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New species and new records of *Hyphydrus* ILLIGER, 1802 from South-East Asia (Coleoptera: Dytiscidae)

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Abstract

Four new species of *Hyphydrus* ILLIGER (Coleoptera: Dytiscidae) of the *H. signatus* species group (sensu BISTRÖM 1982) are described from South-East Asia: *H. toraja* (Sulawesi), *H. koho* (Vietnam), *H. philippensis* (Philippines) and *H. cornatipenis* (Philippines). Important diagnostic morphological characters and genitalia of both sexes are illustrated (female gonocoxosternum and gonocoxae for the first time). New distributional data of *H. pulchellus* CLARK, 1863, *H. celebensis* BISTRÖM, 1983, *H. fangensis* BISTRÖM & SATŌ, 1988, *H. schoedli* WEWALKA & BISTRÖM, 1993 and *H. lyratus xanthomelas* RÉGIMBART, 1877 are added. *Hyphydrus detectus* FALKENSTRÖM, 1936 is recorded for the first time from Hubei province (China), *H. jacobsoni* BISTRÖM, 1982 from Malaysia and Laos, *H. sumatrae* RÉGIMBART, 1880 from Laos, and *H. lyratus lyratus* SWARTZ, 1808 from Sulawesi (Indonesia).

Key words: Coleoptera, Dytiscidae, *Hyphydrus*, taxonomy, new species, new records, Indonesia, Laos, Malaysia, Philippines, Vietnam.

Introduction

BISTRÖM (1982) published a world revision of the genus *Hyphydrus* ILLIGER, 1802. During the last 25 years, several papers described new species and provided new distributional data of South-East Asian *Hyphydrus* (e.g. WEWALKA & BISTRÖM 1988, 1983, BISTRÖM 1983a, 1983b, 1984, BISTRÖM & SATŌ 1988). In an important paper, BISTRÖM et al. (1997) listed 29 species from the Australasian and Oriental Regions (including the territory of China). The last new species of Asian *Hyphydrus* was described from China (Yunnan) by ŠŤASTNÝ (2000).

During examination of a large material of *Hyphydrus* deposited in the NMW, I found several undescribed species. I also obtained some additional material from NMPC and ZHMB and during my field work in Sulawesi. Altogether I examined about 400 specimens from South-East Asia. The entire material includes some faunistically important records as well as four new *Hyphydrus* species which are described below.

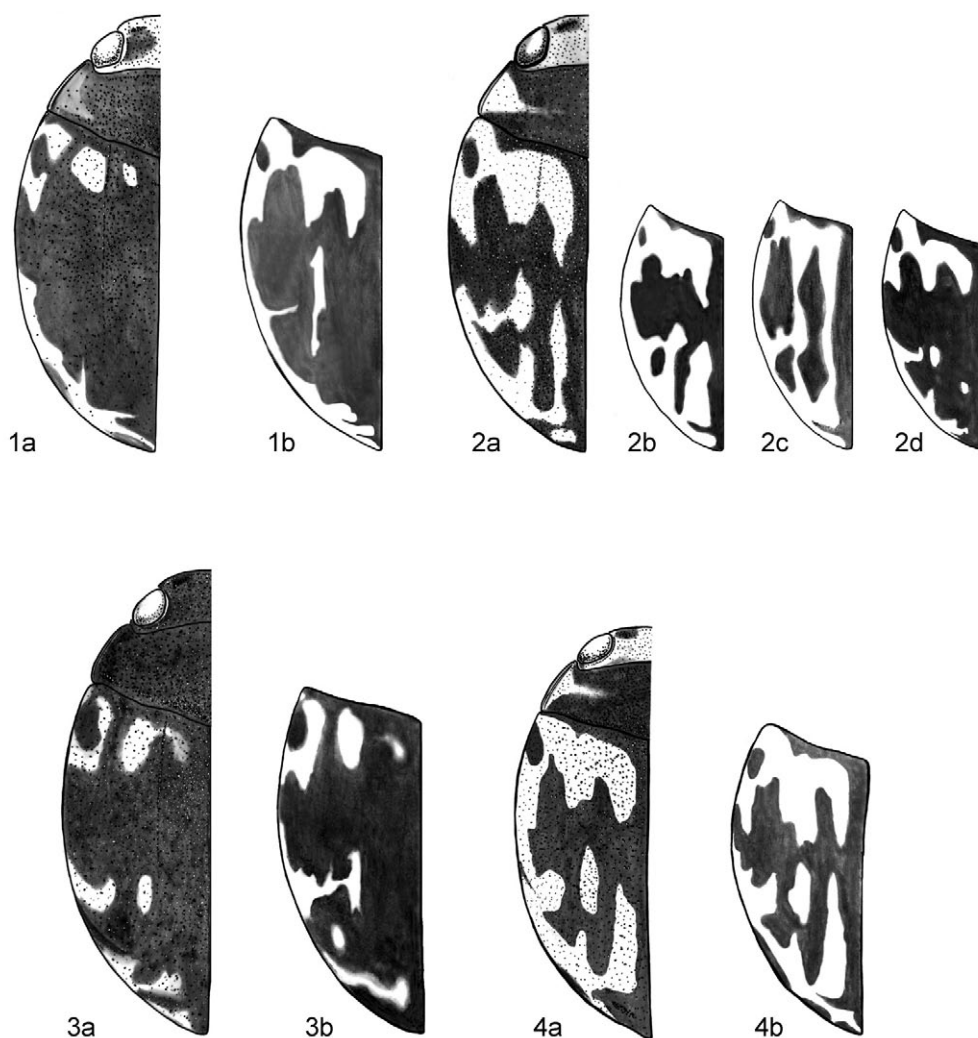
Material and Methods

The material is deposited in the following collections:

JSCL	Collection Jaroslav Šťastný, Liberec, Czech Republic
MNS	Staatliches Museum für Naturkunde Stuttgart, Germany (W. Schawaller)
NHMB	Naturhistorisches Museum Basel, Switzerland (M. Brancucci)
NMPC	Národní Muzeum Praha, Czech Republic (J. Hájek)
NMW	Naturhistorisches Museum Wien, Austria (M.A. Jäch)
ZHMB	Museum für Naturkunde der Humboldt-Universität, Berlin (M. Uhlig)

Label data of type material are cited in quotation marks; separate labels are indicated by slashes (/). Label data of other material are listed in a standardised form. Comments on label data are enclosed in square brackets.

Male and female genitalia were extracted and examined following a method similar to that of MAZZOLDI (1996). They were studied and illustrated in temporary glycerine mounts using a Leica transmitted light microscope at magnifications up to 40–180x; they were subsequently rinsed in distilled water, and mounted in DMHF on the same card as the beetle. Male median lobes are illustrated in dry condition.



Figs. 1–4: Habitus, colour patterns of 1a, b) *Hyphydrus toraja*, 2a–d) *H. koho*, 3a, b) *H. philippensis*, 4a, b) *H. cornatipenis*. Size of illustrations not proportional; for actual size of specimens see description.

Hyphydrus toraja sp.n.

TYPE LOCALITY: Kanre Apia, southern Sulawesi, Indonesia.

TYPE MATERIAL: **Holotype** ♂ (NMW): "S - SULAWESI 1992 Kanre Apia Ö [east] Malino 1400 m (28) leg. Schödl 30.IV \ HOLOTYPE ♂ *Hyphydrus toraja* sp.n. J. ŠŤASTNÝ det. 2004 [red label with black line border]".

Paratypes: 1 ♂, 2 ♀ with same loc. data as the holotype (NMW); 1 ♂ "S - SULAWESI 1992 Kanre Apia Ö Malino 1400 m (28) leg. Schödl 30.IV. \ *Hyphydrus* n.sp., signatus group 92 [handwritten] det. G. Wewalka [printed]"; 3 ♂♂, 1 ♀ "S - SULAWESI 1992 Kanre Apia E Malino 1400 m (28) leg. Jäch 30.IV." (NMW); 1 ♂ "S - SULAWESI 1992 Umg. Malino (27) E Ujung Pandang leg. Jäch 29.IV." (NMW); 2 ♀♀ "S - SULAWESI 1992 Umg. Malino (27) Ö Ujung Pandang leg. Schödl 29.IV." (NMW); 2 ♂♂ "S U L A W E S I S Rantepao env. Bututumonga J.Šťastný lgt. 6.10.2001" (JSCL). All specimens are provided with a red, black-framed label with the following printed text: HOLOTYPE or PARATYPE [with No and symbols for male or female], *Hyphydrus toraja* sp. n. J. Šťastný det. 2004.

ADDITIONAL MATERIAL EXAMINED:

I N D O N E S I A: SULAWESI: S of Rantepao, env. Bututumonga, 6.10.2001, J.Šťastný lgt. \ *Hyphydrus toraja* sp. n. J. Šťastný det. 2004, 1 ♂ (JSCL).

DIAGNOSIS: *Hyphydrus toraja* is a distinct species within the *H. signatus* species-group (sensu BISTRÖM 1982). It is apparently closely related to *H. boettcheri* BISTRÖM; however it differs externally by large size, dark coloration of males, dense and coarse elytral punctation and mainly by the shape of the penis, which is curved (lateral aspect) and shallowly incised (dorsal aspect). In *H. boettcheri* the penis has a concave frontal outline (lateral aspect) and is moderately deeply incised (dorsal aspect).

DESCRIPTION: Body shape globose, rounded, with extensive dark dorsal colour pattern (Fig. 1a). Angle between pronotum and elytra distinct. Measurements (n = 14): total length 4.10–4.75 mm (holotype 4.52 mm), maximum width 2.6–2.9 mm (holotype 2.82 mm).

Male. Head dark ferrugineous, with very narrow, hair-like line along entire eye margin and sometimes with large dark brown spot laterally and posteriorly of eyes. Clypeus medially slightly rounded, bordered. Frons anteriorly between eyes with two large, shallow depressions. Punctuation coarse, dense and evenly distributed, punctures close to pronotum obliterated. Frons microsculptured, posteriorly with narrow shiny area or with fragments of microsculpture. Antenna, labial and maxillary palpus testaceous.

Pronotum blackish to dark ferrugineous, with moderately narrow, somewhat vague lateral testaceous area on each side (Fig. 1 a). Sides slightly rounded and markedly rimmed. Punctures of somewhat irregular size, fine to fairly coarse, densest basally and anteriorly. Base coarsely punctate, spaces between punctures forming longitudinal ridges; disc finely punctate. Disc on each side with narrow transverse area lacking punctures. Interstices shiny, without microsculpture.

Elytra testaceous, with extensive blackish to dark ferrugineous variable markings (Fig. 1). Punctuation indistinctly of two kinds, coarse punctures very sparsely distributed (Fig. 11). Each elytron with distinct, posteriorly disappearing row of punctures on disc and irregular, indistinct lateral row of punctures. Integument shiny, microsculpture lacking, lateral margin in apical third with very fine golden hairs. Epipleura ferrugineous, with darkened apical third, fairly finely and sparsely punctate.

Ventral side: Gena, gula and episterna ferrugineous, metaventricle, metacoxal plate and abdomen blackish ferrugineous to brownish, ventrite 6 paler. Prosternum and proepisternum impunctate; metepisternum and metaventricle evenly and coarsely punctate, punctation medially sparse; metacoxal plates impunctate; abdomen more finely punctate. Integument shiny, not microsculptured. Prosternal process medially with dense hair tuft; ventrites 4 and 5 posteriorly with row of hairs. Ventrite 6 distinctly hooked.

Legs ferrugineous. Fore and middle tarsomeres 1–5 darkened (Fig. 13). Fore trochanter with tuft of hairs, incised and provided with short, slightly backwards curved process.

Male genitalia. Apico-lateral hair tufts indistinct but present. Shape as in Figs. 5–7.

SEXUAL DIMORPHISM: Female differing from male in the following characters: body distinctly smaller, elytra with dark markings more reduced, thus pale; punctuation everywhere sparsely distributed, head finely microsculptured; fore trochanters apically slightly pointed; fore and middle tarsi slender; ventrite 6 only slightly transversally depressed.

Female genitalia as in Figs. 8–10. Spermatheca as in Fig. 12.

VARIABILITY: The type series varies slightly in body size and the extent of pale colour pattern on the elytra (Fig. 1). Punctuation of elytra varies slightly in density. Specimens from Rantepao have slightly different outlines of penis in dorsal view; one male from this locality has the whole dorsal surface matt and irregularly microsculptured.

COLLECTION CIRCUMSTANCES: The new species was collected in shallow pools along a ca. 3–5 m wide river (M.A. Jäch, pers. comm.). Specimens from Rantepao were collected in an unshaded small pond with dense macrophytes and close to paddy fields.

NAME DERIVATION: Named after the native tribe Toraja, who live in the surroundings of Rantepao in a spectacular valley in southern Sulawesi.

DISTRIBUTION: Indonesia, Sulawesi.

Hyphydrus koho sp.n.

TYPE LOCALITY: Da Lat City, S Vietnam.

TYPE MATERIAL: **Holotype** ♂ (NMW): “S-VIETNAM Dalat City 21.-27. 4. 1994 Pacholatko & Dembicky \ HOLOTYPE ♂ *Hyphydrus koho* sp.n. J. ŠŤASTNÝ det. 2004 [red label with black line border]”. **Paratypes**: 5 ♂♂, 16 ♀♀ with same loc. data as the holotype (NMW, JSCL); 4 ♂♂, 5 ♀♀ “S-VIETNAM 28.-30.4. 12km N Dalat, 1994 Lang Bian Pacholatko & Dembicky” (NMW, JSCL); 8 ♂♂, 6 ♀♀ “S-VIETNAM: 17.-21.4. 12km N Dalat 1995 Lang Bian \ 12°03' N 108°27' E 1580 – 1750 m Pacholatko & Dembicky” (NMW, JSCL). All specimens are provided with a red, black-framed label with the following printed text: HOLOTYPUS or PARATYPUS [with No and symbols for male or female], *Hyphydrus koho* sp. n. J. ŠŤastný det. 2004.

DIAGNOSIS: *Hyphydrus koho* sp.n. undoubtedly belongs to the *H. signatus* SHARP, 1882 species group (sensu BISTRÖM 1982) and is closely related to *H. pulchellus* and other similar South-East Asian members of this group (see the diagnosis of *H. cornatipenis* sp.n. above). *H. koho* sp.n. is clearly distinguished from *H. pulchellus* chiefly by the shape of the male genitalia, dense and coarse reticulation of the head and dark, more enlarged and dilated fore and middle tarsomeres in male.

DESCRIPTION: Only diagnostically important differences from the re-description of *H. pulchellus* in BISTRÖM (1982: 95) are summarized in the following text. Body shape as in Fig. 2a. Measurements (n = 20): total length 3.9–4.6 mm (holotype 4.2 mm), maximum width 2.58–2.87 mm (holotype 2.7 mm).

Male. Head testaceous, posterior to eyes darkened. Punctuation dense, coarse and evenly distributed.

Pronotum dark ferrugineous, laterally and in anterior angles pale testaceous. Sides slightly rounded.

Elytra with punctuation of two sizes, smaller punctures dense, distance between them equal to their diameter or somewhat less. Coarse punctures with 2–3 times diameter of finer ones, sparsely arranged (Fig. 20).

Ventral side. Gena, gula and episterna testaceous, metaventrite, metacoxal plate and abdomen blackish ferruginous to brownish, ventrite 5 and 6 paler. Hind coxa impunctate.

Legs. Fore and middle tarsomeres 1–5 dark ferruginous. Fore tarsomeres 1–2 broader than tarsomere 3 (Fig. 22); middle tarsomeres 1–3 broadened. Fore trochanter incised and provided with short curved process.

Male genitalia as in Figs. 14–16.

SEXUAL DIMORPHISM: Female differing from male in the following characters: fore trochanter not incised; fore and middle tarsi slender; ventrite 6 not hooked, only slightly transversally depressed; punctuation fine and sparse, head with fine microsculpture between punctures.

Female genitalia as in Figs. 17–19. Spermatheca as in Fig. 21.

VARIABILITY: The type series varies slightly in body size and extent of the pale elytral colour pattern (Fig. 2a–d), which can be more or less reduced.

COLLECTION CIRCUMSTANCES: Unknown.

NAME DERIVATION: Named after the Koho, a Vietnamese tribe who lives in the area where this species was collected.

DISTRIBUTION: Known only from several localities near the city of Da Lat in southern Vietnam.

Hyphydrus philippensis sp.n.

TYPE LOCALITY: Ilomavis, Mt. Apo, Mindanao Island, Philippines.

TYPE MATERIAL: **Holotype** ♂ (MNS): “MINDANAO, Mt. APO ILOMAVIS, 1400 m 18.-19. MAY 1996 BOLM lgt. \ HOLOTYPE ♂ *Hyphydrus philippensis* sp.n. J. ŠTASTNÝ det. 2004 [red label with black line border]”. **Paratypes**: 18 ♂, 23 ♀ with same loc. data as the holotype (JHCP, JSCL, MNS, NMW); 1 ♂, 1 ♀ with same loc. data as the holotype except “coll. Jiří HÁJEK Charles University Prague, Czech Republic” (JHCP); 1 ♂ with same loc. data as the holotype except “*Hyphydrus* sp. n. signatus group Jiří Hájek det. 2001” (JHCP); 1 ♂ “PHILIPP.: Camiguin Isl. Mambajao 1.-4.2.1994 leg. Seyfert (23)” (NMW). All specimens are provided with a red, black-framed label with the following printed text: HOLOTYPE or PARATYPE [with No and symbols for male or female], *Hyphydrus philippensis* sp. n. J. Štastný det. 2004.

DIAGNOSIS: *Hyphydrus philippensis* sp.n. belongs to the *H. signatus* SHARP, 1882 species group as recognized by BISTRÖM (1982). It is a distinct species characterized by the following combination of characters: pronotum in both sexes distinctly microsculptured and mat, elytral punctuation of indistinctly two kinds, male fore and middle tarsi broad, body in dorsal view mainly dark with indistinct pale colour pattern.

DESCRIPTION: Body shape globose, rounded, with indistinct dorsal colour pattern (Fig. 3a). Angle between pronotum and elytra distinct. Measurements (n = 20): total length 4.10–4.85 mm (holotype 4.8 mm), maximum width 2.80–2.92 mm (holotype 2.9 mm).

Male. Head almost black, anterior margin pale ferruginous, small area behind eyes brownish. Clypeus medially straight, bordered. Frons anteriorly between eyes with two large, shallow depressions. Punctuation dense, evenly distributed, close to shallow depressions obliterated. Whole surface matt, distinctly microsculptured. Antennae ferruginous to testaceous, labial and maxillary palpus ferruginous to dark ferruginous.

Pronotum black, with narrow, somewhat vague antero-lateral area on each side testaceous to pale ferruginous. Sides slightly rounded and markedly rimmed. Posterior angles rounded. Punctures shallow, of two kinds, difference between fine and coarse punctures small, punctuation densest

basally and anteriorly, spaces between punctures forming longitudinal ridges. Disc on each side with narrow transverse area lacking punctures. Interstices mat, with microsculpture.

Elytron blackish, with testaceous to dark ferrugineous variable markings (Fig. 3). Punctuation indistinctly of two kinds (Fig. 29), dense, evenly distributed, laterally and posteriorly somewhat finer. Each elytron with posteriorly disappearing row of punctures on disc and irregular, indistinct lateral row of punctures. Integument shiny, microsculpture lacking. Epipleura dark ferrugineous to testaceous, sometimes with darkened apical third, fairly finely and sparsely punctate.

Ventral side ferrugineous to blackish ferrugineous. Gena, gula and episterna pale ferrugineous, metaventricle, metacoxal plate and abdomen blackish ferrugineous, ventrites medially dark rufous. Prosternum, proepisternum, metepisternum and metaventricle coarsely punctate, punctuation medially sparse and finer; metacoxa impunctate; abdomen more finely punctate. Integument rather shiny, sporadic microsculpture discernible, hind coxa microsculptured; ventrites shiny. Prosternal process medially with dense tuft of hairs; ventrites 4 and 5 posteriorly with row of hairs, medially with tuft of hairs. Ventricle 6 distinctly hooked.

Legs dark ferrugineous. Fore and middle tarsi broadened. (Fig. 31). Fore tarsomere 3 and middle tarsomeres 1–5 dorsally partly darkened. Fore trochanter incised and provided with long, slightly backwards curved process.

Male genitalia. Shape as in Figs. 23–25.

SEXUAL DIMORPHISM: Female differing from male in the following characters: generally smaller; posterior corners of pronotum more distinctly rounded; punctuation sparse and shallowly impressed, distinctly of two kinds; entire dorsal surface microsculptured; fore trochanter not incised; fore and middle tarsi slender. Ventricle 6 not hooked, only slightly transversally depressed.

Female genitalia as in Figs. 26–28. Spermatheca as in Fig. 30.

VARIABILITY: The type series varies slightly in body size and the extent of pale elytral colour pattern, which can be more or less reduced. Punctuation of elytra varies slightly in density.

COLLECTION CIRCUMSTANCES: Unknown.

NAME DERIVATION: This species is named for the Philippines.

DISTRIBUTION. So far known only from two islands in the Philippines (Mindanao, Camiguin).

Hyphydrus cornatipenis sp.n.

TYPE LOCALITY: Mt. Makiling, Los Banos, Luzon, Philippines Archipelago.

TYPE MATERIAL: **Holotype** ♂ (NMW): “leg. Jäch (15) PHILIPPINEN - Luzon Los Banos 24. 11. 1992 Mt. Makiling 100m \ HOLOTYPE ♂ *Hyphydrus cornatipenis* sp.n. J. ŠTASTNÝ det. 2004 [red label with black line border]”. **Paratypes**: 3 ♂♂ “PHILIPPINEN - Luzon Los Banos 13. 11. 1992 Mt. Makiling (3) leg. Schillhammer” (NMW, JSCL); 1 ♀ with same loc. data as the holotype except “*Hyphydrus* [printed] sp. 1 [handwritten] Balke det. 1997 [printed]” (NMW). All specimens are provided with a red, black-framed label with the following printed text: HOLOTYPUS or PARATYPUS [with No and symbols for male or female], *Hyphydrus cornatipenis* sp. n. J. Štastný det. 2004.

DIAGNOSIS: *Hyphydrus cornatipenis* sp.n. undoubtedly belongs to the *H. signatus* SHARP, 1882 species group (sensu BISTRÖM 1982) and is closest in appearance to *H. pulchellus* CLARK and other similar species such as *H. boetcheri* BISTRÖM, *H. sumatrae* RÉGIMBART, *H. jacobsoni* BISTRÖM, *H. fangensis* BISTRÖM & SATÔ, *H. dongba* ŠTASTNÝ and *H. schoedli* WEWALKA &

BISTRÖM. However, it is clearly distinguished from all of them chiefly by the shape of the male genitalia.

DESCRIPTION: Body shape globose, rounded, with distinct dorsal colour pattern (Fig. 4a). Angle between pronotum and elytra almost straight. Measurements (n = 5): total length 3.80–4.35 mm (holotype 3.85 mm), maximum width 2.48–2.60 mm (holotype 2.55 mm).

Male. Head pale ferrugineous, with very narrow, hair-like line along entire eye margin. Clypeus medially almost straight, bordered. Punctuation fine, evenly distributed, punctuation sometimes sparse on vertex, close to pronotum obliterated. Frons microsculptured and thus almost matt anteriorly, posteriorly and near eye shiny or with fragments of microsculpture. Antenna, labial and maxillary palpus testaceous.

Pronotum blackish to dark ferrugineous, with narrow, somewhat vague lateral testaceous to pale ferrugineous area on each side (Fig. 4a). Sides almost straight to slightly rounded and markedly rimmed. Posterior angles obtuse, angle between pronotum and elytra almost straight but distinctly visible. Punctures of somewhat irregular size, fine to fairly coarse, densest basally and anteriorly, spaces between them forming longitudinal ridges. Disc on each side with narrow transverse area with sparse punctures. Interstices shiny, without microsculpture.

Elytra testaceous, with blackish to dark testaceous variable markings (Fig. 4). Punctuation indistinctly of two kinds (Fig. 38). Punctures almost regularly distributed, slightly denser at base. Each elytron with posteriorly disappearing row of punctures on disc and irregular, indistinct lateral row of punctures. Integument shiny, microsculpture lacking. Epipleura pale testaceous to testaceous, with darkened apical third, fairly finely and sparsely punctate.

Ventral side blackish ferrugineous. Gena, gula and episterna testaceous, metaventricle, metacoxal plate and abdomen blackish ferrugineous to brownish, ventrite 6 paler. Prosternum and proepisternum impunctate; metepisternum, metaventricle and metacoxal plates coarsely and finely punctate, punctuation medially sparse and finer; abdomen more finely punctate. Integument shiny, not microsculptured. Prosternal process medially without distinct tuft of hairs; ventrites 4 and 5 posteriorly with row of fine hairs. Ventrite 6 distinctly hooked.

Legs pale ferrugineous to ferrugineous. Fore and middle tarsi indistinctly broadened (Fig. 40). Fore trochanters slightly incised.

Male genitalia. Median lobe in dorsal view apically tapered and provided with two short protuberances. Shape as in Figs. 32–34.

SEXUAL DIMORPHISM: Female differing from male in the following characters: fore trochanters not incised, apically slightly pointed; fore and middle tarsi slender; ventrite 6 not hooked, only slightly transversally depressed.

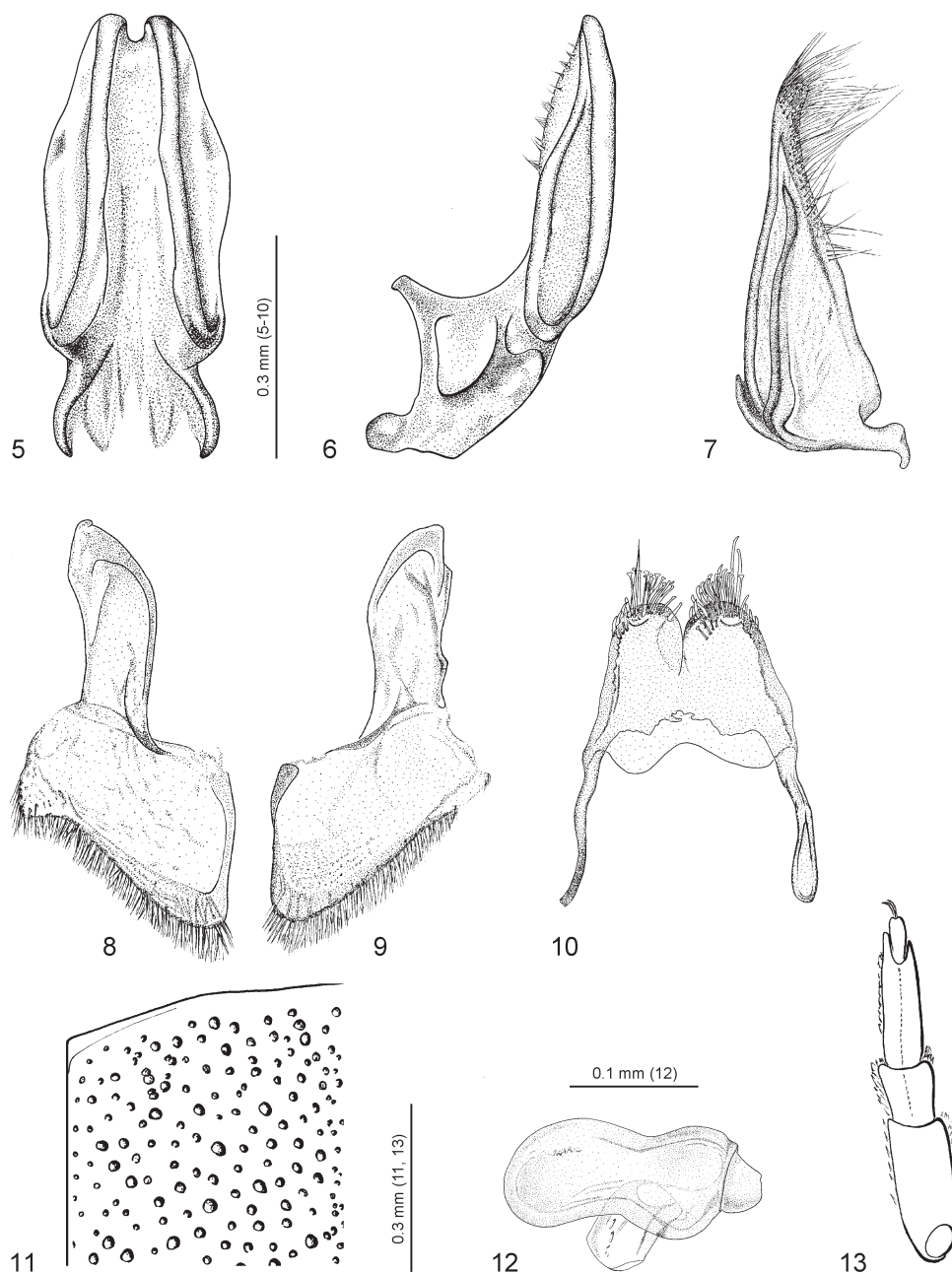
Female genitalia as in Figs. 35–37. Spermatheca as in Fig. 39.

VARIABILITY: The type series slightly varies in the extent of the dark colour pattern on pronotum and elytra (Fig. 4).

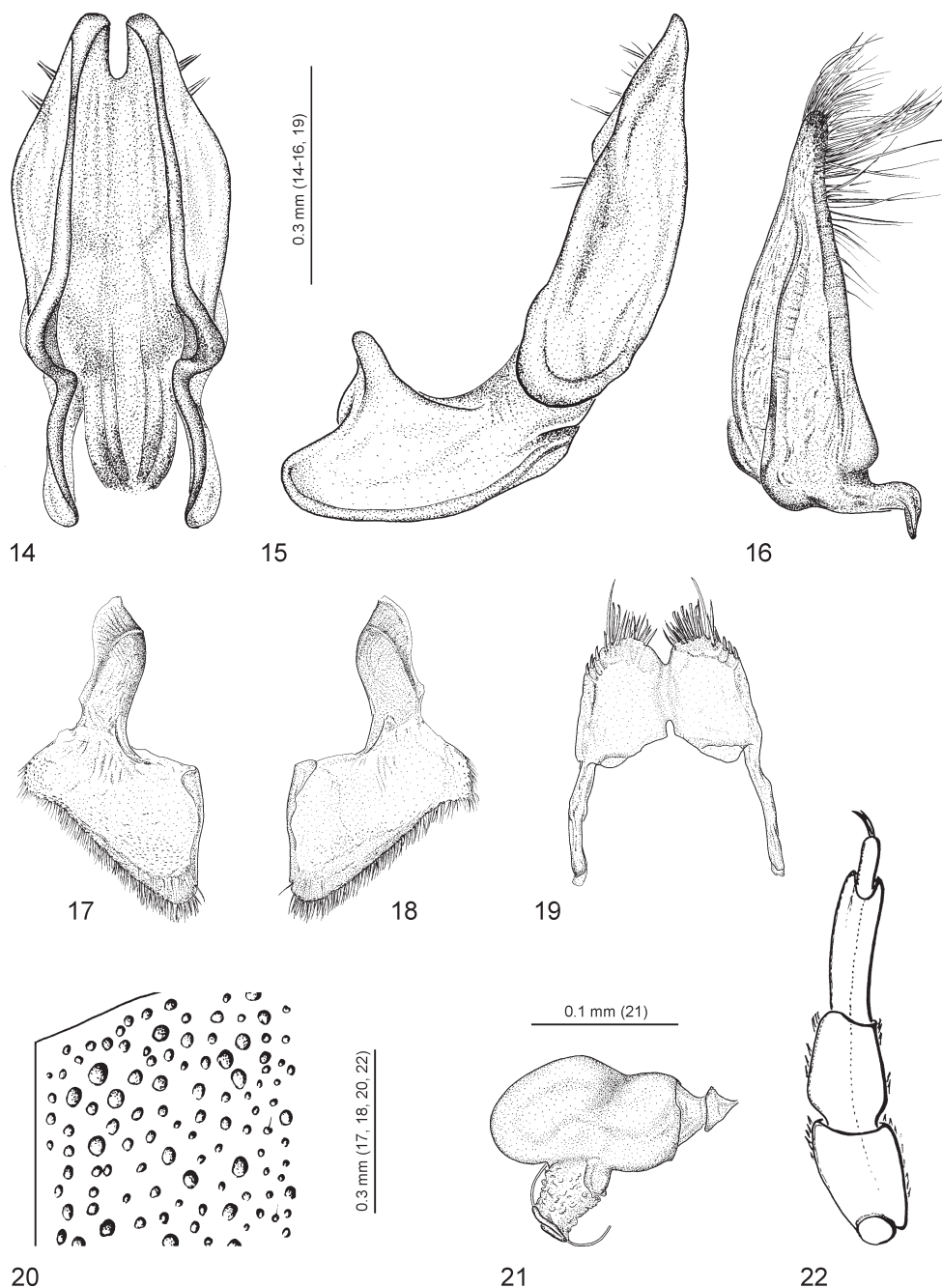
COLLECTION CIRCUMSTANCES: *Hyphydrus cornatipenis* sp.n. was collected in a small forest stream, which was more or less dried out – the specimens were collected in residual pools in the stream bed (M.A. Jäch, pers. comm.).

NAME DERIVATION: This specific epithet is composed of the Latin words “cornutus” (horned) and “penis” (penis) and refers to the shape of apical part of aedeagus.

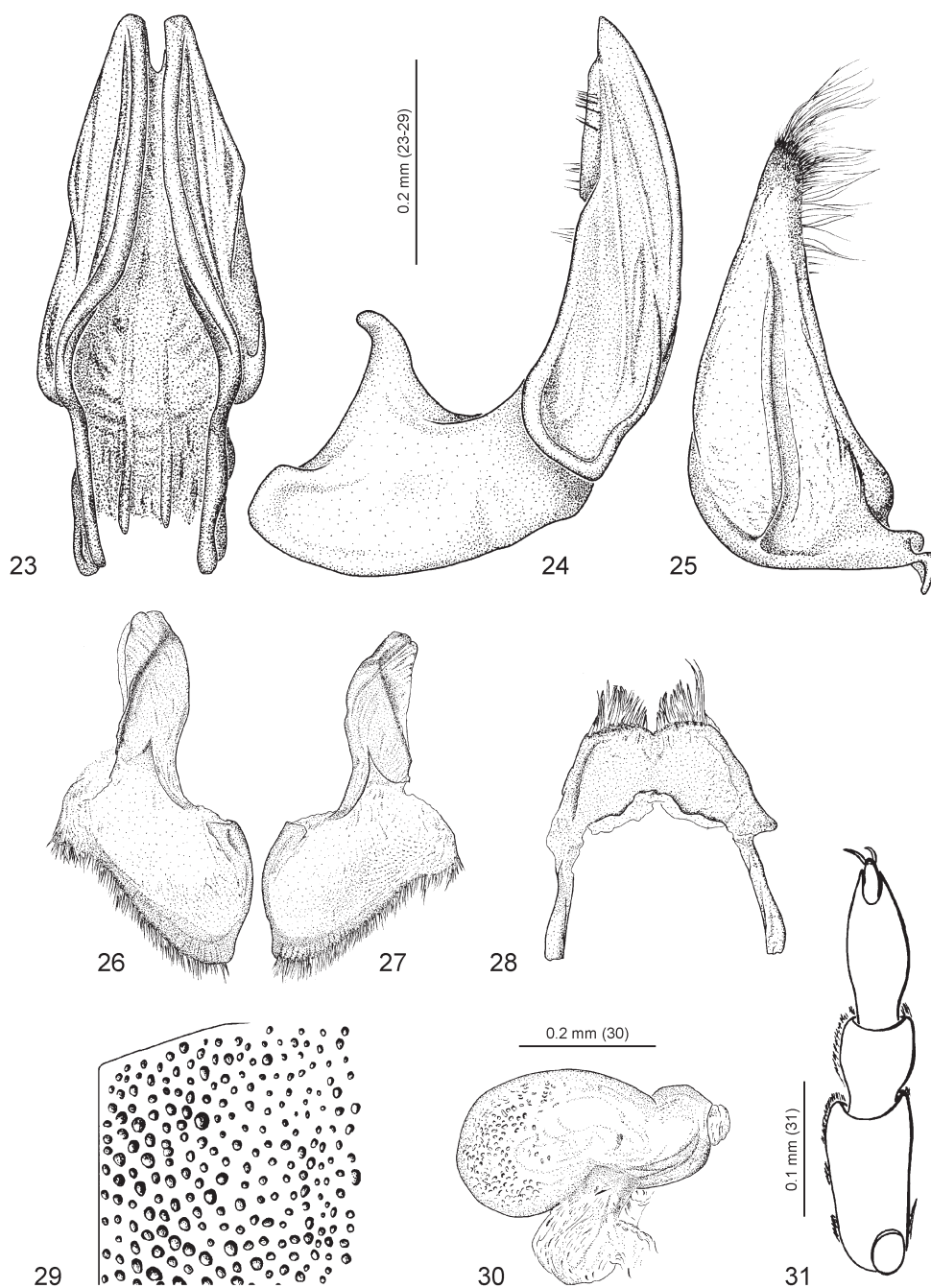
DISTRIBUTION: Known only from the Philippines (Luzon Island).



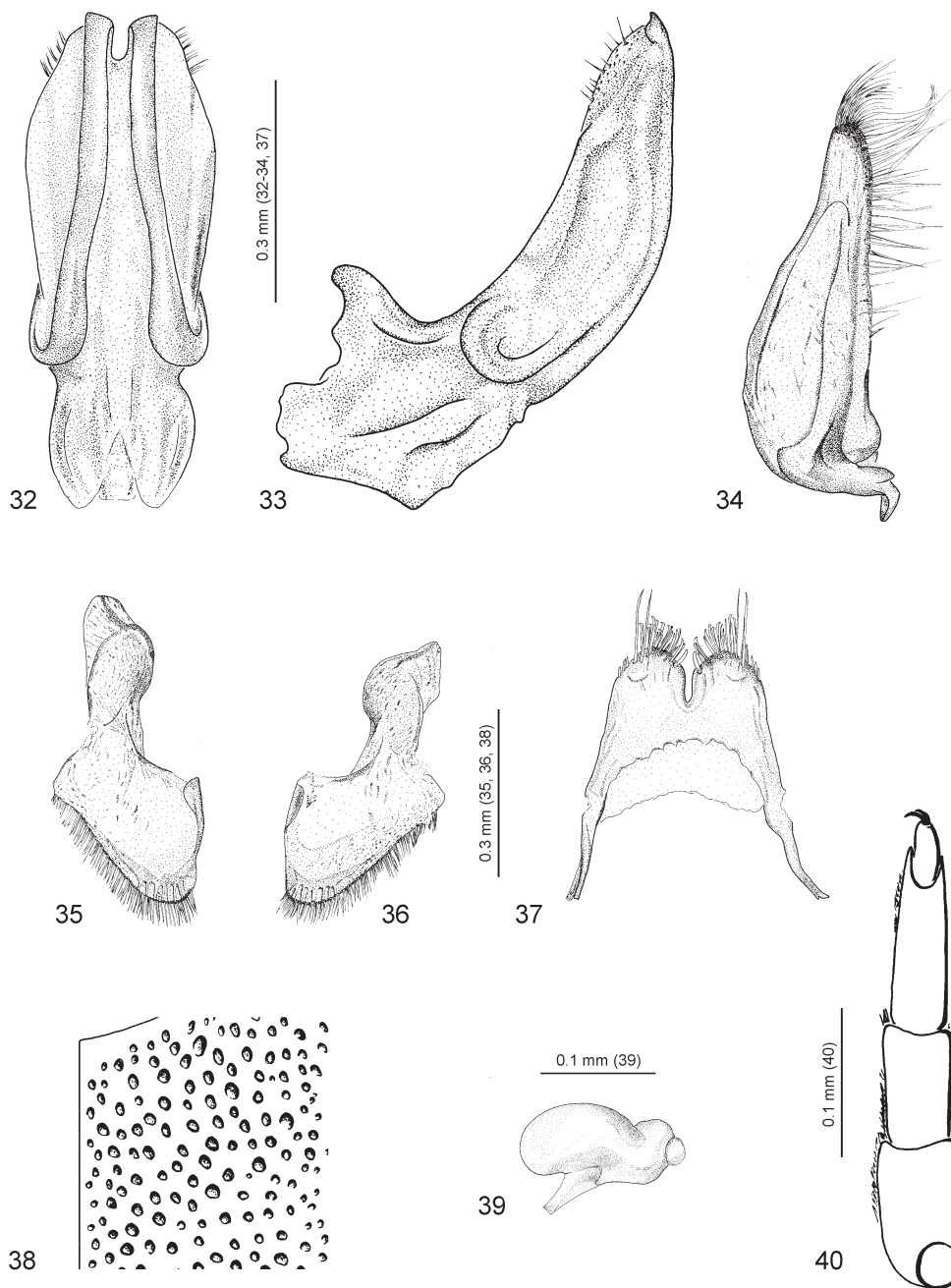
Figs. 5–13: *Hyphydrus toraja*: 5) median lobe of aedeagus, dorsal view; 6) median lobe of aedeagus, lateral view; 7) paramere; 8) right gonocoxosternum, ventral view; 9) left gonocoxosternum, ventral view; 10) gonocoxae, ventral view; 11) elytral punctation (basal part, from suture to first discal row of punctures); 12) spermatheca; 13) fore tarsomeres of male.



Figs. 14–22: *Hyphydrus koho*: 14) median lobe of aedeagus dorsal view; 15) median lobe of aedeagus lateral view; 16) paramere; 17) right gonocoxosternum in ventral view; 18) left gonocoxosternum in ventral view; 19) gonocoxae in ventral view; 20) elytral punctation (basal part, from suture to first discal row of punctures); 21) spermatheca; 22) fore tarsomeres of male.



Figs. 23–31: *Hyphydrus philippensis*: 23) median lobe of aedeagus dorsal view; 24) median lobe of aedeagus lateral view; 25) paramere; 26) right gonocoxosternum in ventral view; 27) left gonocoxosternum in ventral view; 28) gonocoxae in ventral view; 29) elytral punctation (basal part, from suture to first discal row of punctures); 30) spermatheca; 31) fore tarsomeres of male.



Figs. 32–40: *Hyphydrus cornatipenis*: 32) median lobe of aedeagus dorsal view; 33) median lobe of aedeagus lateral view; 34) paramere; 35) right gonocoxosternum in ventral view; 36) left gonocoxosternum in ventral view; 37) gonocoxae in ventral view; 38) elytral punctation (basal part, from suture to first discal row of punctures); 39) spermatheca; 40) fore tarsomeres of male.

Notes on other South-East Asian species

Hyphydrus boettcheri BISTRÖM, 1982

TYPE MATERIAL EXAMINED: **Holotype** ♂ (ZHMB): "Philippinen n. Luzon Dalbalasen [upper side], S. Boettcher III. 1918 [lower side, handwritten, with pen] / *Hyphydrus boettcheri* Holotypus [red label] / *Hyphydrus boettcheri* n. sp. O. Biström det. 1980". **Paratypes** 2 ♀ ♀ with same loc. data as the holotype (ZHMB).

Hyphydrus pulchellus CLARK, 1863

MATERIAL EXAMINED:

C H I N A: GUANGDONG: Chebaling – Siqian rd., 24°41'11"N 114°07'17"E, 7.XI.2001, ca. 270 m, leg. Jäch & Komarek (CWBS 479), 3 ♂ ♂, 2 ♀ ♀ (NMW); Chengjia – Ruyuan rd., ca. 40 km E Chengjia, 5.XI.2001, leg. Jäch & Komarek (CWBS 471), 1 ♂ (NMW); Dinghu Nat. Res., 29.X.2001, ca. 170 m, leg. Jäch & Komarek (CWBS 451), 2 ♂ ♂, 7 ♀ ♀ (NMW); Dinghu Nat. Res., 29.X.2001, ca. 20–40 m, leg. Jäch & Komarek (CWBS 452), 2 ♂ ♂, 2 ♀ ♀ (NMW).

Additional records from Guangdong province.

Hyphydrus detectus FALKENSTRÖM, 1936

MATERIAL EXAMINED:

C H I N A: HUBEI: 10 km W Zhashuping, road Badong – Jianshi, 30°8'N 109°9'E, 1500 m, 10.VI.2003, leg. Turna, 1 ♂, 3 ♀ ♀ (JSCL).

The specimens represent the first reliable record from Hubei province.

Hyphydrus dongba ŠŤASTNÝ, 2000

MATERIAL EXAMINED:

C H I N A: YÜNNAN: Yipinglang, 28.–29.VII.1995, leg. Bolm, det. Hájek 2004, 6 exs. (1 ex. NMPC; 5 exs. NHMB).

This record is the second known locality of this species.

Hyphydrus celebensis BISTRÖM, 1983

MATERIAL EXAMINED:

I N D O N E S I A: SULAWESI: 23 km E Kotamobagu, Danau Mooat, 21.X.2001, leg. Šťastný, 3 ♂ ♂ 5 ♀ ♀ (CJSL).

Specimens were collected in residual pools in a rain forest swamp at about 1000 m a.s.l.

Hyphydrus fangensis BISTRÖM & SATÔ, 1988

MATERIAL EXAMINED:

T H A I L A N D: PHETCHANBUN: Nam Nao NP, 25.XI.1995, leg. Zettel, 1 ♀ (NMW); Mae Hong Son, 16.–23.IV.1993, leg. Schneider, 1 ♂ (NMW).

Hyphydrus jacobsoni BISTRÖM, 1982

MATERIAL EXAMINED:

M A L A Y S I A: PAHANG: Endau Rompin NP, Salendang, 28.II.–12.III.1995, 100 m, leg. Štrba & Hergovits, 1 ♂ (NMW); Kuala Rompin env., 13.–16.III.1995, leg. Štrba & Hergovits, 1 ♂ (NMW).

L A O S: HUA PHAN: E Ban Saluei, Phu Phan Mts., 23°13'N 103°59', 6.–18.IV.2004, 1300–2000 m, leg. Bezděk, 69 ♂♂, 138 ♀♀ (NMPC, JSCL); Lao Pako env., 55 km NE Vientiane, 19.–22.V.2004, 200 m, leg. Bezděk, 2 ♂♂, 1 ♀ (JSCL)

These are the first reliable records from Malaysia and Laos.

***Hyphydrus schoedli* WEWALKA & BISTRÖM, 1993**

MATERIAL EXAMINED:

I N D O N E S I A: SUMATRA: Berastagi 28.IV.2004, leg. Trávníček, 2 ♂♂ (JSCL).

This record is the second known locality of this species.

***Hyphydrus sumatrae* RÉGIMBART, 1880**

MATERIAL EXAMINED:

L A O S: HUA PHAN: Phu Loei NP, Ban Sakok, 20°10'N 103°12'E, 1 ♂, 2 ♀♀ (NMPC).

T H A I L A N D: MAE HONG SON: Chiang Mai env., 22.–25.IV.2003, leg. Šafránek, 2 ♂♂, 1 ♀ (JSCL);
Kiwlom-pass near Soppong, WGS 84: 19°26'N 98°19'E, 1400+50 m, leg. R. & H. Fouqué, 4 ♂♂, 9 ♀♀ (JSCL).

First record from Laos.

***Hyphydrus lyratus lyratus* SWARTZ, 1808**

MATERIAL EXAMINED:

I N D O N E S I A: SULAWESI: Rantepao env., Bututumonga, 6.X.2001, leg. Šťastný, 2 ♂♂, 3 ♀♀ (JSCL).

The first reliable record from Sulawesi.

***Hyphydrus lyratus xanthomelas* RÉGIMBART, 1877**

MATERIAL EXAMINED:

M A L A Y S I A: SABAH: Kinabatangan River, Uncle Tan's camp, 8.–15.VI.2003, leg. Šťastný, 1 ♂ (JSCL);
Campung Takaia env., branch of Kinabatangan River, 5.VI.1998, leg. Kodada & Čiampor, 2 ♂♂, 2 ♀♀ (NMW);
Kampung Pisang Pisang env., tributary of Kuamut River, 29.VI.1998, leg. Kodada & Čiampor, 1 ♀ (NMW).

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