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ORIGINAL ARTICLE

Six new species of the subgenus *Habronychus* (*Habronychus*) (Coleoptera: Cantharidae) from the Oriental region, with key to species

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Key words. Taxonomy, morphology, genitalia.

Abstract. Six new species of *Habronychus* (*Habronychus*) Wittmer, 1981 are described, including *H.* (*H.*) *laticeps* Y. Yang, Ge & X. Yang, sp. n., *H.* (*H.*) *honestus* Y. Yang, Ge & X. Yang, sp. n., *H.* (*H.*) *crassatus* Y. Yang, Ge & X. Yang, sp. n. and *H.* (*H.*) *tengchongensis* Y. Yang, Ge & X. Yang, sp. n. from China, and *H.* (*H.*) *longiplatus* Y. Yang, Ge & Liu, sp. n. and *H.* (*H.*) *trianguliceps* Y. Yang, Ge & Liu, sp. n. from Vietnam. In addition, a previously known species, *H.* (*H.*) *parallelicollis* (Pic, 1921), is redescribed. The above species are illustrated with habitus photographs, aedeagi, abdominal sternites VIII and internal genitalia of females. Key for identification of the species of this subgenus worldwide is provided.

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INTRODUCTION

The genus *Habronychus* was established by Wittmer (1981), with *Anolisus rubicundus* Champion, 1926 designated as the type species (Okushima & Satô, 1999). There was a controversy about the validity of *Habronychus* as the generic name (Brancucci, 2007), which was resolved by Kopetz (2008). At present, it is divided into three subgenera (Kazantsev & Brancucci, 2007). The nominate subgenus includes 15 species widely distributed in the Oriental and south eastern Palaearctic regions (Wittmer, 1981, 1982a, b; Ishida, 1986; Satô, 1986; Okushima & Satô, 1999; Švihla, 2004, 2005; Kazantsev & Brancucci, 2007; Kopetz, 2008), *Macrohabronychus* Wittmer, 1981 includes 11 species restricted to the Himalayan area (Kopetz, 2008; Yang et al., 2010) and *Monohabronychus* Okushima & Satô, 1999 is composed of 5 species endemic to Taiwan (Okushima & Satô, 1999; Kazantsev & Brancucci, 2007; Satô et al., 2014).

The members of *Habronychus* can be distinguished from all other genera of Cantharinae by the small to middle-sized and slender body, head with a pair of smooth impressions behind the antennal sockets, subquadrate pronotum, which is much narrower than head in the male, oval-shaped aedeagus which is deeply cleft ventrally and separated dorsally, with the ventral process and dorsal plate of each paramere approaching each other, a pair of laterophyses present between median lobe and dorsal plates, and the pro- and meso- inner and outer claws each with a basal tooth in both sexes in subgenus *Habronychus*, or all claws each with a tooth in *H.* (*Macrohabronychus*) or simple in *H.* (*Monohabronychus*) (Okushima & Satô, 1999). However, the female reproductive system, which is helpful in the taxonomy of Cantharinae (Okushima, 2005; Ge et al., 2021a, b, c; Yang et al., 2021a, b), has not been used in this genus until now.

During our recent study, some interesting species of the subgenus *Habronychus* were discovered from China (Yunnan) and northern Vietnam. After careful examination and comparison with the types of previously known species, they were identified to be new species and reported in the present study. Some of the females were used to summarize the characters of the reproductive system for this subgenus. These results provide a better understanding of the taxonomy and morphological diversity in this group.

MATERIAL AND METHODS

The material studied is preserved in the following collections, and the primary types were returned to the collections from which

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they were borrowed or were deposited in the following public museums: California Academy of Sciences, San Francisco, USA (CAS), Institute of Zoology, Chinese Academy of Sciences, Beijing, China **(**IZAS), Museum of Hebei University, Baoding, China (MHBU), Muséum national d'Histoire naturelle, Paris, France (MNHN), Naturhistorisches Museum Basel, Switzerland (NHMB) and Zoological Institute of Russian Academy of Science, St. Petersburg, Russia (ZIN).

Genitalia of both sexes and abdominal sternite VIII of females were dissected and cleared in a 10% solution of NaOH; female genitalia were dyed with haematoxylin. Generally, at least one specimen of each species was dissected to study the morphology of the male and female genitalia; more individuals were dissected if they were damaged during dissection. If the species is widely distributed, one specimen was dissected from each locality. Habitus photographs were taken using a Leica M205A stereo microscope and multiple layers stacked using Combine ZM or Helicon Focus 5.3. Line drawings were made using a camera lucida attached to a Nikon SMZ1500 stereo microscope, then edited in CorelDRAW 12 and Adobe Photoshop CS3.10.0.1.

Complete label data in Chinese was transliterated for type specimens, quotation marks are used to separate data from different labels and a double slash to separate different lines of the same label. Body length was measured from the anterior margin of the clypeus to the elytral apices and the body width across the humeral part of the elytra. Morphological terminology of the male genitalia follows Okushima (2005) and that of female genitalia follows Brancucci (1980). The abbreviations in the figures are as follows: ag – accessory gland; bp – basal piece; di – diverticulum; dp – dorsal plates of parameres; la – laterophyses; ml – median lobe; nd – nodule; ov – median oviduct; sd – spermathecal duct; sp – spermatheca; va – vagina; vp – ventral processes of parameres.

TAXONOMY

Genus *Habronychus* Wittmer, 1981

Subgenus *Habronychus* Wittmer, 1981

Type species: *Anolisus rubicundus* Champion, 1926 (monotypy).

Distribution. Oriental and Palaearctic Regions.

Habronychus (*Habronychus*) *parallelicollis* (Pic, 1921)

Figs 1A–D, 2A–C, 3A, 4A

Lycocerus parallelicollis Pic, 1921: 5.

Lycocerus lineaticeps var. *notatithorax* Pic, 1947: 8. Synonymized by Wittmer, 1982a: 342.

Habronychus (*Habronychus*) *parallelicollis*: Wittmer, 1982a: 342; Kopetz, 2008: 195.

Macrohabronychus "(s. str.)" *parallelicollis* [an obvious error, species placed in sg. *Habronychus* in the catalog of the same book, see Kazantsev & Brancucci, 2007]: Brancucci, 2007: 55.

Macrohabronychus (*Habronychus*) *parallelicollis*: Kazantsev & Brancucci, 2007: 255.

Redescription

Body length (both sexes): 5.6–7.0 mm; width: 1.0–1.5 mm.

Male (Fig. 1C). Coloration. Body dark brown, head each side with a brown marking behind eyes, or sometimes uniformly black, antennae and scutellum black, pronotum brown with median longitudinal line black and darkened on both sides of anterior parts, legs with yellow coxae, trochanters and femora, or sometimes only on inner sides of femora, elytra yellowish brown. Body densely covered with short, semi-recumbent yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes strongly protruding, head width across eyes 1.5 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest in the middle; antennae filiform, almost reaching the elytral apices, antennomeres II about 1.6 times longer than wide at apices, III about 2.1 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle of outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, nearly as long as wide, anterior margin nearly straight, anterior angles truncated, lateral margins nearly parallel and feebly sinuate, posterior margin bisinuate and narrowly bordered, posterior angles subrectangular, disc strongly convex on posterolateral parts, surface finely and densely punctate.

Elytra. Feebly dilated posteriorly, about 3.9 times as long as humeral width, 4.5 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 2A–C). Diameter moderately narrower apically, with the apical part about half of the basal part; basal pieces shorter than parameres, simple and without any nodule at base of ventral side; ventral process of each paramere moderately approach each other, with apices directed inwards in ventral view, slender and slightly thickened apically, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate nearly as long as ventral process, strongly narrowed apically from the base and slightly thickened at apex; laterophyses conjoint basally and separated from each other apically, with apices acute and obviously bent dorsally, the emargination between laterophyses shallow; median lobe exceeding the middle emargination between dorsal plates.

Female (Figs 1A–B, D). Similar to male, but with stouter body, head brown or black, each side with a brown or yellow marking behind eyes, legs dark brown or black, eyes smaller and less protruding than male, head width across eyes 1.3 times wider than the anterior margin of pronotum, antennae shorter and reaching elytral mid-length, antennomeres IV–XI without impressions; elytra red or yellowish brown, moderately dilated posteriorly, about 3.5 times as long as humeral width, with moderately distinct longitudinal costae.

Abdominal sternite VIII (Fig. 3A). Moderately narrowed posteriorly, latero-apical angles obtusely rectangular, posterior margin deeply and roundly emarginate in the middle and weakly emarginate on both sides, the portion between the middle and lateral emarginations truncated at apex, lateral margins of the middle emargination slightly converging posteriorly, present with a membranous lobe behind the middle emargination, centre of which is sclerotized in a heart-form.

Internal reproductive system (Fig. 4A). Vagina elongate, with diverticulum and spermathecal duct arising from apex, median oviduct situated ventroapically; diverticulum long, about half of adult body length, slender tube-shaped, evenly thinned apically and spiral; spermathecal duct long

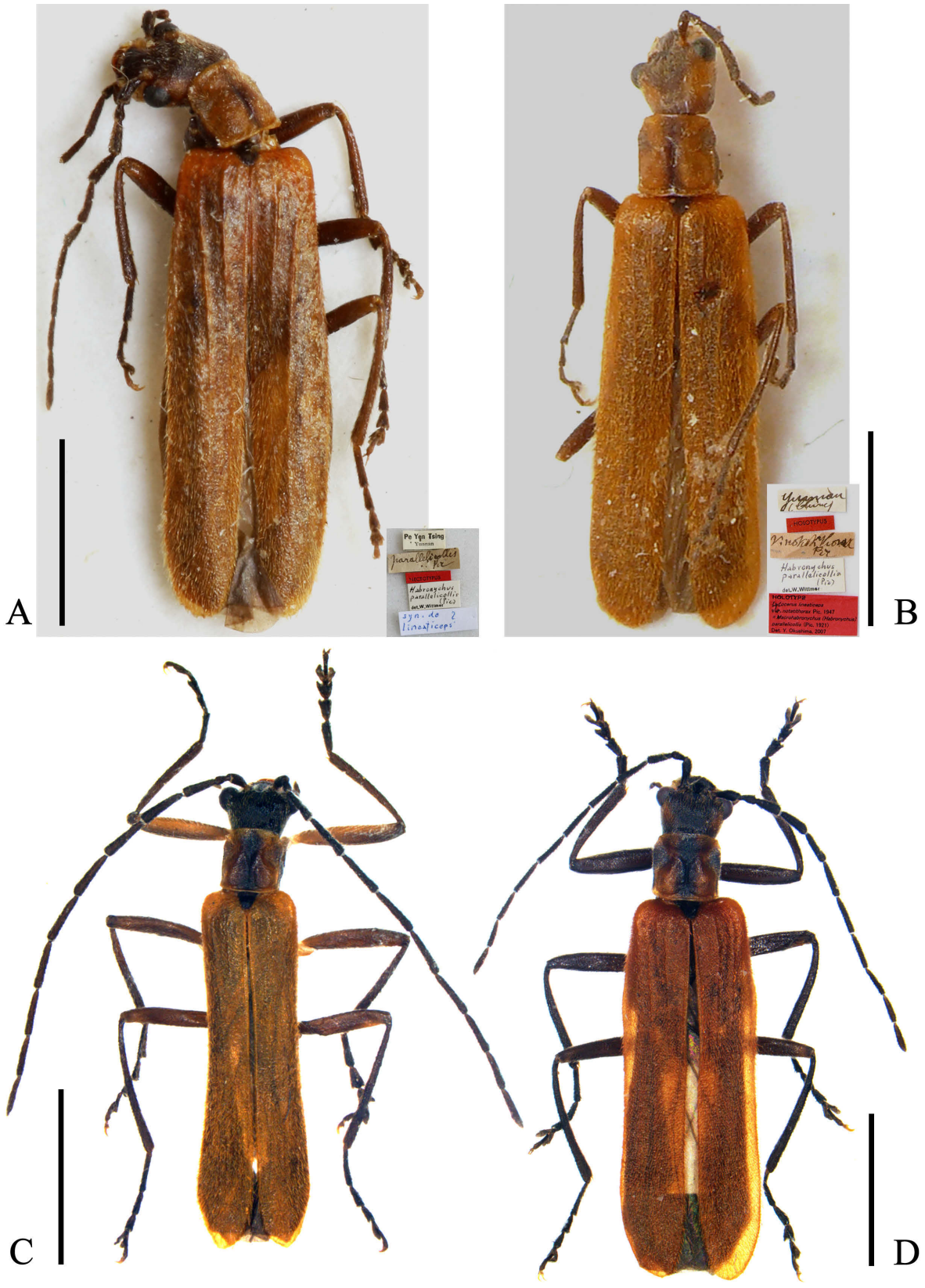

Fig. 1. Habitus of *Habronychus* (*Habronychus*) *parallelicollis* (Pic, 1921), dorsal view. A – lectotype female of *Lycocerus parallelicollis* Pic, 1921; B – holotype female of *Lycocerus lineaticeps notatithorax* Pic, 1947; C – male from China (Yunnan); D – female from China (Yunnan). Scale bars: 2.0 mm.

and slender, much shorter than diverticulum; spermatheca slender tube-shaped and spiral, obviously thinner than spermathecal duct and longer than diverticulum, with basal portion extended into a short tube at the end of which is the opening of the accessory gland; accessory gland thickened apically, much shorter than spermatheca.

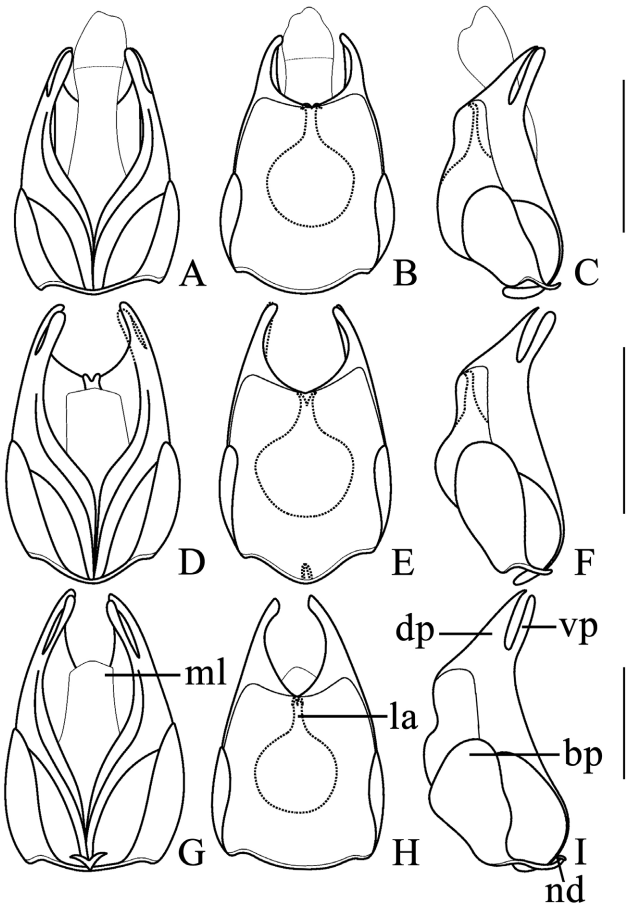

Fig. 2. Male genitalia of *Habronychus* (*Habronychus*) Wittmer, 1981. A, D, G – ventral view; B, E, H – dorsal view; C, F, I – lateral view; A–C – *H.* (*H.*) *parallelicollis* (Pic, 1921); D–F – *H.* (*H.*) *laticeps* sp. n.; G–I – *H.* (*H.*) *honestus* sp. n. Scale bars: 0.5 mm.

Type material. Lectotype of *Lycocerus parallelicollis* Pic (Fig. 1A): ♀ (MNHN), [p] "Pe Yen Tsing // Yunnan", [h] "parallelicollis // Pic", [p] "LECTOTYPUS", [h-p] "Habronychus // parallelicollis // (Pic) // det. W. Wittmer", [h] "syn. de L. // lineaticeps".

Holotype of *Lycocerus lineaticeps* var. *notatithorax* Pic (Fig. 1B): ♀ (MNHN), [h] "yunnan // (Chine)", [p] "HOLOTYPUS", [h] "v. notatithorax // Pic", [h-p] "Habronychus // parallelicollis // (Pic) // det. W. Wittmer", [p] "HOLOTYPE // *Lycocerus lineaticeps* // var. *notatithorax* Pic, 1947 // = *Macrohabronychus* (*Habronychus*) // *parallelicollis* (Pic, 1921) // Det. Y. Okushima, 2007".

Additional material. 1♂ (NHMB), CHINA, NW Yunnan, Yunlong, 2200–2500 m, vi.1993 (det. W. Wittmer); 2♂ (MHBU), CHINA, Yunnan, Yunlong, Langba, 28.vi.2020, leg. Younan Wang; 2♀ (MHBU), same locality and data, leg. Zechen Yang. [Translated from Chinese labels in the MHBU specimens.]

Type locality. China, Yunnan, Pe Yen Tsing (now Chuxiong, Dayao, Baiyang).

Distribution. China (Yunnan).

Habronychus (*Habronychus*) *laticeps* Y. Yang, Ge & X. Yang, sp. n.

Figs 2D–F, 3B, 4B, 5A, B

ZooBank taxon LSID:
7431ECE3-6471-4077-BEEB-9FAF50E44FAB

Diagnosis. It is similar to *H.* (*H.*) *parallelicollis*, but differs from the latter in the following characters: pronotum 1.1 times longer than wide in male (Fig. 5A), elytra 3.8 times as long as humeral width in female (Fig. 5B), while in *H.* (*H.*) *parallelicollis*, pronotum nearly as long as wide in male (Fig. 1C), elytra less than 3.6 times as long as humeral width in female (Figs 1A–B, D); aedeagus (Figs 2D–F): ventral process of each paramere obviously thickened apically in lateral view, median lobe not reaching the middle emargination between dorsal plates, while in *H.* (*H.*) *parallelicollis* (Figs 2A–C), ventral process of each paramere slightly thickened apically in lateral view, median lobe exceeding the middle emargination between dorsal plates; female abdominal sternite VIII: latero-apical angles widely rounded, lateral margins of the middle emargination parallel to each other (Fig. 3B), while in *H.* (*H.*) *parallelicollis,* latero-apical angles obtusely rectangular, lateral margins of the middle emargination slightly converging posteriorly (Fig. 3A).

Description

Body length (both sexes): 5.5–7.5 mm (5.5 mm in holotype); width: 1.1–1.5 mm (1.1 mm in holotype).

Male (Fig. 5A). Coloration. Body black, each side of head with a brown marking behind eyes, pronotum brown, with black median longitudinal line and darkened on both sides of anterior parts, scutellum black, legs brown, yellow coxae, trochanters and femora, elytra yellowish brown. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes strongly protruding, head width across eyes 1.8 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest near apices; antennae filiform, almost reaching the elytral apices, antennomere II about 1.6 times longer than wide at apex, III about 2.0 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle of outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, about 1.1 times as long as wide, anterior margin nearly straight, anterior angles truncated, lateral margins nearly vertical, posterior margin bisinuate and narrowly bordered, posterior angles sub-rectangular, disc strongly convex on posterolateral parts, surface finely and densely punctate.

Elytra. Feebly dilated posteriorly, about 4.1 times as long as humeral width, 5.2 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 2D–F). Diameter moderately narrower apically, of which the apical part is about half of the basal part; basal pieces shorter than parameres, simple and without any nodule at base of ventral side; ventral process of each paramere moderately approach each other, with apices directed inwards in ventral view, slender and distinctly thickened apically, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere nearly as long as ventral process, strongly narrowed apically from base and slightly

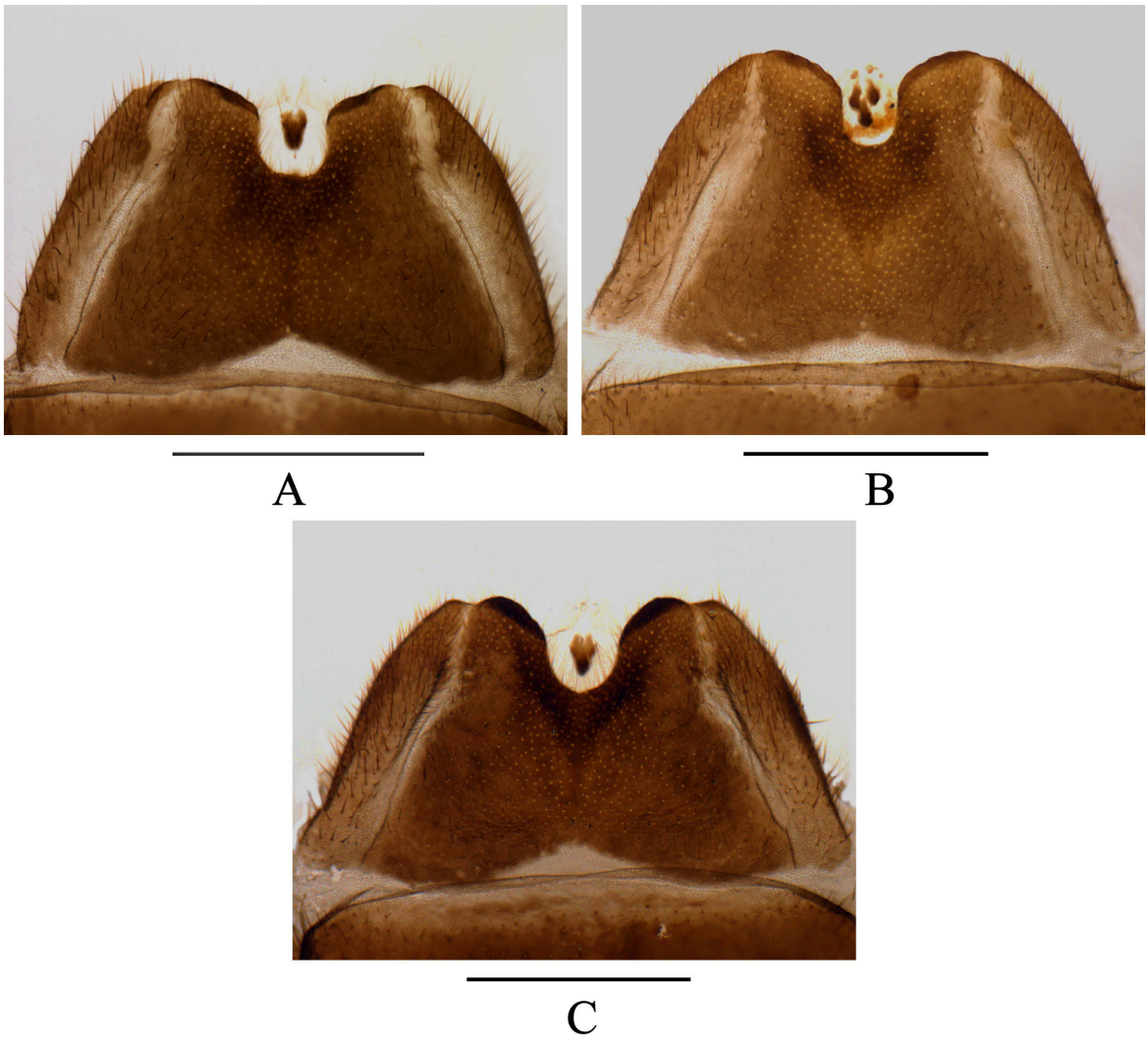

Fig. 3. Female abdominal sternites VIII of *Habronychus* (*Habronychus*) Wittmer, 1981, ventral view. A – *H.* (*H.*) *parallelicollis* (Pic, 1921); B – *H.* (*H.*) *laticeps* sp. n.; C – *H.* (*H.*) *crassatus* sp. n. Scale bars: 0.5 mm.

thickened at apex; laterophyses conjoint basally and divided from each other apically, with apices acute and slightly bent dorsally, the emargination between laterophyses shallow; median lobe not reaching the middle emargination between dorsal plates.

Female (Fig. 5B). Similar to male, but the body stouter, legs black, eyes smaller and less protruding, head width across eyes 1.3 times wider than the anterior margin of pronotum, antennae shorter and only slightly exceeding elytral mid-length, antennomeres IV–XI without impressions; elytra moderately dilated posteriorly, about 3.8 times as long as humeral width, with slightly distinct longitudinal costae.

Abdominal sternite VIII (Fig. 3B). Moderately narrower posteriorly, latero-apical angles widely rounded, posterior margin deeply and roundly emarginate in the middle and hardly emarginate on both sides, lateral margins of the middle emargination parallel with each other, with a membranous lobe behind the middle emargination, the centre of which is sclerotized area in a three drop-form.

Internal reproductive system (Fig. 4B). Vagina elongate, with diverticulum and spermathecal duct arising from apex, median oviduct situated ventroapically; diverticulum long, about 0.6 times adult body length, slender tube-shaped, evenly thinned apically and spiral; spermathecal duct moderately long and slender, much shorter than diverticulum; spermatheca slender tube-shaped and spiral, obviously thinner than spermathecal duct and about 1.5 times as long as diverticulum, with basal portion extended into a short tube, where the opening of the accessory gland is situated; accessory gland thickened apically, much shorter than spermatheca.

Type material. Holotype: ♂ (IZAS), CHINA, Yunnan, Nujiang, Lushui, Lusaihe vill., 30.vi.2019, leg. Qilong Lei & Yandong Chen. Paratypes: 2♀ (IZAS), same collection data as for holotype. [Translated from Chinese labels.]

Type locality. China, Yunnan, Nujiang, Lushui, Lusaihe vill.

Etymology. The specific name is derived from the Latin *latus* (wide) and suffix *-ceps* (headed), referring to its wide head, with the width across eyes 1.8 times wider than the anterior margin of pronotum, while less than 1.5 times in other species.

Remarks. The right antennomeres X–XI of holotype are missing.

Distribution. China (Yunnan).

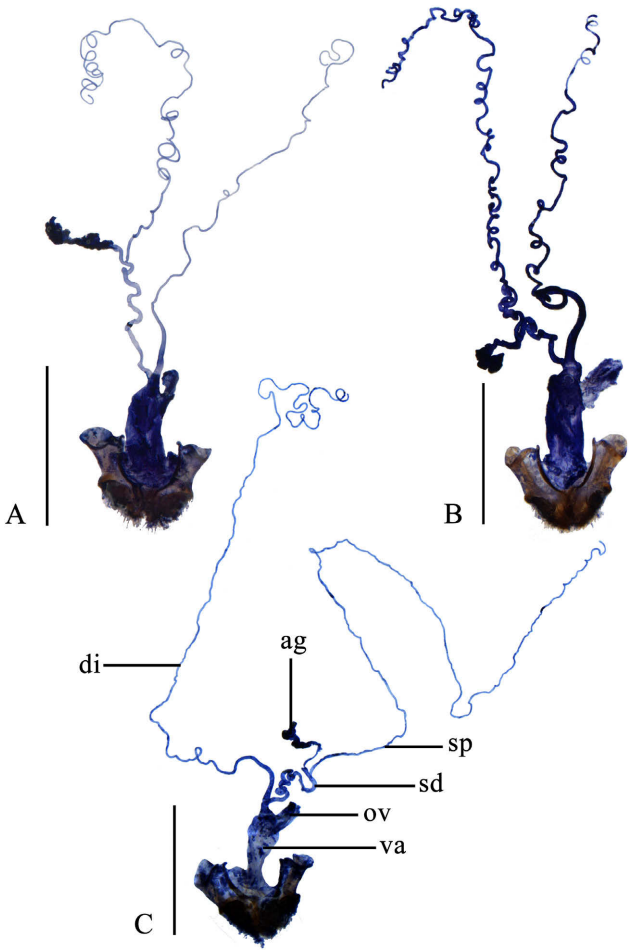

Fig. 4. Female internal reproductive system of *Habronychus* (*Habronychus*) Wittmer, 1981, ventral view. A – *H.* (*H.*) *parallelicollis* (Pic, 1921); B – *H.* (*H.*) *laticeps* sp. n.; C – *H.* (*H.*) *crassatus* sp. n. Scale bars: 1.0 mm.

Habronychus (*Habronychus*) *honestus* Y. Yang, Ge & X. Yang, sp. n.

Figs 2G–I, 5C

ZooBank taxon LSID:
627D8922-B647-4244-BEC1-164761275994

Diagnosis. It is similar to *H.* (*H.*) *kurosawai*, but differs from the latter in the following characters: antennae simple and almost reaching elytral apices in male (Fig. 5C); aedeagus: moderatelly narrower apically, ventral processes moderately approach each other in ventral view (Figs 2G–I). Unlike in *H.* (*H.*) *kurosawai*, antennae are flattened and clearly extend beyond apices of the elytra in male (Okushima & Satô, 1999: figs 5, 9); aedeagus abruptly narrows apically, ventral processes approach each other in ventral view (Wittmer, 1982: fig. 9).

Description

Body length: ♂ 5.0–5.4 mm (5.5 mm in holotype); width: 0.9–1.1 mm (1.0 mm in holotype).

Male (Fig. 5C). Coloration. Body brown, median longitudinal line on pronotum slightly darker, elytra yellowish brown, darker basally on inner margins, legs brown, yellow coxae, trochanters and femora. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes strongly protruding, head width across eyes 1.5 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest in the middle; antennae filiform, almost reaching the elytral apices, antennomere II about 1.6 times longer than wide at apex, III about 2.3 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle on outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, about 1.1 times as long as wide, anterior margin nearly straight, anterior angles feebly truncated, lateral margins sinuate, posterior margin bisinuate and narrowly bordered, posterior angles sub-rectangular, posterolateral parts of disc strongly convex, surface finely and densely punctate.

Elytra. Feebly dilated posteriorly, about 3.8 times as long as humeral width, 5.1 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 2G–I). Diameter of the apical part less than half of that of the basal part; basal pieces shorter than parameres, with a large, bifurcate conjoint middle nodule at base of ventral side; ventral process of each paramere moderately approach each other, with apices directed inwards in ventral view, slender and hardly thickened apically, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere nearly as long as ventral process, strongly narrowed apically from the base and moderately thickened at apex; laterophyses conjoint basally and divided from each other apically, with apices acute and clearly bent dorsally, the emargination between laterophyses shallow; median lobe exceeding the middle emargination between dorsal plates.

Female. Unknown.

Variation within species. Head brown, with a black marking on centre of vertex, elytra uniformly yellowish brown.

Type material. Holotype: ♂ (IZAS), CHINA, Yunnan, Menglongbanna, Mengsong, 1600 m, 24.iv.1958, leg. Zhizi Chen; Paratypes: 1♂ (IZAS), same locality, 26.iv.1958, leg. Yiran Zhang; 1♂ (IZAS), same locality, 26.vii.1958, leg. Shuyong Wang. [Translated from Chinese labels.]

Type locality. China, Yunnan, Menglongbanna, Mengsong.

Etymology. The specific name is derived from the Latin *honestus* (honourable, respected, regarded with honour), referring to the respected status of the collectors of the types.

Remarks. The right antennomeres X–XI of holotype are missing.

Distribution. China (Yunnan).

Habronychus (*Habronychus*) *crassatus* Y. Yang, Ge & X. Yang, sp. n.

Figs 3C, 4C, 5D, 6A–C

ZooBank taxon LSID:
B9D7FCDE-9E7E-43CE-8631-D514328DA70A

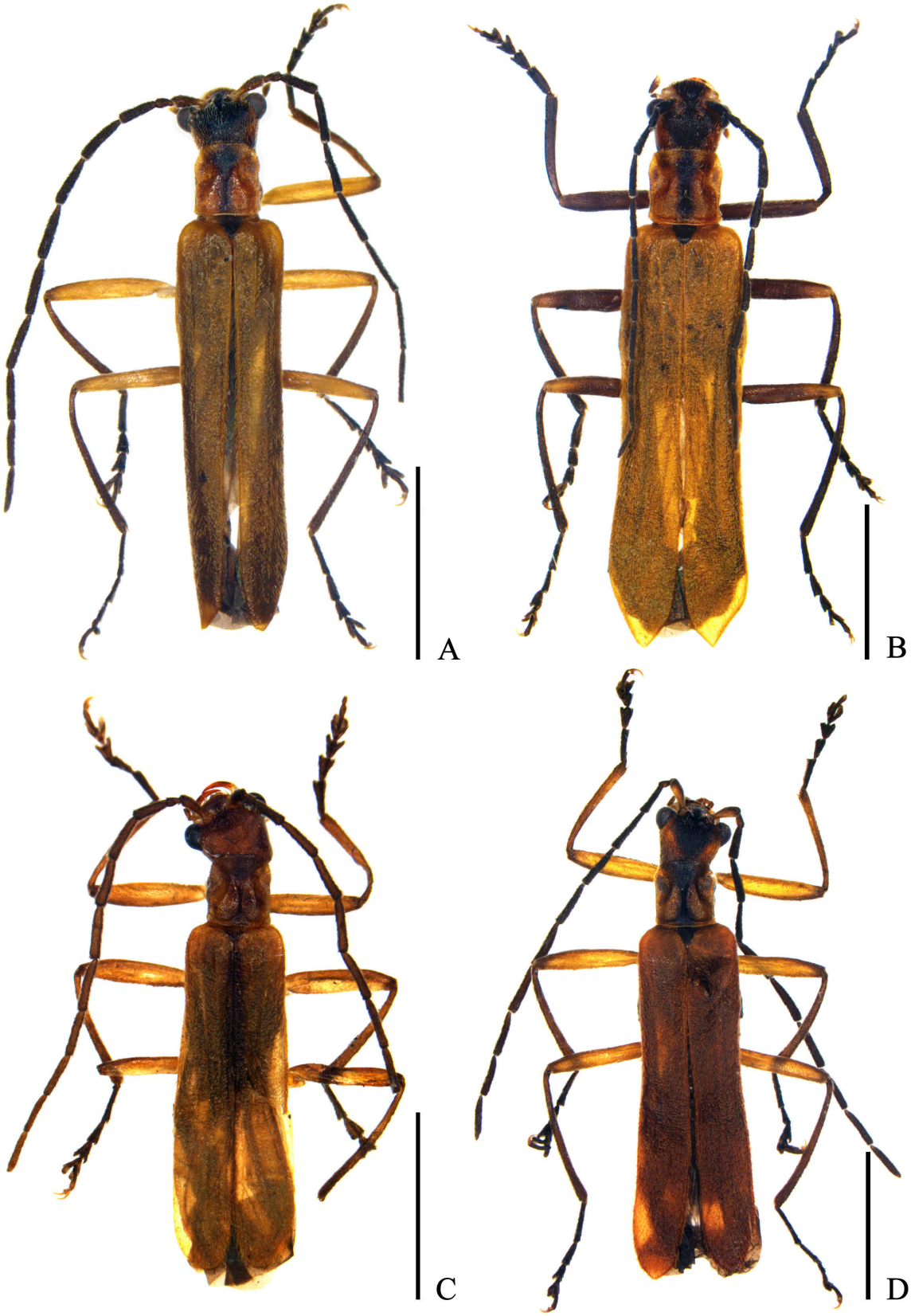

Fig. 5. Habitus of *Habronychus* (*Habronychus*) Wittmer, 1981, dorsal view. A, B – *H.* (*H.*) *laticeps* sp. n. (male holotype and female paratype); C – *H.* (*H.*) *honestus* sp. n. (male paratype); D – *H.* (*H.*) *crassatus* sp. n. (male holotype). Scale bars: 2.0 mm.

Diagnosis. It is similar to *H.* (*H.*) *parallelicollis*, but differs from the latter in the following characters: eyes moderately protruding in male (Fig. 5D); aedeagus (Figs 6A–C): ventral processes of parameres obviously thickened apically in lateral view, with apices directed outwards in ventral view; female abdominal sternite VIII (Fig. 3C)

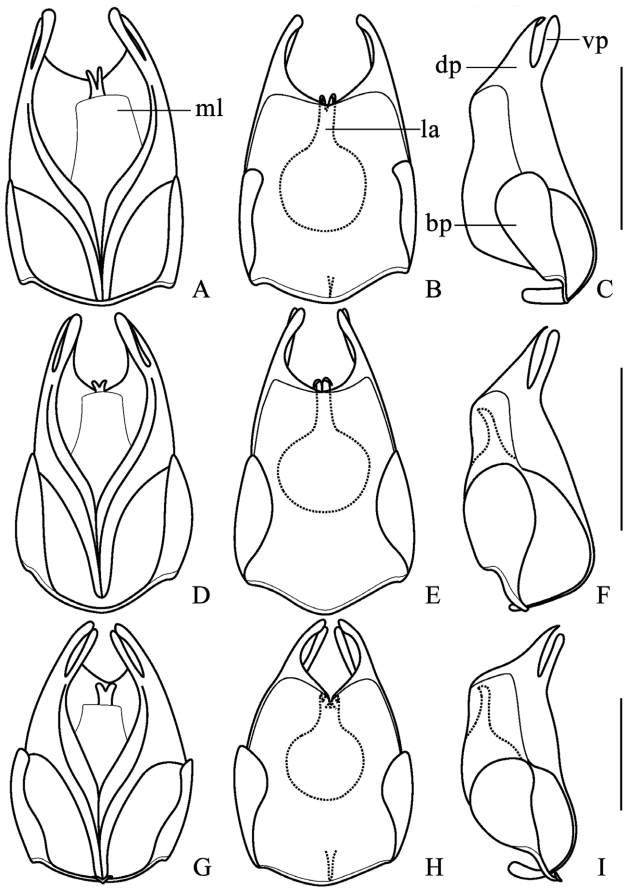

Fig. 6. Male genitalia of *Habronychus* (*Habronychus*) Wittmer, 1981. A, D, G – ventral view; B, E, H – dorsal view; C, F, I – lateral view; A–C – *H.* (*H.*) *crassatus* sp. n.; D–F – *H.* (*H.*) *tengchongensis* sp. n.; G–I – *H.* (*H.*) *longiplatus* sp. n. Scale bars: 0.5 mm.

shallowly and triangularly emarginate on both sides of posterior margin, lateral margins of the middle emargination diverging posteriorly; diverticulum extremely long, about 0.9 times adult body length (Fig. 4C). In comparison, in *H.* (*H.*) *parallelicollis*, eyes protrude strongly in male (Fig. 1C); aedeagus (Figs 2A–C): ventral processes of parameres are slightly thickened apically in lateral view, with apices directed inwards in ventral view; female abdominal sternite VIII (Fig. 3A) is weakly emarginate on both sides of posterior margin, lateral margins of the middle emargination converge posteriorly, diverticulum is long and about half the length of the adult body (Fig. 4A).

Description

Body length (both sexes): 6.6–8.1 mm (6.6 mm in holotype); width: 1.2–1.5 mm (1.2 mm in holotype).

Male (Fig. 5D). Coloration. Body brown, head, antennae and scutellum black, each side with a yellow marking behind eyes, antennomere I yellow, pronotum brown, with black median longitudinal line and darkened on both sides of anterior parts, coxae, trochanters and femora yellow, elytra red. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes moderately protruding, head width across eyes 1.4 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest near apices; antennae filiform, almost reaching the elytral apices, antennomere II about 1.4 times longer than wide at apex, III about 2.3 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle on outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, 1.1 times as long as wide, anterior margin nearly straight, anterior angles truncated, lateral margins nearly vertical, posterior margin bisinuate and narrowly bordered, posterior angles sub-rectangular, disc strongly convex on posterolateral parts, surface finely and densely punctate.

Elytra. Feebly dilated posteriorly, about 3.7 times as long as humeral width, 5.3 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 6A–C). Diameter moderately narrower apically, with that of the apical part about half of the basal part; basal pieces shorter than parameres, simple and without any nodule at base of ventral side; ventral processes of parameres moderately approach each other, with apices directed outwards in ventral view, slender and distinctly thickened apically, feebly directed dorsally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere nearly as long as ventral process, strongly narrowed apically from the base and moderately thicker at apex; laterophyses conjoint basally and divided from each other apically, with apices acute and obviously bent dorsally, the emargination between laterophyses slightly deep; median lobe does not reach the middle emargination between dorsal plates.

Female. Similar to male, but the body stouter, legs dark brown, with apical half of femora pale yellow, eyes smaller and less protruding than in male, head width across eyes 1.2 times wider than the anterior margin of pronotum, antennae shorter and extending to elytral mid-length, antennomeres IV–XI without impressions; elytra moderately dilated posteriorly, about 3.6 times as long as humeral width, with moderately distinct longitudinal costae.

Abdominal sternite VIII (Fig. 3C). Moderately narrower posteriorly, latero-apical angles sub-rectangular, posterior margin deeply and roundly emarginate in the middle and shallowly and triangularly emarginate on both sides, the portion between the middle and lateral emarginations rounded at apex, lateral margins of the middle emargination diverging posteriorly, with a membranous lobe behind the middle emargination, in centre of which is a sclerotized area in the form of a heart.

Internal reproductive system (Fig. 4C). Vagina elongate, with diverticulum and spermathecal duct arising from apex, median oviduct situated ventroapically; diverticulum extremely long, approximately 0.9 times adult body length, slender tube-shaped, evenly thinned apically and spiral; spermathecal duct long and slender, much shorter than diverticulum; spermatheca slender tube-shaped and spiral, obviously thinner than spermathecal duct and slightly longer than diverticulum, with basal portion extended into a short tube bearing the opening of the accessory gland; ac-

cessory gland thickened apically, much shorter than spermatheca.

Type material. Holotype: ♂ (IZAS), "CHINA, Yunnan Prov., Tengchong, Jietou town, Datang. on log / plant, 25.74556°N, 98.69630°E, 2030 m, 2006.5.15, Liang H.B. collector, California Academy & IOZ, Chinese Acad. Sci."; Paratype: 1♀ (CAS, CASENT 6005485), "CHINA, Yunnan, Tengchong County, Jietou Township, Dahetou Lingganjiao, headwaters Longchuan Jiang, N25.73947°/ E098.69630°, 2010 m, 16 May 2006, stop #2006-025A, D.H. Kavanaugh & R.L. Brett collectors."

Type locality. China, Yunnan, Tengchong, Jietou town.

Etymology. The specific name is derived from the Latin *crassus* (thick), referring to the thickened apex of the ventral process of each paramere of the aedeagus.

Distribution. China (Yunnan).

Habronychus (*Habronychus*) *tengchongensis* Y. Yang, Ge & X. Yang, sp. n.

Figs 6D–F, 7A

ZooBank taxon LSID:
49C6C853-A188-41BE-B76C-27F26B32073A

Diagnosis. It is similar to *H.* (*H.*) *honestus* sp. n., from which it differs in the following characters: eyes moderately protruding, elytra 3.4 times as long as humeral width (Fig. 7A), whereas in the latter eyes are strongly protruding and elytra 3.8 times longer than humeral width (Fig. 5C); aedeagus (Figs 6D–F): basal pieces without nodule at base on ventral side, while in *H.* (*H.*) *honestus* sp. n. (Figs 2G–I), basal pieces present with a large, bifurcate middle nodule at base on ventral side.

Description

Body length: ♂ 5.8 mm; width: 1.2 mm.

Male (Fig. 7A). Coloration. Body brown, head, antennae and scutellum black, each side of head with a brown mark behind eyes, antennomere I brown, the median longitudinal line on pronotum black and darkened on both sides anteriorly, coxae, trochanters and femora yellow, elytra yellowish brown. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes moderately protruding, head width across eyes 1.5 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest near apices; antennae filiform, almost reaching the elytral apices, antennomere II about 1.6 times longer than wide at apex, III about 2.1 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle on outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, 1.1 times as long as wide, anterior margin nearly straight, anterior angles truncated, lateral margins nearly vertical, posterior margin bisinuate and narrowly bordered, posterior angles sub-rectangular, disc strongly convex posterolaterally, surface finely and densely punctate.

Elytra. Slightly dilated posteriorly, about 3.4 times as long as humeral width, 5.3 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 6D–F). Diameter of the apical part less than half of that of the basal part; basal pieces shorter than parameres, simple and without any nodule at base on ventral side; ventral processes of parameres moderately approach each other, with apices directed inwards in ventral view, slender and slightly thickened apically, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere nearly as long as ventral process, narrows strongly from the base, with moderately thickened apex; laterophyses conjoined basally and separate apically, with apices acute and clearly bent dorsally, the emargination between laterophyses shallow; median lobe not reaching the middle emargination between dorsal plates.

Female. Unknown.

Type material. Holotype: ♂ (IZAS), "CHINA, Yunnan Prov., Tengchong, Huoqiao, Guyong Linchang, 25.39859°N, 98.30531°E, 2584 m, 2006.5.27, Liang H.B. & Liu Z.C., California Academy & IOZ, Chinese Acad. Sci."

Type locality. China, Yunnan, Tengchong, Huoqiao.

Etymology. The specific name is derived from its type locality, Tenchong, Yunnan Province, China.

Distribution. China (Yunnan).

Habronychus (*Habronychus*) *longiplatus* Y. Yang, Ge & Liu, sp. n.

Figs 6G–I, 7B

ZooBank taxon LSID:
04A75266-2812-4D45-A546-47B86C87582A

Diagnosis. It is similar to *H.* (*H.*) *helenae* Švihla, 2004, from which it differs as follows: a larger body 6.8 mm, eyes moderately protruding, elytra with distinct longitudinal costae (Fig. 7B); aedeagus (Figs 6G–I): terminal diameter of which is greatly reduced, ventral processes of parameres hardly thickened apically in lateral view, dorsal plate of each paramere longer than ventral process in lateral view. Whereas *H.* (*H.*) *helenae* has a small body 5.5 mm, eyes protrude strongly, elytra have weak longitudinal costae; aedeagus (Švihla, 2004, figs 177–178) is subparallel-sided, ventral processes of parameres are moderately thickened apically in lateral view, dorsal plate of each paramere is shorter than ventral process in lateral view.

Description

Body length: ♂ 6.8 mm; width: 1.5 mm.

Male (Fig. 7B). Coloration. Body brown, head, antennae and scutellum black, brown between eyes, pronotum brown mixed with black, elytra yellowish brown. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

Head. Subquadrate, surface densely and finely punctate; eyes moderately protruding, head width across eyes 1.4 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest near apices; antennae filiform, nearly reaching the elytral apices, antennomere II about 1.7 times longer than wide at apex, III

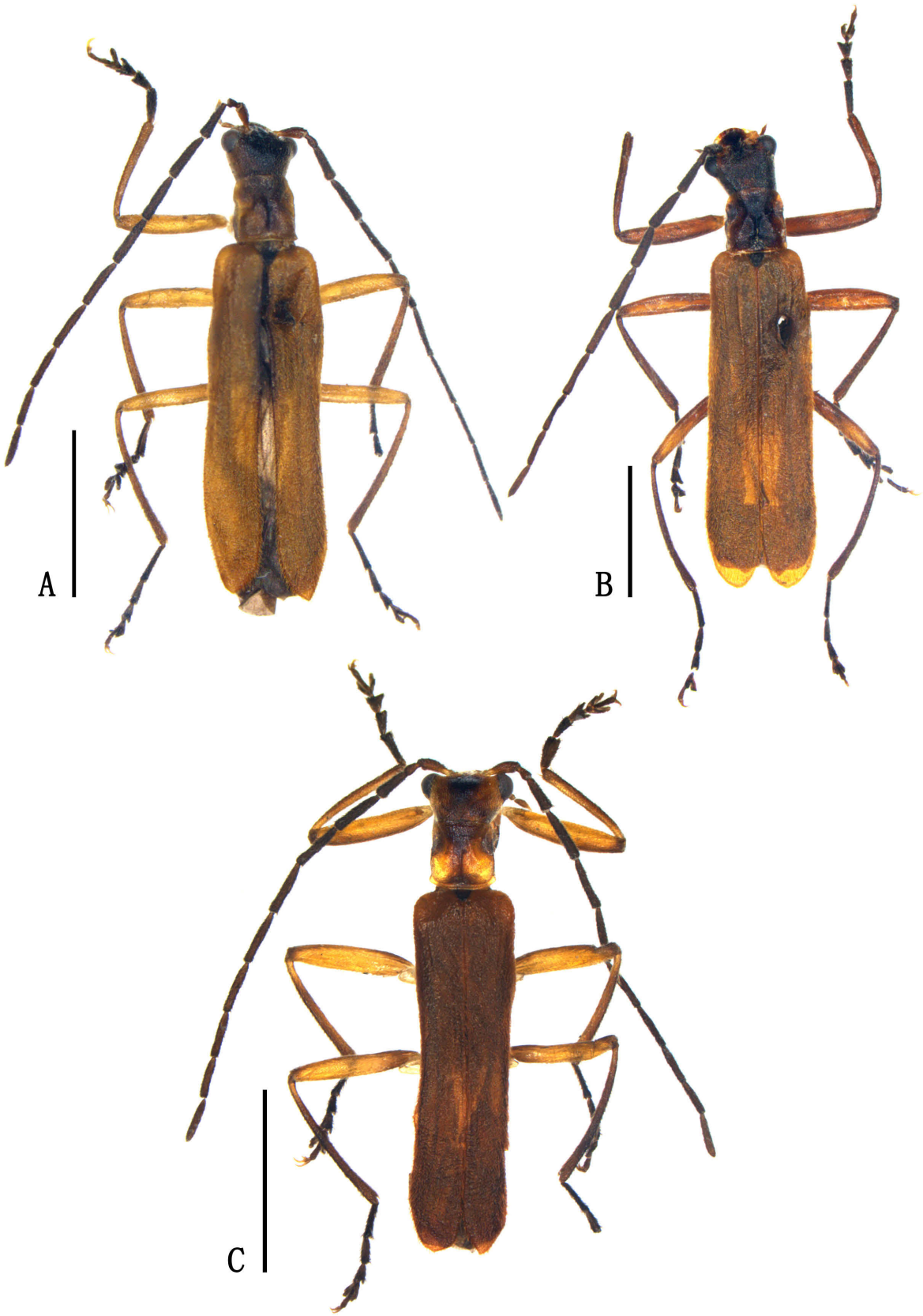

Fig. 7. Habitus of *Habronychus* (*Habronychus*) Wittmer, 1981, dorsal view, males. A – *H.* (*H.*) *tengchongensis* sp. n.; B – *H.* (*H.*) *longiplatus* sp. n.; C – *H. (H.) trianguliceps* sp. n. Scale bars: 2.0 mm.

about 2.5 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle on outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, about 1.1 times as long as wide, anterior margin feebly arcuate, anterior angles truncated, lateral margins nearly vertical, posterior margin feebly

bisinuate and narrowly bordered, posterior angles sub-rectangular, disc strongly convex posterolaterally, surface finely and densely punctate.

Elytra. Slightly dilated posteriorly, about 3.8 times as long as humeral width, 5.2 times longer than pronotum, surface finely and densely punctate, with distinct longitudinal costae.

Aedeagus (6G–I). Apical diameter less than half of the basal diameter, basal pieces shorter than parameres, with a small, bifurcate conjoint middle nodule at base on ventral side; ventral processes of parameres strongly approach each other, with apices directed inwards in ventral view, slender and hardly thickened apically, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere longer than ventral process, strongly narrowed apically from the base and moderately thickened at apex; laterophyses conjoint at base and divided from each apically, with apices acute and obviously bent dorsally, the emargination between laterophyses shallow; median lobe does not reach the middle emargination between dorsal plates.

Female. Unknown.

Type material. Holotype: ♂ (ZIN), "ВЬЕТНАМ, горы у ШИА-ПА, ФАН-СИ-ПАН, 2100 m, 2.vi.1963, leg. Г. Кабаков" ["Vietnam, Mountains at Sa Pa, Fansipan Peak, 2100 m, 2.vi.1963, leg. G. Kabakov"].

Type locality. Vietnam, Mountains at Sa Pa, Fansipan Peak.

Etymology. The specific name is derived from the Latin *longus* (long) and *plata* (plate), referring to its aedeagus with the dorsal plate of each paramere longer than ventral process.

Remarks. The right antenna of the holotype is missing.

Distribution. Northern Vietnam.

Habronychus (*Habronychus*) *trianguliceps* Y. Yang, Ge & Liu, sp. n.

Figs 7C, 8A–C

ZooBank taxon LSID:
788FD04E-7F7E-4301-B702-04FF91FECC7D

Diagnosis. It is similar to *H.* (*H.*) *crassatus* sp. n., but can be distinguished from the latter by the following characters: pronotum dilated posteriorly, with sub-rectangular anterior angles, elytra parallel-sided (Fig. 7C), apical diameter of aedeagus strongly reduced, ventral processes of parameres even in width in lateral view, with apices directed inwards in ventral view (Figs 8A–C). While in *H.* (*H.*) *crassatus* sp. n., pronotum is subparallel-sided, with truncated anterior angles, elytra are dilated posteriorly (Fig. 5D), apical diameter of aedeagus is moderately reduced, ventral processes of parameres are obviously thickened apically in lateral view, with apices directed outwards in ventral view (Figs 6A–C).

Description

Body length: ♂ 5.5 mm; width: 1.0 mm.

Male (Fig. 7C). Coloration. Body brownish black, head and pronotum brown, with a black marking in centre of vertex, dark median longitudinal line on pronotum and darker on both sides anteriorly, scutellum black, legs yellow except tarsi, elytra red. Body densely covered with short, semi-recumbent pale-yellow pubescence, which is slightly sparser on head and pronotum.

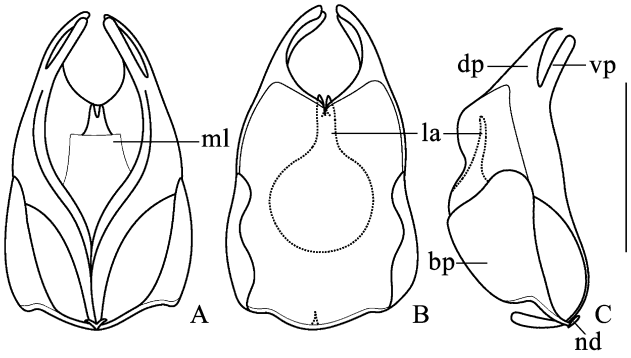

Fig. 8. Male genitalia of *Habronychus* (*Habronychus*) *trianguliceps* sp. n. A – ventral view; B – dorsal view; C – lateral view. Scale bar: 0.5 mm.

Head. Subquadrate, surface densely and finely punctate; eyes moderately protruding, head width across eyes 1.6 times wider than the anterior margin of pronotum; terminal maxillary palpomeres long-triangular, widest near apices; antennae filiform, almost reaching the elytral apices, antennomere II about 1.2 times longer than wide at apex, III about 2.3 times longer than II, IV–XI each with a small and smooth longitudinal impression in the middle on outer edge, XI slightly longer than X, pointed at apex.

Pronotum. Subquadrate, nearly as long as wide, anterior margin nearly straight, anterior angles sub-rectangular, lateral margins diverge posteriorly, posterior margin bisinuate and narrowly bordered, posterior angles sub-rectangular, disc strongly convex posterolaterally, surface finely and densely punctate.

Elytra. Nearly parallel-sided, about 3.7 times as long as humeral width, 5.2 times longer than pronotum, surface finely and densely punctate, with weak longitudinal costae.

Aedeagus (Figs 8A–C). Apical diameter less than half of the basal diameter; basal pieces shorter than parameres, with a small, bifurcate conjoint middle nodule at base on ventral side; ventral processes of parameres very close to each other, with apices directed inwards in ventral view, slender and even in width along the whole length, moderately directed ventrally at an angle of about 45 degrees with median lobe in lateral view; dorsal plate of each paramere nearly as long as ventral process, which narrows strongly from the base and is slightly thicker at apex; laterophyses conjoint basally and separate from each other apically, with apices acute and feebly bent dorsally, the emargination between laterophyses shallow; median lobe not reaching the middle emargination between dorsal plates.

Female. Unknown.

Type material. Holotype: ♂ (ZIN), "ВЬЕТНАМ, горы у ШИА-ПА, 1900–2600 m, 5.v.1963, leg. Г. Кабаков" ["Vietnam, Mountains at Sa Pa, 1900–2600 m, 5.v.1963, leg. G. Kabakov"].

Type locality. Vietnam, Mountains at Sa Pa.

Etymology. The specific name is derived from the Latin *triangulus* (with three corners) and the suffix *-ceps* (headed), referring to its head distinctly narrowing posteriorly.

Distribution. Northern Vietnam.

DISCUSSION

With more species discovered and added to the subgenus *Habronychus*, the diversity and morphology of this subgenus are now better understood. The members of this group are quite conservative in the structure of the aedeagus, which is very similar, except in *H.* (*H.*) *sauteri* (Pic, 1934) (Wittmer, 1982: Fig. 7; Okushima & Satô, 1999: Figs 10–12), *H.* (*H.*) *providus* (Kiesenwetter, 1874) (Ishida, 1986: Figs 2–4) and *H.* (*H.*) *szechwanus* Wittmer, 1988 (Wittmer, 1988: Fig. 35). This phenomenon is also noted by Švihla (2004, 2005), who did not provide illustrations of aedeagi for several species. Accordingly, the female genitalia, which is presented and described for the first time here, is also uniform in shape and comparative length of the internal organs, with diverticulum and spermatheca much longer than accessory gland, which is extremely short and thickened apically.

Although the genitalia are very uniform, the species could be distinguished from one another by a combination of characters, such as, body size, coloration and pubescence, shape of eyes, antennae, pronotum, elytra and female abdominal sternite VIII, as well as detailed comparison of genitalia.

KEYS FOR THE IDENTIFICATION OF SPECIES

Because the male or female of some species remain unknown, we provide separate keys for males and females. Males are unknown for *H.* (*H.*) *distinctecostatus* (Pic, 1917) and females for eight species: *H.* (*H.*) *helenae* Švihla, 2004, *H.* (*H.*) *obscuricolorissimus* (Pic, 1935), *H.* (*H.*) *szechwanus* Wittmer, 1988, *H.* (*H.*) *zdeneki* Švihla, 2004, *H.* (*H.*) *honestus* sp. n., *H.* (*H.*) *longiplatus* sp. n., *H.* (*H.*) *tengchongensis* sp. n., and *H.* (*H.*) *trianguliceps* sp. n. *H.* (*H.*) *rubicundus* (Champion, 1926) is also excluded from the female key because no useful characters are available in literature and no specimens were available.

Males

1 Antennae clearly extend beyond elytral apices 2
– Antennae at most reaching elytral apices 5
2 Body uniformly black 3
– Body at least bicolored 4
3 Elytra dilated posteriorly, stouter and about 3.2 times as long as humeral width; Japan ..... *H.* (*H.*) *providus* (Kiesenwetter, 1874)
– Elytra parallel-sided, slender and about 3.5 times as long as humeral width; Japan ..... *H.* (*H.*) *obscuricolorissimus* (Pic, 1935)
4 Antennae flattened and broad, elytra orange or red, about 3.8 times as long as humeral width (Okushima & Satô, 1999: Figs 5, 9; Okushima, 2008: Fig. 34); aedeagus: apices of ventral processes of paremeres directed inwards (Wittmer, 1982: Fig. 9); China (Taiwan)..... *H.* (*H.*) *kurosawai* Wittmer, 1982
– Antennae simple and filiform, elytra black, about 3.4 times as long as humeral width (Satô, 1986: Fig. 2); aedeagus: apices of ventral processes of parameres directed outwards (Satô, 1986: Fig. 10; Ishida, 1986: Figs 8–10); Japan ..... *H.* (*H.*) *aritai* Satô, 1986
5 Pronotum uniformly red 6
– Pronotum uniformly black or pale yellow, or brown mixed with black 7
6 Head and scutellum uniformly red, antennae filiform, elytra parallel-sided; aedeagus: ventral processes of parameres moderately approach each other in ventral view, inner margins of dorsal plates nearly parallel to each other in dorsal view (Švihla, 2004: Figs 180–182); India ..... *H.* (*H.*) *zdeneki* Švihla, 2004
– Head black, each side with a yellowish-brown marking behind eyes, scutellum black, antennae flattened and slightly serrate, elytra dilated posteriorly; aedeagus: ventral processes of parameres closely approach each other in ventral view, inner margins of dorsal plates strongly converging apically in dorsal view (Švihla, 2005: Figs 79–81); northern Vietnam..... *H.* (*H.*) *lineaticeps* (Pic, 1914)
7 Aedeagus: ventral processes of parameres stout, laterophyses completely separated 8
– Aedeagus: ventral processes of parameres slender, laterophyses conjoined at the base and divided from each other near apices or in the middle 9
8 Pronotum pale yellow, elytra black (Okushima & Satô, 1999: Figs 1, 7); aedeagus: ventral process of each paramere narrows apically in ventral view, inner surface of dorsal plates simple (Wittmer, 1982: Fig. 7; Okushima & Satô, 1999: Figs 10–12); China (Taiwan)..... *H.* (*H.*) *sauteri* (Pic, 1934)
– Pronotum yellowish brown, elytra red; aedeagus: ventral process of each paramere thickened apically in ventral view, inner surface of dorsal plates with a pair of protrusions (Wittmer, 1988: Fig. 35); China (Sichuan) ..... *H.* (*H.*) *szechwanus* Wittmer, 1988
9 Pronotum dilated posteriorly 10
– Pronotum parallel-sided..... 12
10 Elytra yellowish brown, dilated posteriorly; aedeagus: moderately reduced apical diameter, of which the apical part is about half that of the basal part, middle emargination between dorsal plates wide (Švihla, 2004: Figs 175–176); Myanmar.. *H.* (*H.*) *rubicundus* (Champion, 1926)
– Elytra red, parallel-sided; aedeagus: strongly reduced apical diameter, of which the apical part is narrower than half of the basal part, middle emargination between dorsal plates narrow 11
11 Antennomeres III about 2.7 times longer than II; aedeagus: ventral processes of parameres moderately approach each other in ventral view (Švihla, 2005: Figs 75–77); northern Laos ..... *H.* (*H.*) *kantnerorum* Švihla, 2005
– Antennomeres III about 2.3 times longer than II (Fig. 7C); aedeagus: ventral processes of parameres very close to each other in ventral view (Figs 8A–C); northern Vietnam..... *H.* (*H.*) *trianguliceps* sp. n.
12 Elytra narrowed posteriorly (Ishida, 1986: Fig. 11); aedeagus: dorsal plates of parameres nearly parallel to each other in dorsal view, laterophyses divided near the middle (Ishida, 1986: Figs 12–14); Japan..... *H.* (*H.*) *miyatakei* Ishida, 1986
– Elytra enlarged posteriorly or parallel-sided; aedeagus: dorsal plates of parameres bend towards each other in dorsal view, laterophyses divided near apices 13
13 Aedeagus: basal two-thirds of paramere nearly parallel-sided in ventral view 14
– Aedeagus: basal two-thirds of paramere clearly tapering in ventral view (Figs 2A, D, G; 6A, D, G) 15
14 Body uniformly black (Okushima & Satô, 1999: Figs 3, 4, 8); aedeagus: about 2.4 times as long as wide, basal pieces clearly shorter than parameres (Wittmer, 1982: Fig. 8); China (Taiwan)..... *H.* (*H.*) *nantouanus* Wittmer, 1982

– Body mixture of black and yellowish brown; aedeagus: about 1.4 times as long as wide, basal pieces nearly as long as parameres (Švihla, 2004: Figs 177–178); Myanmar .... *H.* (*H.*) *helenae* Švihla, 2004
15 Aedeagus: strongly narrowed apically, of which the apical part is narrower than half of the basal part 16
– Aedeagus: moderately narrowed apically, of which the apical part is about half of the basal part..... 18
16 Elytra with distinct longitudinal costae (Fig. 7B), aedeagus: dorsal plates of parameres longer than ventral processes in lateral view (Figs 6G–I); northern Vietnam..... ..... *H.* (*H.*) *longiplatus* sp. n.
– Elytra with weak longitudinal costae, aedeagus: dorsal plates of parameres as long as ventral processes in lateral view .. 17
17 Elytra about 3.8 times as long as humeral width (Fig. 5C), aedeagus: basal pieces with a large, bifurcate middle nodule at base on ventral side (Figs 2G–I); China (Yunnan) .... *H.* (*H.*) *honestus* sp. n.
– Elytra about 3.4 times as long as humeral width (Fig. 7A), aedeagus: basal pieces simple and without any nodule at base on ventral side (Figs 6D–F); China (Yunnan) ....*H.* (*H.*) *tengchongensis* sp. n.
18 Eyes moderately protruding (Fig. 5D); aedeagus: ventral processes of parameres weakly directed dorsally in lateral view, with the apices directed outwards in ventral view (Figs 6A–C); China (Yunnan)..... *H.* (*H.*) *crassatus* sp. n.
– Eyes strongly protruding; aedeagus: ventral processes of parameres moderately directed ventrally in lateral view, with apices directed inwards in ventral view..... 19
19 Elytra about 3.9 times as long as humeral width (Fig. 1C); aedeagus: ventral process of each paramere slightly thickened apically in lateral view (Figs 2A–C); China (Yunnan)..... .....*H.* (*H.*) *parallelicollis* (Pic, 1921)
– Elytra about 4.1 times as long as humeral width (Fig. 5A); aedeagus: ventral process of each paramere clearly thickened apically in lateral view (Figs 2D–F); China (Yunnan) ....*H.* (*H.*) *laticeps* sp. n.

Females

1 Antennae serrate, antennomeres III–VIII flattened and broader apically 2
– Antennae filiform, antennomeres III–VIII parallel-sided, cylindrical or flattened..... 3
2 Antennomere IV less than 2.5 times as long as wide at apex; northern Vietnam .....*H.* (*H.*) *lineaticeps* (Pic, 1914)
– Antennomere IV about 2.7 times as long as wide at apex; northern Vietnam .....*H.* (*H.*) *distinctecostatus* (Pic, 1917)
3 Body uniformly black..... 4
– Body at least bicolored 5
4 Head across eyes slightly wider than the anterior margin of pronotum, elytra about 3.2 times as long as humeral width (Okushima, 1997: Fig. 20); Japan ....*H.* (*H.*) *providus* (Kiesenwetter, 1874)
– Head across eyes clearly wider than the anterior margin of pronotum, elytra about 3.5 times as long as humeral width (Okushima & Satô, 1999: Fig. 4); China (Taiwan) .... *H.* (*H.*) *nantouanus* Wittmer, 1982
5 Antennae extending beyond the middle of the elytra..... 6
– Antennae at most extending to the middle of the elytra..... 7
6 Antennae reaching two-thirds of elytral length; abdominal sternite VIII: posterior margin shallowly and triangularly emarginate in middle, lateral margins of the middle emargination diverging posteriorly (Švihla, 2005: Fig. 78); northern Laos ..... *H.* (*H.*) *kantnerorum* Švihla, 2005
– Antennae reaching middle of elytral length; abdominal sternite VIII: posterior margin deeply and roundly emarginate in middle, lateral margins of the middle emargination parallel to each other (Fig. 3B); China (Yunnan) .. *H.* (*H.*) *laticeps* sp. n.
7 Antennae flattened (Okushima & Satô, 1999: Fig. 6); China (Taiwan).....*H.* (*H.*) *kurosawai* Wittmer, 1982
– Antennae cylindrical..... 8
8 Pronotum uniformly pale yellow (Okushima & Satô, 1999: Fig. 2); China (Taiwan)..... *H.* (*H.*) *sauteri* (Pic, 1934)
– Pronotum uniformly black or bicolored 9
9 Abdominal sternite VIII: posterior margin shallowly emarginate in middle 10
– Abdominal sternite VIII: posterior margin deeply emarginate in middle 11
10 Body small, 5.8–7.1 mm; abdominal sternite VIII: posterior margin narrowly emarginate in middle (Okushima, 1995: Fig. 1); Japan.....*H.* (*H.*) *aritai* Satô, 1986
– Body large, 8.3 mm; abdominal sternite VIII: posterior margin widely emarginate in middle (Ishida, 1986: Fig. 15); Japan .....*H.* (*H.*) *miyatakei* Ishida, 1986
11 Abdominal sternite VIII: the portion between the middle and lateral emarginations rounded at apex, lateral margins of middle emargination diverging posteriorly (Fig. 3C); China (Yunnan) ..... *H.* (*H.*) *crassatus* sp. n.
– Abdominal sternite VIII: the portion between the middle and lateral emarginations truncated at apex, lateral margins of middle emargination slightly converging posteriorly (Fig. 3A); China (Yunnan) .....*H.* (*H.*) *parallelicollis* (Pic, 1921)

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