

Occurrence of *Hubeitrechus* (Coleoptera, Trechinae) in Southwestern Henan, Central China

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Abstract A new subspecies of the humicolous trechine beetle, *Nesiotrechus* (*Hubeitrechus*) *dahongensis* is described from Baotianman on the Fu'niu Shan Mountains in southwestern Henan, Central China, under the subspecific name *rotundipennis*.

Through the courtesy of Mr. Jaroslav TURNA, we were given an opportunity to examine a short series of specimens of a humicolous trechine beetle apparently belonging to the subgenus *Hubeitrechus* of the genus *Nesiotrechus*. They were collected by himself at Baotianman on the Fu'niu Shan Mountains lying at the southwestern part of Henan, Central China.

At the first glance, the trechine looked specifically different from the type species of the subgenus, *N. (Hubeitrechus) dahongensis* DEUVE (2005, p. 306, figs. 1, 7) from Dahong Shan in central Hubei, which is more than 200 km distant to the south-southeast from Baotianman. However, close examination of the specimens revealed that they were identical with the type species in the structure of the male genital organ and the standard ratios of body parts. They should be regarded as a northern local race of *N. dahongensis* isolated from the nominotypical population by the wide lowland drained by tributaries of the Han Shui River. It will be described in the present paper as a new subspecies under the name *Nesiotrechus (Hubeitrechus) dahongensis rotundipennis*. A brief comment will also be given on the peculiarities of the subgenus *Hubeitrechus*. The abbreviations employed herein are the same as those explained in previous papers of the senior author's (e.g., UÉNO, 1975, p. 137).

We wish to express our hearty thanks to Mr. Jaroslav TURNA for his kindness in offering his collection for our study.

Subgenus *Hubeitrechus* DEUVE, 2005

Nesiotrechus subgen. *Hubeitrechus* DEUVE, 2005, Coléoptères, Guyancourt, 11, pp. 306, 309; type species: *Nesiotrechus dahongensis* DEUVE, 2005.

DEUVE was certainly right in placing his Dahong Shan species close by *Nesiotrechus* S. UÉNO (1995, = *Lamprotrechus* S. UÉNO, 1975, p. 144) and in erecting a new subgenus *Hubeitrechus* for it. He pointed out two peculiarities of his species, but the anterior position of the anterior apical pore on the elytra cannot be regarded as a character state of subgeneric importance, since it is unstable in relation to reduction of the apical striole. On the other hand, the male protarsi exhibit a diagnostic difference between the Japanese and Chinese species. In the nominotypical subgenus endemic to the Island of Yakushima at the northernmost of the Ryukyu Archipelago, the legs are short and stout, bearing short tarsi, and the two proximal protarsomeres in the male are short and wide, each as long as wide, and stoutly produced inwards at the apex. In *Hubeitrechus*, the legs are longer and slenderer, bearing fairly long and thin tarsi, and the two proximal protarsomeres in the male are elongate, each distinctly longer than wide (1.4 times as long as wide), and briefly but acutely produced inwards at the apex. Besides, the labrum is much less deeply emarginate at the apex in *Hubeitrechus* than in *Nesiotrechus* (s. str.), the antennae are filiform and slenderer in the former, submoniliform and stouter in the latter, the pronotal hind angles are reflexed and subdigitiform in the former, small and denticulate but nearly rectangular in the latter, and the aedeagus is curved to the right in the former, straight and nearly symmetrical in the latter. In spite of these discrepancies, *Hubeitrechus* and *Nesiotrechus* (s. str.) are identical in many basic character states, and can safely be regarded as two subgenera of an isolated genus.

DEUVE compared *Hubeitrechus* also with *Taiwanotrechus* S. UÉNO (1987, p. 335), but the relationship between them does not appear so close as that between *Hubeitrechus* and *Nesiotrechus* (s. str.), as is clearly indicated by the different conformation of the pronotum. However, this does not mean that *Taiwanotrechus* is not related with *Nesiotrechus*, in particular with *Hubeitrechus*. As was pointed out by DEUVE, these three groups are doubtless interrelated, and *Hubeitrechus* seems to bridge the gap between *Nesiotrechus* (s. str.) and *Taiwanotrechus*.

Range. So far known from central Hubei and southwestern Henan, Central China.

Nesiotrechus (Hubeitrechus) dahongensis rotundipennis

S. UÉNO et GITZEN, subsp. nov.

(Figs. 1–3)

Length: 3.75–4.05 mm (from apical margin of clypeus to apices of elytra).

Closely allied to the nominotypical subspecies and identical with it in many respects including the standard ratios of body parts and configuration of male genitalia, but readily recognised by its dark coloration, and more rotundate elytra with coarser

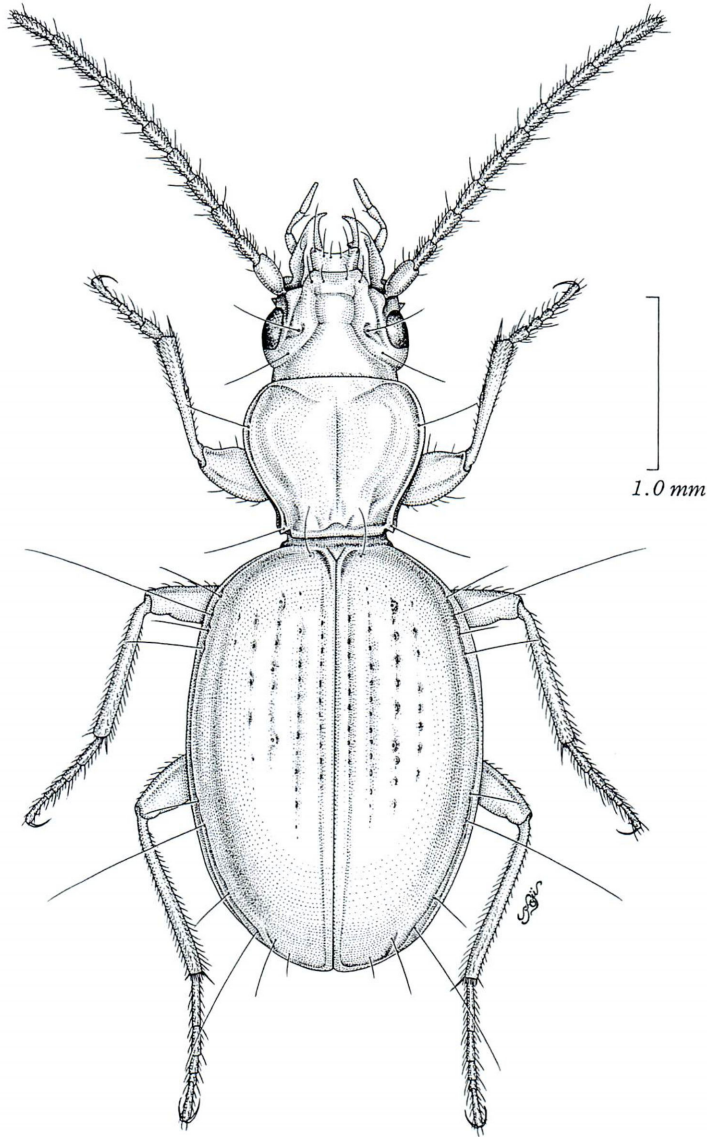
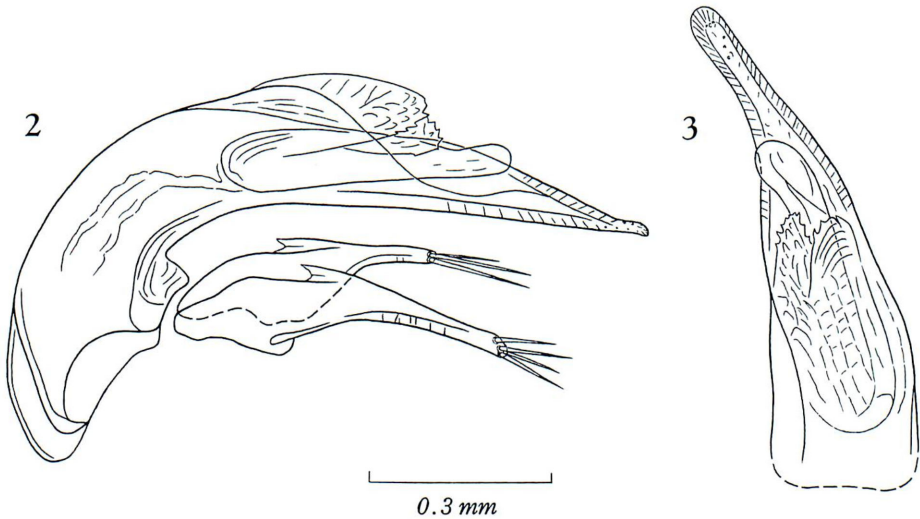


Fig. 1. *Nesiotrechus (Hubeitrechus) dahongensis rotundipennis* S. UENO et GITZEN, subsp. nov., ♂, from Baotianman on the Fu'niu Shan Mountains.

punctures in the striae.

Colour dark brown to brownish-black, polished, elytra dark brown, sometimes lighter in basal parts; palpi and legs pale yellowish-brown.

Head as in the nominotypical subspecies; eyes contained in the contour of convex genae, often with mal-defined margins, facets more or less evanescent, usually percepti-



Figs. 2-3. Male genitalia of *Nesiotrechus (Hubeitrechus) dahongensis rotundipennis* S. UÉNO et GITZEN, subsp. nov., from Baotianman on the Fu'niu Shan Mountains; left lateral view (2), and apical part of aedeagus, dorso-apical view (3).

ble at least at inner portions but sometimes obliterated altogether; neck constriction deeply marked at the sides; antennae reaching basal three-tenths of elytra in ♂, basal two-sevenths of elytra in ♀. Pronotum as in the nominotypical subspecies. Elytra more rotundate than in the nominotypical subspecies, widest at about four-ninths from bases, with more widely rounded shoulders and more widely rounded apices; dorsum a little more strongly convex; striation as in the nominotypical subspecies, but with coarser punctures, especially in stria 3; dorsal setae missing altogether (probably rubbed off) in all the specimens of the type series, but the anterior pore is detected at about basal sixth of stria 3, posterior one not recognisable due to a row of coarse punctures in the stria. Legs as in the nominotypical subspecies.

Standard ratios as follows (those in two mature paratypes of *N. d. dahongensis* are given in brackets for comparison): PW/HW 1.19-1.26 (M 1.22) [1.24, 1.27], PW/PL 1.07-1.15 (M 1.11) [1.15, 1.16], PW/PA ca. 1.39-1.54 (M ca. 1.44) [1.48, 1.50], PW/PB 1.54-1.63 (M 1.59) [1.50, 1.59], PA/PB ca. 1.00-1.15 (M ca. 1.10) [ca. 1.01, 1.06], EW/PW 1.62-1.69 (M 1.65) [1.63, 1.65], EL/PL 2.45-2.63 (M 2.54) [2.64, 2.69], EL/EW 1.35-1.43 (M 1.39) [1.39, 1.42].

Male genital organ fairly large and moderately (in the paratype) or very heavily (in the holotype) sclerotized, almost identical with that of the nominotypical subspecies¹⁾,

¹⁾ DEUVE's illustration of the male genitalia of the nominotypical subspecies of *Nesiotrechus dahongensis* seems to have been drawn obliquely from the left dorsal side, and gives an impression quite different from our illustration of that of the new subspecies. This is caused simply from difference of optical angle.

though the aedeagus is more strongly curved to the right. Aedeagus about three-sevenths as long as elytra, widely open on dorsum; in lateral view, aedeagus nearly straight and gradually tapered towards apex in apical three-fifths, with the left dorsal margin widely sinuate from before middle to the side of apical lobe; basal part fairly large, ventrally curved, with large basal orifice more or less emarginate at the sides; sagittal aileron hyaline though long and fairly large; viewed dorsally, apical lobe narrow, nearly parallel-sided, and narrowly rounded at the extremity; viewed laterally, apical lobe narrowly extended at the apical portion. Inner sac armed with an elongate copulatory piece about three-sevenths as long as aedeagus, and a twofold lamella lying at the right dorsal side of the elongate sclerite; copulatory piece gradually tapered towards apical part, which is slightly dilated and narrowly rounded at the extremity; twofold lamella rounded at each apex, covered at the apical parts with minute teeth, and minutely serrulate at each apical margin. Styles slender, particularly narrow at the apical parts, each bearing three or four short setae at the apex.

Type series. Holotype: ♂, allotype: ♀, paratypes: 1 ♂, 4 ♀♀, 6~7-VII-2006, J. TURNA leg. The holotype, allotype and one paratype are deposited in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo. The remaining paratypes are retained in GITZEN's collection.

Type locality. Baotianman, 1,500–1,750 m in altitude, on the Fu'niu Shan Mountains, 33° 31' N, 111° 56' E, in Neixiang Xian of southwestern Henan, Central China.

Notes. It is surprising that differentiation of *Hubeitrechus* has not attained to the level of complete speciation between the two isolated mountains widely distant both geographically and topographically. A similar example of mal-speciation was recorded by the senior author (UÉNO, 2004, pp. 284–285) for *Trechus* (*Epaphius*) *qinlingensis*, whose southern subspecies *T. q. shennongji* occurs in Shennongjia lying at the eastern end of the Daba Shan Mountains, nearly 300 km distant to the southeast from the type locality of *T. q. qinlingensis* on the Qin Ling Mountains.

According to the collector, all the specimens of the type series of *N. d. rotundipennis* were taken by sifting humid dead leaves and other debris accumulated around the base of a large decayed tree stump standing near a small stream in a deciduous broadleaved forest on the gentle northwestern slope of Baotianman. They were quickly running about when sifted out.

要 約

上野俊一・Artur GITZEN: 中国河南省南西部で見つかったツヤチビゴミムシ。—— 中国河南省南西部に位置する伏牛山の宝天曼で、ツヤチビゴミムシの一種が発見され、*Hubeitrechus* 亜属のものだと確認された。一見、別種のようにみえるにもかかわらず、雄交尾器の形態などは亜属の基準種とほぼ完全に一致するので、北方の山地に隔離された同種の1地方型だと認定して、*Nesiotrechus* (*Hubeitrechus*) *dahongensis rotundipennis* S. UÉNO et GITZEN という新亜種名を与えた。亜属基準種の基準産地である湖北省の大洪山は、新亜種の基準産地から南南東方向に 200 km

以上離れているうえに、漢水の支流域の低湿地によって大きく隔てられている。それにもかかわらず分化が亜種段階にとどまっているのは、注目に値する事実だといえるだろう。

References

- DEUVE, Th., 2005. Descriptions de nouveaux Trechini de la Chine centrale et du plateau Tibétain (Coleoptera, Trechidae). *Coléoptères, Guyancourt*, **11**: 305–317.
- UÉNO, S.-I., 1975. The trechid beetles of the Island of Yaku-shima, Southwest Japan. *Mem. natn. Sci. Mus., Tokyo*, (8): 137–153.
- 1987. A new saproxylophilous trechine beetle from central Taiwan. *Kontyû, Tokyo*, **55**: 333–341.
- 1995. New replacement name for *Lamprotrechus* S. UÉNO, 1975 (Coleoptera, Trechinae). *Elytra, Tokyo*, **23**: 118.
- 2004. Two new humicolous trechines (Coleoptera, Trechinae) from Shennongjia, western Hubei. *Ibid.*, **32**: 277–286.