valainisi* sp.n. is black-brown

with bronze lustre. It differs from *B. stefani* Sciaky & Facchini in its colouring and more extended and slender body. The body colouring of *B. stefani* Sciaky & Facchini is black, with greenish or bluish hue, head with collar constriction deep and punctate, but the new species have dark brown body with bronze lustre. The elytra are more extended than those of *B. stefani* Sciaky & Facchini, too. The species have different areas of distribution as well: *B. sichuanum* Deuve and *B. stefani* Sciaky & Facchini are to be found in Sichuan Province in China, but the new species so far is known only from Shanxi province. Most of the species found in Eastern Asia are distributed in small areas, the only exception being *B. sichuanum* Deuve, which has recently been discovered in a larger territory in Sichuan Province in China.

**Etymology.** This species is named after my colleague and disciple Uldis Valainis (Institute of Systematic Biology, Daugavpils University, Daugavpils, Latvia) who, having studied the ground beetles of the genus *Omophron* Latr., has greatly contributed to the development of carabidology. The name of the species has been coined on the basis of his surname “Valainis” – *valainisi*.

## REFERENCES

- Bousquet Y. 2003. Broscinae, pp. 235 – 237- In I. Lobl & A. Smetana (editors): Catalogue of Palearctic Coleoptera, Vol. 1. Stenstrup: Apollo Books, 819 pp.
- Deuve T. 1983. Description de trois nouveaux carabiques de la region himalayenne (Coleoptera, Caraboidea). Entomologica Basiliensia, 8: 118 – 124.
- Deuve T. 1985. Nouveaux Broskosoma et Agonum du Nepal (Coleoptera, Caraboidea, Broscidae, Pterostichidae). Revue Francaise d'Entomologie (N.S.), 7 (3): 131 – 134.
- Deuve T. 1990. Nouveaux Carabidae et Broscidae des montagnes tibeto-himalayennes

- 
- (Coleoptera). Revue Francaise d'Entomologie (N.S.), 12: 183–190.
- Carabidae, Broscinae). Giornale italiano di Entomologia, 10: 147–150.
- Deuve T. 1992. Un nouveau Broscosoma du Sichuan (Col., Broscidae). Nouvelle Revue d'Entomologie (N.S.), 9: 338.
- Morvan P. 1995. Carabiques nouveaux du Nepal et du Bhutan (Coleoptera, Caraboidea). Nouvelle Revue d'Entomologie (N.S.), 12: 47–55.
- Deuve T. & Tian M. 2002. Un nouveaux Broscosoma de la Chine subtropicale (Col., Broscidae). Bulletin de la Societe entomologique de France, 107 (4): 395–396.
- Sciaky R. & Facchini S. 2005. Revision of the Chinese Broscosoma Rosenhauer, 1846, with descriptions of two new species (Coleoptera: Carabidae, Broscinae). Koleopterologische Rundschau, 75: 1 - 12.
- Dvořák M. 1998. Neue Broscosoma-Art aus Tibet (Coleoptera: Carabidae, Broscini). Folia Heyrovskyana, 6: 73 - 75.
- Facchini S. 2002. Description of Broscosoma tibetanum n. sp. from Tibet (Coleoptera,
- Received: 01.02.2010.*  
*Accepted: 30.05.2010.*