

## A Revision of the *Phaedeucyrtus* Group of the Genus *Phaedis* PASCOE (Coleoptera, Tenebrionidae, Cnodalonini)

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**Abstract** The subgenus *Phaedeucyrtus* of the genus *Phaedis* is synonymised with the nominotypical subgenus, and proposed to be ranked down to a group. Ten new species in this group are described herein as follows: *Phaedis angulicollis* sp. nov. (Sumatra), *P. kiyoyamai* sp. nov. (Malay Peninsula), *P. malayanus* sp. nov. (Malay Peninsula), *P. opacipennis* sp. nov. (Java), *P. purpurinotatus* sp. nov. (Malay Peninsula), *P. robustipes* sp. nov. (Thailand), *P. rolandi* sp. nov. (Borneo), *P. signicollis* sp. nov. (Malay Peninsula), *P. ventralis* sp. nov. (Borneo) and *P. yamasakoi* sp. nov. (Laos, Thailand). A key to the species of this group is provided.

### Introduction

The monotypic subgenus *Phaedeucyrtus* was established by PIC (1916) as a subgenus of the genus *Pseudeumolpus* KRAATZ, 1880 for *Pseudeumolpus (Phaedeucyrtus) obscuripes* PIC, 1916 from Zanzibar. Later, the genus *Pseudeumolpus* was synonymised with *Phaedis* PASCOE, 1866 by GEBIEN in 1941 and the subgenus thus belonged to *Phaedis*. However, no one has been able to examine the type specimen since the original description and the real identity of the subgenus has remained unclear. Fortunately in 2013, the author found the type specimen of this subgenus in PIC's collection deposited in the Muséum National d'Histoire Naturelle, Paris under good condition.

Up until the present, the members of the genus *Phaedis* are mostly known from Indomalaya and Palaearctic areas including SE Asia, China, Taiwan and Japan, and Sulawesi of Wallacea, while only one species *Phaedis (Phaedeucyrtus) obscuripes* was known from Zanzibar of Africa. The label(s) on the type specimen of *P. (P.) obscuripes* is written as “Zanzibar (Raffray)”, which means that the specimen belongs to the collection of RAFFRAY (1844–1923), and the locality of the specimen would be Zanzibar. However, ARDOIN (1967) pointed out that the PIC's types carrying the label as << Zanguebar, Raffray.>> are not meant to be Africa but actually Asian. BREMER (2001) agreed with his judgment. Also referring back to my around ten years' experience at the Muséum National d'Histoire Naturelle, Paris, the specimens even in different families of Coleoptera labeled as “Zanzibar (Raffray)” were thought to be with SE Asian origin. Therefore I agree with the opinion of ARDOIN and BREMER although the true locality is still indefinite.

In the present paper, the author would like to describe ten additional new species from Borneo, Malay Peninsula, Sumatra, Java, Thailand and Laos, which are brought from many European museums and colleagues.

### Materials and Methods

The specimens used in this study belong to the following institutes or private collections (acronyms are in parentheses): Ehime University Museum, Matsuyama, Japan (EUMJ); Hungarian Natural History Museum, Budapest, Hungary (HMNH); Muséum National d'Histoire Naturelle, Paris, France

(MNHN); Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany (SDEI); Staatliches Museum für Naturkunde, Stuttgart, Germany (SMNS); Zoologische Staatssammlung München, Germany (ZSM); collection of Dr. Roland GRIMM, Neuenbürg, Germany (CRGN); and collection of Kiyoshi ANDO, Osaka, Japan (CKAO).

Specimens were observed by a Leica MZ16 stereomicroscope. Male and female terminalia were dissected from specimens relaxed in hot water for about one hour, then cleared in hot KOH, neutralised with weak acetic acid, and rinsed with water. The illustrations of genitalia, ventral parts and legs were drawn by Leica drawing tubes. The terminalia were glued on a paper sheet by “Colle de poisson”. Photographs of specimens were taken by a Canon EOS 7D reflex camera with two macro lens (Canon macro photo lens MP-E 65 mm and EF 100 mm), and combined using a digital auto-montage software (Helicon Focus, v. 6.2.2 Lite). Morphological terminology follows that of MATTHEWS *et al.* (2008).

Body length shows the median length from the apex of labrum to the apices of elytra excluding antennae. Abbreviations of parts in the descriptions are as follows: EL — length of elytra along midline; EW — maximum width of elytra; IE — distance between eyes; PL — length of pronotum along midline; PW — maximum width of pronotum; TD — transverse diameter of an eye in dorsal view.

## Taxonomy

### Genus *Phaedis* PASCOE, 1866

*Phaedis* PASCOE, 1866: 474.

*Pseudeumolpus* KRAATZ, 1880: 111.

*Pseudeumolpus* (*Phaedeucyrtus*) PIC, 1916: 14. Type species: *Pseudeumolpus* (*Phaedeucyrtus*) *obscuripes* PIC, 1916. Syn. nov.

*Phaedis* (*Phaedis*): GEBIEN, 1941: 1145.

*Phaedis* (*Phaedeucyrtus*): GEBIEN, 1941: 1145.

*Notes.* ANDO (2008) once defined the genus *Phaedis*, and dealt with the characters dividing the group, species, and subspecies in the genus. However he did not refer to the subgeneric character due to few available information on the subgenus *Phaedeucyrtus*. Until then, this was the only subgenus separated from the nominotypical subgenus. The subgenus *Phaedeucyrtus* was established by PIC (1916) as follows:

*Original description.* *Pseudeumolpus* n. s. gen. *Phaedeucyrtus*. *Thorace marginato, antice distincte inciso et in medio insulcato; epipleuris antice dilatatis; pedibus validis, femoribus anticis fortiter dentatis, intermediis et posticis minute subdentatis.* — *Ce nouveau sousgenre se distingue, à première vue, par la structure femorale des pattes intermédiaires et postérieures, les fermurs étant courtement dentés en dessous près de leur sommet, ensuite faiblement échancrés vers les genoux.*

This subgenus is characterised in having not only the profemoral teeth, but also the meso- and metafemoral teeth. The type specimen of the subgenus *Phaedeucyrtus* is a female, of which all femora provided with the teeth, but the overall appearance is almost common with those in the nominotypical subgenus (see the subgenus *Phaedis* in ANDO, 2008). In the present study, the author could examine several undescribed species which have the meso- and metafemoral teeth. For some species among them, the metafemoral tooth is vestigial, or the meso- and metafemoral teeth are lacked in female.

Results of a careful comparison among many known species of the nominotypical subgenus and ten undescribed species suggested that the inherent character of *Phaedeucyrtus* is neither for the independent genus nor the subgenus. The characters separating the two subgenera are only the presence or absence of the meso- and metafemoral teeth, and other peculiar characters depend on specific rather

than generic ones, which are quite common with those in the nominotypical subgenus. About the weight of these teeth, for instance, their occurrences either have discrepancies in both sexes, or are in male only, or otherwise are extremely reduced. By taking this perspective, the weight of the meso- and metafemoral teeth is one of the specific characters rather than an apomorphic to the subgenus. Therefore, I concluded that the subgenus *Phaedeucyrtus* should be synonymised to the genus *Phaedis* and ranked down to a group of the latter.

Based on the characteristics of the external sexual dimorphism, the species of this group would be separated into four species subgroups as shown below in spite of that only one single female of the type species, and male specimen of five species (asterisked) are known. Therefore the grouping of this group is deferred to the future until both sexes could be examined.

The *obscuripes* subgroup (female with meso- and metafemoral teeth): *P. obscuripes* (Pic, 1916), *P. yamasakoi* sp. nov. and *P. purpurinotatus* sp. nov.

The *robustipes* subgroup (female without meso- and metafemoral teeth; male metatibia with apical tubercle): *P. robustipes* sp. nov.\*, *P. ventralis* sp. nov., *P. rolandi* sp. nov. and *P. kiyoyamai* sp. nov.\*

The *opacipennis* subgroup (male metatibiae with basal hook, female devoid of meso- and metafemoral teeth): *P. opacipennis* sp. nov.\*, *P. malayanus* sp. nov. and *P. signicollis* sp. nov.\*

The *angulicollis* subgroup (each posterior margin of meso- and metafemora with two teeth): *P. angulicollis* sp. nov.\*

### ***Phaedis obscuripes* (Pic, 1916)**

(Figs. 1–8, 29–32)

*Phaedeucyrtus obscuripes* Pic, 1916: 15.

*Phaedis (Phaedeucyrtus) obscuripes*: ANDO, 2008: 367 (in the list).

*Original description.* *Phaedeucyrtus obscuripes* n. sp. *Oblongus, postice subacuminatus, nitidus, cupreus, capite thoraceque pro parte purpureis, antennis ad basin, epipleuris et infra corpore rufescentibus, antennis apice pedibusque nigris. Thorace transverso, circa sinuato; elytris satis elongates, lineato-punctatis, intervallis deplanatis. Long. 13 mill. Zanzibar (Raffray).*

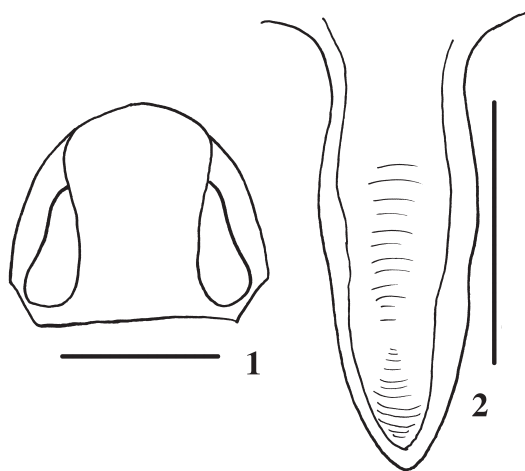
*Type examined.* 1 ♀, Zanzibar (Raffray) / *obscuripes* Pic / *Pseudeumolpus* sg. *Phaedeucyrtus* Pic / s. n. genre cuisses ant. fortement dentées les autres un peu / Type / TYPE / Muséum Paris Coll. M. Pic. (MNHN).

*Measurements.* Body length: 13.7 mm. Female (n = 1): IE/TD 2.67; PW/PL 1.55; EL/EW 1.67.

*Redescription.* Female. Oblong, convex above posteriorly, subshiny by dense microsculpture. Colour reddish brown, more or less darkened in part, dorsal surface slightly greenish brassy, with strong purplish sheen.

Head semicircular, weakly convex, with fine isodiametric microsculpture, anterior margin between clypeus and genae slightly sinuate; punctures dense and minute, rather coarse in part, those on frons sparser and larger than the rest of head; clypeus weakly convex, strongly sloping in apical third, with apex distinctly sinuate in middle; fronto-clypeal suture distinct, tenuously engraved; genae almost flat, straight at sides, nearly as wide as eye; post-genae rounded, ill-produced; frons weakly raised, flattened medially; eyes large, inner ocular-sulci distinct and deep. Antennae reaching middle of pronotum, distinctly dilated and clubbed in five distal antennomeres. Ultimate maxillary palpomere strongly dilated, shortened securiform. Mentum linguiform, wider than long (5 : 4), broadly convex in middle, deeply excavate at sides. Area beside submentum smooth.

Pronotum trapezoidal, widest at base; disc weakly convex, gently sloping laterad, shallowly sulcate along lateral margins, the sulci densely microsculptured; punctures fine and dense, larger and a



Figs. 1–2. *Phaedis obscuripes* (PIC, 1916). —  
1, Mentum; 2, prosternal process.  
Scales: 0.25 mm for fig. 1; 1.0 mm for fig. 2.

little sparser than those on head, gradually becoming minuter and sparser laterad; anterior margin arcuately and very deeply emarginate, distinctly beaded except for interrupted median third; lateral margins moderately beaded, subparallel-sided in basal half, thence steeply narrowed to apex in a straight line; anterior angles acute, distinctly produced, posterior angles acutely produced. Scutellum depressed, nearly as long as wide, with a few punctures.

Elytra oblong-oval, widest at apical third, strongly convex; striae very fine, almost vestigial, strial punctures rather large and sparse, irregular in density, quite reduced in apical portions; intervals flat, densely covered with fine isodiametric microsculpture, sparsely and finely punctate, with sparse and transverse rugosities; humeral calli moderately humped; epipleuron weakly depressed, almost smooth, with very fine microsculpture.

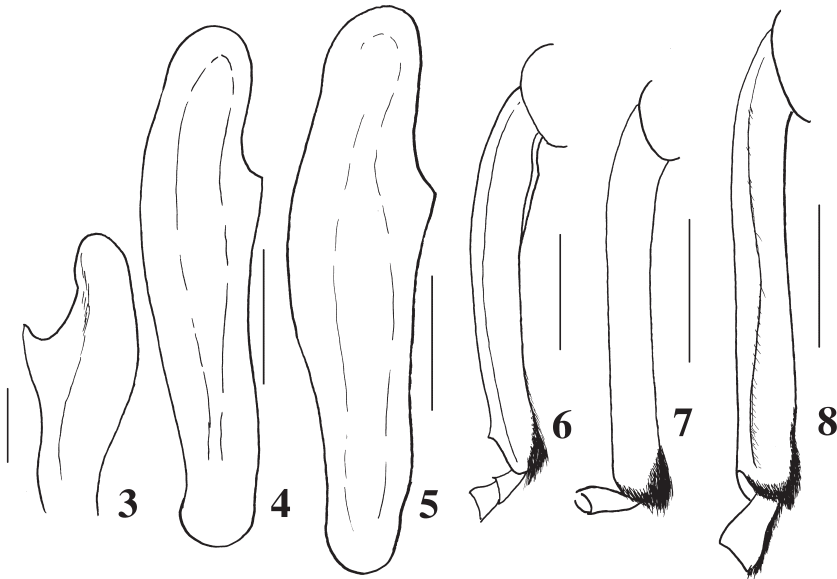
Hypomeron cutaneous, finely microsculptured, impunctate. Prosternum distinctly raised along middle, microsculptured and scarcely punctate; prosternal process strongly cuneiform, hardly oblique posteriorly, shallowly sulcate in middle and beaded at sides, acute but rounded at apex. V-shaped ridge of mesoventrite short, with anterior angles obtusely produced antero-downwards. Metaventrte strongly convex towards middle, obliquely rugulose, microscopically and sparsely punctate. Abdominal ventrites densely and finely punctate, longitudinally rugulose in three basal ventrites.

Legs rather robust; profemora strongly thickened in middle, with anterior tooth acutely pointed, directed laterad, mesofemora gently thickened apicad, metafemora strongly thickened towards apical two-fifths, posterior margins of meso- and metafemora with a weak tooth at each apical third; protibiae not emarginate in inner margins, meso- and metatibiae simple and almost straight; claws slender and long.

*Male*. Unknown.

*Distribution*. Zanzibar [?].

*Notes*. This species bears comparatively large meso- and metafemoral teeth although the type specimen is female. It is slightly similar to *P. signicollis* sp. nov., but different in neither spotted pronotum nor hooked metatibiae of this species. Important characteristics for the identification of this species are greenish brassy dorsal surface, the pronotum microsculptured overall and shallowly sulcate along lateral margins, deeply emarginate at apex, acute and produced every angle, and anterior angles of V-shaped ridge obtusely produced antero-downwards.



Figs. 3–8. *Phaedis obscuripes* (Pic, 1916). — 3, Profemora; 4, mesofemora; 5, metafemora; 6, protibia; 7, mesotibia; 8, metatibia. Scales: 1.0 mm.

***Phaedis robustipes* sp. nov.**

(Figs. 9–12, 33–34)

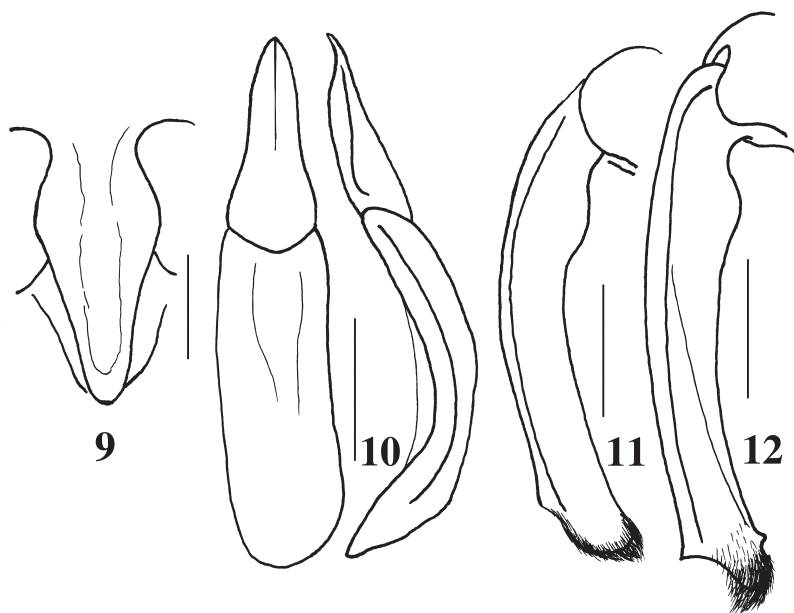
Holotype: ♂, Thailand, pr. Fang, Mae Fang Nat. Park, Doi Pha Hom Pok, 1,560 m, 20.XI.2003. UV light, L. PERGOVITS, M. FÖLDVÁRI, A. KÖRÖSI, A. SZAPPANOS & B. MAKLÁRIKIS leg., No. 10. (HMNH).

*Measurements.* Body length: 7.4 mm. Male (n = 1): IE/TD 1.76; PW/PL 1.67; EL/EW 1.62.

*M a l e.* Oval, rather weakly convex above, shiny. Colour dark reddish brown, tibiae and four distal antennomeres more or less darkened, head and pronotum violet-blue, elytra with brassy sheen.

Head transversely elliptical, with anterior margin drawing straight line between clypeus and genae, punctures rather minute, dense on clypeus and genae, sparse on frons; clypeus weakly convex in middle, feebly rounded at apex; fronto-clypeal suture distinct and semicircular, not angulate; genae slightly convex, subparallel-sided in basal half, oblique in a straight line in apical half; post-genae not produced; frons distinctly depressed, weakly raised laterally; eyes distinctly convex, inner ocular-sulci deep and broad. Antennae reaching before base of pronotum; five distal antennomeres strongly dilated and forming club. Ultimate maxillary palpomere rather thin, distinctly securiform. Mentum sharp triangular, thickly beaded anteriorly, carinate in middle, and shallowly excavate at sides, coarsely punctate.

Pronotum quadrate, widest before middle; disc weakly convex, hardly sulcate along lateral margins, punctures fine and moderate, minuter and sparser than on head; anterior margin very shallowly emarginate, narrowly beaded at sides; lateral margins roundly narrowed forwards and faintly sinuate backwards from the widest point, narrowly and evenly beaded; basal margin rather thickly beaded; anterior and posterior angles obtuse, not produced. Scutellum depressed, a little wider than long, microscopically rugose.



Figs. 9–12. *Phaedis robustipes* sp. nov. — 9, Prosternal process; 10, male genitalia (left: dorsal view; right: lateral view); 11, protibia; 12, metatibia. Scales: 0.25 mm for fig. 9; 0.5 mm for figs. 10–12.

Elytra oblong, moderately convex, widest at apical third; striae rudimental, hardly impressed, stria punctures large, coarse and sparse, becoming minuter apically; intervals very slightly convex, flat in part, densely and finely punctate; humeral calli weakly humped; elytral epipleuron depressed, impunctate, with very fine microscopic rugosities.

Hypomeron weakly convex, smooth. Prosternum short, impunctate, weakly microsculptured; prosternal process acute triangular, distinctly adunc behind coxae, broadly sulcate in middle, coarsened on lateral beads and acute at apex. Mesoventrite with a median short carina anteriorly; V-shaped ridge a little oblique forwards, with coarsened surface by dense rugosities, anterior angles subrectangular in lateral view. Abdomen finely, densely and evenly punctate.

Male genitalia short and robust; parameres gently tapering forwards, and emarginate at sides, curved up near apex.

Legs robust and short; profemoral teeth large and broad, posterior margins of mesofemora with a row of dense pubescence near base to tip of mesofemoral tooth which is situated behind apex, metafemoral teeth small, situated at middle; protibiae distinctly incurved, with inner margins broadened just behind base and hardly emarginate, mesotibiae weakly incurved, with inner margin distinctly emarginate in basal half between ancipital edges, densely pubescent in apical half of lower edge, metatibiae moderately incurved, inner margin strongly depressed, and suddenly produced just behind base, with a minute tubercle at the apical terminal of the depression near apex; tarsi simple, compactly articulated.

F e m a l e. Unknown.

*Distribution.* Thailand.

*Diagnosis.* This species is similar to *Phaedis ventralis* sp. nov., *P. rolandi* sp. nov., and *P. kiyoyamai* sp. nov. in having common accessories of mesofemora (row of dense pubescence) and metatibiae (basal dilation and apical tuberculation) though the female specimens are not found. The important external appearances of this species are as follows: violet-blue anterior body; triangular mentum; hardly sulcate pronotum along lateral margins, with obtuse and not produced both angles;



large and coarse strial punctures on elytra; acute triangular prosternal process; subrectangular anterior angles of ventral V-shaped ridge; and robust male genitalia.

*Etymology.* The specific epithet refers to the robust legs.

***Phaedis kiyoyamai* sp. nov.**

(Figs. 13–16, 35)

Holotype: ♂, Gemas, Malaysia, 20.IV.1975, Y. KIYOYAMA leg. (EUMJ).

*Measurements.* Body length: 7.4 mm. Male (n = 1): IE/TD 2.07; PW/PL 1.61; EL/EW 1.69.

*Male.* Oblong, subparallel-sided, moderately convex above, shiny. Colour dark reddish brown; head violet, with mouthparts light reddish brown, antennae infusate; pronotum violet medially, violet-blue laterally; elytra blackish brown, with faint brassy sheen, metallic green in posterior third of lateral margins; legs blackish brown.

Head transversely elliptical, weakly convex, finely microsculptured, with anterior margin not sinuate between clypeus and genae; clypeus gently convex, weakly rounded and not sinuate at apex, finely and densely punctate; fronto-clypeal suture fine, roundly curved; genae depressed, nearly as wide as long, suddenly raised behind fronto-clypeal suture, punctate as on clypeus; post-genae steeply constricted, not produced laterad; frons depressed, distinctly sloping forwards, with punctures dense and coarse, a little larger than on clypeus; eyes strongly convex, inner ocular-sulci narrow and deep. Antennae reaching behind middle of pronotum; five distal antennomeres densely pubescent, forming moderate club; 11th semicircular. Ultimate maxillary palpomere thick, right-angled triangular. Mentum linguiform, triangularly and strongly elevated in middle, irregularly depressed at sides.

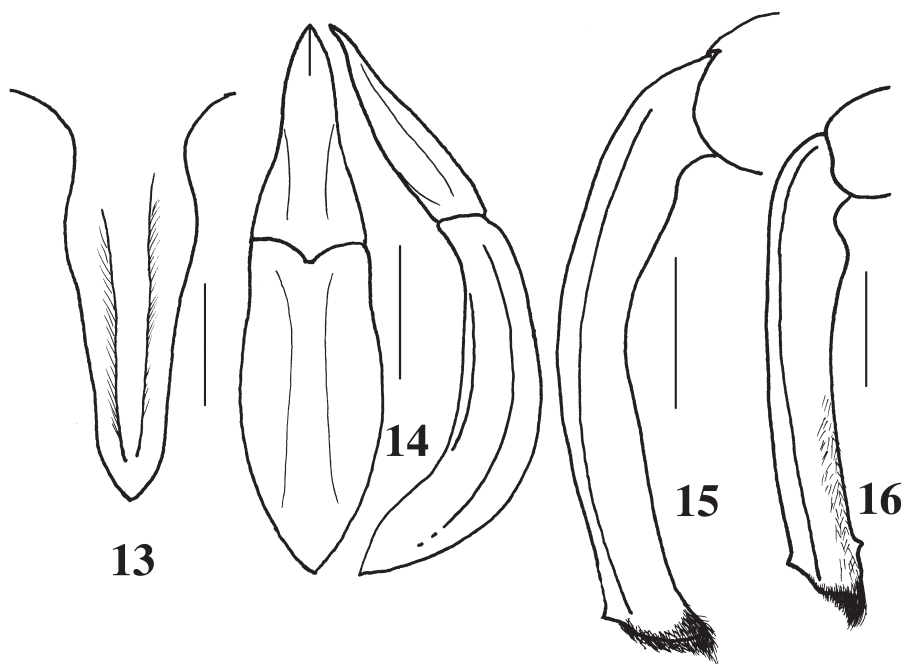
Pronotum transversely quadrate, widest at middle; disc moderately convex, not sulcate along lateral margins, punctures dense and irregular, similar in size to those on frons; anterior margin slightly emarginate, not beaded in median half; lateral margins roundly produced, steeply narrowed posteriorly in basal fourth, thickly beaded; anterior angles obtusely rounded, posterior angles rectangular, a little produced posteriorly. Scutellum small, depressed and microsculptured, with fine and dense punctures.

Elytra subparallel-sided, strongly convex, widest at apical third; striae vestigial, feebly depressed; strial punctures coarse and dense, irregular in density, becoming finer posteriorly; intervals flat in inner four intervals, weakly convex in the rest, finely and rather densely punctate; humeral calli weakly humped; elytral epipleuron weakly convex, reaching near apex of fifth abdominal ventrite, microsculptured and very sparsely punctate.

Hypomeron microsculptured, hardly punctate. Prosternal process slender, sharp cuneiform, distinctly descendent behind coxae, deeply sulcate in middle and acutely pointed at apex. Mesoventrite coarsened, with rugulose uneven surface; V-shaped ridge short and oblique, depressed posteriorly, with anterior angles obtusely rounded in lateral view. Abdomen densely and finely punctate; fifth ventrite with an oval depression at middle of apex.

Male genitalia short and robust, distinctly curved ventrad, distinctly elevated in middle; parameres steeply narrowed apicad in apical half, somewhat hastate at apices, 0.57 times as long as basal piece.

Legs short and robust; profemoral teeth distinct, mesofemoral teeth weakly rounded, metafemoral teeth vestigial, consist of weak angulation, posterior margins of mesofemora densely with long pubescence from base to tip of tooth; protibiae gently incurved, not emarginate, slightly depressed in basal fourth in ventral side, mesotibiae weakly incurved, with inner margin depressed in basal third, metatibiae slightly incurved, inner margin roundly dilated behind base and distinctly deplanate in basal half, with a small tubercle before apex; tarsi compact, slightly dilated.



Figs. 13–16. *Phaedis kiyoyamai* sp. nov. — 13, Prosternal process; 14, male genitalia (left: dorsal view; right: lateral view); 15, protibia; 16, metatibia. Scales: 0.25 mm for fig. 13; 0.5 mm for figs. 14–16.

**F e m a l e.** Unknown.

**Distribution.** West Malaysia.

**Diagnosis.** This species is very similar to *Phaedis robustipes* sp. nov., *P. ventralis* sp. nov., and *P. rolandi* sp. nov., in having accessories of male mesofemora and metatibiae, but different from the latter in lacking elytral spots. Other effective characteristics of this species for the identification are as follows: inner ocular-sulci narrow and deep; ultimate maxillary palpomere right-angled triangular; pronotum widest at middle; male fifth abdominal ventrite with an oval depression; male genitalia robust; posterior margin of mesofemora densely pubescent; metafemoral teeth vestigial; and metatibiae deplanate with a small tubercle before apex.

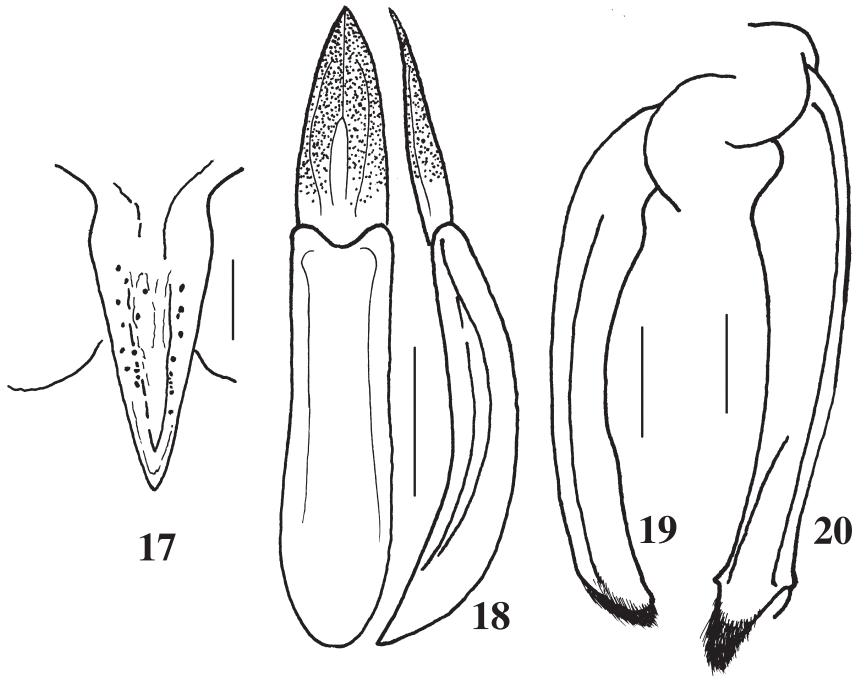
**Etymology.** This species epithet is dedicated to Mr. Yoshimi KIYOYAMA, Osaka, collector of the holotype.

***Phaedis ventralis* sp. nov.**

(Figs. 17–20, 36–37)

**Type series.** Holotype: ♂, Bukit Bangkirai, near Balikpapan, Kalimantan, Indonesia, 22.II.2000, H. MAKIHARA leg. (EUMJ). Paratypes: 1 ♂, 2 ♀♀, Sabah, Tambunan, 15–20.V.1987, BURCKHARDT – LÖBL leg. (SMNS); 2 ♂♂, Borneo, Malaysia, Sabah, Tambunan, 500 m, 28–31.III.2007, R. GRIMM leg. (CRGN); 1 ♂, Malaysia, Sabah, 25 km NE. Keningau, N. Apin Apin, 500 m, 25–27.2006, R. GRIMM leg. (CRGN); 1 ♀, Borneo, Malaysia, Sabah, Keningau, 300 m, Lux, 26–28.I.2010, R. GRIMM leg. (CRGN); 1 ♀, Borneo, Malaysia, Sarawak, Santubong Peninsula, Permal Rainforest Resort, 10–200 m, Lux, 11–14.IX.2008, R. GRIMM leg. (CRGN); 1 ♀, ditto, 30–210 m, 30.XI.–5.XII.2010, Lux, R. GRIMM leg. (CRGN); 1 ♂, Borneo, Sarawak, Belaga, Long Linau, 17–21.III.1990, A. RIEDEL leg.





Figs. 17–20. *Phaedis ventralis* sp. nov. — 17, Prosternal process; 18, male genitalia (left: dorsal view; right: lateral view); 19, protibia; 20, metatibia. Scales: 0.25 mm for fig. 17; 0.5 mm for figs. 18–20.

(SMNS); 1 ♂, Borneo, Sabah W., Route Ranau, Tamburan, II.2000, M. SINŽEK leg. (SMNS).

*Measurements.* Body length: 7.5–9.5 mm. Male (n = 7): IE/TD 1.76–2.14; PW/PL 1.53–1.64; EL/EW 1.64–1.70. Female (n = 5): IE/TD 2.00–2.50; PW/PL 1.41–1.69; EL/EW 1.62–1.73.

Oblong-oval, gently convex above, shiny. Colour dark reddish brown; head and pronotum various in colour, violet-purple or dark metallic green, otherwise dark blue with greenish sheen or with purplish sheen; elytra also various in colour, aeneous to brassy-aeneous, greenish black in a few case, posterior portion of scutellum along suture tinged with the same colour of corresponding pronotum; each elytron with a metallic blue humeral spot and an apical spot, the humeral spot small and rounded, sometimes reduced or developed inwards until behind scutellum, the apical spot small and triangular, produced forwards along suture, basal margin tinged with dark metallic green; venter sometimes with metallic green in part.

*Male.* Head transversely elliptical, with fine isodiametric microsculpture, anterior margin not sinuate between clypeus and genae; clypeus weakly convex, straight at apex, coarsely and densely punctate; fronto-clypeal suture tenuous and distinct, angularly curved; genae wider than long, elevated laterad, finely punctate; post-genae not convex, reduced; frons distinctly depressed, with punctures coarse, sparser and larger than on clypeus; inner ocular-sulci deep and distinct. Antennae robust; five distal antennomeres dilated and somewhat loosely articulate, forming a club; 11th short-oval. Ultimate maxillary palpomere strongly securiform, with endo-apical angle strongly produced laterad. Mentum triangular, carinate in middle and excavate at sides, acute at apex.

Pronotum quadrate, widest at basal two-fifths or middle; disc weakly convex, feebly sulcate along lateral margins and tenuously sulcate along basal margin, densely and similarly punctate as on clypeus; anterior margin weakly emarginate, slightly produced in median third, gently beaded in each

lateral third; lateral margins gently arcuate, sinuate before base, thickly beaded; anterior angles obtusely rounded, posterior angles rectangular, not produced. Scutellum flattened or strongly depressed, finely microsculptured, with some coarse punctures.

Elytra moderately convex, slightly divergent posteriorly, widest at apical third; striae weakly impressed or vestigial; striae punctures large, coarse and sparse, becoming minute in apical portions; intervals almost flat, slightly convex in lateral three intervals, finely and moderately punctate; humeral calli oblong, distinctly humped; epipleuron flattened and smooth, impunctate.

Hypomeron evenly microsculptured, finely rugose in part, impunctate. Prosternum almost flat and oblique forwards, coarsened by obscure punctures and rugosities; prosternal process sharp elongate-triangular, weakly sloping posteriad, shallowly and irregularly sulcate in middle, acutely pointed at apex. Mesoventrite longitudinally carinate in middle anteriorly and coarsened at sides by dense punctures and microsculpture; V-shaped ridge weakly sloping forwards, anterior angles produced forwards, obtusely angulate in lateral view. Metaventrite convex, densely and obscurely punctate, finely with long hairs in median fourth. Abdomen densely punctate; three basal ventrites longitudinally rugose, with sparse tuft of long pubescence in each middle.

Male genitalia moderate in length, gently curved ventrad; parameres depressed dorsally, gently and slightly roundly narrowed to apices, with dense punctures in apical three-fourths.

Legs short and robust; profemoral teeth large and distinct, posterior margins of mesofemora with a row of dense pubescence near base to mesofemoral tooth which is situated near apex, metafemoral tooth small, situated behind middle; protibiae gently incurved, with inner margins emarginate in apical three-fourths, mesotibiae weakly incurved, inner margin ancipital, depressed between ancipital edges, of which lower edge tumid inwards behind base, metatibiae moderately incurved, inner margin strongly depressed, suddenly produced inwards just behind base, with a minute tubercle at the apical terminal of the depression near apex; tarsi slender, compactly articulated.

**F e m a l e.** Antennae shorter; metaventrite and abdomen not pubescent; femora lacking furnished pubescence, meso- and metafemora without teeth, and metatibiae without tubercles.

*Distribution.* Borneo.

*Diagnosis.* This species is characterised by the robust body, and unique in the allied species of *Phaedis robustipes* sp. nov., *P. rolandi* sp. nov., and *P. kiyoyamai* sp. nov. in having slender and punctate male genitalia, and pubescent male metaventrite and abdomen. The combination of the following points of this species is effective for the identification: clypeus straight at apex; fronto-clypeal suture angularly curved; ultimate maxillary palpomere with endo-apical angle strongly produced; pronotal lateral margins sinuate before base; elytra with humeral and apical spots; prosternal process elongate triangular; parameres densely punctate; and metatibiae roundly produced inwards behind base in both sexes, of which inner margin in male is decorated with a minute tubercle before apex.

*Etymology.* The specific epithet refers to the male venter.

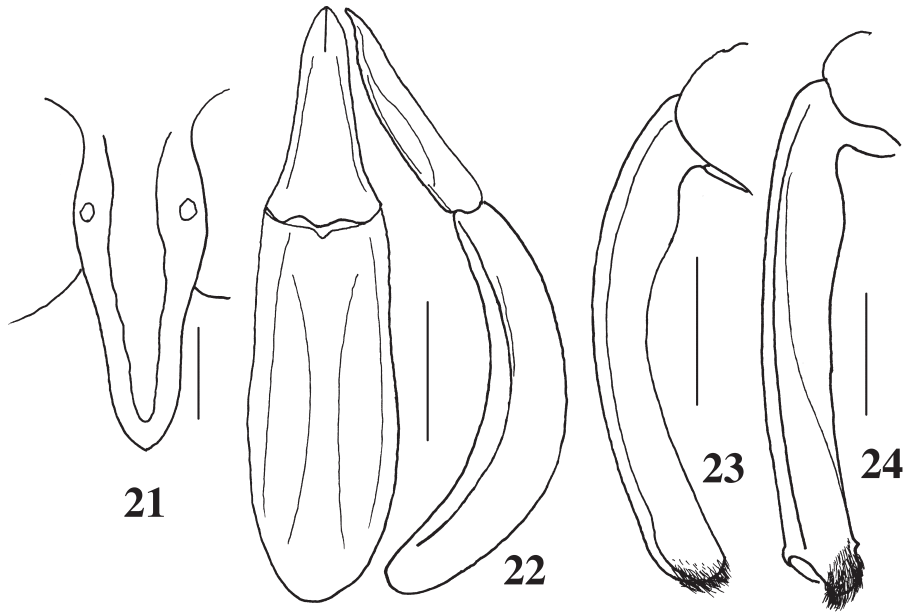
***Phaedis rolandi* sp. nov.**

(Figs. 21–24, 38)

*Type series.* Holotype: ♂, Borneo, Malaysia, Sabah, Tambunan, 500 m, 14–15.III.2007, R. GRIMM leg. (SMNS). Paratype: 1 ♀, same area and altitude for the holotype, 28–31.III.2007, R. GRIMM leg. (CRGT).

*Measurements.* Body length: 8.6–8.7 mm. Male (n = 1): IE/TD 2.14; PW/PL 1.58; EL/EW 1.69. Female (n = 1): IE/TD 1.88; PW/PL 1.60; EL/EW 1.64.

Oblong-oval, moderately convex above, shiny. Colour dark reddish brown; head and pronotum



Figs. 21–24. *Phaedis rolandi* sp. nov. — 21, Prosternal process; 22, male genitalia (left: dorsal view; right: lateral view); 23, protibia; 24, metatibia. Scales: 0.25 mm for fig. 21; 0.5 mm for figs. 22–24.

dark metallic green or bluish dark metallic green, violet in part; elytra brassy-aeuneous, each elytron with a metallic bluish green basal band and an apical spot, the basal band narrow and transverse, contact with basal margin, the apical spot small and triangular, contact with apex of elytron, irregularly produced forwards; abdomen dark metallic green, legs blackish brown.

**M a l e.** Head transversely elliptical, with fine isodiametric microsculpture, anterior margin slightly sinuate between clypeus and genae; clypeus weakly convex in middle, almost straight at apex, coarsely and densely punctate, area in front of frons distinctly lower than frons; fronto-clypeal suture distinct, angularly curved; genae wider than long, gently rounded at sides, finely punctate; post-genae reduced; frons distinctly and semicircularly depressed, with punctures sparser and larger than on clypeus; eyes large, inner ocular-sulci deep. Antennae short, just reaching middle of pronotum; five distal antennomeres thick, weakly dilated, forming a loosely articulate club; 11th oblong-oval. Ultimate maxillary palpomere right-angled triangular, with endo-apical angle moderately produced laterad. Mentum oblong-triangular, triangularly carinate in middle, distinctly and narrowly excavate at sides, pointed at apex.

Pronotum quadrate, widest at basal fourth; disc weakly convex, slightly sulcate along lateral margins and faintly sulcate along basal margin, punctures dense and irregular, similar in size as on clypeus; anterior margin weakly emarginate, slightly produced in median third, narrowly beaded in each lateral third; lateral margins weakly arcuate, distinctly sinuate before base, thickly beaded; anterior angles obtuse, posterior angles a little more obtuse than rectangular, not produced. Scutellum slightly convex, finely microsculptured, with some punctures.

Elytra robust, distinctly convex, weakly divergent posteriorly, widest at apical third; striae weakly impressed; strial punctures large and sparse, gradually becoming minute posteriorly; intervals almost flat in inner two ones, slightly convex in third to fifth intervals, weakly so in lateral four inter-

vals, finely and densely punctate; humeral calli oblong, moderately humped; epipleuron depressed, reaching near apex, finely and very sparsely punctate.

Hypomeron finely microsculptured, rugose in part, with punctures setiferous, fine and sparse. Prosternum short and oblique, roughened; prosternal process elongate-cuneiform, slightly sloping posteriad, distinctly sulcate in middle, slightly sinuate at sides and roundly pointed at apex. Mesoven-trite longitudinally carinate in middle anteriorly and coarsened at sides by dense rugosities; V-shaped ridge weakly sloping forwards, with anterior angles obtusely rounded in lateral view. Metaventr-ite strongly convex, densely and irregularly punctate, without pubescence. Abdomen densely punctate and microsculptured; three basal ventrites weakly and longitudinally rugose; fifth ventrite roundly de-pressed at apex where the punctures are denser than the rest of abdomen.

Male genitalia short and robust, distinctly curved ventrad; parameres weakly convex dorsad, slightly emarginate at sides and reflexed near somewhat hastate apices.

Legs robust; profemoral teeth large and distinct, posterior margins of mesofemora with a row of dense pubescence between near base and tip of corresponding tooth, metafemoral tooth small, situated behind middle; protibiae distinctly incurved, with inner margins emarginate in apical three-fourths, mesotibiae weakly incurved behind base, inner margin ancipital, depressed between ancipital edges, of which lower edge is scarcely tumid inwards behind base, metatibiae gently incurved, with inner margin strongly depressed, and suddenly produced inwards just behind base, with an apical tubercle minute and weak; tarsi simple.

*F e m a l e.* Antennae more slender; meso- and metafemora without teeth, posterior margin of mesofemora without pubescence; inner margins of metatibiae with basal dilation weak and without apical tubercles.

*Distribution.* Borneo.

*Diagnosis.* This new species is very similar to the preceding species, but different from the lat-ter in the following points: male genitalia robust, not slender; profemoral teeth broad, protibiae gently curved in apical three-fourths, inner margins of metatibiae weakly produced behind base, with apical tubercle weak; pronotum widest at basal fourth; basal bands of elytra not reaching behind scutellum; elytral intervals more densely and coarsely punctate; inner ocular-sulci more distinct; male metaven-trite and abdomen not pubescent, abdomen finely punctate, with fifth ventrite roundly and slightly de-pressed at apex, where the punctures are coarse; prosternal process slightly sinuate at sides, with dis-tinct median sulcus; and V-shaped ridge of mesoven-trite with anterior angles obtusely rounded in lateral view.

*Etymology.* The specific epithet is dedicated to Dr. Roland GRIMM, Neuenbürg, Germany, who constantly helped me with the loan of many specimens for the study, and collected the type series of this species.

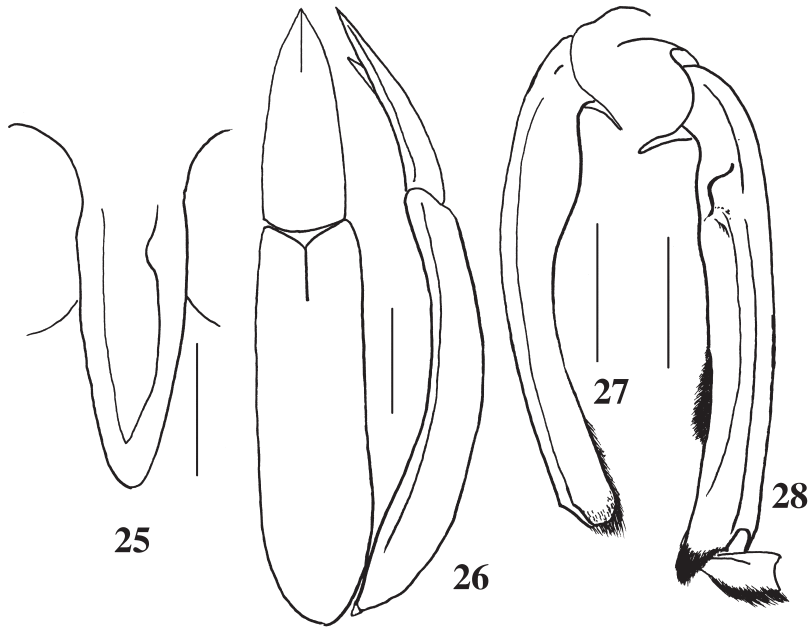
***Phaedis signicollis* sp. nov.**

(Figs. 25–28, 39–40)

*Holotype:* ♂, Malaysia-W, Perak, 30 km SE. of Iphoh, 900 m, Cameron Highland, Ringlet, 26–31.III.2000, P. CECHOVSKÝ leg. (SMNS).

*Measurements.* Body length: 13.0 mm. Male (n = 1): IE/TD 2.73; PW/PL 1.65; EL/EW 1.62.

*M a l e.* Oblong, gently convex above, shiny. Colour black; head violet-purple, metallic green in part, mouthparts dark reddish brown; pronotum light violet, with a pair of violet-purple spots at sides, the spots oblong-oval, contact with lateral margins, margined by bicolour of brassy and metallic green, with metallic green small spot in their core; elytra dark purple, inner half of sutural intervals light violet.



Figs. 25–28. *Phaedis signicollis* sp. nov. — 25, Prosternal process; 26, male genitalia (left: dorsal view; right: lateral view); 27, protibia; 28, metatibia. Scales: 0.5 mm for fig. 25; 1.0 mm for figs. 26–28.

Head subquadrate, well produced forwards, weakly convex, with anterior margin not sinuate between clypeus and genae; clypeus weakly convex medially, weakly sinuate at apex in median half, densely punctate; fronto-clypeal suture tenuous, straight in middle, angularly bent laterally; genae flattened, a little longer than wide, weakly narrowed forwards at sides, sparsely and minutely punctate; post-genae strongly constricted backwards, a little produced laterad; frons broad, weakly convex, gently sloping forwards, densely punctate; eyes rather small, with inner ocular-sulci distinct, moderate in depth. Antennae compactly articulate, reaching before middle of pronotum; five distal antennomeres forming distinct club; 11th oval. Ultimate maxillary palpomere weakly securiform, rounded at apex. Mentum semicircular, wider than long, broadly elevated in median half and moderately excavate at sides, with setae behind apex.

Pronotum trapezoidal, widest at base; disc weakly convex, feebly sulcate along lateral margins, densely and coarsely punctate, the punctures nearly as large as on frons; anterior margin shallowly emarginate, finely and entirely beaded; lateral margins weakly rounded, gently narrowed forwards in apical half, slightly sinuate before base, gently beaded; anterior angles obtusely rounded, posterior angles a little more acute than rectangular, hardly produced. Scutellum almost flat, wider than long, punctate and densely microsculptured.

Elytra oblong, distinctly convex, gently divergent posteriad, widest at apical third; striae weak, vestigial posteriorly, strial punctures large and dense, but irregular in density and size, becoming smaller in apical declivities; intervals flat, finely and rather densely punctate; humeral calli gently humped; elytral epipleuron flattened and smooth, with an oblong depression beside fourth abdominal ventrite.

Hypomeron slightly depressed, impunctate, covered with very fine microsculpture. Prosternal process cuneiform, slender and horizontal, evenly narrowed apicad, impunctate, moderately sulcate in

middle and rounded at apex. Mesoventrite broadly carinate in middle and roughened at sides; posterior ridge U-shaped, slightly raised forwards, with two anterior angles acutely produced forwards in lateral view. Metaventrite finely and sparsely punctate in middle, with tenuous median line. Abdomen finely punctate, longitudinally rugulose in three basal ventrites.

Male genitalia distinctly curved ventrad; basal piece with a tenuous and short median sulcus behind apex; parameres weakly convex dorsad, evenly and gradually tapering towards apices.

Legs moderate in length; each femoral tooth weak, with apex directed outwards, anterior margin of profemora, posterior margins of meso- and metafemora densely pubescent between base and corresponding tooth; protibiae with inner margin gently emarginate in apical three-fourths, mesotibiae weakly incurved, inner margin densely pubescent in apical half, metatibiae weakly incurved, inner margin weakly ancipital, with a distinct hook behind base on dorsal edge of ancipital ones, and with an oblong tuft of dense pubescence between middle and apical fourth.

F e m a l e. Unknown.

*Distribution.* West Malaysia.

*Diagnosis.* This species is similar to *Phaedis opacipennis* sp. nov. in having hooked metatibiae and pubescent femora though the body dorsally is very shiny. This species is also readily separable from any other known species by the following combination of the characters: colourful body with violet-purple pronotal spots; fronto-clypeal suture angularly bent laterally; post-genae strongly constricted; mentum semicircular; mesoventrite with posterior ridge U-shaped; anterior margin of profemora, posterior margins of meso- and metafemora densely pubescent; and male metatibiae with distinct hook basally and a tuft of dense pubescence behind middle.

*Etymology.* The specific name is derived from the spots of the pronotum.

***Phaedis yamasakoi* sp. nov.**

(Figs. 41–44, 53)

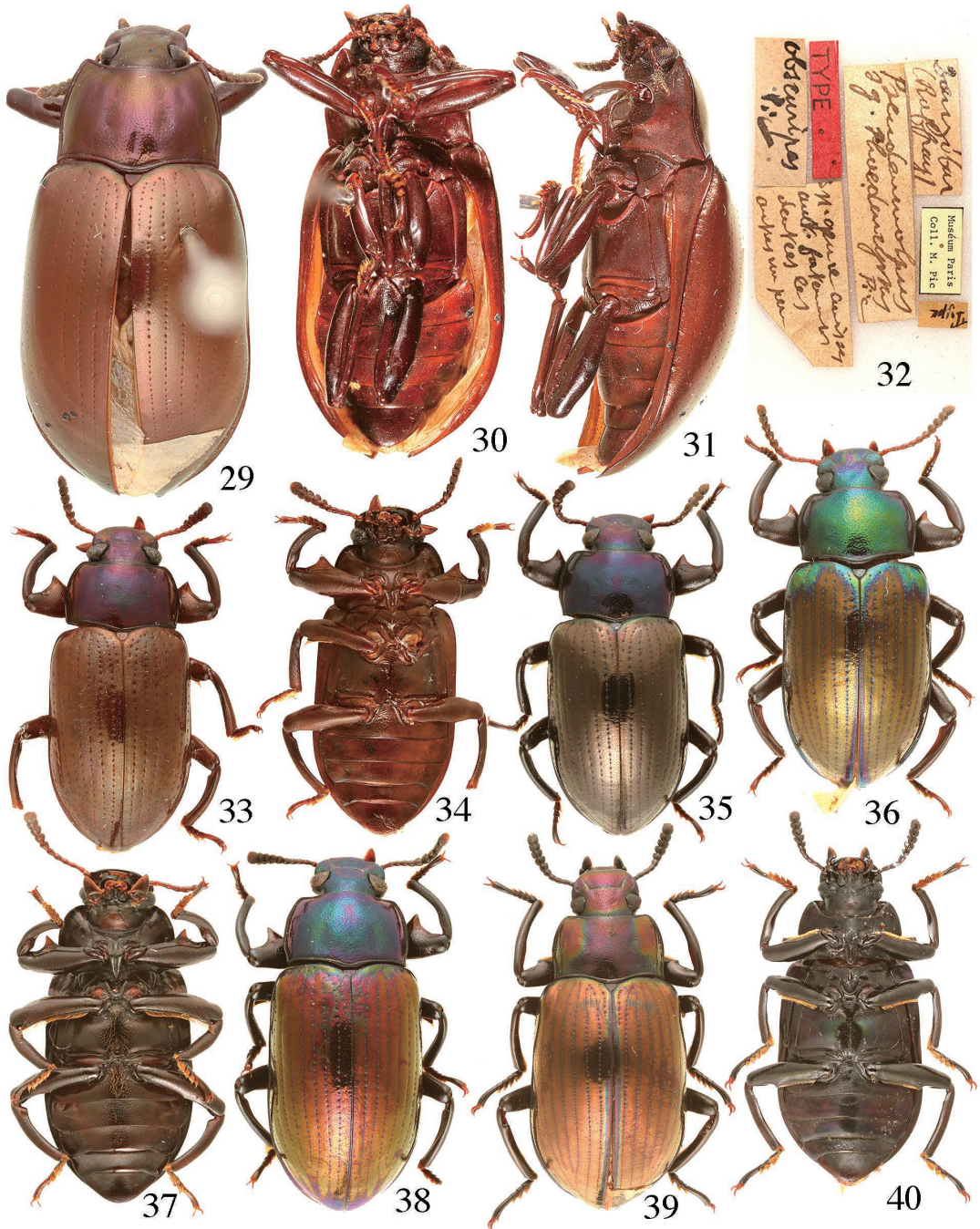
*Type series.* Holotype: ♂, Thailand, Chiang Mai P. Doi Suthep Mt., VI.14.1997, C. W. & L. B. O'BRIEN leg. (HMNH). Paratypes: 1 ♀, Laos, Tha Ngon, N. Vientiane 25 km, Vientiane Prov., 24.IV.2005, J. YAMASAKO leg. (CKAO); 1 ♀, Laos, Ban Dongmakhai, Tha Ngon National Park, Alt. ca. 170 m, North of Vientiane 25 km, Vientiane Prov., 9.V.2008, J. YAMASAKO leg. (CKAO).

*Measurements.* Body length: 5.3–6.6 mm. Male (n = 1): IE/TD 3.00; PW/PL 1.56; EL/EW 1.63. Female (n = 2): IE/TD 2.73; PW/PL 1.37–1.56; EL/EW 1.57–1.65.

Oblong-oval, robust, gently to strongly convex above, shiny. Colour dark reddish brown; head and pronotum black, with aeneous sheen; elytra blackish brown, each elytron with a pair of reddish purple humeral and apical fasciae, the fasciae margined by tricolour of metallic green, purple and bluish brassy, the humeral fascia oval, contact with lateral margin and not reaching suture, undulate posteriorly, with a metallic green spot at the core in single female paratype, the apical fascia oblong, contact with lateral margin and suture, margined by the same colour as on humeral fascia, distinctly undulate anteriorly; mouthparts, coxae and ultimate antennomeres more or less paler.

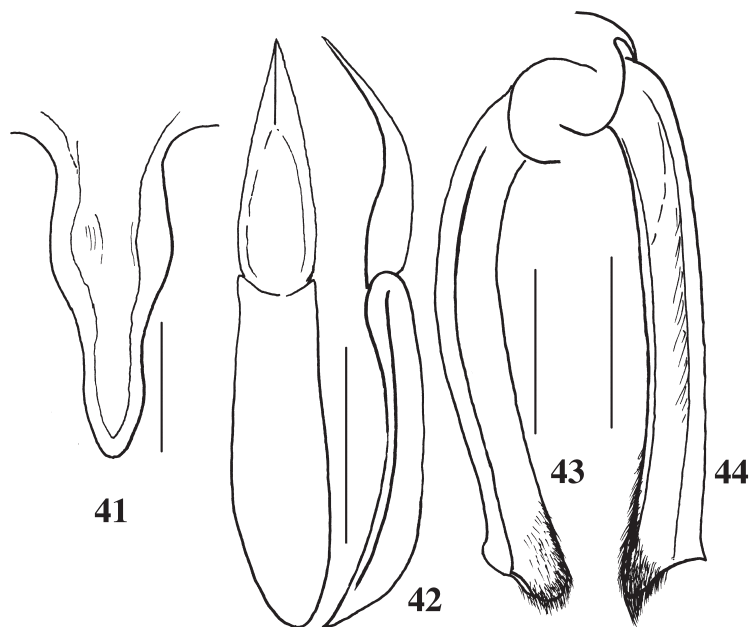
M a l e. Head transverse, with anterior margin not sinuate between clypeus and genae; clypeus gently convex, weakly rounded at apex, lower than frons and genae, with punctures coarse and dense, oblong and large just before fronto-clypeal suture, which is fine and obscure, roundly arcuate; genae flat, tumid laterally, roundly narrowed in basal half and slightly sinuate in apical half at sides, with sparse and large punctures; post-genae a little produced laterad just behind eyes; frons moderately convex, punctures coarse and oblong, larger than on clypeus and genae; eyes distinctly convex, not transverse in dorsal view, inner ocular-sulci distinct, deep and narrow. Antennae moderate in size,





Figs. 29–40. *Phaedis* spp. — 29–32, *P. obscuripes* (Pic, 1916); 33–34, *P. robustipes* sp. nov.; 35, *P. kiyoyamai* sp. nov.; 36–37, *P. ventralis* sp. nov.; 38, *P. rolandi* sp. nov.; 39–40, *P. signicollis* sp. nov. — 29, 33, 35, 36, 38 & 39, Habitus in dorsal; 30, 34, 37 & 40, habitus in ventral; 31, lateral; 32, type labels of *P. obscuripes* (Pic, 1916).





Figs. 41–44. *Phaedis yamasakoi* sp. nov. — 41, Prosternal process; 42, male genitalia (left: dorsal view; right: lateral view); 43, protibia; 44, metatibia. Scales: 0.25 mm for fig. 41; 0.5 mm for figs. 42–44.

reaching middle of pronotum; five distal antennomeres forming loosely articulate club; 11th oval. Ultimate maxillary palpomere strongly fusiform, very large, endo-apical angle strongly produced laterad, inner margin sinuate. Mentum obtapezoidal, with transversely triangular process in middle, the process strongly produced forwards, longitudinally elevated in middle and excavate at sides, pointed at apex.

Pronotum quadrate, weakly convex, widest at base, not sulcate along lateral margins, punctures oblong, dense and coarse, nearly as large as on frons; anterior margin weakly emarginate, straight in median half, slightly beaded in the lateralmost portions; lateral margins weakly rounded, very slightly sinuate before base, narrowly beaded; anterior angles obtusely rounded, posterior angles rectangular, not produced. Scutellum flat, longer than wide, finely punctate.

Elytra oblong-oval, distinctly convex, widest at apical third, with lateral margins visible only apical third from dorsal view; striae very fine, almost vestigial; strial punctures large, coarse and sparse, becoming fovea-like in fifth to eighth striae; intervals finely and sparsely punctate, unevenly flat in inner three, weakly convex in the rest, these are more or less invaded by the impressions of fovea-like punctures; humeral calli elongate, weakly humped; epipleuron unevenly flat and oblique, impunctate, finely microsculptured.

Hypomeron sparsely punctate and finely rugose, with fine isodiametric microsculpture. Prosternal process large and cuneiform, suddenly narrowed behind coxae, weakly sloping posteriad, broadly sulcate in middle, and pointed at apex. Mesoventrite deeply depressed; posterior ridge short and horizontal, U-shaped, with anterior angles obtusely angulate in lateral view. Metaventrite moderately convex, obliquely rugulose and densely punctate in median half, the punctures puberulous. Abdomen densely microsculptured, covered with fine and moderate puberulous punctures.

Male genitalia weakly incurved; parameres long, broad basally, 0.69 time as long as basal piece.

Legs short; femora densely and coarsely punctate, femoral teeth distinct, rather small, directed outwards, posterior margins of meso- and metafemora not ancipital, distinctly emarginate between tooth and apex; protibiae weakly incurved, meso- and metatibiae simple, slightly incurved.

**F e m a l e.** Antennae longer; pronotum broader, widest before middle or basal third, with punctures finer and not large in single paratype; elytra widest behind middle or apical third; scutellum nearly as wide as long, or wider than long.

*Distribution.* Thailand, Laos.

*Diagnosis.* This species has no allied species in having normal external appearances in both sexes, and some important characteristics of this species recognised are as follows: elytra with reddish purple fasciae, elytral punctures in fifth to eighth striae fovea-like; anterior margin of head not sinuous between clypeus and genae; post-genae slightly produced; ultimate maxillary palpomere with endo-apical angle strongly produced; pronotum not sulcate along lateral margins, with anterior and posterior angles not produced; hypomera sparsely punctate; ridge of mesoventrite U-shaped; meso- and metafemoral teeth distinct, and male meso- and metatibiae without any accessories.

*Etymology.* This species is dedicated to Dr. Junsuke YAMASAKO, the University of Tokyo, who is one of the specialists on the family Cerambycidae in Japan and collected the paratypes of this new species.

***Phaedis purpurinotatus* sp. nov.**

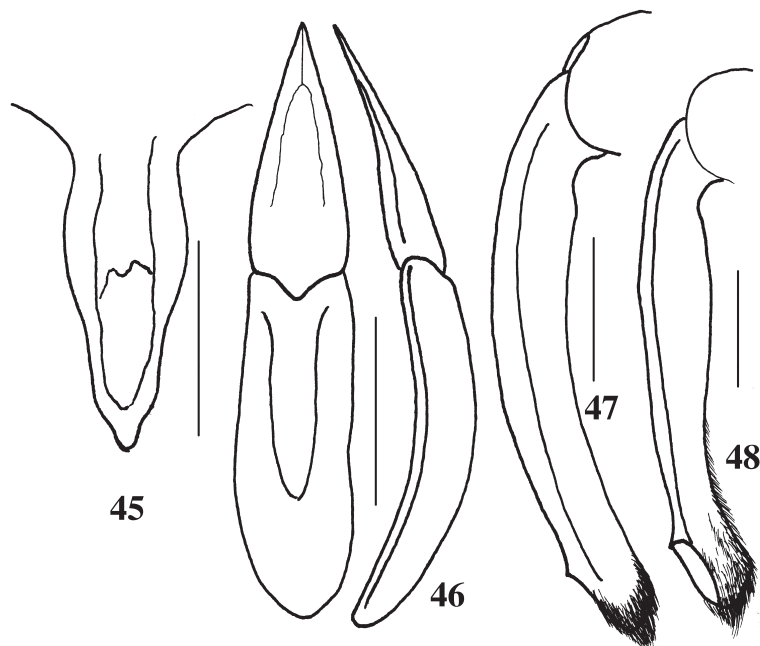
(Figs. 45–48, 54–55)

*Type series.* Holotype: ♂, Gap, Malaysia, 13.II.1974, Y. KIYOYAMA leg. (EUMJ). Paratypes: 1 ♂, Malaysia–W, Perak, 30 km SE of Ipoh, 900 m, Cameron Highland, Ringlet, 26–31.III.2000, P. ČECHOVSKÝ leg. (SMNS); 1 ♀, Malaysia West; 30 km NE Ipoh; Banjaran Titi Wangsa; Mt. Korbu, 2,000 m, 26–31.III.2000, P. ČECHOVSKÝ leg. (ZSM); 1 ♀, Malaysia, 10–16.IV.1999, Kelantan prov., Kampong Raja env. Vit KABOUREK leg. (CKAO); 1 ♀, Malaysia: Kelantan, Pergau Dam, 101°43'50"E 5°35'54"N, 750 m, 4.VII.2008, L. BARTOLOZZI, G. MAZZA, F. CIANFERONI, and F. FABIANTO leg. (num. Mag. 2847) (SMNS); 1 ♀, Lenggong, Malaysia, 14.III.1974, Y. KIYOYAMA leg. (CKAO).

*Measurements.* Body length: 7.4–8.3 mm. Male (n = 2): IE/TD 2.73–3.16; PW/PL 1.37–1.44; EL/EW 1.45–1.64. Female (n = 4): IE/TD 2.73–3.16; PW/PL 1.36–1.40; EL/EW 1.56–1.76.

Oblong, rather weakly convex above, metallicly shiny. Colour dark reddish brown; head blackish, with weak metallic green reflection, mouthpart and antennae more or less lighter in colour; pronotum dark metallic green, dark aeneous in part; elytra metallic green, each with a post-median fascia and an apical spot, the post-median fascia purple, more or less tended to brassy, not margined, strongly running forwards at sutural interval, the apical spot oval and purple, contact with elytral apex, margined by brassy and metallic green.

**M a l e.** Head transversely elliptical, with anterior margin not sinuate between clypeus and genae; clypeus distinctly convex, almost straight at produced apex, densely and finely punctate; fronto-clypeal suture fine and very weak, angulate laterally; genae longer than wide, depressed, very finely and sparsely punctate, weakly arcuate at sides; post-genae gently constricted, not produced; frons weakly convex, obscurely depressed in middle, with punctures oblong, coarse and irregular in density, larger than on clypeus; eyes distinctly convex, inner ocular-sulci narrow and deep. Antennae reaching behind middle of pronotum; five distal antennomeres dilated, forming loosely articulate club; 11th oval. Ultimate maxillary palpomere thick, right-angled triangular. Mentum broadened triangular, 1.4 times as wide as long, strongly convex, weakly depressed at sides, rugulose, and pointed at apex, with some short setae.



Figs. 45–48. *Phaedis purpurinotatus* sp. nov. — 45, Prosternal process; 46, male genitalia (left: dorsal view; right: lateral view); 47, protibia; 48, metatibia. Scales: 0.25 mm for fig. 45; 0.5 mm for figs. 46–48.

Pronotum quadrate, widest at base, weakly convex, gently sloping laterad, not sulcate along lateral margins, with punctures dense, a little smaller than on frons; anterior margin almost truncate, slightly produced in median three-fourths, finely beaded laterally; lateral margins weakly and evenly narrowed forwards, not sinuate before base, narrowly beaded; basal margin narrowly beaded; anterior angles obtusely angulate, posterior angles acute, pointed laterad. Scutellum depressed, wider than long, with fine setiferous punctures.

Elytra oblong, gently convex, weakly divergent posteriad and widest at apical third; striae weakly impressed, obscure in part; strial punctures large and sparse, dense on first, sixth and seventh striae, becoming minuter apically on first to third and sixth; intervals flat in first, second, eighth, and ninth, weakly convex in the rest, with punctures setiferous, fine and sparse; humeral calli oblong, weakly humped; epipleuron oblique, reaching near apex, with surface uneven, impunctate and finely microsculptured.

Hypomeron finely microsculptured, impunctate. Prosternum broad, densely microsculptured and transversely rugose, impunctate; prosternal process slender, cuneiform, sloping inwards posteriorly, densely and irregularly rugulose, longitudinally impressed in middle, sharply pointed at apex. Mesoventrite flattened and coarsened anteriorly; V-shaped ridge horizontal, with anterior angles rectangular in lateral view. Metaventrite strongly convex, finely and densely punctate in median half, rugulose laterally. Abdomen densely and evenly punctate.

Male genitalia short, weakly incurved; parameres slightly depressed dorsally, gently tapering forwards, and pointed at apices.

Legs rather short; profemoral teeth distinct, directed forwards, meso- and metafemoral teeth small and spine-like, situated near middle, individually; protibiae gently incurved, with inner margins shallowly emarginate in apical four-fifths, mesotibiae almost straight, with inner margins sparsely

with seta-like pubescence in apical two-thirds, metatibiae weakly incurved, with intero-dorsal margin depressed in basal half.

**F e m a l e.** Pronotum various in the widest point, widest at base in two specimens, otherwise at middle or before base in single specimen, respectively; teeth of meso- and metafemora vestigial, inner margins of mesotibiae without seta-like pubescence.

*Distribution.* West Malaysia.

*Diagnosis.* This species is characterised in having rather simple male legs, spine-like teeth of meso- and metafemora, never pubescent male femora, seta-like pubescence in apical two-thirds of male mesotibiae, angulate fronto-clypeal suture, longer genae, right-angled triangular ultimate maxillary palpomere, truncate anterior margin and not sinuate basal parts of pronotum, impunctate prosternum, and unique fasciae and spots on elytra.

*Etymology.* The specific name is derived from the purple elytral fasciae and spots.

***Phaedis angulicollis* sp. nov.**

(Figs. 49–52, 56–57)

**Holotype:** ♂, N. O. Sumatra, Tebing tinggi, D<sup>lc</sup> SCHULTHEISS leg. Coll. SCHULTHEISS. *Phaedis* n. sp. det. H. KULZER 1950. DEI Müncheberg Col-04802. (SDEI).

*Measurements.* Body length: 12.7 mm. Male (n = 1): IE/TD 2.61; PW/PL 1.55; EL/EW 1.74.

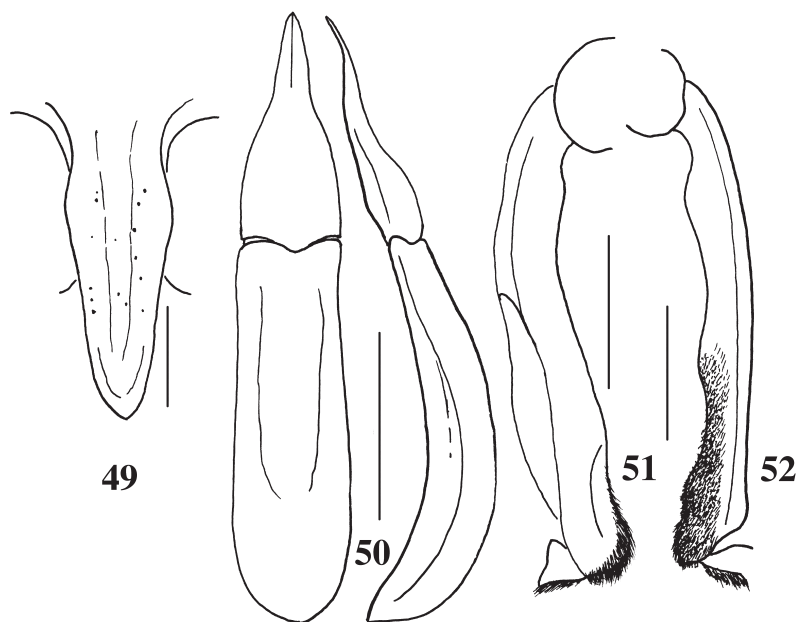
**M a l e.** Oblong, weakly divergent posteriorly, gently convex above, shiny. Colour dark reddish brown (somewhat teneral); head and pronotum slightly covered with reddish purple tinge, and irregular metallic green sheen in part; elytra included with their epipleura reddish purple, intervals with metallic green sheen; venter with slight metallic green sheen in part.

Head almost semicircular, weakly convex, with anterior margin not sinuate between clypeus and genae, punctures fine and dense on clypeus, finer and denser on genae, sparser and larger on frons; clypeus moderately convex in middle, sloping forwards, weakly sinuate at middle of apex; fronto-clypeal suture fine and tenuous, roundly curved and not angulate; genae rather large, longer than wide, distinctly depressed at middle; post-genae rounded, not produced; frons weakly convex, obtriangularly depressed anteriorly, slightly raised laterally; eyes large, inner ocular-sulci obscure. Antennae short, reaching before middle of pronotum, rather loosely articulate; five distal antennomeres dilated, forming a moderate club; 11th oblong-oval, the longest and the widest. Ultimate maxillary palpomere triangular, weakly broadened at apex. Mentum triangular, pointed at apex, moderately elevated in middle and distinctly excavate at sides, with a few long setae.

Pronotum trapezoidal, weakly convex, widest at base, very finely microsculptured, narrowly and weakly sulcate along lateral margins, punctures fine and dense, larger than on clypeus and smaller than on frons; anterior margin shallowly and evenly emarginate, faintly beaded laterally; lateral margins weakly rounded, gently narrowed forwards and sinuate backwards from the middle, narrowly beaded; anterior angles obtusely rounded, not produced, posterior angles acutely pointed, extremely strongly produced backwards. Scutellum depressed, impunctate.

Elytra oblong, weakly divergent posteriad, widest at apical third, moderately convex; striae fine and weakly impressed, almost instriate in inner three striae, strial punctures irregular and rather sparse, becoming distinctly smaller posteriad in posterior half; intervals flat, or slightly convex in part, almost impunctate; humeral calli gently humped; epipleuron flat and oblique inwards, reaching near middle of fifth abdominal ventrite, with bead of inner margin distinct.

Hypomeron impunctate, covered with dense and fine microsculpture. Prosternum rather long, not beaded at apex, with fine puberulous punctures; prosternal process long, cuneiform, moderately sul-



Figs. 49–52. *Phaedis angulicollis* sp. nov. — 49, Prosternal process; 50, male genitalia (left: dorsal view; right: lateral view); 51, protibia; 52, metatibia. Scales: 0.5 mm for fig. 49; 1.0 mm for figs. 50–52.

cate in middle and sharply pointed at apex. Mesoventrite oblique forwards; V-shaped ridge a little sloping forwards, with two anterior angles acutely pointed in lateral view. Metaventrite strongly convex, sparsely and microscopically punctate, with distinct median line; space between punctures very smooth. Abdomen densely covered with puberulous minute punctures.

Male genitalia robust, feebly incurved; parameres weakly convex dorsad, rounded at sides, with reflexed beak-shaped apices in apical two-fifths.

Legs rather slender; profemoral teeth sharp and distinct, pointed forwards, posterior margins of meso- and metafemora each with two teeth and space between teeth gently emarginate, mesofemoral teeth weak, situated near base and at apical third, metafemoral teeth also weak, situated near base and behind apex; protibiae distinctly ancipital on outer margin, distinctly depressed and twisted in apical two-thirds between the ancipital edges, with inner margin also ancipital, emarginate in basal half in dorsal view although constantly and shallowly excavate between the ancipital edges in ventral view, mesotibiae slightly curved outwards, inner margin not ancipital, with dense pubescence in apical half, metatibiae almost straight, with inner margin weakly bisinuate, in which basal sinus adapted to receive metafemoral tooth.

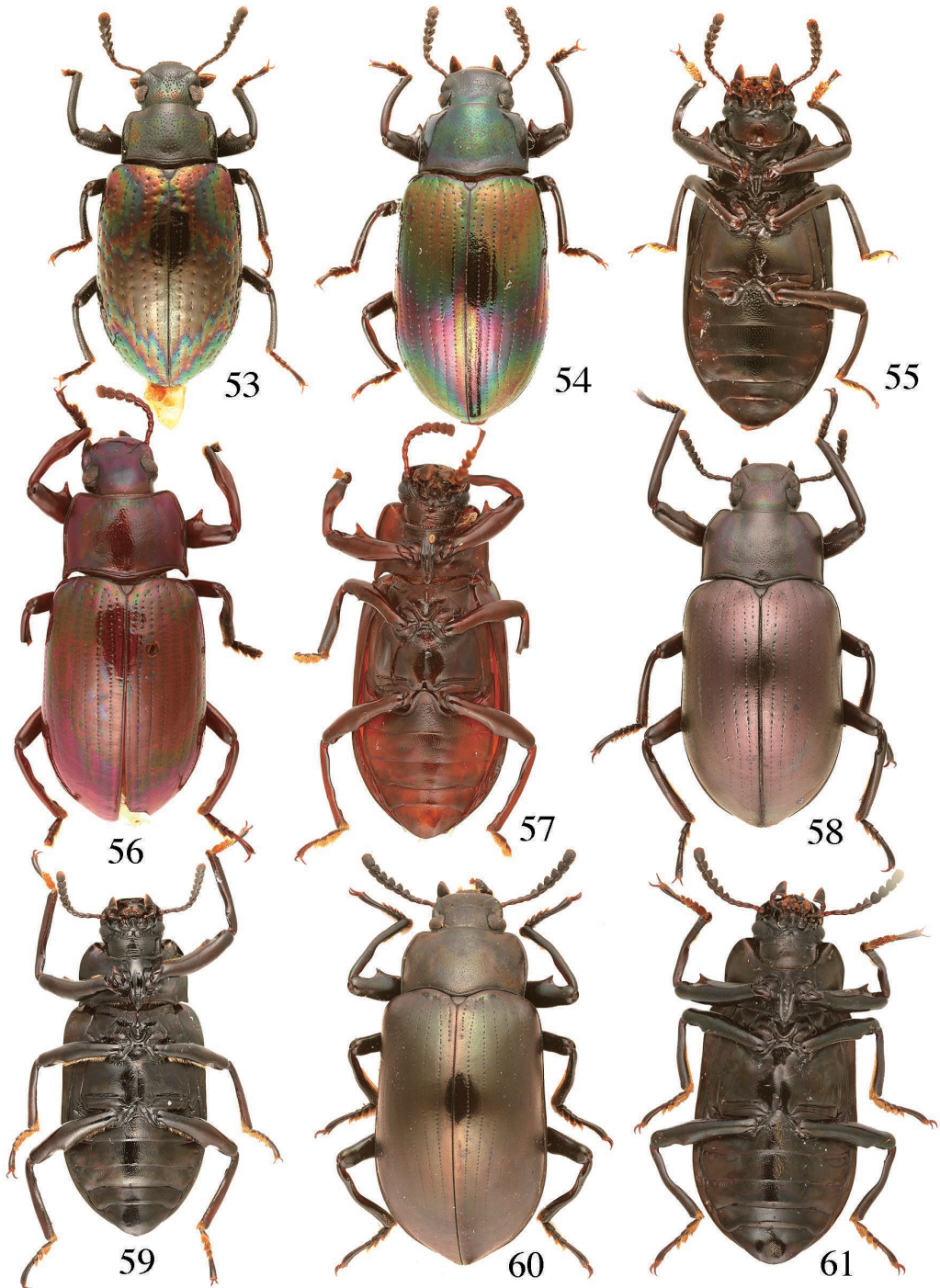
F e m a l e. Unknown.

*Distribution.* Sumatra.

*Diagnosis.* This species is unique in having slender body, very strongly produced pronotal posterior angles and bidentate meso- and metafemora. Other important external characteristics for the identification are as follows: inner ocular-sulci obscure; ultimate maxillary palpomere triangular; pronotum weakly sulcate along lateral margins; elytral intervals almost impunctate; V-shaped ridge of mesoventrite with anterior angles acute; parameres with reflexed beak-shaped apices; inner margin of mesotibiae with dense pubescence in apical half and that of metatibiae bisinuate.

*Etymology.* The new species is named after the posterior angles of the pronotum.





Figs. 53–61. *Phaedis* spp. — 53, *P. yamasakoi* sp. nov.; 54–55, *P. purpurinotatus* sp. nov.; 56–57, *P. angulicollis* sp. nov.; 58–59, *P. opacipennis* sp. nov.; 60–61, *P. malayanus* sp. nov. — 53, 54, 56, 58 & 60, Habitus in dorsal; 55, 57, 59 & 61, habitus in ventral.

*Phaedis opacipennis* sp. nov.

(Figs. 58–59, 62–65)

Holotype: ♂, E. Java: Mt. Argopuro, Indonesia, XI–1989. (EUMJ).

*Measurements.* Body length: 15.0 mm. Male (n = 1): IE/TD 2.73; PW/PL 1.63; EL/EW 1.62.

*Male.* Oblong, gently convex, almost mat. Colour dark reddish brown, black in part; head and pronotum black, head with dark reddish purple sheen, metallic green in median portion of clypeus and posterior area behind vertex; pronotum with a pair of quadrate spots at sides, the spots margined internally by dark metallic green; elytra dark purple.

Head distinctly produced forwards, not sinuate between clypeus and genae, finely microsculptured, densely and finely punctate, the punctures on frons a little larger and sparser than on clypeus; clypeus transversely convex in anterior half, gently sinuate at apex; fronto-clypeal suture tenuous, distinctly impressed; genae depressed, longer than wide, gently arcuate at sides and not reflexed; post-genae not produced, gently narrowed backwards; frons broadened, moderately convex in middle, not raised laterally; eyes coarsely faceted, inner ocular-sulci shallow and broad. Antennae short, rather loosely articulated, reaching behind middle of pronotum; six distal antennomeres forming a moderate club; 11th oval. Ultimate maxillary palpomere thick, weakly securiform. Mentum oblong-triangular, longer than wide, longitudinally elevated in middle and deeply excavate at sides, thickly beaded anteriorly, densely punctate, with some long setae anteriorly.

Pronotum subquadrate, widest at base; disc weakly convex, hardly sulcate along lateral margins, very finely microsculptured, punctures dense and fine, minuter than on head; anterior margin gently and arcuately emarginate, weakly beaded laterally; lateral margins feebly arcuate in basal two-thirds, thence steeply narrowed to apex, distinctly and rather narrowly beaded; anterior angles obtuse, a little produced, posterior angles acute and pointed, produced backwards. Scutellum depressed, wider than long, pointed at apex, with some punctures.

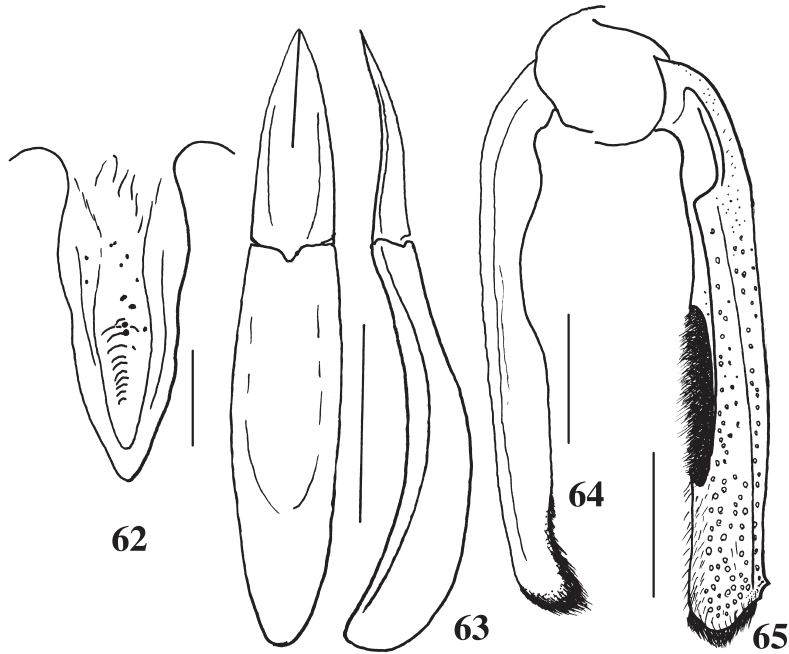
Elytra distinctly convex, weakly divergent posteriad, widest at apical third, surface with dense and fine microsculpture; striae almost vestigial, strial punctures large and rather dense, but irregular in density, becoming minuter or rudimental apically; intervals flat, densely and finely punctate; humeral calli weakly humped; epipleuron flattened, strongly and abruptly broadened near base, microsculptured and impunctate.

Hypomeron impunctate, matted by dense microsculpture. Prosternum strongly convex in middle, impunctate; prosternal process cuneiform, horizontal, distinctly depressed, not beaded at sides, roundly acute at apex, with some minute punctures. Mesoventrite carinate in middle of anterior portion, rugulose at sides; posterior ridge U-shaped, with anterior angles acute in lateral view. Metaventrite rather short, moderately convex, obliquely rugulose, punctures dense and fine, somewhat obscure. Abdomen densely and finely punctate except for somewhat coarsely so in fifth ventrite.

Male genitalia slender and simple, moderately curved; parameres gently and evenly narrowed apicad.

Legs slender; anterior margin of profemora densely pubescent between base and profemoral tooth which is short and truncate at apex, mesofemoral teeth short and weak, posterior margins of mesofemora densely pubescent from base to behind apex, those of metafemora also moderately pubescent from base to metafemoral tooth; protibiae weakly incurved, with inner margin distinctly emarginate between basal fifth and middle, inner margins of mesotibiae densely pubescent in apical half, those of metatibiae ancipital, space between the ancipital edges with an elongate pubescent pore between basal fourth and apical two-ninths, dorsal edge of ancipital edges with a distinct hook behind base; tibiae compactly articulate.





Figs. 62–65. *Phaedis opacipennis* sp. nov. — 62, Prosternal process; 63, male genitalia (left: dorsal view; right: lateral view); 64, protibia; 65, metatibia. Scales: 0.5 mm for fig. 62; 1.0 mm for figs. 63–65.

Female. Unknown.

*Distribution.* Java.

*Diagnosis.* This species is similar to *Phaedis malayanus* sp. nov. in having matted body and hooked metatibiae, but quite different from the latter in having densely pubescent male femora. The characterised points of this species are as follows: antennae clavate in six distal antennomeres; pronotum gently emarginate at apex, with a pair of obscure spots at sides; clypeus sinuate at apex; genae longer than wide; inner ocular-sulci shallow; mentum longer than wide; posterior ridge of mesoventrite U-shaped; all femora with dense pubescence; and inner margin of mesotibia densely pubescent in apical half and that of metatibia with a pubescent elongate pore.

*Etymology.* The specific epithet refers to the opaque elytra.

***Phaedis malayanus* sp. nov.**

(Figs. 60–61, 66–70)

*Type series.* Holotype: ♂, Malaysia-W, Pahang, 30 km E of Ipoh, 1,500 m, Cameron Highlands, Tanah Rata, 14.–17.III.1998, P. ČECHOVSKÝ leg. (SMNS). Paratypes: 1 ♀, W Malaysia, Pahang, Banjaran Benom Mts., 20 km S of Kampong Ulu Dong, 17.–23.IV.1997, 1,500–1,900 m, P. ČECHOVSKÝ leg. (SMNS); 1 ♂, Pahang, Malaysia, Tana Rata, CHL., alt. ca 1,400 m, 28–31.III.2008, N. OHBAYASHI leg. (CKAO); 1 ♂, Pahang, Malaysia, Gunung Jasar, Cameron Highland, 13.IV.2011, N. OHBAYASHI leg. (CKAO); 1 ♂, 1 ♀, Pahang, Malaysia, Tanah Rata, Cameron Highland, 1–18.IV.2011, Native collector leg. (CKAO); 1 ♂, Malaysia, Pahang, Cameron Highlands, Tana Rata vill. Env., Gunung Jasar [Mt.]: 1,470–1,705 m, 04°28.4–7'N, 101°21.6–22.1'E, 18.IV–10.V.2009, Jiň HÁJEK leg. (SMNS); 1 ♂, Malaysia, Cameron Highlands, X.1980. (ZSM); 1 ♂, Malaysia – Perak, Cameron Highlands, Tanah Rata,

13.–16.III.1997, Oliver ĎULIK leg. (ZSM); 1 ♀, ditto, 13.–17.II.1997. (ZSM); 1 ♂, Malaysia, Cameron Highlands, 1.II.1982. (ZSM); 1 ♀, Maxwell's Hill, Malaysia, 15.I.1976, Y. KIYOYAMA leg. (CKAO); 1 ♀, Cameron Hi., 19 M., Malaysia, 1973–1975. (CKAO); 1 ♀, Malaysia, Cameron Hlds., Tapah, IV–V.1989, B. MOLNÁR leg.; 1 ♀, Malaysia, Taiping, IV.1978. (ZSM); 1 ♀, Malaysia, Pahang, Cameron Highlands, Tanah Rata, from illuminated white-washed walls, No. 77, 23–31.III.1995, O. MERKL leg. (HMNH).

*Measurements.* Body length: 13.5–16.7 mm. Male (n = 9): IE/TD 2.31–2.86; PW/PL 1.48–1.58; EL/EW 1.57–1.65. Female (n = 8): IE/TD 2.50–3.16; PW/PL 1.52–1.63; EL/EW 1.43–1.65.

Oblong, moderately convex, gently divergent posteriorly, mat to submat, with sericeous sheen, legs more or less shiny. Colour black to dark reddish brown; dorsal side dark brown to dark reddish brown, in some individuals covered with dark brassy-green sheen throughout, somewhat shiny on sutural intervals of elytra; pronotum with a pair of oval spots at sides, the spots obscure dark green or aeneous, visible under the florescent lamp; antennae infuscate; legs metallic blue or metallic dark green in major individuals, tibiae dark reddish brown or reddish brown in a few individuals.

*M a l e.* Head quadrate, weakly convex, densely covered with microsculpture, anterior margin slightly sinuate between clypeus and genae; clypeus weakly convex in middle, roundly and distinctly emarginate at apex in median half, densely and finely punctate; fronto-clypeal suture strongly impressed, angularly curved laterally; genae longer than wide, slightly elevated and gently arcuate at sides; post-genae a little produced laterad behind eyes; frons broad, almost flattened medially, weakly raised laterally, punctures larger and sparser than on clypeus; eyes transverse, inner ocular-sulci shallow and weak, obscure in some individuals. Antennae rather slender, reaching middle of pronotum, loosely articulate; six distal antennomeres weakly dilated and forming a club; 11th oval or oblong-oval. Ultimate maxillary palpomere securiform, large and thick. Mentum short-linguiform, produced forwards, longitudinally elevated in middle, excavate at sides, rounded at apex, finely punctate.

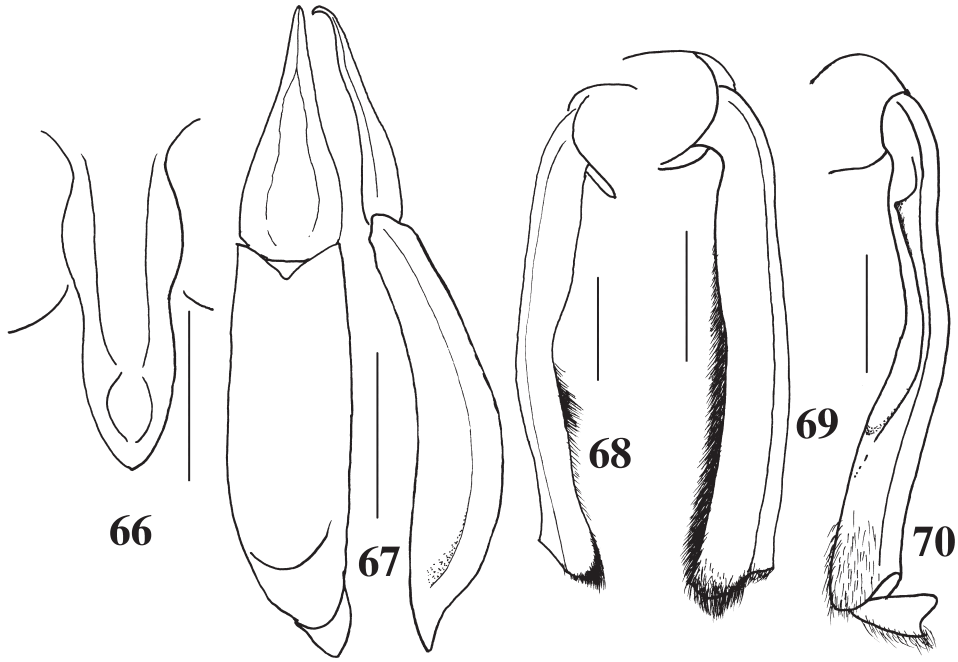
Pronotum subtrapezoidal, various in widest point, widest at middle or basal two-fifths, otherwise at base; disc weakly convex, covered with dense microsculpture, not sulcate along lateral margins, punctures coarse and sparse, larger than on frons, fine on lateral spotted areas; anterior margin shallowly emarginate, weakly beaded laterally; lateral margins feebly narrowed or subparallel-sided in basal two-thirds, roundly narrowed in the rest, narrowly beaded; basal margin narrowly beaded; anterior angles obtusely rounded, a little produced, posterior angles acute, hardly produced. Scutellum short, wider than long, finely microsculptured, with some fine punctures.

Elytra oblong, gently divergent posteriad, strongly convex, widest at apical third, densely covered with microsculpture, transversely depressed behind base; striae vestigial, strial punctures distinct, large and sparse, becoming minuter posteriorly and rudimental apically; intervals flat, microscopically punctate; humeral calli weakly humped; epipleuron flat or depressed, impunctate, covered with dense microsculpture.

Hypomeron impunctate, densely microsculptured. Prosternal process broadened cuneiform, slightly sloping posteriad, depressed in middle, roundly pointed at apex. Mesoventrite coarsely and very densely punctate; posterior ridge U-shaped, horizontal, with anterior angles clearly angulate, rectangular in lateral view. Metaventrite weakly convex, distinctly depressed in middle, finely punctate and rugulose, with process sparsely setiferous. Abdomen finely and densely punctate, with a tuft of sparse long setae on each middle of first to third ventrites; fifth ventrite roundly depressed in middle, the depressed area with a rounded tuft of sparse to dense long setae.

Male genitalia slightly incurved; parameres rounded at sides in basal half, steeply and evenly tapering towards apices in apical half, suddenly curled up ventrad at apices.

Legs moderate in length; profemoral teeth distinct, situated at apical third, meso- and metafemo-



Figs. 66–70. *Phaedis malayanus* sp. nov. — 66, Prosternal process; 67, male genitalia (left: dorsal view; right: lateral view); 68, protibia; 69, mesotibia; 70, metatibia. Scales: 1.0 mm.

ral teeth weak and rounded, both situated at apical third; protibiae emarginate ventrally in basal half, with inner margin roundly emarginate between basal fourth and apical two-fifths, rather densely pubescent in apical half, mesotibiae slightly incurved, with inner margin densely pubescent in apical two-thirds, metatibiae bent inwards at basal two-fifths, with inner margin ancipital, strongly depressed between ancipital edges, of which dorsal edge with a distinct hook behind base; tarsi simple, claw tarsomere nearly as long as the total length of preceding tarsomeres.

*F e m a l e.* Antennae shorter; abdomen without depression and tufts of setae; legs simple, meso- and metafemora devoid of teeth; tibiae weakly incurved, not bent, neither emarginate, densely pubescent nor hooked.

*Distribution.* West Malaysia.

*Diagnosis.* This species is very similar in mat body to *Phaedis opacipennis* sp. nov. The differences between these two are summarised under the description of the latter. The deserving characteristics of this species are as follows: anterior margin of head slightly sinuous between clypeus and genae; fronto-clypeal suture angularly curved; post-genae a little produced; inner ocular-sulci shallow; antennal club composed of six antennomeres; pronotum narrowly beaded at base, and not sulcate along lateral margins; male mesoventrite with posterior ridge U-shaped; three basal abdominal ventrites in male with tuft of long setae on each middle, fifth ventrite in male with a rounded tuft of setae; parameres curled up ventrad at apices; inner margin of male mesotibiae densely pubescent in apical two-thirds; metatibiae bent inwards at basal two-fifths, with distinct hook; and female devoid of meso- and metafemoral teeth.

*Etymology.* The specific epithet refers to the type locality.

**Key to the Species of the *Phaedeucyrtus* Group of the Genus *Phaedis***

1. Antennae clavate in five distal antennomeres; body shiny to subshiny, never mat ..... 2
- Antennae clavate in six distal antennomeres; body matt or submat, with sericeous sheen ..... 10
2. Posterior margin of male mesofemora between base and mesofemoral tooth fringed with lineate dense pubescence; metafermoral tooth reduced or rudimental; meso- and metafemora in female of some species devoid of teeth ..... 3
- Posterior margin of male mesofemora not fringed with dense pubescence, metafemoral tooth distinct; female meso- and metafemoral teeth present ..... 7
3. Pronotum and elytra neither fasciate nor spotted; inner margin of male metatibia with a minute tubercle before apex ..... 4
- Pronotum or elytra fasciate or spotted, spots on pronotum rather obscure, fasciae or spots of elytra with metallic tinge, observable under the florescent lamp; presence of tubercles on male metatibiae variable ..... 5
4. Prosternal process oblong triangular, robust; metafemoral tooth minute, spine-like, situated near middle; frons less than twice as wide as eye; ultimate maxillary palpomere with endo-apical angle strongly produced; body length: 7.4 mm; Thailand ..... *P. robustipes* sp. nov.
- Prosternal process slender, lanceolate; metafemoral tooth obtuse edge-like, situated behind middle; frons more than twice as wide as eye; ultimate maxillary palpomere with endo-apical angle weakly produced; body length: 7.4 mm; Malay Peninsula ..... *P. kiyoyamai* sp. nov.
5. Pronotum obscurely spotted at sides; elytra not spotted anywhere; anterior margins of pro-, posterior margins of meso- and metafemora fringed with lineate dense pubescence; frons 2.73 times as wide as eye; inner margin of male metatibiae scarcely produced inwards, distinctly hooked behind base, narrowly depressed between ancipital edges, with a tuft of short pubescence between middle and apical fourth and without apical tubercles; body length: 13.3 mm; Malay Peninsula ..... *P. signicollis* sp. nov.
- Pronotum not spotted; elytra with humeral and apical metallic spots; pro- and metafemora glabrous; frons less than 2.2 times as wide as eye; inner margin of male metatibiae not pubescent, roundly produced and not hooked behind base, broadly depressed between ancipital edges, with a tubercle before apex in male; body length: 7.5–9.5 mm ..... 6
6. Head with anterior margin not sinuate between clypeus and genae; ultimate maxillary palpomere strongly securiform; mentum triangular, not triangularly carinate in middle; pronotum widest at middle or basal two-fifths, with posterior angles rectangular; hypomeron impunctate; prosternal process elongate triangular; V-shaped ridge of mesoventrite with anterior angles produced forwards in lateral view; male metaventrte with fine long pubescence in middle; three basal abdominal ventrites in male with sparse tuft of long pubescence in each middle; male genitalia more slender, parameres gently narrowed to apices, with dense punctures in apical three-fourths; body length: 7.5–9.5 mm; Borneo ..... *P. ventralis* sp. nov.
- Head with anterior margin slightly sinuate between clypeus and genae; ultimate maxillary palpomere right-angled triangular; mentum oblong-triangular, triangularly carinate in middle; pronotum widest at basal fourth, with posterior angles a little obtuse than rectangular; hypomeron with setiferous punctures; prosternal process elongate cuneiform; V-shaped ridge of mesoventrite with anterior angles obtusely rounded in lateral view; male metaventrte without pubescence in middle; three basal abdominal ventrites in male without pubescence; male genitalia robust, parameres impunctate, somewhat hastate at apices; body length: 8.6–8.7 mm; Borneo ..... *P. rolandi* sp. nov.

7. Elytra with fasciae or spots ..... 8  
 — Elytra neither fasciate nor spotted ..... 9
8. Pronotum variable in the widest point, coarsely and densely punctate; elytral basal and apical fasciae iridescent, with distinctly undulate margins; striae punctures large and coarse, fovea-like laterally; meso- and metafemoral teeth small, not spine-like; post-genae produced laterad; inner margins of male metatibiae not depressed; body length: 5.3–6.6 mm; Thailand and Laos ..... *P. yamasakoi* sp. nov.  
 — Pronotum widest at base, finely and densely punctate; elytral basal and apical fasciae metallic green, oval, with margins not undulate; striae punctures fine and moderate in size; meso- and metafemoral teeth minute, spine-like; post-genae not produced laterad; inner margins of male metatibiae depressed in basal half; body length: 7.4–8.3 mm; Malay Peninsula ..... *P. purpurinotatus* sp. nov.
9. Body shiny; head with anterior margin not sinuate between clypeus and genae; pronotum shallowly emarginate at apex, with posterior angles extremely produced; mentum triangular, longer than wide; posterior margins of meso- and metafemora each with two teeth; body length: 12.7 mm; Sumatra ..... *P. angulicollis* sp. nov.  
 — Body weakly shiny by dense microsculpture; head with anterior margin slightly sinuous between clypeus and genae; pronotum deeply emarginate at apex, with posterior angles weakly pointed; mentum linguiform, wider than long; posterior margins of meso- and metafemora each with a tooth at apical third; body length: 13.7 mm; Zanzibar (?) ..... *P. obscuripes* (PIC, 1916)
10. Clypeus gently sinuate at apex; frons moderately convex in middle, not raised laterally; mentum oblong-triangular, longer than wide; pronotum thickly beaded at base, acute and produced backwards at posterior angles, with punctures dense and fine, minuter than on head; striae punctures of elytra large and rather dense; prosternal process horizontal, distinctly depressed; male abdomen without tufts of long setae on ventrites, and without round depression on fifth ventrite; profemoral teeth short, truncate at apex, anterior margin of profemora, posterior margins of meso- and metafemora densely pubescent; inner margins of mesotibiae densely pubescent in apical half, male metatibiae not bent, inner margin with an elongate pubescent pore between basal fourth and apical two-ninths; body length: 15.0 mm; East Java ..... *P. opacipennis* sp. nov.  
 — Clypeus distinctly emarginate at apex in median half; frons flattened medially, weakly raised laterally; mentum short-linguiform, produced forwards; pronotum narrowly beaded at base, acute and hardly produced at posterior angles, with punctures coarse and sparse, larger than on frons; striae punctures of elytra sparse; prosternal process slightly sloping posteriad; male abdomen with a tuft of sparse long setae on each middle of first to third ventrites, fifth ventrite in male roundly depressed in middle, and the depressed area with a rounded tuft of sparse to dense long setae; profemoral teeth distinctly acute at apex, anterior margin of profemora, posterior margins of meso- and metafemora smooth; male mesotibiae with inner margin densely pubescent in apical two-thirds, male metatibiae bent inwards at basal two-fifths, devoid of pubescent pore; body length: 13.5–16.2 mm; Malay Peninsula ..... *P. malayanus* sp. nov.

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## 要 約

安藤清志：*Phaedeucyrtus* グループ（カタビロキマワリ属 *Phaedis*）の再検討（鞘翅目ゴミムシダマシ科ニジゴミムシダマシ族）。——カタビロキマワリ属の1亜属である *Phaedeucyrtus* 亜属について再検討を行った。本亜属はアフリカ・Zanzibar産の1雌を模式種として PIC (1916) が創設した。基亜属が前腿節のみに明瞭な歯状突起をそなえるのに対して、本亜属はすべての腿節に歯状突起をそなえる特徴だけで区別されていたが、今回の検討によりこれら中・後腿節の歯状突起は亜属を分ける派生形質とは思量できず、本亜属を基亜属のシノニムとして処理を行い、その1グループであると提唱した。また本属の種でこの亜属のみがアフリカで記録されていた点に言及し考察した。多くの協力者によってもたらされた標本を検討した結果、本グループに該当する東南アジア産の10新種を認知し、記載した。これらの種にはそれぞれ固有の特徴が散見され、幾つかのサブグループに分けうると考えられる。このグループの種を見極める特徴には、雌雄の二次性徴がきわめて有効であるが、模式種 *P. obscuripes* の雄は発見することができなかった。また、今回記載した種の幾つかの雌は未見である。したがってこのグループの全容が明らかになったとは言えず、挿入した検索表も便宜上のものとして作成した。新たに記載した新種名は次の通りである。*Phaedis angulicollis* sp. nov., *P. kiyoyamai* sp. nov., *P. malayanus* sp. nov., *P. opacipennis* sp. nov., *P. purpurinotatus* sp. nov., *P. robustipes* sp. nov., *P. rolandi* sp. nov., *P. signicollis* sp. nov., *P. ventralis* sp. nov., *P. yamasakoi* sp. nov.

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