

Two New Species of *Horaeomorphus* SCHAUFUSS (Coleoptera, Scydmaenidae) from Sabah, Malaysia

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Abstract *Horaeomorphus absconditus* sp. nov. and *H. aegrus* sp. nov. are described from East Malaysia. The type material has been collected in Borneo, Sabah: Crocker Range. The habitus of both species, their aedeagi and the spermatheca of *H. aegrus* are illustrated.

Key words: Coleoptera, Scydmaenidae, *Horaeomorphus* SCHAUFUSS, new species, Malaysia, Borneo, Sabah, taxonomy.

Introduction

Eighteen species of *Horaeomorphus* SCHAUFUSS have been known to occur in the Malay Peninsula and the Sunda Islands; nine of them have been recorded from Borneo (JALOSZYŃSKI, 2006; JALOSZYŃSKI *et al.*, 2007). Within Borneo, *H. eumicroides* SCHAUFUSS and *H. ishianus* JALOSZYŃSKI are known from Kalimantan; *H. jaechi* JALOSZYŃSKI from Sarawak; *H. tibialis* JALOSZYŃSKI, *H. punctatissimus* FRANZ, *H. loeblianus* FRANZ, and *H. sabahensis* FRANZ from Sabah; *H. pseudosabahensis* JALOSZYŃSKI from Sarawak and Sabah, and *H. sarawakensis* FRANZ from Sarawak and Brunei (JALOSZYŃSKI, 2006). Some of these species have broader ranges, and they occur also in other parts of the archipelago, in peninsular Malaysia or on small islands near the Malay Peninsula. For instance, *H. sarawakensis* was found also in Kedah, Perak, peninsular part of Pahang, Tioman Is., and Penang Is., and *H. punctatissimus* in Sumatra and Siberut Is. The genus seems to be relatively common, although not particularly abundant in the region, and further fieldwork will very likely provide many new species, especially from the Malay Peninsula and the large islands like Borneo,

Sumatra, Java or Celebes. In this paper we describe two new species from the Crocker Range, Sabah. The type material is deposited in the National Museum of Nature and Science, Tokyo, Japan (NSMT) and in the private collection of the first author (PCPJ); the measurements follow the convention used in JAŁOSZYŃSKI, 2006.

Taxonomy

Horaeomorphus absconditus sp. nov.

(Figs. 1, 3, 4)

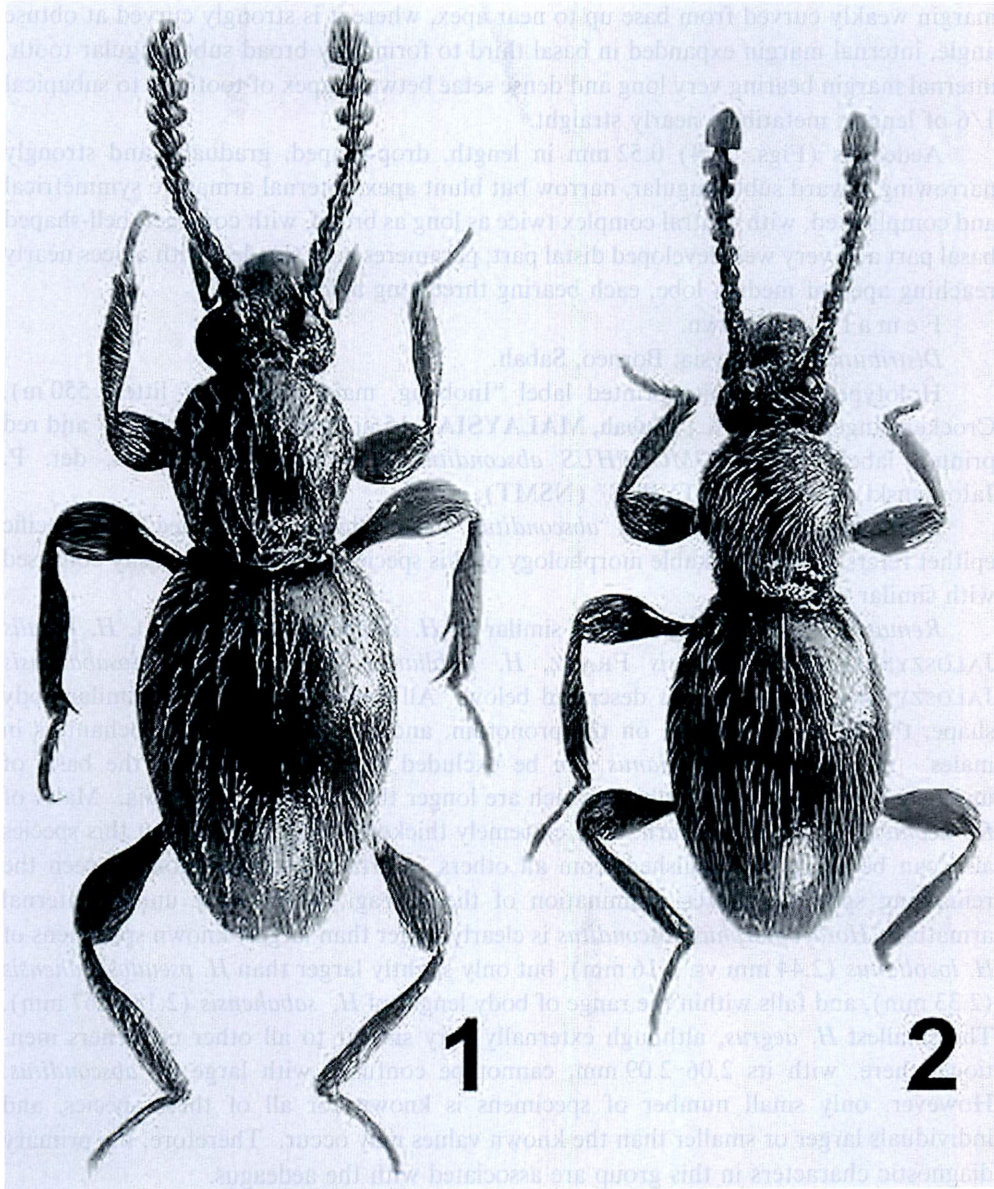
Diagnosis. The following combination of characters can be used to distinguish this species from all other congeners: body length below 2.5 mm; entire dorsum very finely punctate; base of pronotum with distinct transverse groove connecting five small pits; antennomeres I–IV elongate, V–VI as long as broad, VII–X strongly transverse; metatrochanters non-modified; aedeagus with narrow but blunt apex; central complex of aedeagus twice as long as broad, with very well developed distal part.

Description. Body moderately slender, strongly convex, dark brown, covered with vestiture slightly lighter than cuticle.

Male (Fig. 1). Body length 2.44 mm. Head widest at moderately convex, large eyes, length 0.37 mm, width 0.51 mm; vertex convex, with a pair of small and moderately deep but very distinct pits each adjacent to postero-interior margin of supraantennal tubercle; tempora short, strongly and nearly regularly rounded; frontoclypeal area strongly convex and relatively narrow; supraantennal tubercles moderately large, strongly raised and distinctly delimited from frons but indistinctly delimited from vertex. Punctuation on vertex and frons distinct but composed of very small and sparse punctures; setation moderately long, sparse and suberect to erect. Antennae short and stout, gradually thickened toward apices, length 1.12 mm; antennomeres I–IV each elongate; V–VI each as long as broad; VII–X transverse and gradually broader; XI only $1.2\times$ as long as broad.

Pronotum elongate but relatively stout, broadest near anterior third, length 0.72 mm, maximum width 0.64 mm. Anterior and lateral margins rounded together; very narrow basal collar is delimited from disc by narrow and sharply marked transverse groove with five small but distinct dorsal pits; posterior margin arcuate. Punctuation distinct, composed of unevenly distributed small but sharply marked setiferous punctures, in central part of disc separated by spaces $1-4\times$ as long as puncture diameters; setation dense, moderately long, erect and directed posteriorly.

Elytra oval, broadest distinctly anterior to middle, length 1.35 mm, width 0.95 mm, elytral index (EI; length/width) 1.42. Humeral calli moderately distinct; subhumeral impressions very shallow; small adsutural area on each elytron near anterior fourth is slightly but distinctly flattened; apices of elytra separately rounded. Punctuation on flattened area similar to that on pronotum, remaining area on each elytron bears slightly



Figs. 1-2. Habitus of the holotypes (to the same scale). — 1. *Horaeomorphus absconditus* sp. nov. (length 2.44 mm). — 2. *Horaeomorphus aegrus* sp. nov. (length 2.09 mm).

smaller, shallower and sparser punctures; setation dense, slightly longer than that on pronotum and slightly more erect. Hind wings well developed.

Legs robust, moderately long; metatrochanters non-modified, with blunt apices; protibiae straight, broadest minimally posterior to middle; mesotibiae with external

margin weakly curved from base up to near apex, where it is strongly curved at obtuse angle, internal margin expanded in basal third to form very broad subtriangular tooth, internal margin bearing very long and dense setae between apex of tooth up to subapical 1/6 of length; metatibiae nearly straight.

Aedeagus (Figs. 3, 4) 0.52 mm in length, drop-shaped, gradually and strongly narrowing toward subtriangular, narrow but blunt apex; internal armature symmetrical and complicated, with central complex twice as long as broad, with compact, bell-shaped basal part and very well developed distal part; parameres very slender, with apices nearly reaching apex of median lobe, each bearing three long apical setae.

F e m a l e. Unknown.

Distribution. Malaysia: Borneo, Sabah.

Holotype male, white printed label "Inobong, main trail, (leaf litter: 550 m), Crocker range, near K. K., [Sabah, MALAYSIA], 15.iii.2006, S. Nomura leg." and red printed label "*HORAEOMORPHUS absconditus* Jałoszyński & Nomura, det. P. Jałoszyński, 2008, HOLOTYPE" (NSMT).

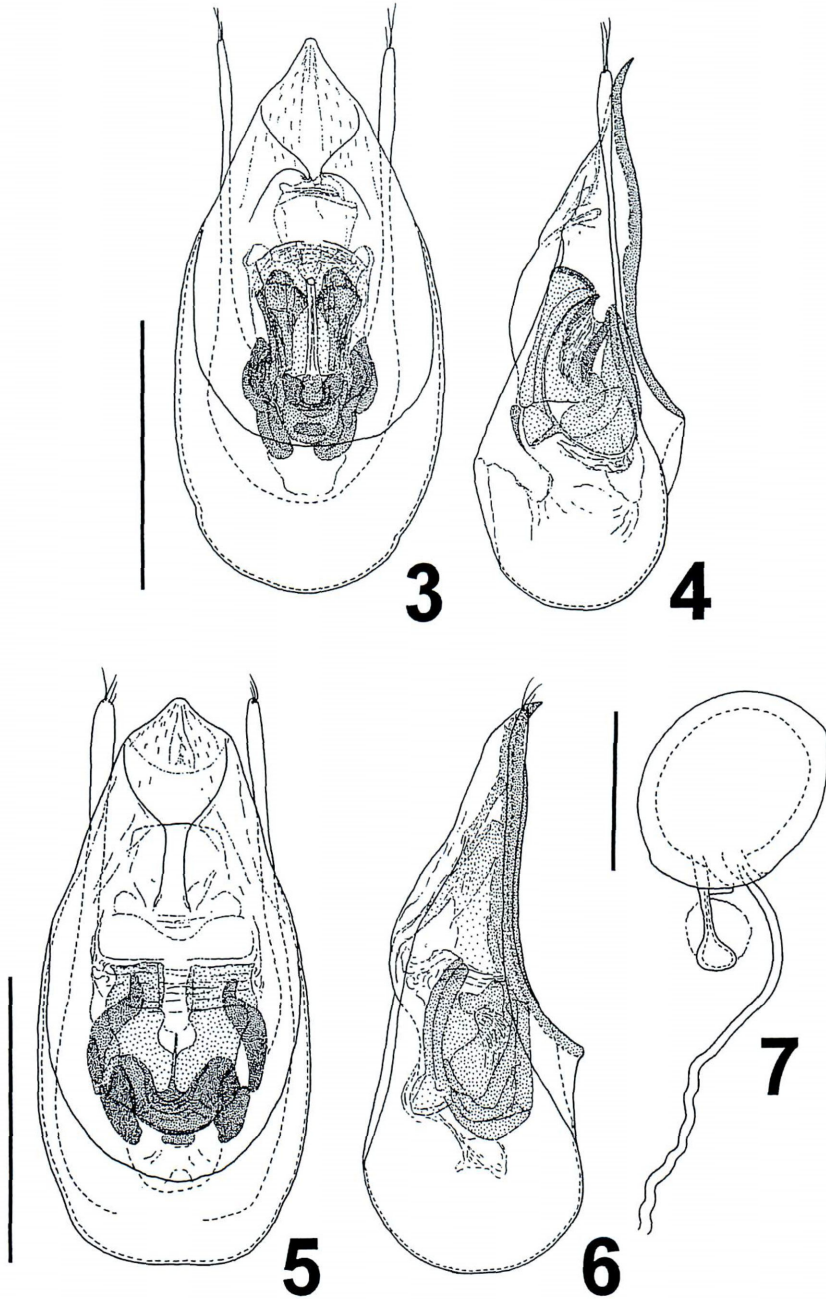
Etymology. The Latin word "*absconditus*" means "hidden, concealed"; the specific epithet refers to unremarkable morphology of this species, which can be easily confused with similar congeners.

Remarks. This species is most similar to *H. ishianus* JAŁOSZYŃSKI, *H. tibialis* JAŁOSZYŃSKI, *H. sabahensis* FRANZ, *H. loeblianus* FRANZ, *H. pseudosabahensis* JAŁOSZYŃSKI, and *H. aegrus* described below. All these species share a similar body shape, the ante-basal groove on the pronotum, and non-modified metatrochanters in males. *Horaemorphus ishianus* can be excluded from this group on the basis of uniquely long setae on mesotibiae, which are longer than half length of tibia. Males of *Horaemorphus tibialis*, in turn, have extremely thickened protibiae, so that this species also can be easily distinguished from all others. Certain discrimination between the remaining species requires examination of the aedeagi, which have unique internal armature. *Horaemorphus absconditus* is clearly larger than largest known specimens of *H. loeblianus* (2.44 mm vs. 2.16 mm), but only slightly larger than *H. pseudosabahensis* (2.33 mm), and falls within the range of body length of *H. sabahensis* (2.18–2.67 mm). The smallest *H. aegrus*, although externally very similar to all other congeners mentioned here, with its 2.06–2.09 mm, cannot be confused with large *H. absconditus*. However, only small number of specimens is known for all of these species, and individuals larger or smaller than the known values may occur. Therefore, the primary diagnostic characters in this group are associated with the aedeagus.

Horaemorphus aegrus sp. nov.

(Figs. 2, 5–7)

Diagnosis. The following combination of characters can be used to distinguish this species from all other congeners: body length about 2 mm; head with dense, deep and very distinct punctures, pronotum and elytra finely punctate; base of pronotum with



Figs. 3-7. Aedeagus in dorsal (3, 5) and lateral (4, 6) views and spermatheca (7). — 3-4. *Horaeomorphus absconditus* sp. nov. — 5-7. *Horaeomorphus aegrus* sp. nov. Scale bars: 3-6: 0.25 mm; 7: 0.05 mm.

distinct transverse groove connecting five small pits; antennomeres I–III distinctly elongate, IV–VI barely noticeably longer than broad, VII as long as broad, VIII–X strongly transverse; metatrochanters non-modified; aedeagus with broad and blunt apex; central complex of aedeagus about as long as broad, with darkly sclerotized and loosely assembled basal part and short, much lighter distal part.

Description. Body slender, strongly convex, dark brown, covered with vestiture only slightly lighter than cuticle.

Male (Fig. 2). Body length 2.09 mm. Head widest at moderately convex, large eyes, length 0.32 mm, width 0.40 mm; vertex convex, with a pair of small and moderately deep but very distinct pits each adjacent to postero-interior margin of supraantennal tubercle; tempora long, relatively weakly and nearly regularly rounded; frontoclypeal area strongly convex and relatively narrow; supraantennal tubercles large and strongly raised, distinctly delimited from frons but indistinctly delimited from vertex. Punctuation on vertex very distinct, composed of unevenly distributed, moderately large but deep and sharply marked punctures separated by spaces $0.5\text{--}2\times$ as long as puncture diameters; punctures on frontoclypeal area distinctly shallower, smaller and sparser; setation moderately long, sparse and strongly erect. Antennae short but moderately stout, gradually thickened toward apices, length 0.90 mm; antennomeres I–III distinctly elongate; IV–VI barely noticeably longer than broad; VII as long as broad; VIII–X strongly transverse; XI $1.2\times$ as long as broad.

Pronotum elongate, moderately slender, broadest near anterior third, length 0.62 mm, maximum width 0.55 mm. Anterior and lateral margins rounded together; very narrow basal collar delimited from disc by narrow and sharply marked transverse groove with five small, moderately distinct dorsal pits; posterior margin arcuate. Punctuation distinct, composed of unevenly distributed small and very shallow punctures with raised margins, in central part of disc punctures are separated by spaces $2\text{--}3\times$ as long as puncture diameters; setation dense, moderately long, erect and directed posteriorly.

Elytra oval, broadest distinctly anterior to middle, length 1.15 mm, width 0.80 mm, EI 1.44. Humeral calli moderately distinct; subhumeral impressions shallow; small adsutural area on each elytron near anterior fourth is slightly but distinctly flattened; apices of elytra separately rounded. Punctuation similar to that on pronotum, but composed of slightly smaller and regularly distributed punctures, those on flattened area are separated by spaces about twice as long as puncture diameters; setation dense, slightly longer than that on pronotum and slightly more erect. Hind wings well developed.

Legs robust, moderately long; metatrochanters non-modified, with blunt apices; protibiae nearly straight, broadest minimally anterior to middle; mesotibiae with external margin weakly curved from base up to near apex, where it is very strongly curved at obtuse angle, internal margin expanded in basal third to form very broad, rounded expansion, internal margin bearing moderately long and dense setae between broadest place up to subapical $1/4\text{--}1/5$ of length; metatibiae nearly straight.

Aedeagus (Figs. 5, 6) 0.50 mm in length, drop-shaped, gradually and strongly narrowing toward subtriangular, broad and blunt apex; internal armature symmetrical and relatively simple, with central complex about as long as broad, with loosely assembled, bell-shaped basal part and lightly sclerotized, weakly developed distal part; parameres slender, with apices nearly reaching apex of median lobe, each bearing 3–4 moderately long apical setae.

Female. Very similar to male, but with slightly broader elytra; body length 2.06 mm, length of head 0.32 mm, width 0.40 mm, length of antennae 0.92 mm, length of pronotum 0.62 mm, maximum width 0.62 mm, length of elytra 1.12 mm, width of elytra 0.80 mm, EI 1.40.

Spermatheca (Fig. 7) 0.07 mm in length, globular, moderately thick-walled, with approximate insertions of accessory gland and ductus spermathecae.

Distribution. Malaysia: Borneo, Sabah.

Holotype male, white printed label “Inobong, main trail, (leaf litter: 550 m), Crocker range, near K. K., [Sabah, MALAYSIA], 15.iii.2006, S. Nomura leg.” and red printed label “*HORAEOMORPHUS aegrus* Jałoszyński & Nomura, det. P. Jałoszyński, 2008, HOLOTYPUS” (NSMT). Paratype: female, same data as for the holotype, but with yellow “PARATYPUS” label (PCPJ).

Etymology. This species is very similar to *H. sabahensis* and allied congeners, but it has a distinctly smaller body, as if in a result of illness, which is reflected by the specific epithet “*aegrus*”, in Latin meaning “ill, diseased, unwell”.

Remarks. See remarks for *H. absconditus*.

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要 約

Paweł JAŁOSZYŃSKI・野村周平: マレーシア, サバ産トゲアシオオコケムシ属(コウチュウ目コケムシ科)の2新種. —— マレーシア東部からトゲアシオオコケムシ属の2新種, *Horaemorphus absconditus* と *H. aegrus* を記載した. これらはサバ州クロッカー山脈から得られたものである. 両種の全形, 雄交尾器および後者の種の貯精嚢を図示した.

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Elytra, Tokyo, 36(1): 166, May 30, 2008

A New Record of *Malthinus nakanishii* (Coleoptera, Cantharidae) from Minamidaitô Is., Southwest Japan

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Malthinus nakanishii TAKAHASHI, 2006 is a remarkable species first described from Kitadaitô Is., Southwest Japan. Up to the present, this has been the sole known locality. Recently, I had an opportunity to examine a specimen collected on Minamidaitô Is., which almost coincides with the present species. After a careful examination I have concluded that this specimen from Minamidaitô Is. perfectly agrees with the specimens from Kitadaitô Is. The following locality is a second known place of occurrence of this rare species.

Material examined. 1 ♂, East coast of Minamidaitô Is., Okinawa Pref., 10–IV–2007, M. NAKANISHI leg.

Distribution. Japan. (Kitadaitô Is. and Minamidaitô Is.)

Finally, I wish to express my hearty thanks to Messrs. Motoo NAKANISHI of Matsusaka and Hiroshi OTOBE of Tsu for their kindness in providing me the opportunity to examine the above-mentioned specimen.

Reference

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