

Research articleSubmitted: June 10th, 2020 - Accepted: September 30th, 2020 - Published: November 15th, 2020**Description of eight new *Paratrichius* Janson, 1881 from Vietnam (Coleoptera: Scarabaeidae, Cetoniinae)**

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Abstract

Increased availability of recently collected beetle material from Vietnam has stimulated numerous taxonomic studies. Several specimens representing new species of the genus *Paratrichius* Janson, 1881, were discovered among this material. These are described here as *Paratrichius bartolozzii* sp. nov., *P. caobangi* sp. nov., *P. dangvanboi* sp. nov., *P. parvolaetus* sp. nov., *P. saetosus* sp. nov., *P. triguttatus* sp. nov., *P. inexpectatus* sp. nov. and *P. variicoloratus* sp. nov., thereby bringing the total number of known Vietnamese species to 29. The distribution of the species highlights three major areas of endemism for the genus within the country: northern provinces, Central Highlands and southern provinces. To date, no species has been found to inhabit more than one of these areas. Further research in intermediate areas is needed to better clarify boundaries between these areas of endemism.

Key words: Coleoptera, Trichiini, new species, Vietnam, taxonomy.

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Introduction

Moser (1901) described the first six species of *Paratrichius* Janson, 1881 (as *Trichius* Fabricius, 1775) inhabiting the northeastern provinces of Vietnam. By the time Paulian (1961) reviewed the Indochinese *Paratrichius*, only five additional species had been described from Vietnam, all by Bourgoin (1915, 1917, 1920). For several decades thereafter, the number of known *Paratrichius* species inhabiting Vietnam remained eleven.

The long Vietnam war of the second half of the 20th century, with forests heavily affected by devastating defoliants, and the accompanying political events, did not allow entomological research in Vietnam until very recently. Finally, during the 21st century, collecting activities resumed and the examination of copious new material has led to the description of ten new species of *Paratrichius* (see list below).

Before 2005, based on known species, it seemed that representatives of the genus *Paratrichius* inhabited the northernmost provinces of Vietnam only. Iwase (2005) described *P. pulchellus* from the southern province of Lam Dong, considerably expanding the distribution of *Paratrichius* within the country. Currently, with the eight new species described herein and the three described in a previous contribution (Ricchiardi 2018), the total number of Vietnamese *Paratrichius* species is twenty-nine (see list below). As far as I know, the distribution range of each species, is restricted to either the northern provinces, the Cen-

tral Highlands or the southern provinces, with no overlap between any of them. However, to better define the boundaries among these three areas of endemism, many other areas of Vietnam need to be explored.

Material and methods

Specimen length was measured between the apex of the pygidium and the anterior margin of the clypeus with the head in the normal position. Specimen width represents the maximum width of elytra. Clypeal length was measured laterally, between the anterior margin and the antennal insertion. For the description of surface sculpture, the terminology used by Harris (1979) was followed, while most of the anatomical terms used in the descriptions are those proposed by Krikken (1984).

Photographs were taken using a Nikon Coolpix P7700 attached to one of the eyepieces of a Wild dissecting microscope. All photographs were processed with photo stacking software (Zerene Stacker Version 1.04 Build T2018-07-19-1515, <http://www.zereneystems.com> [accessed May 28 2020]) and backgrounds were removed using GIMP 2.10.18 (www.gimp.org), in order to increase contrast. Individual photographs were finally merged to generate composite images using the same GIMP software.

The following abbreviations are used to denote the housing location of the study material:

ERPC	Enrico Ricchiardi Private Collection, Torino, Italy.
IZAS	Institute of Zoology, Chinese Academy of Science, Beijing, China.
MZF	Museo Zoologico “La Specola”, Firenze, Italy.
NHM	The Natural History Museum, London, U.K.
NMER	Naturkunde Museum, Erfurt, Germany.
PKLPC	Paul K. Lago Private Collection, Oxfors, Mississippi, U.S.A.
PMPC	Petr Mückstein Private Collection, Hlinsko, Czech Republic
SJPC	Stanislav Jakl Private Collection, Praha, Czech Republic
VNMN	Vietnam National Museum of Nature, Hanoi, Vietnam.

The following abbreviations are used to denote the types:

HT	holotype
PT	paratype

Results

The following taxonomic acts are proposed in this work: 1) the description of two new species, *Paratrichiulus caobangi* sp. nov. and *P. inexpectatus* sp. nov., from the northern province of Cao Bang; 2) the description of *P. saetosus* sp. nov. from the northern province of Ha Tinh; 3) the description of four new species inhabiting central Vietnam, *P. bartolozzii* sp. nov., *P. dangvanboi* sp. nov., *P. parvolaetus* sp. nov. and *P. variicoloratus* sp. nov.; and 4) the description of a new species, *Paratrichiulus triguttatus* sp. nov., inhabiting the southern province of Lam Dong.

Species list of Vietnamese *Paratrichiulus*

Northern provinces (20 species)

<i>Paratrichiulus alexisi</i> Krajcik, 2007
<i>brevifolius</i> Kobayashi & al., 2013
<i>campagnei</i> (Bourgoin, 1917)
<i>caobangi</i> sp. nov.
<i>coopertus</i> Ricchiardi, 2018
<i>cruentus</i> (Moser, 1901)
<i>diversus</i> Ricchiardi, 2018
<i>elegantulus</i> (Moser, 1901)
<i>flavipes</i> (Moser, 1901)
<i>hajeki</i> Krajcik, 2010
<i>marmoreus</i> (Moser, 1901)
<i>nicoudi</i> (Bourgoin, 1920)
<i>pejchai</i> Mückstein, 2018
<i>pullatus</i> (Bourgoin, 1915)
<i>saetosus</i> sp. nov.
<i>saucius</i> (Moser, 1901)
<i>inexpectatus</i> sp. nov.
<i>versicolor</i> (Moser, 1901)

vicinus (Bourgoin, 1915)
vitalisi (Bourgoin, 1915)

Central Highlands (5 species):

<i>Paratrichiulus bartolozzii</i> sp. nov.
<i>dangngocvani</i> Ricchiardi, 2018
<i>dangvanboi</i> sp. nov.
<i>parvolaetus</i> sp. nov.
<i>variicoloratus</i> sp. nov.

Southern provinces (4 species)

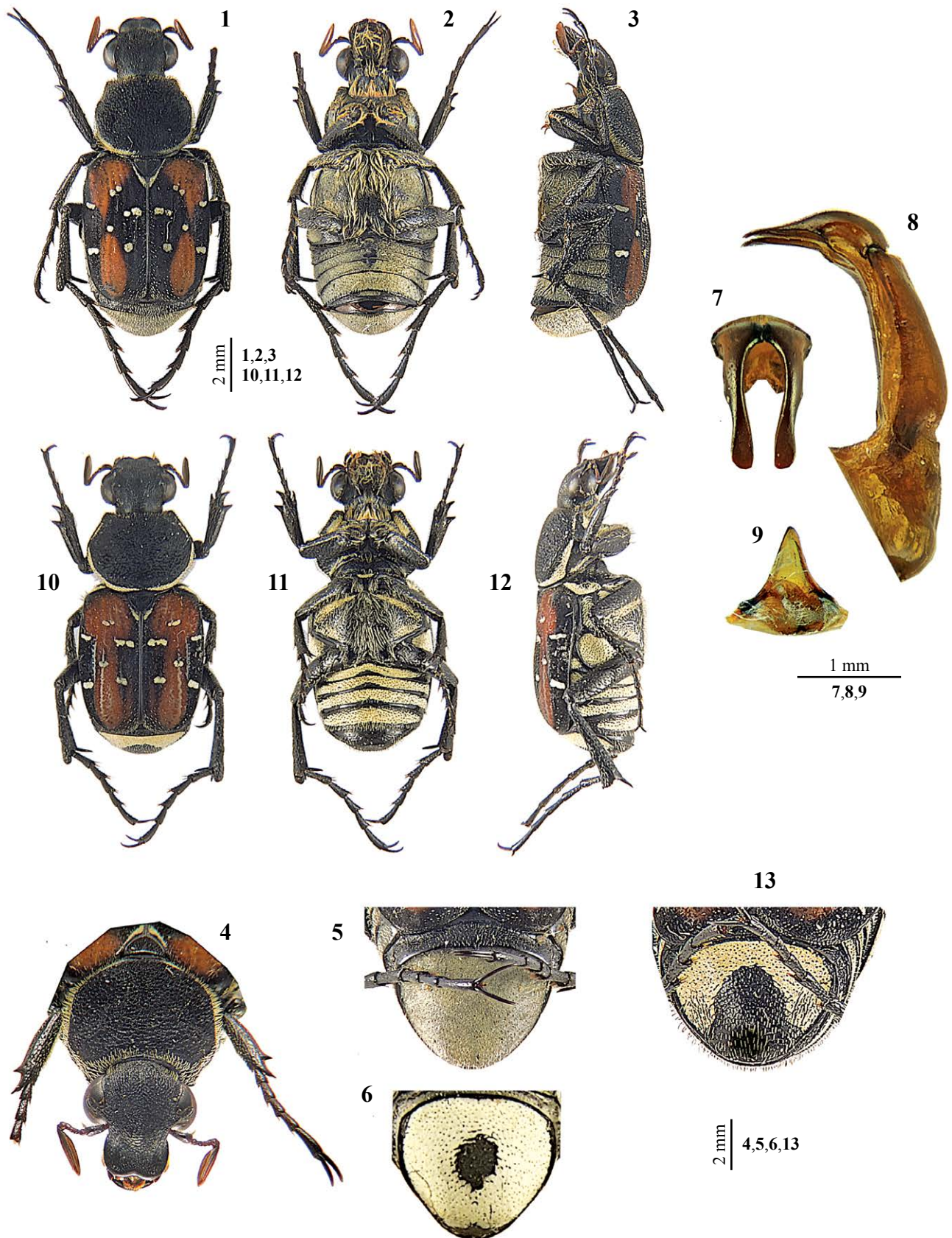
<i>Paratrichiulus lamdongensis</i> Kobayashi & al., 2019
<i>parvulus</i> Kobayashi & al., 2019
<i>pulchellus</i> Iwase, 2005
<i>triguttatus</i> sp. nov.

Taxonomy

Paratrichiulus bartolozzii **sp. nov.** (Figs 1-13)

Type series. Vietnam: HT♂ VNMN, Kon Tum, about 30 Km from Kong Plong (14°40'19" N, 108°15'50" E), Mag. 3078, 1250 m, 4/7.VII.2016, L. Bartolozzi & al. legit. AT ♀ MZF, Vietnam, Thua Thien Hue, Bach Ma Nat. Park, 16°11'35"N, 107°51'11"E, Mag. 3089, 1250 m, 28.V/1.VI.2017, L. Bartolozzi & al. legit. 1PT♂ 1PT♀ MZF, same data as holotype but Mag. 3089. 1PT♂ MZN, same data as holotype. 1PT♂ NMER, Thua Thien Hue, Phu Loc, Bach Ma N.P., Top Area, 16°11'39"N, 107°51'12"E, 1250-1400 m, 5/9 May 2019, A. Weigel legit. 1PTF♀ ERPC, Kon Tum, Ngoc Linh, 1700 m, V.2016, local collectors. 1PTF♀ ERPC, Kon Tum, Ngoc Linh, V.2017, local collectors. 1PT♂ ERPC, Bach Ma National Park, 16°11'32"N, 107°51'11"E, 1250 m, 28.V/1.VI.2017, L. Bartolozzi & al. legit. 2PT♂ ERPC, Kon Tum, Ngoc Linh, VI-2017, local collectors. 1PT♂ ERPC, Kon Tum, Mang Den, VI-2018, Dang Ngoc Van legit. 3PT♂ 4PT♀ ERPC, Vietnam, Kon Tum, Mang Den then DT676 up to 14°39'51.8"N, 108°17'35.728"E, V.2018, Dang Ngoc Van legit. 3PT♂ ERPC, 1PT♂ 1PT♀ PKLPC, Kon Tum, Mag Den env., V-2018, local collectors. 2PT♂ SJPC, Kon Tum, V-2018, local collectors. 4PT♀ SJPC, same data but IV-2019.

Description of holotype ♂. *General*: Length 10.0 mm, maximum width 4.9 mm. Elongate, with slender legs. Black, except scapus and antennal segments which are brown, antennal clubs dark fulvous. Elytra black, matt, with one reddish orange macula at one-third and a second one at two-thirds of baso-apical length. Body decorated with cretaceous markings as follows: pronotum with a chalky band along lateral margins, interrupted at around one-third of length and continuing towards posterior margin with interruption at its centre. Elytron with chalky juxtasutellar margins and six prominent, chalky spots posi-



Figs 1-13 – *Paratrichius bartolozzii* sp. nov. Holotype ♂ VNMN: 1, dorsal habitus. 2, ventral habitus. 3, lateral habitus. 4, head. 5, pygidium. 6, pygidium variation. 7, parameres, frontal view. 8, parameres, lateral view. 9, spiculum gastrale. Paratype ♀ ZMF: 10, dorsal habitus. 11, ventral habitus. 12, lateral habitus. 13, pygidium.

tioned in two rows, at one-third and two-thirds of length. The internal two of first row are double, the two on declivity are elongated. Pygidium entirely covered by elytra. Tergites almost completely covered except propygidial side. Ventrites covered, except the anal one, exhibiting a central spot.

Head. Black, clypeus slightly shiny, glabrous, wider than long, widest at centre, sides regularly rounded outwards up to 75% of length from anterior margin; horizontally arched, anterior corners rounded, anterior margin emarginate, not reflexed, sinuate; surface minutely reticulate. Frons matt, glabrous, surface minutely reticulate. Antennal club slightly longer than clypeus length.

Pronotum. Octagonal. Surface covered with black pruinosity covering thick, rounded, big, shallow punctuation. Slightly wider than long, moderately convex, without central, longitudinal hollow, with two large, shallow depressions at sides of disc, about two-thirds of length. Lateral margins nearly parallel from middle to base, broadly rounded laterally and posteriorly, anterior angles obtuse, posterior angles rounded and not projecting posteriorly, posterior margin broadly emarginated at middle. Covered with thick, fulvous, slightly long setae around anterior and lateral margins, denser at anterior corners.

Scutellum. Black, matt, covered with black pruinosity; with a central, longitudinal, effaced carina, disc impunctate, lateral margins punctate.

Elytra. Intervals glabrous or with few setae and mostly unpunctated. Striae prominent, with shallow, round, or horse-shoe punctures, with posterior portion of juxtatural interval reticulate.

Pygidium. Convex, wider than long, with apex rounded. Surface under chalky material imbricate.

Ventrites. Anal ventrite hollowed, with a chalky oval spot medially.

Legs. Black. Protibia bidentate, lacking terminal spur. Profemur anterior margin densely crenulate. Metatibia with central tooth on external margin present but not prominent. Metatarsi with small tuft of fulvous setae on internal apical margin of four basal tarsomeres.

Aedeagus. As in Figs 7-9.

Description of female (ERPC; differences from male only). *General.* Length: 11.5 mm, maximum width: 4.7 mm. Body stockier than in male, with protibia larger; in *P. bartolozzii* female differs little from male in colours and general shape. Frons weakly shiny. Clypeus less arched than in male, with rounded carina on each side. Antennomeres mostly brown, with mesal side of first club antennomere fulvous. Antennal club of same length as clypeus. Pronotum with posterior corners rounded, surface black, without pruinosity, slightly shiny, coarsely punctate-reticulate. Pronotal central longitudinal hollow effaced and with thick, fulvous, moderately long setae on lateral margins and posterior corners. Elytron black, matt, with a longitudinal orange-red band at centre almost reaching an-

terior and posterior margins. Posterior part of juxtatural scratched. Pygidium black, with large band of chalky material along dorsal and lateral margins, but not reaching margins; covered with regularly scattered, short, fulvous setae, becoming longer at apex. Surface imbricate, punctate on apical hollow. Disc deeply hollowed from about two-thirds of length to apex. Tergites black, covered in chalky material on three quarter of surface, except propygidium. Ventrites black, centrally covered with chalky material except for part of posterior margins. Anal ventrite not hollowed and without chalky material. External margin of metatibia with central tooth not very large, but with apex pointed. Tarsi more robust than in male.

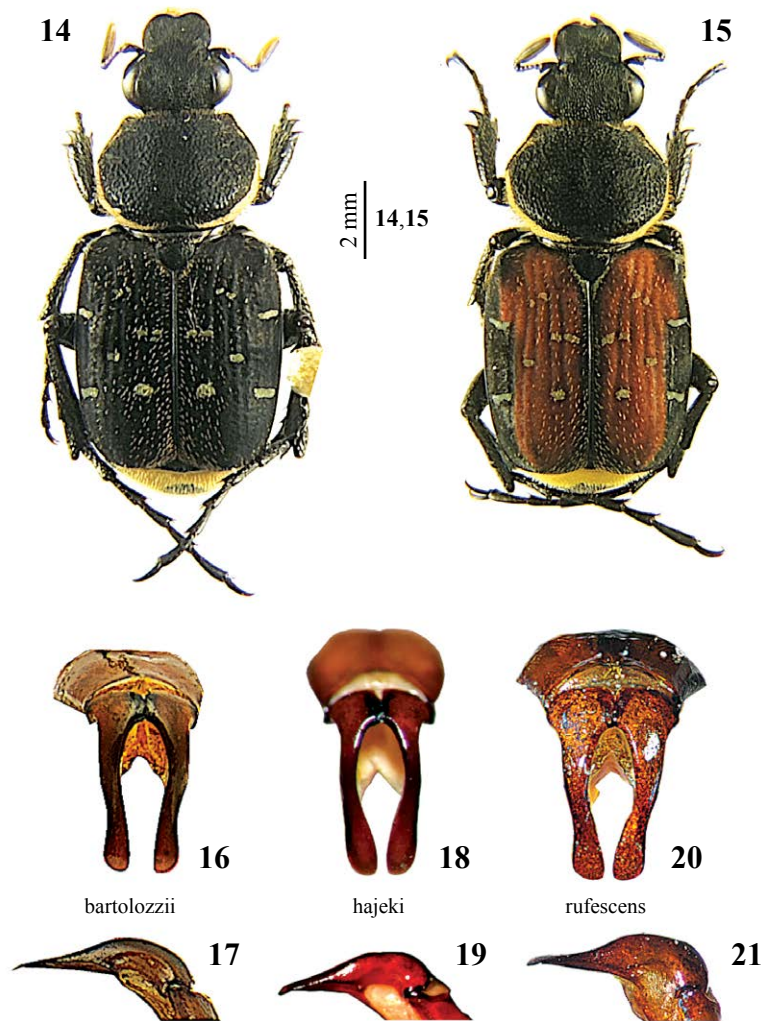
Derivatio nominis. This species is dedicated to the Italian Entomologist Luca Bartolozzi, who collected many of the type specimens.

Type series variability. Males have a constant appearance except that rarely the reddish-orange anterior spots on the elytra are slightly enlarged, but the two spots never join to form a band. In one paratype specimen, the two spots are reduced, while they are completely absent in another. The females too have a constant appearance, except for some variability in the elytral colours: many females exhibit completely black elytra, others have a broad, longitudinal, central band that sometimes expands to cover nearly the entire surface. While the chalky markings on the pygidium of females does not vary, many males exhibit a black, oval area on disc centre without chalky material.

Diagnosis. Superficially, *Paratrichius bartolozzii* looks similar to *P. hajeki* Krajcik, 2010 and *P. rufescens* Ma, 1990. Together they seem to form a complex of species possibly resulting from climatic changes and reconfiguration of land masses, as they emerged after the last Glacial Maximum due to the rising ocean levels (100-120 m: Church 2007; Yao 2009). *Paratrichius rufescens* inhabits the Chinese island of Hainan, which at that time was joined to mainland. *Paratrichius hajeki*, described from northern Vietnam, also inhabits north-east Laos (**new record**), as well as the Chinese province of Guangxi (**new record**). In northern Vietnam, it occurs in the southern province of Ha Tinh (**new record**). On the other hand, *P. bartolozzii* is known only from central Vietnam.

The shape of the parameres of the three species shows small differences among them (Figs 16-21). Those of *P. bartolozzii* are sinuate, similar to those of *P. rufescens* in frontal view, but slender in lateral view. The parameres of *P. hajeki* are less sinuate laterally (frontal view).

The three species can be separated using the following characters: males of *P. rufescens* have the pygidium covered with chalky material, while those of *P. hajeki* exhibit a wide black area from centre to apex. Males of *P. bartolozzii* can exhibit either a pygidium completely covered or with a small central black spot. Females of *P. rufescens*



Figs 14-21 – *Paratrichius bartolozzii* sp. nov. **14-15**, Paratype ♀ ERPC colors variation of elytra. **16-17**, parameres in dorsal and lateral views. *Paratrichius hajeki* Krajcik, 2010: **18-19**, parameres in dorsal and lateral views. *Paratrichius rufescens* Ma, 1990: **20-21**, parameres in dorsal and lateral views. Photographs 20 and 21 by Sha Li.

have fulvous legs and a prominent central tooth in the middle of the dorsal margin of the metatibia. The females of *P. hajeki* share with those of *P. bartolozzii* black legs and a reduced central tooth on metatibia. Finally, *P. bartolozzii* females can be separated from those of *P. hajeki* in that the latter possess a conspicuous tuft of setae at the apex of the metatarsomeres.

***Paratrichius caobangi* sp. nov.** (Figs 22-29)

Type series. HT♂ MNHN, **Vietnam:** Cao Bang, Cao Bang env., V-2018, Dang Ngoc Van legit.

Description of holotype. *General.* Length 13.1 mm. Maximum width 5.5 mm. Elongate, with slender legs. Black, except antennal clubs, prothoracic and mesothoracic legs which are light brown. Elytra completely reddish orange. Body with chalky markings as follows: pronotum with narrow band around lateral margins, interrupted at centre; narrow, longitudinal median line not joining anterior

or posterior margins and small, rounded macula on both sides of midline; elytra with narrow line at juxtascutellar margins and seven small, rounded maculae (Fig. 22); pygidium with comma-shaped macula on each dorso-lateral corner; anterior half of all ventrites, except anal one.

Head. Clypeus shiny, glabrous, wider than long, widest at centre, sides regularly convex; anterior corners rounded, anterior margin sinuate; surface reticulate. Frons and vertex shiny, glabrous, reticulate. Antennal club about 2.5 times as long as clypeal length.

Pronotum. Octagonal, slightly wider than long (length measured at centre), moderately convex, with two large, shallow depressions on sides of disc, at about two-thirds of length; anterior corners obtuse, posterior corners projecting posteriorly; posterior margin broadly emarginate at centre; posterior half of margins and anterior corners exhibiting scattered, pale yellow setae; surface covered in black pruinosity, overlaid on dense, round, broad, shallow sculpture.

Scutellum. Triangular, matt, wider than long, sides slightly arcuate, apex rounded, surface covered with black pruinosity overlying very scattered, small punctures.

Elytron. Matt, longer than wide, widest at centre, with seven effaced striae, six dorsally and one on lateral declivity, exhibiting light horseshoe-shaped punctures.

Pygidium. Convex, wider than long, with apex rounded; covered in scattered, whitish, recumbent setae.

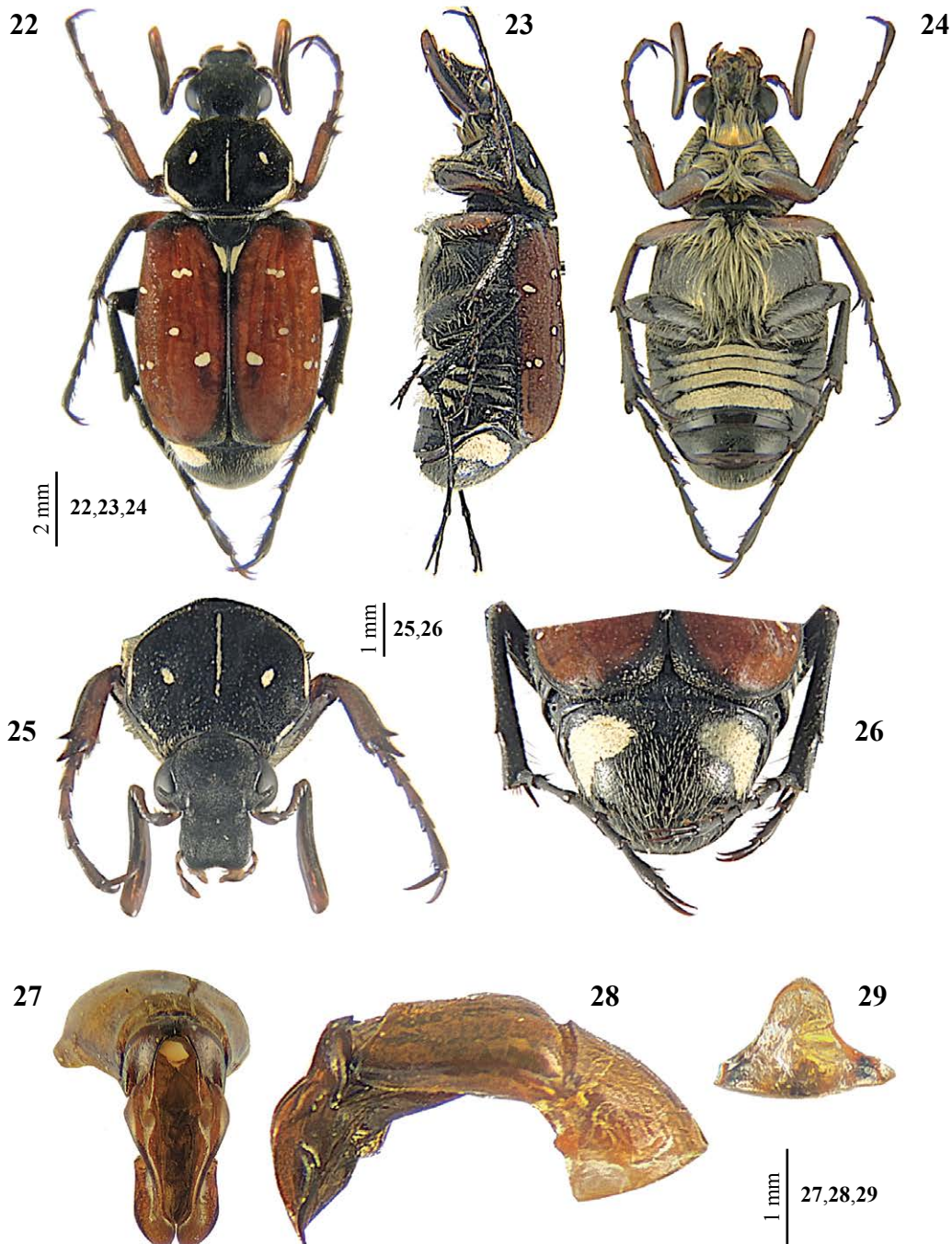
Legs. Protibia bidentate, lacking terminal spur; meta-

tarsus with row of fulvous setae at inner apex of all tarsomeres. Mesotibial posterior margin with central tooth barely visible. Metatibial posterior margin with prominent, pointed tooth.

Anal ventrites. Shiny, not depressed at centre.

Aedeagus. As in Figs 27-29.

Derivatio nominis. This species is named after the Vietnamese province of its origin, Cao Bằng.



Figs 22-29 – *Paratrichius caobangi* sp. nov. Holotype ♂ MNHN: 22, dorsal habitus. 23, lateral habitus. 24, ventral habitus. 25, head. 26, pygidium. 27, parameres, frontal view. 28, parameres, lateral view. 29, spiculum gastrale.

Diagnosis. The closest species to *Paratrichius caobangi* is *P. riekoae* Iwase, 1996, which is relatively widespread in the north-western provinces of China. Both species have a similar general pattern of chalky markings on pronotum, elytra and pygidium, as well as similar, very long antennal clubs and prominent, pointed, central external tooth on metatibiae. The striking reddish orange elytra of *P. caobangi* allow its easy separation from *P. riekoae*, which has completely black elytra (Fig. 30). Only a single male of *P. caobangi* is known thus far. In the event that future collecting may reveal males with completely black elytra, as often happens in *Paratrichius*, examination of the parameres, especially the shape of the apices, will be needed to separate the two species (Figs 27-28 and 32-33).

Remarks. The female is unknown.

***Paratrichius dangvanboi* sp. nov.** (Figs 34-46)

Type series. HT♂ NHM, **Vietnam:** Kon Tum, Ngoch Linh Mts., 1900 m, V.2019, local collectors. PT♀ ERPC, Mang Den (14°39'51.8"N, 108°17'35.728"E), V.2018, Dang Ngoc Van legit. 1 PT♂ MZF, Kon Tum, Ngoch Linh Mts., 1900 m, V.2019, local collectors. 1 PT♂ ERPC, Vietnam, Kon Tum, Ngoch Linh Mt., 1700 m, IV.2016, local collectors. 2 PT♂ ERPC, Same data as the first paratype above.

Description of holotype ♂. Length: 12.9 mm. Maximum width: 5.9 mm. Elongate, with slender legs. Underside mostly black. Head black, with clypeus dark fulvous. Pronotum dark fulvous, weakly shiny, with black spot close to posterior corner and close to lateral margin at about one-third of length. Scutellum suffused dark fulvous. Elytra black, matt, with a broad, dark fulvous band around all margins. Pygidium black, shiny, with fulvous band along apex. Legs dark fulvous, tarsi dark fulvous with apex blackish. Body marked with chalky material as follows: pronotum with a narrow band around margins, interrupted at one-third of lateral margins and at one-third and two-thirds of posterior margin, a narrow longitudinal line not reaching anterior and posterior margins in the middle and a small spot on each side of disc; elytra with narrow, short, sinuate transverse bands, positioned before and behind middle, latter widened, not reaching margins, and narrow band at juxtascutellar margin; pygidium with two large, narrowly separated maculae not reaching margins; ventrites nearly covered, except apical ventrite.

Head. Clypeus glabrous, slightly wider than long, widest at centre, sides convex; anterior corners rounded, anterior margin sinuate, broadly emarginate; surface covered in large, shallow punctures. Frons glabrous, transversely reticulate-punctate. Antennal club arched, about 1.4 times as long as clypeal length.

Pronotum. Octagonal, wider than long, moderately convex, with longitudinal hollow medially, sides regular-

ly convex, anterior angles obtuse, posterior angles rounded and slightly projecting posteriorly, posterior margin broadly emarginate medially; surface covered in scattered, round, shallow punctures.

Scutellum. Triangular, wider than long, arcuate posteriorly, with surface sparsely punctulate.

Elytron. Longer than wide, widest before middle, with seven striae, six dorsally and one on lateral declivity, marked by mixed horseshoe to round punctures.

Pygidium. Glabrous, convex, wider than long, with apex rounded.

Legs. Protibia bidentate, lacking terminal spur. Profemur without longitudinal serrated carina on anterior margin. Posterior margin of meso- and metatibia with medial tooth obsolete. Basal metatarsomere longer than second; with brush of dark fulvous setae on internal side of each tarsomere.

Anal ventrites. Not depressed medially.

Aedeagus. As in Figs 39-41.

Description of female (differences from male only). Length 15.1 mm, maximum width 6.7 mm. Stockier than male, with protibia broader. Antennal club as long as clypeus. Pronotum without black spots and chalky material. Pygidium with less chalky material than in male, distributed in two well-separated, large, rounded chalky maculae on sides but not reaching margins. Apex depressed. Tergites testaceous with few chalky spots. Ventrites without chalky material. External margin of metatibia with central tooth noticeable. Tarsi more robust than in male.

Type series variability. Males vary in length from 12.9 to 15.6 mm. In two paratypes, the broad fulvous band that surrounds each elytron is less wide than in the holotype. In these specimens, the black spot on pronotum is also wider than in the holotype. Two male paratypes have black pronotal lateral margins.

Derivatio nominis. This species is dedicated to Van Bo Dang, who helped collecting the type series.

Diagnosis. *Paratrichius dangvanboi* new species differs from the only other species inhabiting central Vietnam with similar chalky markings (i.e. *P. dangngocvani* Ricchiardi, 2018) by its distinctive dorsal coloration (Ricchiardi 2018, Fig. 2). The shape of its parameres is also very distinctive (Figs 39-41).

***Paratrichius parvolaetus* sp. nov.** (Figs 47-59)

Type series. HT♂ NHM, **Vietnam:** Kon Tum, Ngoc Linh Mts., 1700 m, V.2016, Local collectors. PT♀ ERPC, same data as holotype. 1 PT♂ MZF, Vietnam, Kon Tum, about 30 km from Klong Plon (14°40,320'N, 108°15,829'E), 1250 m, 4/7.V.2016, Bartolozzi & al. legit. 3 PT♂ ERPC, same data as holotype.

Description of holotype ♂. *General*. Length 9.0 mm, maximum width 4.0 mm. Elongate, with slender legs. Black, with antennae dark fulvous. Elytra black, matt, with large, reddish orange band around umbones and round reddish orange spot at two-thirds of disc length. Chalky material distributed as follow: pronotum with band around lateral margins, interrupted at around one-third of length and with longitudinal band in the middle, reaching both anterior and posterior margins, sinuously widening towards posterior margin, finally, small spot at middle of each semi-disc; elytra with several spots at one-third length and four spots at two-thirds length, and juxtascutellar margin with narrow line; pygidium with large spot on each side, separated from margins; ventral surface nearly completely covered, except anal ventrite.

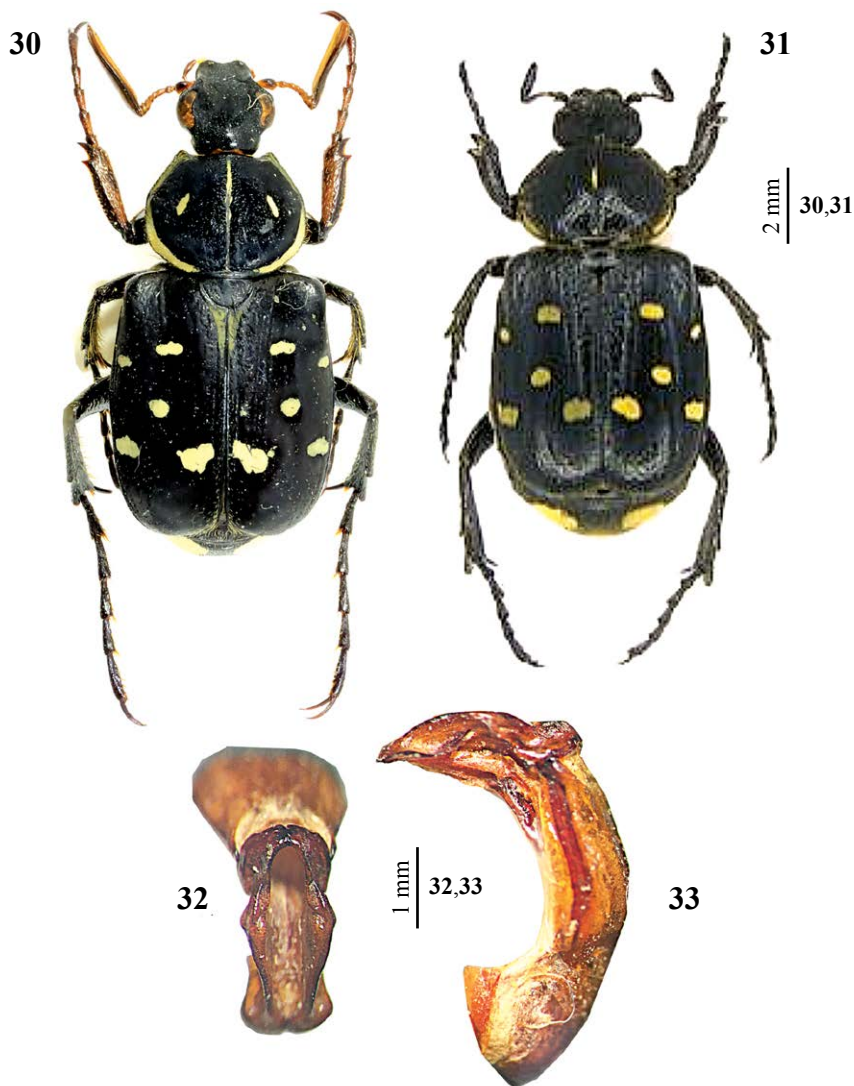
Head. Clypeus wider than long, anterior margin sinuate, anterior corners rounded, lateral margins convex on

40-50% of length behind anterior margin; surface weakly shiny, shagreened. Frons reticulate. Antennal club long, about 2.3 times as long as clypeal length.

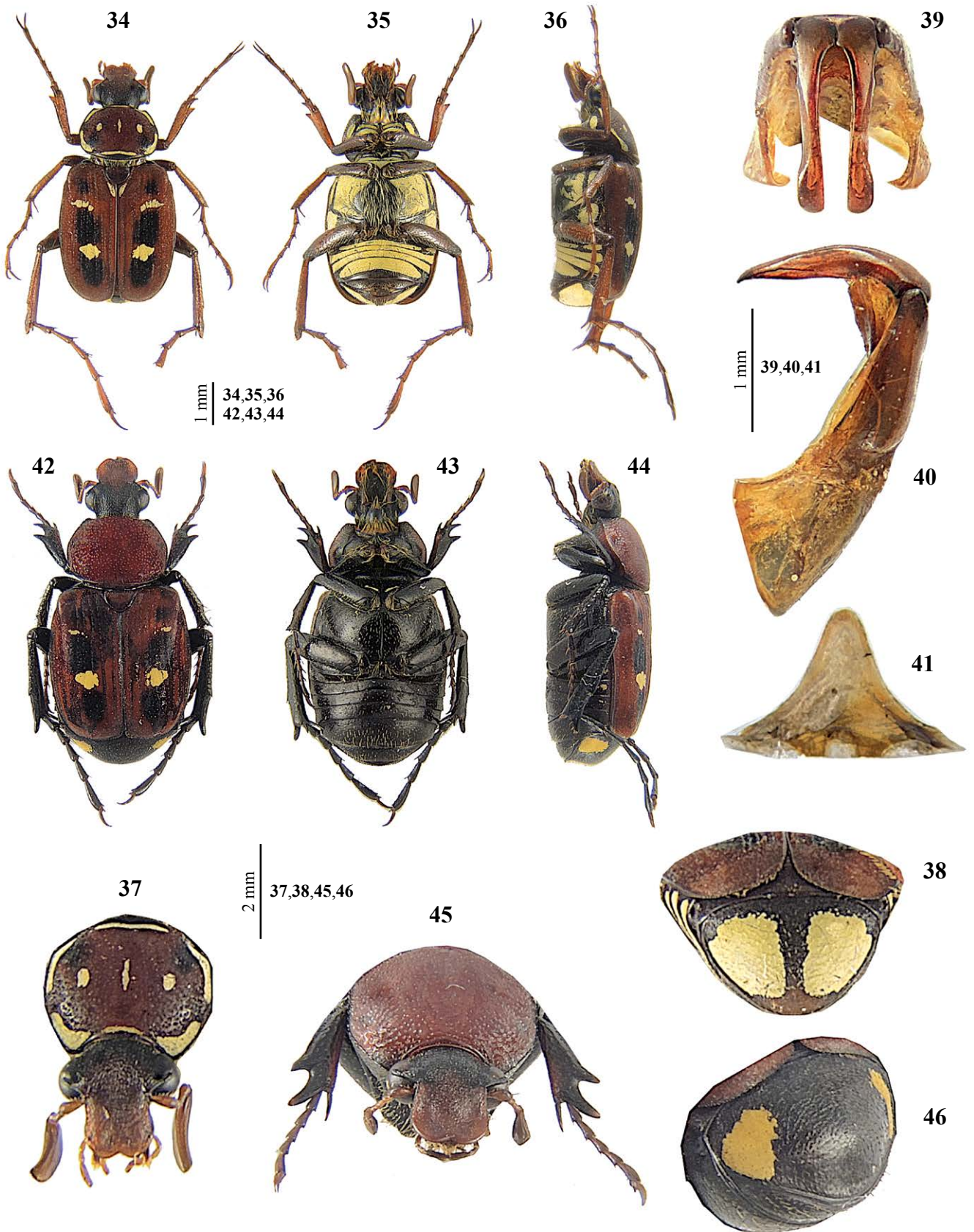
Pronotum. Octagonal, wider than long, moderately convex, longitudinally hollowed at centre, lateral margins straight, converging towards anterior third, nearly parallel at centre, broadly rounded posteriorly; anterior corners obtuse, rounded at apex, posterior corners rounded and slightly projecting posteriorly; posterior margin broadly emarginate at centre. Surface weakly shiny, horizontally reticulate, without black pruinosity, lateral margins exhibiting thick, fulvous, short setae.

Scutellum. Triangular, wider than long, sides convexly arcuate, apex rounded, surface sparsely punctulate.

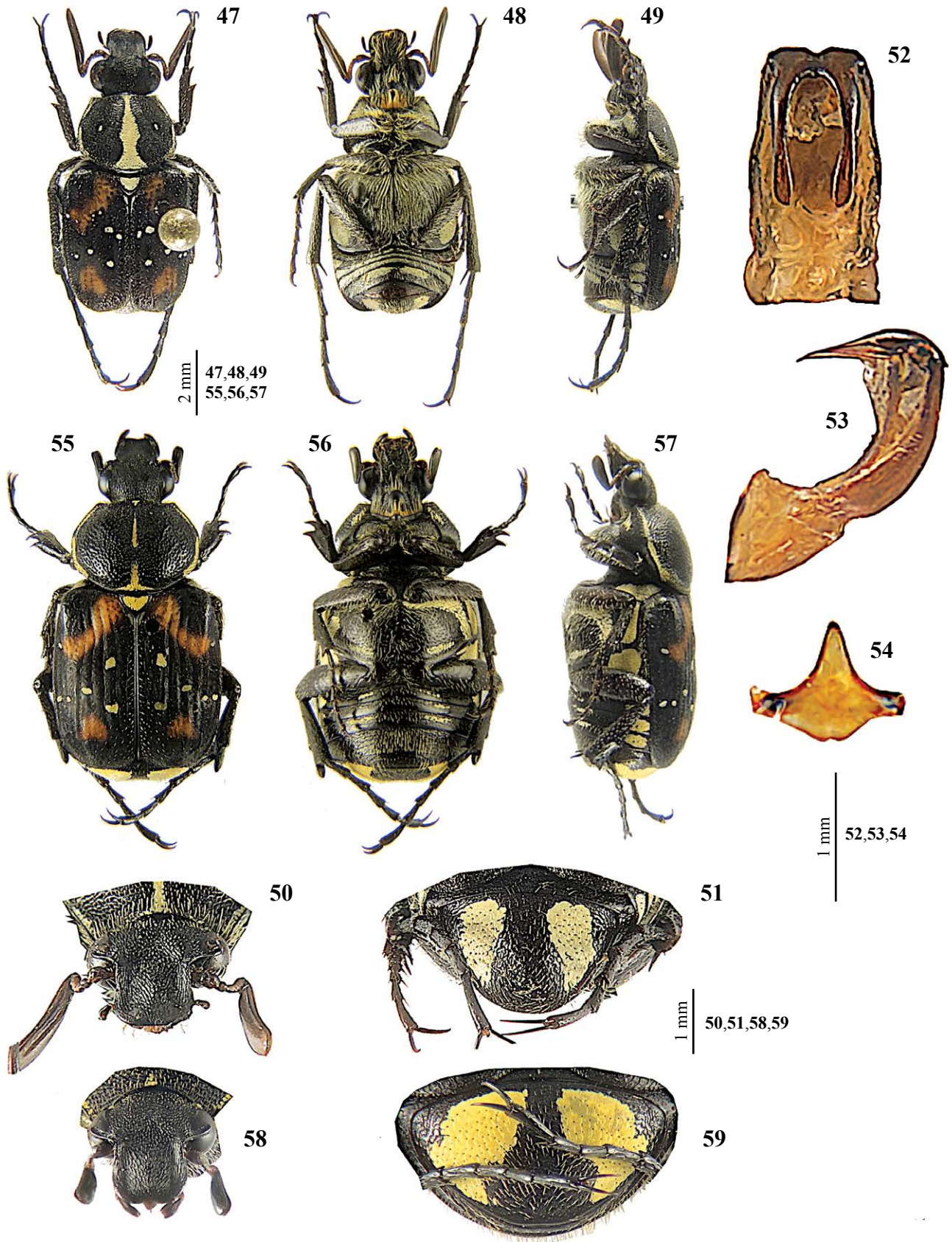
Elytra. Longer than wide, widest before the middle, each elytron with seven striae, six dorsally and one on lateral declivity. Intervals with rows of scattered, fulvous,



Figs 30-33 – *Paratrichius riekoae* Iwase, 1996. Male from Gansu (NHM): **30**, dorsal habitus. **32**, parameres frontal view. **33**, Parameres, lateral view. Female from Henan (NHM): **31**, dorsal habitus. Shape of the parameres compared with drawings of the holotype (Iwase 1996: Fig. 11, page 83). Photographs by Sha Li.



Figs 34-46 – *Paratrichius dangvanboi* sp. nov. Holotype ♂ NHM: **34**, dorsal habitus. **35**, ventral habitus. **36**, lateral habitus. **37**, head. **38**, pygidium. **39**, parameres, frontal view. **40**, parameres, lateral view. **41**, spiculum gastrale. Paratype ♀ ERPC: **42**, dorsal habitus. **43**, ventral habitus. **44**, lateral habitus. **45**, head. **46**, pygidium.



Figs 47-59 – *Paratrichius parvolaetus* sp. nov. Holotype ♂ NHM: 47, dorsal habitus. 48 ventral habitus. 49, lateral habitus. 50, head. 51, pygidium. 52, parameres frontal view. 53, Parameres, lateral view. 54, spiculum gastrale. Paratype ♀ ERPC: 55, dorsal habitus. 56, ventral habitus. 57, lateral habitus. 58, head. 59, pygidium.

short and erect setae, longer and thicker along sutural margin. Striae noticeable, with shallow, horseshoe punctures, often joined to form a row.

Pygidium. Convex, wider than long, nearly glabrous, with apex rounded.

Legs. Protibia bidentate, lacking terminal spur; metatarsi exhibiting very sparse minute setae on dorsal surface. Posterior margin of mesotibia with very weak tooth at centre. Posterior margin of metatibia with obsolete, small tooth at centre; basal metatarsomere longer than second; metatarsomeres with some short, fulvous setae on internal surface.

Anal ventrites. Not hollowed in the middle.

Aedeagus. As in Figs 52-54.

Description of female (ERPC) (differences from male only). *General*. Length: 11.1mm, width: 5.4 mm. The female of *P. parvolaetus* differs from its male in the following characters: stockier than male, with protibia broader. Antennal club shorter than in male, but still longer than clypeus. Pronotum with central, longitudinal depression much narrower than in male, as is the chalky longitudinal band. Pygidium slightly depressed at apex. Ventrites with a line of chalky material interrupted at one- and two-thirds of width. External margin of metatibia with central tooth prominent and pointed. Metatarsi more robust than in male. All the chalky markings are pale yellow instead of white. Tarsi are more robust than in male.

Type series variability. One paratype ♂ has the elytra completely reddish-orange with the reddish-orange band and spot barely discernible. This specimen was probably freshly emerged when it was collected.

Derivatio nominis. The name of this species comes from Latin *parvus*, meaning small and *laetus*, meaning colored.

Distribution. This species occurs in the Ngoc Linh mountains of central Vietnam.

Diagnosis. One of the most distinctive characters of *P. parvolaetus* is the large reddish-orange band that isolates the humeral umbones. According to Iwase (2005) four species of *Paratrichius* sharing this character inhabit Indochina. Two of these, *P. flavipes* (Moser, 1901) and *P. ricchiardii* Miyake, 2000, inhabit the northern Vietnamese provinces of Vinh Phuc and Lang Son respectively. The latter species has not been collected in Vietnam, but occurs in north Thailand (Chiang Mai, Chiang Rai) and north-western Laos (Hua Phan, **new record**). A third species, *P. pulchellus* Iwase, 2006, is known from the south-western provinces of Vietnam (described from Lam Dong, but inhabits Dak Lak as well, **new record**) but has never been collected in central Vietnam. The fourth species, *P. elegantulus* (Moser, 1901), described from the Vietnamese province of Lang Son, also inhabits China (Guangxi,

new record) and Laos (Hua Phan, **new record**), but has not been collected in central Vietnam. Consequently, *P. parvolaetus* can be separated easily from the other species inhabiting central Vietnam (both sexes) by its small size, the distinctive color pattern of the elytra and by the broad central band of chalky material on the pronotal disc. In any case, the shape of its parameres is very distinctive (Figs 52-54).

***Paratrichius saetosus* sp. nov.** (Figs 60-73)

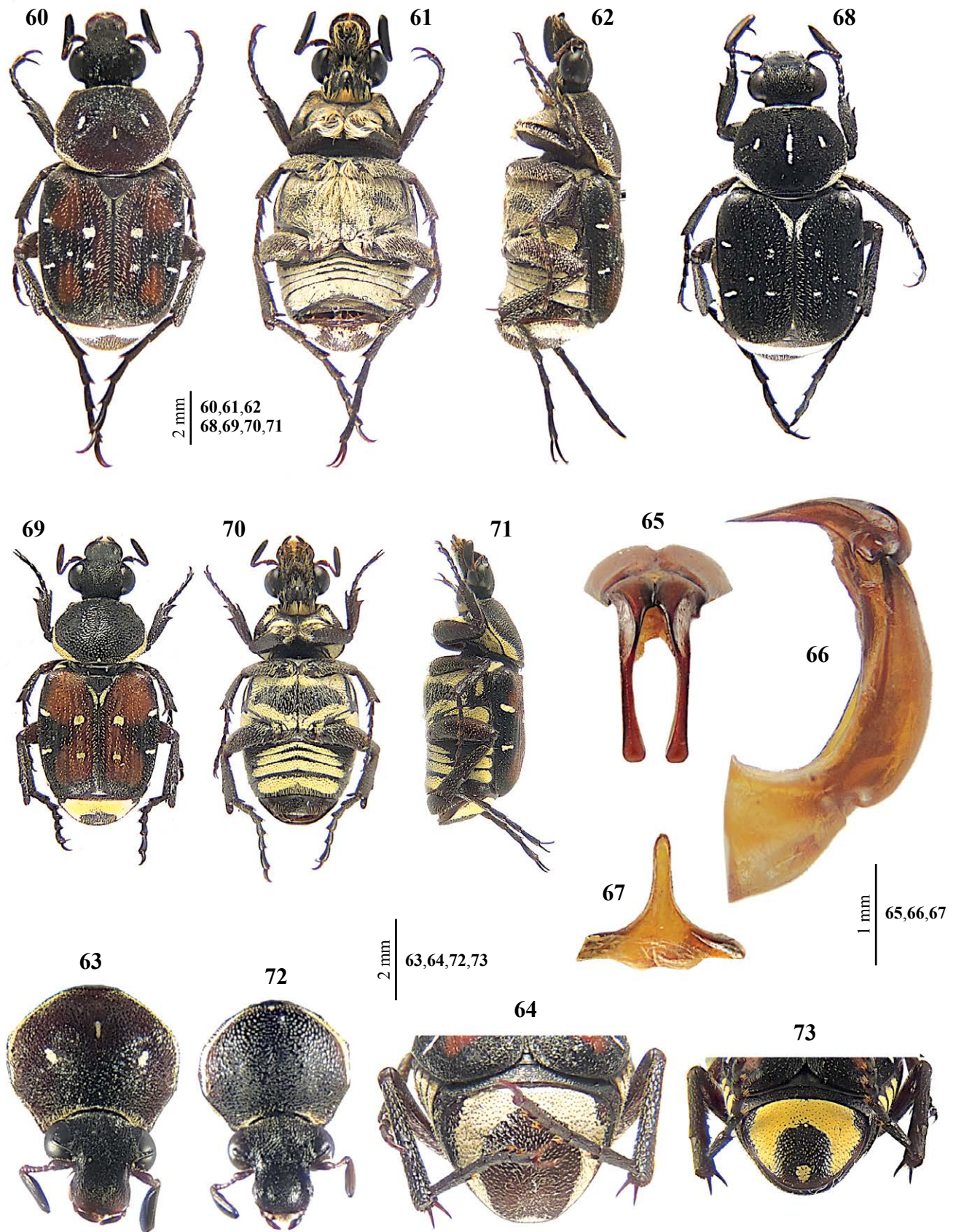
Type series. HT ♂ MNHN, **Vietnam**: Ha Tinh Province, Huong Son, VI.2017, Dang Ngoc Van legit. PT ♀ ERPC, same data as holotype. 8 PT ♂ ERPC, 1 PT ♂ ZMF, 1PT ♂ PKLPC, 3PT ♀ ERPC same data as holotype. 3 PT ♂ SJPC, Ha Tinh, June 2017, local collectors.

Description of holotype ♂. *General*. Length 13.3 mm, maximum width 5.6 mm. Elongate, with slender legs. Black, with exception of anterior margin of clypeus and antennomeres which are dark fulvous, pronotum dull brick-red except central anterior half which is black. Scutellum dull brick-red. Elytra black, matt, with two dark fulvous maculae at one-third and two-thirds length, respectively, first one reaching anterior margin; first interval and, partially, suture dull brick-red. Pygidium dull brick-red, blackish at apex. Tergites dark reddish-range. Ventrites brown, except anal which is dull brick-red. Body decorated with chalky material as follow: pronotum with band around margins interrupted on lateral and posterior margins; short, medial longitudinal line on disc and short line at middle on both sides of disc; elytra with narrow band along margins of scutellum, and five chalky maculae, two at one-third length, two at two-thirds length and the fifth more or less centred between the other four, external posterior one slightly elongate; pygidium with large, horizontally C-shaped band around dorsal and lateral margins and at apical margin (Fig. 64); tergites covered centrally, ventrites mostly covered.

Head. Black, weakly shiny. Clypeus exhibiting flattish surface, with anterior margin rounded and weakly sinuate, lateral margins convex on 60-70% of length from anterior margin. Clypeal surface with anterior half longitudinally and coarsely reticulate-striate; posterior half horizontally and coarsely reticulate-striate. Frons longitudinally coarsely reticulate-striate. Antennal club long, about 1.3 times as long as clypeus length.

Pronotum. Posterior corners rounded and slightly projecting posteriorly. Central longitudinal depression effaced with shallow mark visible only at centre of disc. Surface: centre of anterior third horizontally, coarsely reticulate-striate; middle third and sides of anterior third coarsely, transversely reticulate-striate; posterior third densely foveolate. With scattered fulvous setae on lateral margins, becoming thicker on posterior corners.

Scutellum. Triangular, matt, wider than long, margins



Figs 60-73 – *Paratrichiurus saetosus* sp. nov. Holotype ♂ MNHN: **60**, dorsal habitus. **61** ventral habitus. **62**, lateral habitus. **63**, head. **64**, pygidium. **65**, parameres frontal view. **66**, Parameres, lateral view. **67**, spiculum gastrale. Paratype ♂ ERPC: **68**, color variation. Paratype ♀ ERPC: **69**, dorsal habitus. **70**, ventral habitus. **71**, lateral habitus. **72**, head. **73**, pygidium.

slightly arcuate, apex rounded, with central, broad, rounded carina, punctate-striate laterally.

Elytra. Matt, longer than wide, widest at centre. Intervals with rows of short, fulvous setae bent backward, except first seta and those on sutural margins, which are thick and bent towards lateral margins. Striae noticeable, with shallow rows of elongate horseshoe punctures.

Pygidium. Convex, wider than long, covered in regularly distributed, short, fulvous setae bent in different directions, surface imbricate, apex rounded.

Anal ventrites. Only anal ventrite depressed.

Legs. Protibia bidentate, lacking terminal spur; metatarsi with tuft of fulvous setae on inner apex of first four tarsomeres. Posterior margin of mesotibia and metatibia with barely visible tooth at centre.

Aedeagus. As in Figs 65-67.

Description of female (differences from male only). *General*. Smaller than holotype: length 11.2 mm, maximum width 4.9 mm. Stockier than male, with protibia broader. Black, except antennomeres and two small, effaced, dull brick-red spots at one-third and two-thirds of lateral margins of pronotum. Ventrites black, but anal one brown. Body decorated with pale yellow chalky markings distributed as in male, except none present on disc of pronotum, but with small spot at centre of posterior margin and small spot at centre of pygidial apex (Fig. 73). Antennal clubs about as long as clypeus. Pronotum with scattered, fulvous setae on lateral margins. Elytral intervals with rows of short, fulvous setae bent backwards, except first seta and those on sutural margins which are thick and bent towards external margins; generally less striking than in male. Pygidial midline hollowed from two-thirds to apex. Anal ventrite not depressed. External margin of metatibia with noticeable central tooth. Tarsi more robust than in male.

Type series variability. The size of the ten male paratypes is fairly homogeneous. The extent of elytral spots varies from wide band, or two separate bands, to totally absent. The three female paratypes are smaller than males, with similar integumental color and pattern of chalky material.

Derivatio nominis. From the Latin *saetosus*, meaning “bristly” because the noticeable striae-interstriae are highlighted by the presence of rows of setae.

Diagnosis. *Paratrichius saetosus* can be easily separated by the peculiar and distinctive sculpturing of the clypeus and pronotum and by the shallow depression at apex of the pygidium in females, which is often adorned with a more or less round spot of chalky material in the middle. Paramere shape is distinctive (Figs 65-67).

Distribution. Only known from Ha Tinh Province, Vietnam.

Paratrichius triguttatus sp. nov. (Figs 74-86)

Type series. HT ♂ NHM, **Vietnam**: Lam Dong, Dambri, Bao Lam, 800m, III.2018, Dang Ngoc Van legit. PT ♀ ERPC, Lam Dong, Dambri, Bao Loc, 700 m, III-2028, Dang Ngoc Van legit. 1 PT ♂ ERPC, same data as holotype.

Description of holotype ♂. *General*. Small species: length 10.1 mm, maximum width 4.4 mm. Elongate, with slender legs. Head black, weakly shiny. Pronotum black, matt, disc covered in black pruinosity, not effaced at sides. Scutellum matt, black. Elytra black, matt, surrounded by a complete reddish-orange band, with two horizontal, narrow bands of same color at one and two-thirds of length. Pygidium black, shiny where not covered in chalky material. Ventrites black, except pre-anal and anal which are brown. Legs black. With pale yellow chalky markings, distributed as follow: two lateral longitudinal spots on clypeus, two rounded maculae on each side of frons; pronotum with continuous chalky band around margins and three elongate discal spots, one inside each depression; elytra with two narrow, sinuate, transverse chalky lines extending from external margin to second striae; pygidium completely covered except a large, oval spot in the middle of disc; first three tergites covered, ventrites covered, except apical and posterior third of ante-apical segment.

Head. Clypeus about as long as wide, arched, with lateral margins slightly convex in 70-80 % of length from anterior margin, which is sinuate, emarginate, not reflexed. Posterior half of clypeus and frons covered with scattered, raised, fulvous setae. Surface of clypeus and frons reticulate. Antennal club short, about 1.35 times as long as clypeal length, antennomeres dark brown.

Pronotum. Slightly widened, with maximum width at three-quarters length; distinct longitudinal depression present at centre, effaced on both sides and with two large, round depressions in the middle, one on either side halfway to margins. Posterior corners rounded and slightly projecting laterally. Surface densely reticulate-punctate, with short, erect, dark fulvous seta emerging from centre of each puncture.

Scutellum. With longitudinal, effaced carina, without punctures at centre, but punctate at sides.

Elytra. Intervals with rows of scattered short, erect fulvous setae, becoming longer and thicker on sutural margin. Striae noticeable, with rows or shallow, circular, punctures.

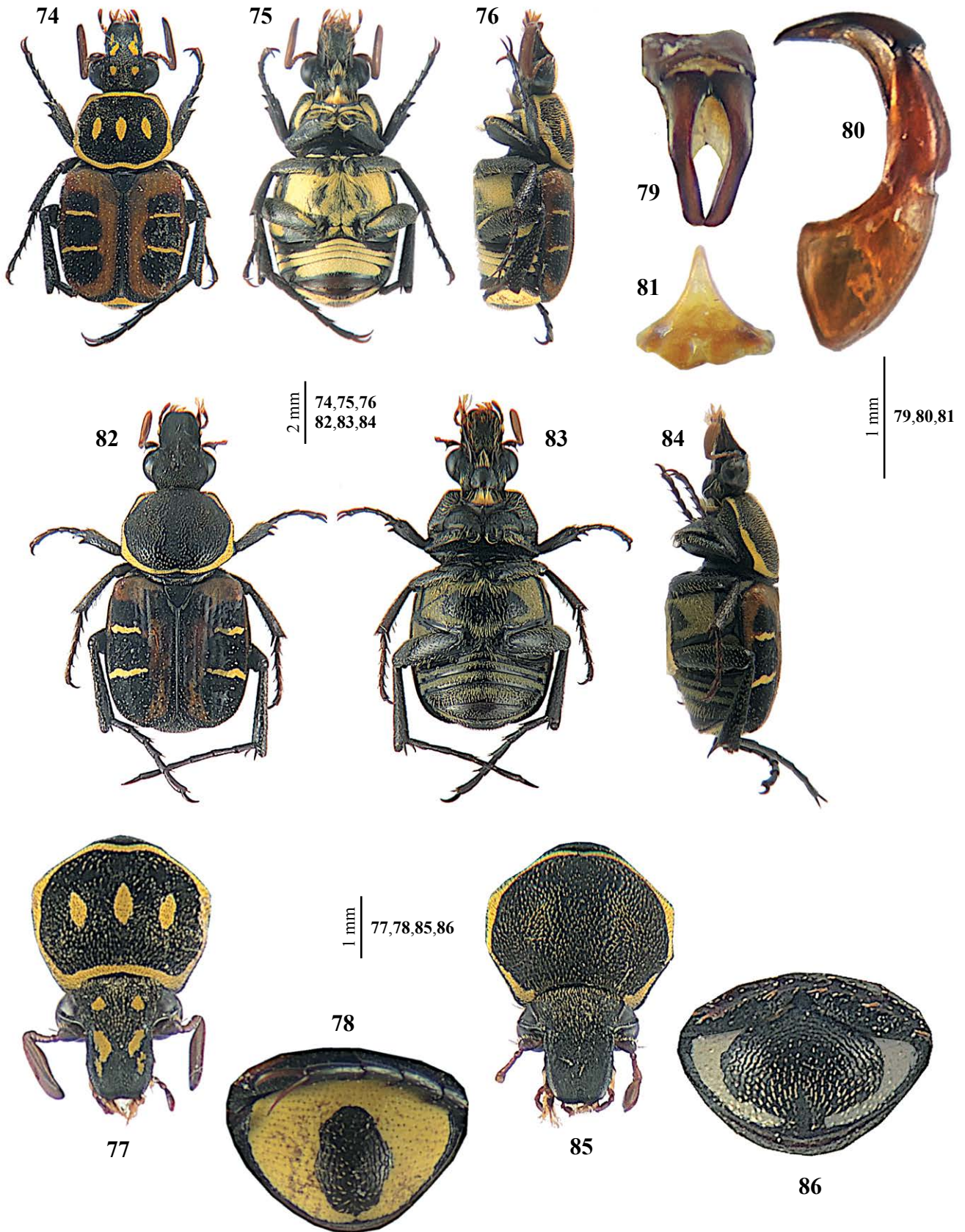
Pygidium. Surface imbricate, apex rounded.

Ventrites. Anal ventrite not depressed, without chalky markings.

Legs. Anterior margin of profemur with scattered crenulations. Metatibia with central, external tooth obsolete. Metatarsomeres with tuft of dark fulvous setae at apex.

Aedeagus. As in Figs 78-81.

Description of female (differences from male only). Slightly stockier than male, with protibia larger. Length



Figs 74-86 – *Paratrichius triguttatus* sp. nov. Holotype ♂ NHM: 74, dorsal habitus. 75, ventral habitus. 76, Lateral habitus. 77, head. 78, pygidium, 79, parameres frontal view. 80, parameres, lateral view. 81, spiculum gastrale. Paratype ♀ ERPC: 82, dorsal habitus. 83, ventral habitus. 84, lateral habitus. 85, head. 86, pygidium.

11.1 mm, maximum width 4.8 mm. Head black, weakly shiny, posterior half of clypeus and frons covered with scattered, raised, fulvous setae. Lateral margins of clypeus slightly convex throughout length. Frons and clypeus without chalky patches. Antennal scape dark fulvous, remaining antennomeres and club fulvous. Antennal club as long as clypeus. Pronotum black, partially shiny; central longitudinal depression present, with fairly noticeable depressions laterally; surface coarsely reticulate, except for triangular area with base at centre of posterior margin extending to two-thirds length, foveolate; with short, erect, scattered fulvous setae, becoming denser around posterior corners. Scutellum blackish-brown, weakly shiny, with a longitudinal, effaced carina, without punctures at centre, with very scattered punctures on sides. Elytra black, matt, with a wide reddish orange band along anterior and sutural margins, except suture which is black, reddish-orange band follows lateral margin progressively narrowing and ending at about two-thirds of elytral length, lateral carina black. Intervals with rows of scattered fulvous short, erect setae, becoming longer and thicker along juxtasutural part of sutural margin. Pygidium black, shiny, with wide, pale yellow, chalky C-shaped band laterally; surface imbricate; apical third deeply depressed. Legs black, except protarsi, mesotarsi and mesotibiae which are brown. External margin of metatibia with central tooth noticeable, with rounded apex.

Derivatio nominis. The name of this species is derived from the characteristic three spots of pale-yellow chalky material present on male pronotum.

Type series variability. The only paratype male is very similar to the holotype.

Diagnosis. This small species can easily be separated from any other by the three prominent chalky yellow elongated spots on male pronotum. Small species with sexes subequal in size. The pale-yellow chalky marking of the male is unique among central Vietnamese *Paratrichius*. The shape of its parameres is also quite distinctive (Figs 79-81).

***Paratrichius inexpectatus* sp. nov.** (Figs 87-99)

Type series. HT ♂ MNHN, Vietnam: Ha Giang, VI.2019, local collectors. PT ♀ ERPC, same data as holotype but VII.2019. 1 PT ♀ ERPC, same data as the first paratype.

Description of holotype ♂. *General.* Length 13.6 mm, maximum width 5.4 mm. Elongate, with slender legs. Head black, matt, with clypeus weakly shiny. Antennomeres brown. Pronotum black. Elytra dark reddish-orange, darkening towards lateral declivity. Scutellum black. Pygidium black and shiny. Tergites and sternites black. Pale yellow chalky material distributed as follow: head without chalky spots; scutellum completely covered; elytra with

two narrow, transverse, sinuate lines extending from external margin, first at one-third of length extending to second striae, second at two-thirds length extending to suture anterior third of suture and along margins of scutellum; pygidium with two broad, comma-shaped spots on sides; tergites and ventrites covered at centre; anteapical ventrite with large band at centre; anal ventrite without chalky markings. Legs black.

Head. Clypeus short, horizontally arched. Lateral margins slightly convex on 70-80 % of length from anterior margin. Anterior margin emarginate, not reflexed. Surface of clypeus and frons reticulate. Frons and vertex covered with scattered, long, erect fulvous setae. Antennal club long, about 1.35 times as long as clypeal length.

Pronotum. Suboctagonal, slightly widened posteriorly, moderately convex. Posterior corners rounded and slightly projecting laterally. Central longitudinal depression absent. Surface punctulate. Covered with scattered, short, erect yellowish setae.

Scutellum. Triangular, wider than long, sides arcuate, apex rounded.

Elytra. Longer than wide, widest before middle. Humeral umbone developed. Intervals with scattered pale-yellow setation, becoming denser at elytral apex, with blackish, shallow punctuation on anterior half of first interval. Striae noticeable, with shallow, horseshoe punctures, rarely joined to form rows.

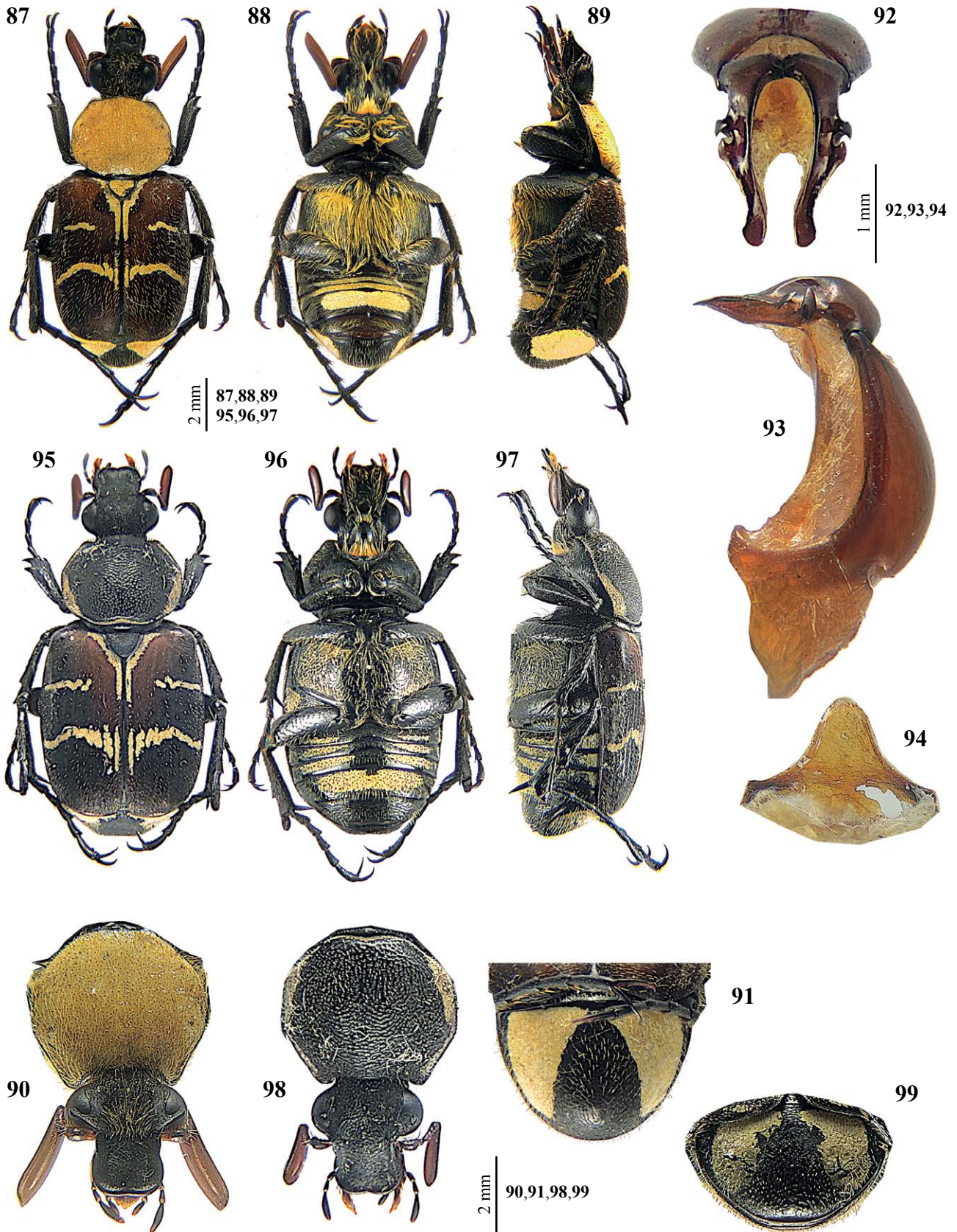
Pygidium. Convex, wider than long, with apex rounded. Surface imbricate. Anal ventrites hollowed, without chalky material.

Ventrites. Metasternal and abdominal ventrites covered with long yellow setae. Anal ventrite depressed medially.

Legs. Protibia bidentate, lacking terminal spur. Anterior margin of profemur densely crenulate. Metatibia with central, external tooth present, but not very prominent. Metatarsi with short, fulvous setae on internal side of all tarsomeres.

Aedeagus. As in Figs 92-94.

Description of female (differences from male only). Length 14.7 mm, maximum width 6.4 mm. Stockier than male, with protibia larger. Clypeus less horizontally arched than in male, with a rounded carina on each side. Clypeal surface with anterior half horizontally, coarsely reticulate; posteriorly half longitudinally, coarsely reticulate. Antennomeres 1-4 dark brown, 5-6 and clubs dark fulvous. Pronotum with central longitudinal depression effaced, with traces present only at centre of disc. With dirty chalky band around lateral and posterior margins. Pronotal surface coarsely reticulate, except for triangular area with base at centre of posterior margin extending two-thirds of pronotal length, which is foveolate. Pronotum with short, erect, scattered fulvous setae slightly denser around posterior corners. Scutellum black, coarsely, minutely punctate, matt, covered with black pruinosity. Elytra dark reddish-



Figs 87-99 – *Paratrichius inexpectatus* sp. nov. Holotype ♂ MNHN: **87**, dorsal habitus. **88**, ventral habitus. **89**, lateral habitus. **90**, head. **91**, pygidium, **92**, parameres, frontal view. **93**, parameres, lateral view. **94**, spiculum gastrale. Paratype ♀ ERPC: **95**, dorsal habitus. **96**, ventral habitus. **97**, lateral habitus. **98**, head. **99**, pygidium.

orange, darkening toward lateral declivity and posteriorly, with two narrow, sinuate dirty chalky lines distributed as in male. Striae noticeable, with shallow, horseshoe punctures, which are often joined to form lines. Pygidium black, weakly shiny, with two triangular, wide bands of dirty chalky material at sides; surface punctulate; apex slightly depressed. Pygidium in dorsal view flattened at very apex. Apical ventrite not depressed and with a wide band of dirty chalky material. External margin of metatibia with central tooth noticeable.

Type series variability. The two female paratypes are quite similar.

Derivatio nominis. The name of this species originates from the surprise of finding another species so close to *Paratrichius pejchai* in Ha Giang.

Diagnosis. Mükstein (2018) described a new Vietnamese species collected in Ha Giang, *P. pejchai* Mükstein, 2018. This species has a peculiar aspect and unusual parameres bearing prominent «wing-shaped protuberances, laterally protruding from basal part of parameres» (Mükstein 2018, Figs 5-6). After that, Mükstein, along with Hao Xu and Jian-Yue Qiu (Mükstein et al. 2020), described a second new species, *P. tesari* Mükstein et al., 2020, collected in Guizhou (China) exhibiting wing-shaped lateral protuberances of parameres even more prominent, but in a different perspective. While studying the current specimens, and dissecting the parameres, I was very surprised to discover that this was a new species, based on the distinctive shape of the parameres, with smaller and different wing-shaped lateral protuberances, different apex and lateral view (Figs 92-93). Males of *P. inexpectatus* can be separated from males of *P. pejchai* by their antennal club being slightly longer than in the latter species, by the second pale yellow chalky line on elytra that covers a portion of the suture (Fig. 87) and by the four basal ventrites, each bearing a broad, prominent band of pale yellow chalky material (Fig. 96). The two *P. inexpectatus* females can be identified by the presences of the second pale yellow chalky line on their elytra, which joins the suture (Fig. 95).

Remarks. *Paratrichius inexpectatus* was found in a locality only about 20 Km from the border with China. Thus, it probably also occurs in the mountains south of Wenshan, in Yunnan Province.

***Paratrichius variicoloratus* sp. nov.** (Figs 100-113)

Type series. HT ♂ NHM, **Vietnam:** Kon Tum, Ngoc Linh Mts., 1700 m, VI.2016, Dang Ngoc Van legit. PT ♀ ERPC Vietnam, Kon Tum, Ngoc Linh Mts., 1900 m, V.2017, Dang Ngoc Van legit. 1 PT ♂ PKLPC Vietnam, Kon Tum, Ngoc Linh Mts., 1600 m, IV.2019, local collectors. 2 PT ♂ 2 PT ♀ PMPC, Vietnam, Kon Tum, Chu Mom Nat. Park, V.2018, local collectors. 1 PT ♀ ERPC Vietnam, Kon Tum,

Ngoc Linh Mts., 1400 m, IV.2019, local collectors. 1 PT ♀ ERPC same data but 1600 m. 1 PT ♀ ERPC Vietnam, Kon Tum, Ngoc Linh Mts., 1900 m, V.2017, Dang Ngoc Van legit. 1 PT ♀ ERPC, Vietnam, Kon Tum, Ngoc Linh Mts., 1900 m, V.2019, Dang Ngoc Van legit. 1 PT ♂ ERPC, Vietnam, Kon Tum, Ngoc Linh Mts., 1600 m, IV.2019, Local collectors. 1 PT ♂ ERPC, Vietnam, Kon Tum, Ngoc Linh Mts., 1700 m, V.2016, Dang Ngoc Van legit. 1 PT ♂ ERPC, Quang Nam, Tay Giang, Mt. Axan, 1300 m, IV-2018, Local collectors.

Description of holotype ♂. *General.* Length 12.5 mm, maximum width 5.6 mm. Elongate, with slender legs. Black. Antennomeres dark fulvous. Pronotum black, reddish-brown on sides, matt, disc covered in black pruinosity, not present on sides. Scutellum black, matt, covered in black pruinosity. Elytra reddish-brown. Pygidium black, weakly shiny. Tergites and ventrites black, shiny. Tibiae reddish-brown, pro-, mesofemora and tarsi black with reddish-brown hue. Chalky material distributed as follow: frons and clypeus without chalky patches; pronotum with small chalky spots at centre of discal lateral depressions; each elytron with five main chalky spots, one each on second and fourth intervals not aligned at about one-third of length, one on fourth interval at about one half of length, two, not aligned, one on third interval at about two third of length and, finally, one stretched on last three intervals at about two thirds of length; in addition to main one, 5-6 small spots scattered on anterior third of length; pygidium black, weakly shiny, with two diagonal, large bands of chalky material on sides; anal ventrite depressed, without chalky material.

Head. Clypeus short, horizontally arched, with lateral margins weakly convex on 70-80 % of length from anterior margin which is emarginate, sinuate, not reflexed. Clypeal surface reticulate-striate, glabrous. Antennal club about twice as long as clypeus.

Pronotum. Suboctagonal, slightly widened medially, moderately convex, glabrous except anterior and posterior corners which exhibit some long, fulvous setae. Central longitudinal depression effaced, with traces only at centre of disc and with two effaced rounded depressions, one on each side. Surface anteriorly imbricate, posteriorly punctulate.

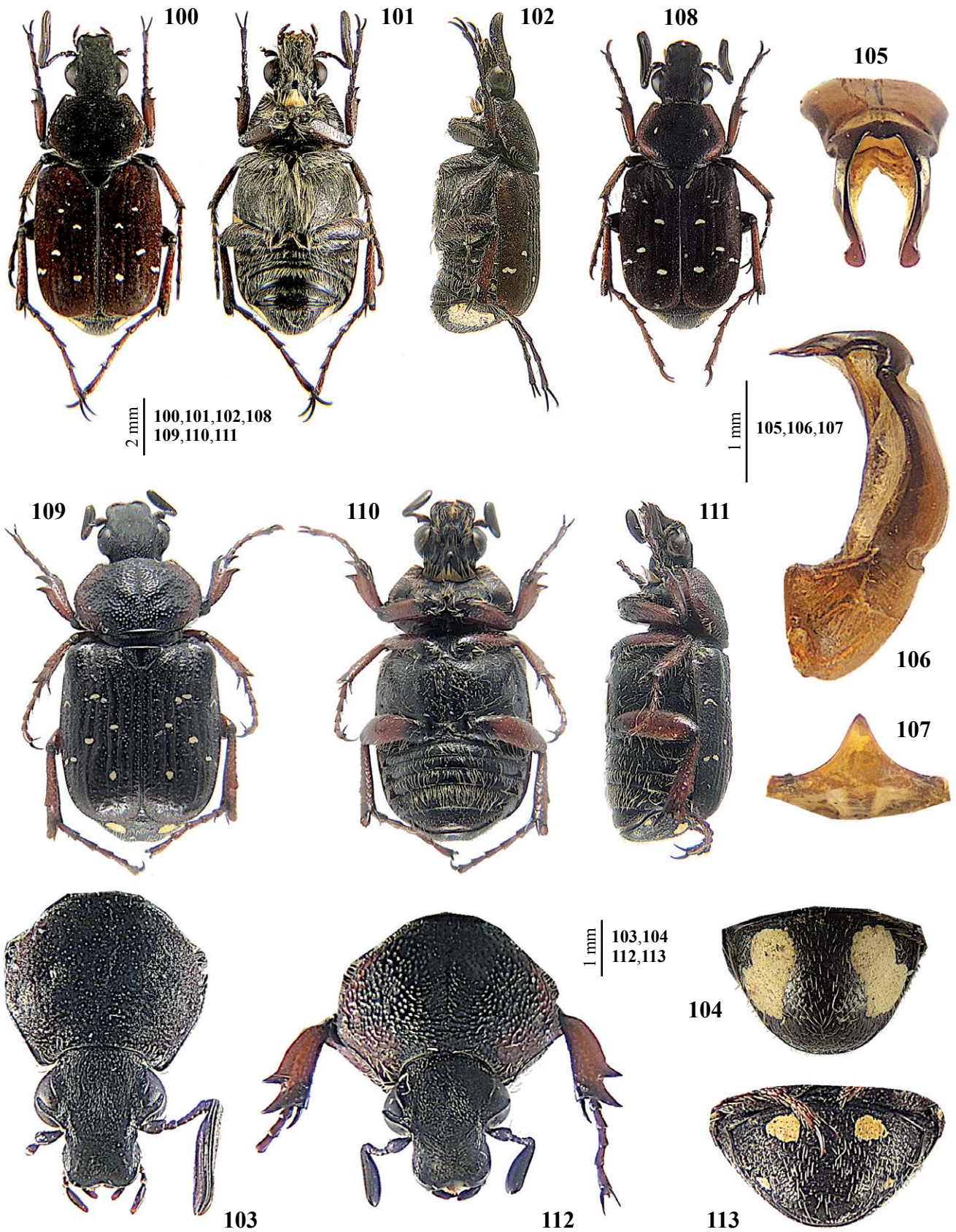
Scutellum. Triangular, wider than long, sides arcuate, apex rounded. Matt, covered in black pruinosity, punctulate on sides.

Elytra. Longer than wide, widest before the middle. Humeral umbone developed. Intervals punctulate. Striae scarcely noticeable, with horseshoe punctures, sometimes joined to form rows.

Pygidium. Convex, wider than long, with apex rounded. Surface concentrically imbricate

Anal ventrites. Depressed, without chalky material.

Legs. Protibia bidentate, lacking terminal spur. Anterior margin of profemur not crenulate. Metatibia with cen-



Figs 100-113 – *Paratrichiurus variicoloratus* sp. nov. Holotype ♂ NHM: **100**, dorsal habitus. **101**, ventral habitus. **102**, Lateral habitus. **103**, head. **104**, pygidium, **105**, parameres frontal view. **106**, parameres, lateral view. **107**, spiculum gastrale. **108**, colors variation. Paratype ♀: **109**, dorsal habitus. **110**, ventral habitus. **111**, lateral habitus. **112**, head. **113**, pygidium.

tral, external tooth prominent. Metatarsomeres with fulvous setae on internal side.

Aedeagus. As in Figs 105-107.

Description of female (differences from male only). Length 12.5 mm, maximum width 5.5 mm. Body stockier than male's, with protibia larger. Clypeus less arched horizontally than in male. Clypeal surface reticulate-striate, glabrous. Scapus black, antennomeres and clubs brown. Clubs slightly longer than clypeus. Pronotum weakly shiny, widened, without chalky patches, glabrous except some long fulvous setae on anterior and posterior corners. Surface of pronotum roughly rugose. Scutellum black, shiny, punctulate on sides. Elytra black, shiny. Intervals rugose. Striae very noticeable, with shallow punctures joined to form lines. Pygidium black, weakly shiny, covered with scattered, medium sized, posteriorly reclined, fulvous setae. With two small, rounded, pale yellow chalky spots near antero-lateral margins, and two other, smaller spots in middle of lateral margins. Pygidial surface reticulate-imbricate. Tergites each with small, pale-yellow chalky, rounded spot. Anal ventrite not depressed. Legs completely reddish-brown. External margin of metatibia with noticeable central tooth.

Type series variability. Some males have completely black elytra (Fig. 108). One male paratype has the pronotum and elytra completely black, with some extra spots of chalky material on pronotum, but has parameres identical to those of the holotype. In general, the pattern of chalky markings on the elytra can vary slightly from male to male.

Derivatio nominis. The name of this species is derived from the variable colour of the integument.

Diagnosis. Both sexes of *Paratrichius variicoloratus* can be separated from those of the other species inhabiting central Vietnam by the characteristic appearance of their pronotal surface: anteriorly imbricate, posteriorly punctulate in males, roughly wrinkled in females. Both sexes exhibit a rounded depression approximately at the centre of each pronotal side (Figs 103 and 112). Moreover, the females can be recognized by their deep, distinct striae and coarsely wrinkled intervals on the elytra. The shape of its parameres is quite distinctive too (Figs 105-107).

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