

Notes on Oriental and Palaearctic *Macrocheilus* (Coleoptera: Carabidae: Helliunini)

Oldřich HOVORKA

Středočeské muzeum v Roztokách u Prahy, Zámek 1,
CZ-252 63 Roztoky, Czech Republic
e-mail: zoolog@muzeum-roztoky.cz

Taxonomy, distribution, Carabidae, Helliunini, *Macrocheilus*, Cambodia, Pakistan, Sumatra, Thailand

Abstract. The male genitalia of *Macrocheilus binotatus* Andrewes, 1931 from Sumatra are illustrated for the first time. *Macrocheilus asteriscus* (White, 1844) is recorded as a new species for the fauna of Cambodia, *M. bensoni* Hope, 1838 is recorded as a species new to the fauna of Pakistan and *M. vitalisi* Andrewes, 1920 as a species new to the fauna of Thailand.

INTRODUCTION

The oriental species of the genus *Macrocheilus* Hope, 1838 were reviewed just recently by Zhao & Tian (2012). The genus is represented in Oriental (= Indomalayan) and in south-east part of Palaearctic bioregion by 21 species, eight of them were described by the Zhao & Tian (2010, 2012). Another new species was described simultaneously from India (Karnataka state) by Shiju et al. (2012). Zhao & Tian (2012) included all species described by them from Southeastern China (province Guangxi) into oriental species; but this territory is recently considered to be a part of the Palaearctic Region - see chapter Distributional information in any part of recent Catalogue of Palaearctic Coleoptera (Löbl & Smetana 2003).

The purpose of the present short paper is to describe so far unknown male genitalia of *Macrocheilus binotatus* Andrewes, 1931 and to give new distributional records of *Macrocheilus asteriscus* (White, 1844), *M. bensoni* Hope, 1838 and *M. vitalisi* Andrewes, 1920.

MATERIAL AND METHODS

Material examined is housed in the following collections:

OHPC private collection of O. Hovorka, Dobříš and Praha, Czech Republic;
SMRP Středočeské muzeum v Roztokách u Prahy, Roztoky, Czech Republic.

Measurements were made by using an ocular micrometer in an MBS 10 stereobinocular microscope. Total body length (TL) was measured from the apex of the labrum to the apex of the longer elytron; the length of the head (HL) as the distance from anterior margin of the labrum to the level of constriction posteriorly the eyes; the width of the head (HW) as the maximum linear distance across the head, including the compound eyes; the length of the pronotum (PL) from the anterior margin to the posterior one along the midline; the length of the elytra (EL) from the anterior margin at first stria to the apex of the longer elytron; the width of the pronotum (PW) and the elytra (EW) at their broadest point.

Dissection was made with standard technique; male genitalia are glued on a small card beneath the specimen studied.

DESCRIPTION OF UNKNOWN MALE

Macrocheilus binotatus Andrewes, 1931

(Figs. 1-2)

Studied material: 1 ♂, labelled: "W Sumatera, Harau Valley, 700 m, vi. - vii. 2004" (OHPC).

The species was described by Andrewes (1931: 69-70) according to two specimens from Sumatra. Sex of specimens is not mentioned in the original description, no notes about male or female genitalia are present in the description. The species was mentioned only in catalogues after its description (e.g. Csiki 1932, Lorenz 2005, Häckel & Farkač 2013), but is not mentioned in any taxonomical paper about oriental members of the genus *Macrocheilus* (Jedlička 1963a, Louwerens 1949) with exception of Zhao & Tian (2012); the problem is that last mentioned authors studied only one female specimen, so that no illustration of male genitalia is given in their paper, only pictures of labrum and clypeus, maxillary palpus, mentum, female gonopod and photo of general habitus are presented.

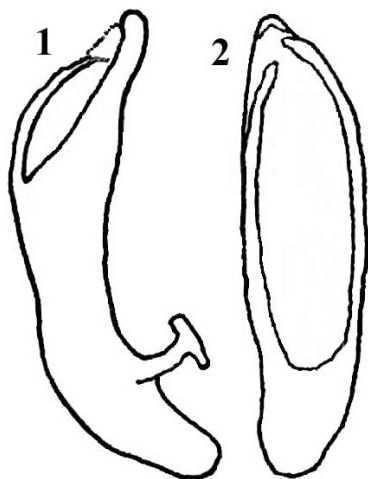
Male genitalia of specimen mentioned above were studied. It was found that they are very different from any other oriental species depicted by Zhao & Tian (2012), and the shape of median lobe of aedeagus is very typical - see Figs. 1-2. Specimen studied correspond very well to the description given by Andrewes (1931), it's characteristics are as follows: TL 12.6 mm; head about as long as wide (HL/HW 1.03); pronotum strongly transverse, PW/PL 1.52, distinctly wider than head - PW/HW 1.11; elytra nearly parallel, elongate, EL/EW 1.64, markedly wider than pronotum, EW/PW 1.49; the only difference from the state given by Andrewes is colour of legs - in studied specimen femora are yellowish and tibiae and tarsi are red-brown, darker than femora.

DISTRIBUTIONAL RECORDS

Macrocheilus asteriscus (White, 1844)

Known distribution: China, India, Indonesia (Java), Laos, Myanmar, Vietnam (Csiki 1932; Hůrka 2003; Shiju et al., 2012; Zhao & Tian 2012; Häckel & Farkač 2013). The species is new for the fauna of Cambodia.

Studied material: 1 ♂ labelled: "Cambodia, Sihanouk-ville, 20-40 m, 20.-30. iv. 2008, S. Murzin leg.", (OHPC).



Figs. 1-2: *Macrocheilus binotatus* Andrewes, 1931: 1- median lobe of aedeagus, lateral view; 2- median lobe of aedeagus, dorsal view.

Macrocheilus bensoni Hope, 1838

Known distribution: China, India, Indonesia (Sumatra), Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam (Csiki 1932; Hürka 2003; Shiju et al., 2012; Zhao & Tian 2012; Häckel & Farkač 2013). The species is new for the fauna of Pakistan, from where was only *M. lindemanae* Jedlička (1963b) was known so far.

Studied material: 1 ex. labelled: “Pakistan, Wah Cantt, vi. 1979”, “Z 8/2000, Z 47240, Coll. Kříž”, “*Macrocheilus bensoni* Hope, 1838, det. O. Hovorka, 2016”, (SMRP).

Macrocheilus vitalisi Andrewes, 1920

Known distribution: China, Laos, Vietnam, Borneo (Andrewes 1920, 1930; Csiki 1932; Hürka 2003; Zhao & Tian 2012; Häckel & Farkač 2013). The species is new for the fauna of Thailand.

Studied material: 1 ex. labelled: „Thai, 5.-10. ix. 1993, Trang, lgt. M Veselý“, (OHPC).

ACKNOWLEDGMENTS. Sincere thanks are due to Stanislav Jákl (Praha, Czech Republic) for providing me with interesting material of Carabid beetles from the Oriental Region.

REFERENCES

- ANDREWES H. E. 1920: Papers on Oriental Carabidae.-V. *The Annals and Magazine of Natural History*, 9 (6): 493-506.
- ANDREWES H. E. 1930: [Pp. 206-208]. In: *Catalogue of Indian Insects*. Part 18 - Carabidae. Calcutta: Government of India, Central Publication Branch, xxii + 389 pp.
- ANDREWES H. E. 1931: Some keys to Sumatran Carabidae, together with descriptions of further new species. *Zoologische Mededelingen* 14: 54-78.

- CSIKI E. 1932: Carabidae: Harpalinae VII. (Pars 124). Pp. 1279-1598. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum catalogus. Volumen III. Carabidae III*. Berlin: W. Junk, 1933 pp.
- HÄCKEL M. & FARKAČ J. 2013: A checklist of the subfamily Anthiinae Bonelli, 1813 of the World (Coleoptera: Carabidae). *Studies and Reports, Taxonomical Series* 9: 261-366.
- HŮRKA K. 2003: Helluonini, p. 407. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera*. Vol. 1. Stenstrup: Apollo Books, 819 pp.
- JEDLIČKA A. 1963a: Monographie der Truncatipennen aus Ostasien. Lebiinae - Odacanthinae - Brachyninae (Coleoptera, Carabidae). *Entomologische Abhandlungen und Berichte aus dem Staatlichen Museum für Tierkunde in Dresden* 28: 269-579.
- JEDLIČKA A. 1963b: Neue Carabiden aus Pakistan aus der Sammlung des Bayerischen Staates in München (Col.). *Opuscula Zoologica* 68: 1-9.
- LORENZ W. 2005: *Systematic list of extant ground beetles of the world*. Second edition. Tutzing: Published by the author, 530 pp.
- LOUWERENS C. J. 1949: Some notes on the Carabidae, collected by Mr. P. H. van Doesburg in the Malay Archipelago with descriptions of new species. *Tijdschrift voor Entomologie uitgegeven door de Nederlandsche Entomologische Vereeniging* 90: 45-53.
- SHIJU R. T., MADANI I. & SABU T. K. 2012: A new carabid species of the genus *Macrocheilus* (Coleoptera) from India. *Oriental Insects* 46: 97-106.
- ZHAO D.Y. & TIAN M. Y. 2010: A review of the genus *Macrocheilus* Hope (Coleoptera: Carabidae: Helluonini) of China, with descriptions of seven new species. *Polish Journal of Entomology*, 29: 3-23.
- ZHAO D.Y. & TIAN M. Y. 2012: Taxonomic notes on the *Macrocheilus* Hope (Coleoptera, Carabidae, Helluonini) from Oriental Region, with descriptions of one new species from the Philippines. *ZooKeys* 228: 77-100.

Received: 8.6.2016
Accepted: 20.6.2016