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Transfer of the Taxonomic Positions of Some *Holotrichia* Species (Scarabaeidae, Melolonthinae, Melolonthini)

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Abstract Three species of the genus *Holotrichia*, *H. desiderata*, *H. semiserrata* and *H. bengalensis*, are transferred to *Pentelia*, *Sophrops* and *Miridiba*, respectively. *Holotrichia borneensis* and *H. horishana* are synonymized with *Pentelia desiderata* and *Sophrops cephalotes*, respectively.

About 140 species of the genus *Holotrichia* had been transferred to other genera by my studies in the last two decades (e.g. Matsumoto, 2005, 2014 a, b, 2015 a, b, 2015 c, 2016 a, b, & 2017 a, b). Matsumoto (2017 c) revised the definition of the genus *Holotrichia* and, according to the revised definition, I assigned 46 species in this genus. Nevertheless, there remain some unsolved problems for the generic assignment of some *Holotrichia* species, the types of which are preserved in the collections of various European museums and institutes.

Lately, I had chances to check the type specimens of several *Holotrichia* species in question, which are preserved in some collections in Europe. In this article, I present the results of my examinations on them.

Before going further, I would like to express my heartfelt gratitude to the following institutes, museums and the staffs: Martin-Luther-Universität Halle-Wittenberg, Zentralmagazin Naturwissenschaftlicher Sammlungen, Zoologische Sammlungen, Halle, Germany, Dr. Karla Schneider; Institut royal des Sciences naturelles de Belgique, Département d'Entomologie, Brussels, Belgium, Dr. Alain Drumont.

Pentelia desiderata (Brenske, 1894), comb. nov.

(Figs. 1,4 & 9-11)

Holotrichia desiderata Brenske, 1894: 23, 61.
Holotrichia borneensis Moser, 1918: 317–318. Syn. nov.
Pentelia borneensis: Matsumoto, 2005: 479–481.

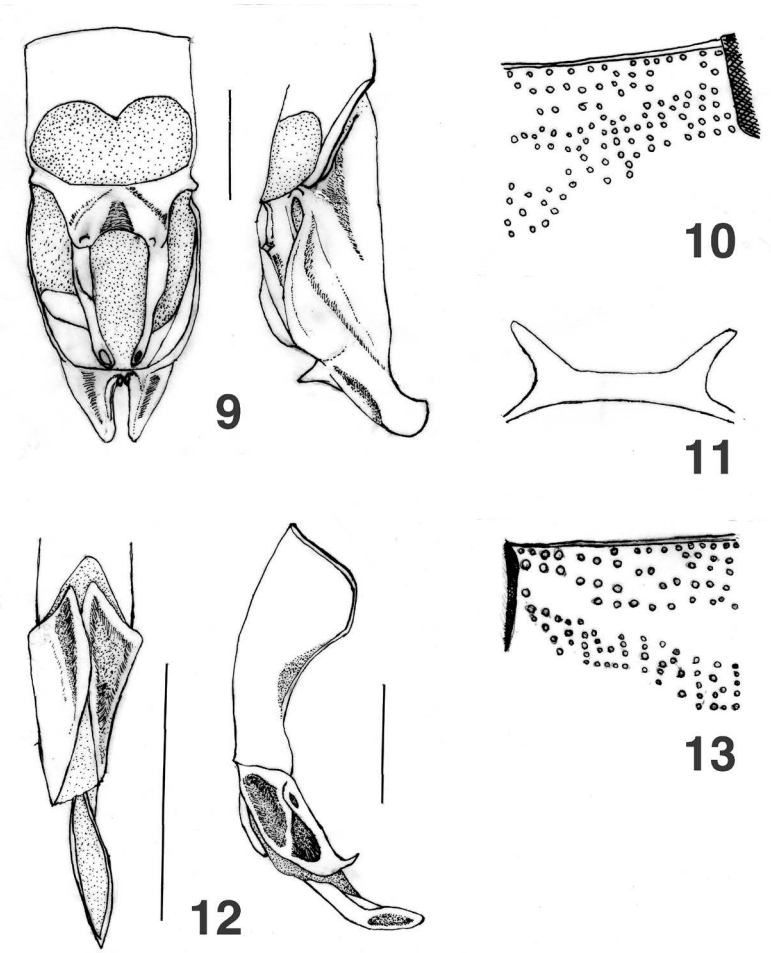
Type examined. 1 ♂ (holotype), Sintang (Borneo) Clement. / *Holotrichia desiderata* Brsk. Type. / Type / R. I. Sc. N. B. I. G. / M. R. Belg.

Distribution. Borneo (western region)

Additional description. Occiput widely punctate from behind vertex toward foramen over the posterior end of eyes, with an obscure transverse impunctate portion medially. Metasternum densely covered with brown and long hairs in the anterior half, and with whitish, short to minute and stout scale-like hairs in the posterior half. Metacoxa with slightly long and stout scale-like hairs. Male genitalia remarkably desclerotized on the dorsal side and forming a structure of a pair slender long sclerites.

Notes. I examined the holotype of this species in order to determine to which genus to transfer it, *Pentelia* or *Miridiba*. As the result of examination, it was revealed that this species should be assigned to *Pentelia* and, further, it is the same species as *Pentelia borneensis* (Moser, 1918). Thus, I syn-

Figs. 1–8. 1 & 4 *Pentelia desiderata* (BRENSKE, 1894), comb. nov., ♂ (holotype); 2 & 5, *Sophrops semiserrata* (BRENSKE, 1894), comb. nov., ♂ (holotype); 3 & 6, *Sophrops cephalotes* (BURMEISTER, 1855), ♀ (holotype); 7 & 8, *Miridiba bengalensis* (BRENSKE, 1894), comb. nov., ♀ (holotype). —— 1, 2, 3 & 7, Habitus; 4, 5, 6 & 8, labels of the type specimen.



Figs. 9–13. 9, 10 & 11, *Pentelia desiderata* (Brenske, 1894), comb. nov., ♂ (holotype); 12, *Sophrops semiserrata* (Brenske, 1894), comb. nov., ♂; 13, *Miridiba bengalensis* (Brenske, 1894), comb. nov., ♀ (holotype). —— 9 & 12, Male genitalia, dorsal & lateral views; 10 & 13, puncture distribution on the occiput; 11, post-coxal process (caudal view). Scale: 1 mm for 9 & 12.

onymized *P. borneensis* with *P. desiderata* (Brenske, 1894) herein. Moser (1918) seems to have overlooked the presence of *Holotrichia desiderata* Brenske for any reason.

Sophrops semiserrata (Brenske, 1894), comb. nov.

(Figs. 2, 5 & 12)

Holotrichia semiserrata Brenske, 1894: 22, 70–71.

Type examined. 1 ♂ (holotype), Shanghai / *Holotrichia semiserrata* Brsk type. / det *HOLOTRICHIA semiserrata* Brenske / Type / Coll. J. Thomson / R. I. Sc. N. B. I. G.

Distribution. China (Shanghai).

Notes. In this species, the metasternum is pruinose laterally and shining in the central rhombical area. In addition, the antenna is composed of ten segments. These character states clearly indicate that this species belongs to *Sophrops*.

Sophrops cephalotes (BURMEISTER, 1855)

(Figs. 3 & 6)

Phytalus cephalotes BURMEISTER, 1855: 352.
Holotrichia cephalotes: DALLA TORRE, 1912: 201; MOSER, 1908: 341–342; ITOH, T., 1995: 195.
Holotrichia horishana NIIJIMA et KINOSHITA, 1923: 52–53. Syn. nov.
Sophrops cephalotes: LÖBL & SMETANA, 2006: 227.

Type examined. 1 ♀ (holotype), *cephalotes* Nob. Ins. Phil.?

Specimens examined. [Vietnam] 5 exs., Tam Dao, N. Vietnam, 28 to 30.IV.1991, M. FUJIOKA & R. MURAMOTO leg.; 2 ♀♀, same locality as in the preceding, 10.VI.1991. [Thailand] 1 ♂, Chiang Mai, N. Thailand, V.1985, N. KOYAMA leg.; 2 ♂♂ 8 ♀♀, same locality as in the preceding, VI.1985. [Laos] 1 ♀, Samneua, N.E. Laos, 28.V.1992, Y. MIYAKE leg. [Taiwan] 3 ♂♂ 4 ♀♀, Liukuei, S. Taiwan, 1985; 2 ♂♂ 3 ♀♀, same locality as the preceding, no other data; 1 ♀, Bao Shan, Liukei, Kaohsiung, Taiwan, 4.VI.1984, Wen Lung CHEN leg.; 1 ♂, Wulai, Taipei, Formosa, 25.V.1971, K. SAKAI leg.

Distribution. China, Taiwan, Vietnam, Thailand, Laos.

Notes. According to the original description by BURMEISTER, the type locality of this species is "In China (oder auf den Philippinen.)". However, as far as I am aware, this species has not been known from the Philippines.

NIIJIMA and KINOSHITA (1923) described *Holotrichia horishana* from Puli of central Taiwan and presented the photograph of this species on the plate. I examined several Taiwanese specimens, which were identified as *H. horishana* according to the original description and the photograph. Consequently, it was clarified that the Taiwanese specimens appear to be the same species as the holotype of *Sophrops cephalotes* (BURMEISTER) and, further, they do not seem specifically different from the above specimens of *S. cephalotes* from Indochina. Therefore, I have concluded that *Holotrichia horishana* should be synonymized with *Sophrops cephalotes*.

Miridiba bengalensis (BRENSKE, 1894), comb. nov.

(Figs. 7, 8 & 13)

Holotrichia bengalensis BRENSKE, 1894: 22, 60.

Type examined. 1 ♀ (holotype), *Holotrichia bengalensis* Brenske Revis. Arrow 1920 / *Holotrichia bengalensis* Brsk. type. / Type / Sylhet (rounded label) / R. I. Sc. N. B. / coll. J. THOMSON / Sylhet (quadrate label) / M. R. Belg. / 1232 / 9657.

Distribution. Bangladesh (northeastern region)

Additional description. Occiput punctate from vertex to foramen over the posterior end of eyes, with a gently arcuate, transversely long and narrow impunctate portion medially.

Notes. Since this species has a transverse carina on the vertex, it should be transferred to *Miridiba*. The holotype is female, and so I was not able to determine to which species it is allied. The puncture distribution pattern on the occiput of this species is similar to that of *Miridiba* species from Malaysia and the Sunda Archipelago.

要　　約

松本　武：*Holotrichia* 属（鞘翅目コガネムシ科）に属するいくつかの種の分類学的変更．――――現在まで *Holotrichia* 属に所属させられていたいくつかの種についてホロタイプの検討を行った結果，*Holotrichia desiderata* BRENSKE は *Pentelia* 属へ，*H. semiserrata* BRENSKE は *Sophrops* 属へ，*H. bengalensis* BRENSKE は *Miridi-*

ba 属へ移すこととした．また，*Pentelia borneensis* (Moser) を *Holotrichia desiderata* の新参異名とした．*Holotrichia horishana* は図版の付随した原記載の検討から *Sophrops cephalotes* (Burmeister) と同一種と判断し，本種を後者の新参異名として扱った．

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