

## A supplement to the revision of the *Anthaxia weyersi* species group (Coleoptera: Buprestidae: Buprestinae: Anthaxiini)

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**Abstract.** *Anthaxia (Haplanthaxia) weyersi* species group is transferred from the subgenus *Anthaxia* s. str. to the subgenus *Haplanthaxia* and the diagnostic characters of both subgenera are shortly discussed. A new species, *Anthaxia (Haplanthaxia) pacholatkoii* sp. n. from Malaysia is described, illustrated and compared with the most similar species of the group. New distributional data for some species and summary catalogue of the species group are given.

**Key words.** Taxonomy, new species, Coleoptera, Buprestidae, Buprestinae, Anthaxiini, *Anthaxia (Haplanthaxia) weyersi* species group, Oriental region.

### Introduction

The *Anthaxia (Anthaxia) weyersi* species group was defined and revised by Bílý (1990) and 10 species were included: *Anthaxia (Anthaxia) borneicola* Obenberger 1924, *A. (A.) brevissima* Bílý 1990, *A. (A.) cymbiformis* Bílý 1990, *A. (A.) hatayamai* Bílý 1990, *A. (A.) malayana* Bílý 1990, *A. (A.) mindanaoensis* Fisher 1922, *A. (A.) ophthalmica* Bílý 1990, *A. (A.) peninsularis* Bílý 1990, *A. (A.) taiwanensis* Bílý 1990 and *A. (A.) weyersi* Kerremans 1900. Another species was described quite recently from the Philippines – *Anthaxia (Haplanthaxia) palawanensis* Bílý & Kubáň 2012. It is evident from this survey that the taxonomic position of the group within the genus *Anthaxia* Eschscholtz 1829 is unclear. The situation was briefly commented in Bílý & Kubáň (2012), who suggested the transfer of all species of the *A. weyersi* species group to the subgenus *Haplanthaxia* Reitter 1911.

There are only a few differentiating characters between the subgenera *Anthaxia* s. str. and *Haplanthaxia* and some species groups stand at the very border between them, sharing the characters of both or missing some characters typical of their subgenus; the *A. weyersi* species group is a typical example. On the “opposite side” of the subgenus, there are also a few species groups sharing common characters with the subgenus *Cratomerus* Solier 1833. The situation is very complicated and a special study is in preparation to solve the subgeneric division of the genus *Anthaxia*.

All species of the *A. weyersi* group were originally attributed to the subgenus *Anthaxia* s. str. due to their general similarity and because the females possess an anal ventrite without an apical notch (Bílý 1990), although in some species the anal ventrite is more or less emarginate (but never with a narrow notch typical of most *Haplanthaxia*). Actually, the *A. weyersi* species group demonstrates all the principal characters of the subgenus *Haplanthaxia* except for the shape of the female anal ventrite (see above): sphenoidal elytra tapering posteriorly and not completely covering abdomen (lateral portions of abdomen visible from above) and emarginated subhumeral part of the elytral margin. So, for the reasons mentioned above, all

species of the *A. weyersi* species group are transferred from the subgenus *Anthaxia* s. str. and treated in this study in the subgenus *Haplanthaxia*.

### Material and methods

Data from the locality labels of all species are cited verbatim with my comments in brackets. A Canon D-550 digital camera with attached Canon MP-E65 mm f/2.8 1–5× macro lens was used to produce the colour images.

The following codens are used throughout the text:

MNHN Muséum National d'Histoire Naturelle, Paris, France;

MTHC Masao Toyama collection, Hyogo, Japan;

NMPC National Museum, Prague, Czech Republic;

NSMT National Science Museum, Tokyo, Japan;

USNM National Museum of Natural History, Smithsonian Institution, Washington DC, USA.

### Taxonomy

#### *Anthaxia (Haplanthaxia) pacholatkoi* sp. n.

(Figs. 1-3)

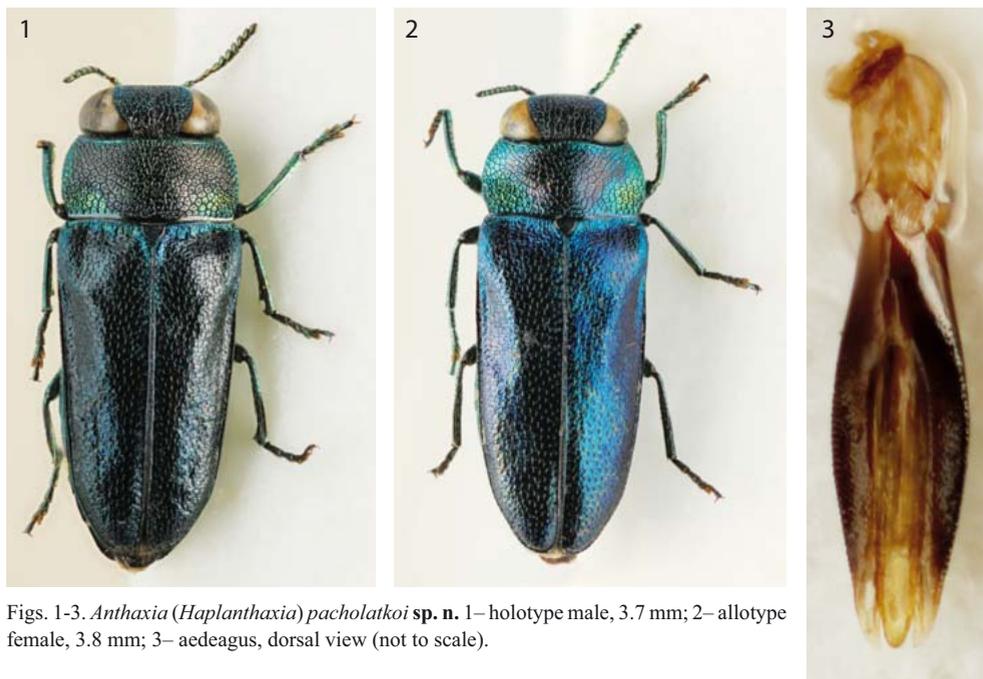
**Type locality.** Malaysia, Pahang, Cameron Highlands, Tanah Rata, 4°28'N 101°23'E, 1600 m.

**Type specimens studied.** Holotype ♂ (NMPC): "Malaysia, Pahang, Cameroon [Cameron] Highlands, Tanah Rata [4°28'N 101°23'E], 1600 m, 11.-27.ii.2000, Pacholátko P. leg.". Allotype ♀ (NMPC): same data.

**Diagnosis.** Small (3.7-3.8 mm), slender, navicular, rather convex; dorsal surface greenish black, frons, pronotal margins, antennae and legs bright bluish green, vertex black, elytra with small, postscutellar bluish green triangle (male – Fig. 1) or entire elytral disc bluish green (female – Fig. 2); ventral surface lustrous, golden green in both sexes, abdominal ventrites very lustrous with slight bronze tinge; entire body asetose, only prosternal process of male with fine, sparse, white pubescence.

**Description of male holotype.** Head large, distinctly wider than anterior pronotal margin; frons flat; vertex flat, 0.9x as wide as width of eye; clypeus separated from frons by deep, transverse depression, anterior margin straight; eyes very large but not projecting beyond outline of head, inner margins strongly S-shaped; antennae short, hardly overlapping midlength of lateral pronotal margins when laid alongside; scape pyriform, 2.5x as long as wide, pedicel ovoid, 1.8x as long as wide; third antennomere subcylindrical, 1.8x as long as wide; antennomere 4 triangular, as long as wide, antennomeres 5-10 trapezoidal, about 1.4x as wide as long; terminal antennomere rhomboid, slightly longer than wide; frontal sculpture consisting of relatively large, oval cells with large, flat but hardly discernible central grains, sculpture of vertex consisting of small, polygonal, well-defined cells with distinct central grains.

Pronotum very wide, rather convex, 2.7x as wide as long, with well-developed, rather deep lateroposterior depressions (Fig. 1); anterior margin strongly, posterior margin moderately



Figs. 1-3. *Anthaxia (Haplanthaxia) pacholatkoii* sp. n. 1–holotype male, 3.7 mm; 2–allotype female, 3.8 mm; 3–aedeagus, dorsal view (not to scale).

biarcuate, lateral margins nearly regularly curved, maximum width at midlength; posterior pronotal angles obtuse; sculpture nearly homogeneous, consisting of small, well-defined polygonal cells with small, distinct central grains; both cells and grains more distinct and rougher along lateral margins. Scutellum medium-sized, flat, triangular, as long as wide.

Elytra twice as long as wide across humeri, nearly regularly tapering posteriorly, rather convex (Fig. 1); humeral swellings small but well-distinct, transverse basal depression wide, deep, nearly reaching scutellum; apex of each elytron widely, obtusely rounded, with extremely fine, nearly indistinct lateral serration; lateral groove separating elytral disc from elytral margin rather wide and deep; elytral epipleura wide along whole elytral length but not reaching extreme apex; elytra glabrous and rather lustrous, with very fine sculpture consisting of fine, transversely stretched punctures.

Ventral side lustrous, rather roughly ocellate with distinct central grains, abdominal ventrites with network of very fine, somewhat prolonged cells without distinct central grains; prosternal process slightly convex, enlarged posterior to procoxae, sharply pointed apically; anal ventrite widely truncate apically, without lateral serration. Legs moderately long, protibiae straight, with very small, shallow preapical emargination; mesotibiae straight, flattened, with deep, conspicuous preapical emargination (Fig. 1); metatibiae straight, flattened, with wide, shallow preapical emargination and inner apical spine (Fig. 1). Tarsal claws fine, slightly hook-shaped, somewhat enlarged at base.

Aedeagus (Fig. 3) flattened, relatively short, widely spindle-shaped, maximum width at midlength; parameres simply, somewhat obtusely pointed, median lobe obtusely pointed, without lateral serrations.

Sexual dimorphism: Female (Fig. 2) differs from male by slightly convex frons, asetose prosternal process, simple tibiae and slightly by elytral colouration (see above).

Measurements: Length 3.7 mm (holotype) and 3.8 mm (allotype); width 1.25 mm (holotype) and 1.30 mm (allotype).

**Etymology.** The species is named in honour of my friend Petr Pacholátko (Brno, Czech Republic), a specialist on the taxonomy of Sericinae and a well-known fisherman.

**Distribution.** Peninsular Malaysia (Prov. Pahang).

**Differential diagnosis.** Within the *Anthaxia (H.) weyersi* species group *A. (H.) pacholatko* sp. n. belongs among the species with very narrow vertex, long elytra, very wide head and spindle-shaped aedeagus [*A. (H.) weyersi* Kerremans 1900, *A. (H.) ophthalmica* Bílý 1990, *A. (H.) malayana* Bílý 1990]. From *A. (H.) malayana* it differs by rather rough frontal and pronotal sculpture (microsculptured without central grains in *A. (H.) malayana*), simply truncate anal ventrite of male (male anal ventrite of *A. (H.) malayana* emarginate with semioval preapical depression – see fig. 18 in Bílý 1990), modified meso- and metatibiae of male (*A. (H.) malayana* possesses straight, simple meso- and metatibiae) and by shorter and more robust aedeagus with simply pointed parameres [aedeagus of *A. (H.) malayana* is slender and longer, with widely enlarged apical portion of parameres – see fig. 20 in Bílý 1990]. From *A. (H.) weyersi* it differs by somewhat longer elytra [only 1.8x as long as wide in *A. (H.) weyersi* – see fig. 5 in Bílý 1990], more deeply emarginate mesotibiae and more flattened and widely emarginate metatibiae [mesotibiae less emarginate and metatibiae only slightly flattened and shallowly emarginate in *A. (H.) weyersi*], regularly spindle-shaped aedeagus [parameres widened at distal third and then abruptly narrowed in *A. (H.) weyersi* – see fig. 15 in Bílý 1990] and by its distribution [*A. (H.) weyersi* is distributed in Sumatra]. *Anthaxia (H.) pacholatko* sp. n. is most similar and probably related to *A. (H.) ophthalmica*, from which it differs by somewhat longer elytra [1.8x as long as wide in *A. (H.) ophthalmica* – see fig. 21 in Bílý 1990], truncate male anal ventrite [shallowly emarginate in *A. (H.) ophthalmica* – see fig. 22 in Bílý 1990] and by the form of male genitalia [parameres widened in proximal half and then markedly narrowed in distal portion in *A. (H.) ophthalmica* – see fig. 26 in Bílý 1990].

### New faunistic records

Subsequent to the revision of the group (Bílý 1990) I studied further specimens from various collections and found distributional data not mentioned in the revision; they are presented below (all specimens in NMPC).

#### *Anthaxia (Haplanthaxia) borneicola* Obenberger 1924

**BRUNEI:** no precise data (2 ♀); **INDONESIA:** WEST SUMATRA: Harau valley env., 20 km N of Payakumbuh, 600 m, v.2007, S. Jákl leg. (2 ♀); Annai valley, Lapai village, 400 m, 1.iii.2003, loc. collector (2 ♂); Payakumbuh (Sarilamak), i.1991; MENTAWARI ISLS: Siberut, Bojakan, 150 m, v.2004, S. Jákl leg. (1 ♂); **MALAYSIA:** SABAH: Kota Kina Balu, 6.iv.1977, T. Mizunuma leg. (1 ♂); 53 km Kota Kina Balu – Tambunan, 1650 m, 22.iii.-6.iv.2000, Bolm leg. (1 ♂), Mt. Marapok (1 ♂, 3 ♀).

#### *Anthaxia (Haplanthaxia) cymbiformis* Bílý 1990

**MALAYSIA:** PAHANG: Cameron Highlands, Tanah Rata, 4°28'N 101°23'E, 1600 m, P. Pacholátko leg. (1 ♂).

***Anthaxia (Haplanthaxia) hatayamai* Bílý 1990**

MALAYSIA: SABAH: Crocker Range, nr. Keningau, 21.v.1988 (1 ♀).

***Anthaxia (Haplanthaxia) malayana* Bílý 1990**

MALAYSIA: PERAK: Banjaran Bintang, Bukit Berapit (Taiping), 11-12.iii.1997, Ivo Jeniš leg. (1 ♂).

***Anthaxia (Haplanthaxia) taiwanensis* Bílý 1989**

TAIWAN: Kuantaoshan, 11.v.2002, Hajime Nara leg. (1 ♀).

***Anthaxia (Haplanthaxia) weyersi* Kerremans 1900**

INDONESIA: WEST SUMATRA: Harau valley env., 20 km N of Payakumbuh, 600 m, v.2007, S. Jákl leg. (2 ♂); Annai valley, Lapai village, 1.iii.2003, loc. collector (1 ♀); PADANG: i.1995, S. Jákl leg. (1 ♂); BALI: road Seririt – Pupuan, 29.-31.i.1998, R Červenka leg. (1 ♀).

**A summary catalogue of the *Anthaxia (Haplanthaxia) weyersi* species group*****Anthaxia (Haplanthaxia) borneicola* Obenberger 1924: 106, comb. n.**

Type locality: North Borneo

Type depository: NMPC

Distribution: Brunei, Indonesia (Borneo), Malaysia (Sabah)

***A. (H.) brevissima* Bílý 1990: 131, comb. n.**

Type locality: Sarawak, Gunung Serapi

Type depository: MTHC

Distribution: Brunei, Malaysia (Sarawak)

***A. (H.) cymbiformis* Bílý 1990: 137, comb. n.**

Type locality: West Malaysia, Fraser's Hill

Type depository: MTHC

Distribution: Malaysia (West Malaysia)

***A. (H.) hatayamai* Bílý 1990: 132, comb. n.**

Type locality: West Malaysia, Fraser's Hill

Type depository: MTHC

Distribution: Malaysia (West Malaysia, Sabah)

***A. (H.) malayana* Bílý 1990: 134, comb. n.**

Type locality: Malaysia (West Malaysia, Fraser's Hill)

Type depository: MTHC

Distribution: Malaysia (West Malaysia, Pahang)

***A. (H.) mindanaoensis* Fisher 1922: 13, comb. n.**

Type locality: The Philippines, Mindanao, Davao, 7°04'N 125°36'E

Type depository: USNM

Distribution: The Philippines, Mindanao

***A. (H.) ophthalmica* Bílý 1990: 135, comb. n.**

Type locality: West Malaysia, Fraser's Hill

Type depository: MTHC

Distribution: Malaysia (West Malaysia, Pahang), Thailand

***A. (H.) pacholatkoii* sp. n.**

Type locality: West Malaysia, Cameron Highlands, Tanah Rata, 4°28'N 101°23'E

Type depository: NMPC

Distribution: Malaysia (West Malaysia, Pahang)

**A. (*H.*) *palawanensis* Bílý & Kubáň 2012: 438**

Type locality: The Philippines, Palawan, Salakot Falls, 4°42'N 118°31'E

Type depository: NMPC

Distribution: The Philippines, Palawan

**A. (*H.*) *peninsularis* Bílý 1990: 138, comb. n.**

Type locality: West Malaysia, Fraser's Hill

Type depository: MTHC

Distribution: Malaysia (West Malaysia, Sarawak)

**A. (*H.*) *taiwanensis* Bílý 1989: 394, comb. n.**

Type locality: Formosa

Type depository: NSMT

Distribution: Taiwan

**A. (*H.*) *weyersi* Kerremans 1900: 10, comb. n.**

Type locality: Sumatra

Type depository: MNHN

Distribution: Indonesia (Sumatra, Bali)

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