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On leaf-beetles of the genus *Palpoxena* Baly, 1861 (Coleoptera: Chrysomelidae) from Malaysia and Indonesia

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Abstract. Four new species of the genus *Palpoxena* Baly, 1861 are described from Malaysia and Indonesia. *Palpoxena achehensis* sp. n. belongs to the *P. bipartita* (Jacoby, 1879) species group from Sumatra. This species has red elytra with the basal part black, the maxillary palpomere III is swollen, not flattened, eyes large, the antennomere III is strongly modified hook-shaped; the space between antennal sockets is flattened; the clypeus is with deep and wide excavation almost reaching eyes, the narrow space between them with the tubercle bearing the tuft of bristles on each side; antennae are slender, extended beyond apex of elytra; antennomere III is slightly flattened, antennomeres IV–V are cylindrical. *Palpoxena* sp. and *Palpoxena klimenкои* sp. n. belong to the *P. laeta* Baly, 1861 species group from Peninsular Malaysia, Sumatra and Borneo. *Palpoxena* sp. from Sumatra, having the strongly enlarged and swollen protarsomere I, is most similar to *Palpoxena shayakhmetovai* Kizub, 2016 from Peninsular Malaysia and is possibly a Sumatran subspecies of the latter taxon. Although there are slight differences between them in the body colouration, the shape of the aedeagus and in the length/width ratio of the protarsomere I; it is not described as a new to sciences in this paper. *Palpoxena klimenкои* sp. n. differs from other members of the species group by the following combination of characters: elytra dark bluish with narrow basal area; epipleura have very narrow sutural margin and wide apical area brown; antennomeres III–VIII are thickened, about 1.4–1.5 times wider than antennomere II, covered with not dense, short and adpressed setae on the ventral surface; the maxillary palpomere III is half-ellipsoid, with the slightly elongated and sharpened apical margin. *Palpoxena parasabahensis* sp. n. belongs to the *P. variabilis* (Jacoby, 1886) species group from Borneo. This new species differs from other members of the group by elytra green with reddish brown apex and entirely brown legs. In addition, only this species has the apex of the antennomere I with the protruding outer corner and the labrum with two long structures on inner side. *Palpoxena trusmadiensis* sp. n. has elytra green-blue or blue and tibiae darkened. This species differs from all congeners by the shape of the maxillary palpomere III which is slightly enlarged and flattened, but just a little wider than the palpomere II. Figures of the general view and the aedeagus are given for mentioned above and related species. A new key for males of the genus *Palpoxena* from Malaysia and Indonesia is proposed.

Key words: Coleoptera, Chrysomelidae, *Palpoxena*, Borneo, Indonesia, Malaysia, Sumatra, new species, taxonomy.

О жуках-листоедах рода *Palpoxena* Baly, 1861 (Coleoptera: Chrysomelidae) Малайзии и Индонезии

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Резюме. Описано четыре новых вида жуков-листоедов рода *Palpoxena* Baly, 1861 из Малайзии и Индонезии. *Palpoxena achehensis* sp. n. относится к группе видов *P. bipartita* (Jacoby, 1879), распространенных на Суматре. Этот вид имеет красные надкрылья с черным основанием; 3-й максиллярный щупик вздутый, но не уплощенный; большие глаза и крюкообразный 3-й членик усиков. Пространство между усиковыми впадинами плоское, наличник с глубоким и широким углублением, достигающим краев глаз; узкое пространство между этим углублением и краем глаза узкое, с каждой стороны с бугорком, несущим пучок щетинок. Усики длиннее тела, с уплощенным члеником III, членики IV–V цилиндрические. *Palpoxena* sp. и *Palpoxena klimenкои* sp. n. принадлежат к группе видов *P. laeta* Baly, 1861 из полуостровной Малайзии, с Суматры и Борнео. *Palpoxena* sp. с Суматры, имеющий сильно увеличенный и вздутый протарзомер I, наиболее похож на *Palpoxena shayakhmetovai* Kizub, 2016 из полуостровной Малайзии и, возможно, является его суматранским подвидом. Хотя между ними есть небольшие различия в окраске тела, форме эдегуса и соотношении длины и ширины протарзомера I, *Palpoxena* sp. не описан как новый вид или подвид в этой статье. *Palpoxena klimenкои* sp. n. отличается от других представителей группы следующей комбинацией признаков: темно-голубые надкрылья с коричневыми узкой базальной и широкой апикальной областями, эпиплеврами и очень узкими краями шва. Членики усиков III–VIII утолщенные (примерно в 1.5 раза шире членика усиков II), на нижней поверхности покрыты негустыми короткими прижатыми волосками, 3-й максиллярный щупик имеет форму полуэллипсоида со слегка вытянутым и заостренным передним краем. *Palpoxena parasabahensis* sp. n. относится к группе видов *P. variabilis* (Jacoby, 1886), распространенных на Борнео, и отличается от других представителей группы зелеными надкрыльями с красноватой вершиной и полностью желтыми ногами. Кроме того, только этот вид имеет членик усиков I с выступающим наружным вершинным углом и верхнюю губу с двумя длинными образованиями на нижней стороне. У *Palpoxena trusmadiensis* sp. n. зелено-голубые или голубые надкрылья и затемненные голени. Этот вид отличается от близких видов слегка увеличенным и уплощенным третьим максиллярным щупиком, который лишь немногим шире второго членика. Для всех этих и для большинства близких к ним видов даны фотографии габитуса и эдегуса. Предложена новая определительная таблица для представителей рода *Palpoxena* из Малайзии и Индонезии.

Ключевые слова: Coleoptera, Chrysomelidae, *Palpoxena*, Борнео, Индонезия, Малайзия, Суматра, новый вид, таксономия.

Introduction

The genus *Palpoxena* established by Baly [1861] is widely distributed in Oriental Region (from India to Borneo) and Africa.

Palpoxena can be distinguished from other Galerucinae genera by the following combination of characters: maxillary palpi are with an enlarged 3rd segment; pronotum is transverse depressed with unbordered anterior margin and bordered lateral and posterior margins; anterior coxal cavities are closed posteriorly; tarsal claws are appendiculate; tibiae are without spurs and secondary sexual characteristics of males listed below. Clypeus is strongly depressed or concave, sometimes with unusual structures; a metasternal process is absent; the last ventrite is trilobed in most species (except *P. shayakhmetovai* Kizub, 2016). Special mention deserves the work of Mohamedsaid and Furth [2011] about secondary sexual characteristics in males of Galerucinae (including ones of this genus).

The first key to Malaysian *Palpoxena* species was given by Mohamedsaid [1997]. Later [Mohamedsaid, 2004] he listed four species from Malaysia. Recently, two more *Palpoxena* species from Malaysia have been described by Kizub [2016] and Bezděk [2017]. However, there are neither revisions nor identification keys for Indonesian representatives of this genus. At present, seven species of this genus are known from the studied region (Indonesia and Malaysia).

The study of the new material made it possible to describe four species new for science and give a new identification key for the Indonesian-Malaysian representatives of this genus.

Material and methods

The paper is based on study of *Palpoxena* materials collected by the author in Malaysia and Indonesia, as well as materials from collections of Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia) and my colleagues.

All measurements were made using an ocular grid mounted on MBS-20 stereomicroscope. Measurements of all segments were taken at their widest part, unless otherwise specifically stated. All the proportions of antennomeres and tarsomeres are given in standard units (1 standard unit = 0.25 mm).

All photos presented in this article were taken by the author excluding photographs of *P. antonini* Bezděk, 2017 and *P. sabachensis* Mohamedsaid, 1997 by J. Bezděk, and of *P. shayakhmetovai* by I. Kizub.

Authors' photographs of beetles were taken with a Canon EOS 80D digital camera with Canon EF-S 60mm f/2.8 Macro USM lens. Photographs of aedeagi and spermatheca taken with by a Canon EOS 80D digital camera with Canon Extender EF 1.4 X II and with a combined Canon EF 70–200 mm f/4.0L IS USM and inverted Minolta MC Rokkor-PF 50 mm f/ 1.7 lenses. Images at different focal planes were combined using Zerene Stacker Professional 1.04 software.

Following abbreviations are used for depository places of types:

ZIN – Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia);

JB – private collection of Jan Bezděk (Brno, Czech Republic);

PR – private collection of Pavel Romantsov (St Petersburg, Russia).

Palpoxena achehensis sp. n.

(Figs 1, 13, 25–27)

Material. Holotype, ♂ (PR): “Indonesien, Sumatra II., North Sumatra Prov, Berastagi, h~1655m, N 03°12'57", E 098°31'34.7" 18.III.2020 P. Romantsov leg.". Paratype: 1♂ (JB), “Sumatra-North/Pr. Aceh/ near Kotakane/lok. Collector 05.09-08.09.2003/leg. W. Schepanski”.

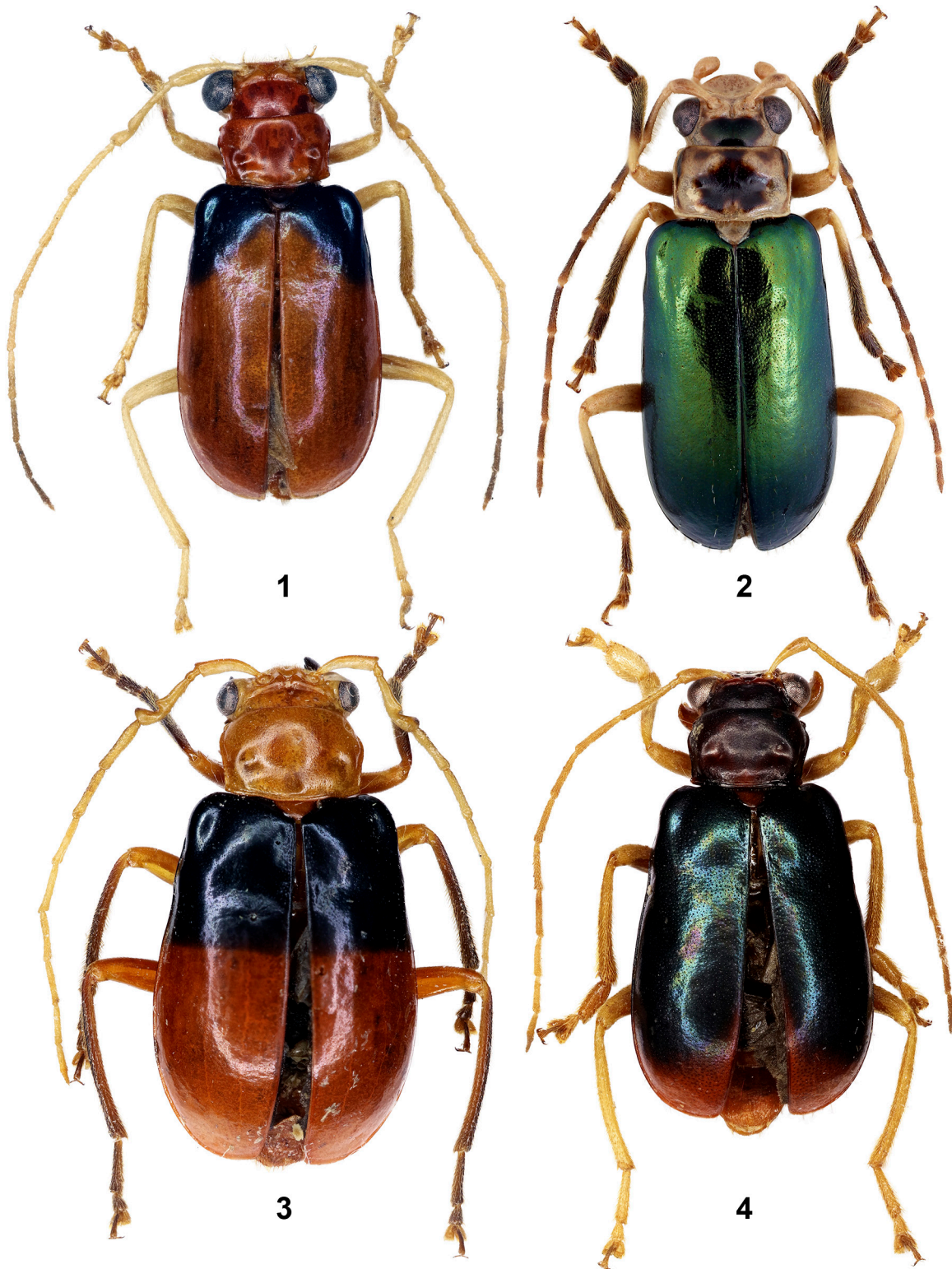
Description. Holotype. Upperside of body red-brown. Elytra shining red, basal area narrow near scutellum and widening toward elytral sides black with slight metallic tint. Antennae and legs light brown. Underside of body brown with darkened sides of metaventrite. Body length 7.9 mm. General view as in Fig. 1.

Body oblong, convex, slightly widened posteriorly, about 2.3 times as long as wide. Head (Fig. 13) impunctate. Labrum large, transverse, convex with group of long erect setae near posterior margin. Maxillary palpomere III swollen, not flattened. Clypeus with deep and wide excavation almost reaching eyes, narrow space between this excavation and margins of eyes with a tubercle bearing a tuft of bristles on each side. Margins of this excavation with group of long erect setae placed laterally (denser and longer closer to labrum) and along its posterior margin. Genae short, about 2.5 times shorter than transversal diameter of eye and about 2.85 times shorter than longitudinal diameter of eye. Frontal tubercles large, moderately convex, impunctate, transverse, separated from vertex by distinct deep furrow. Eyes large, strongly convex, oval (1.16 times as long as wide); interocular space 1.6 times as wide as transverse diameter of eye. Space between antennal sockets flattened with long semi-adpressed setae and with small longitudinal depression in front of tubercles. Antennae long, extended beyond apex of elytra (1.3 times longer than body length). Antennomere III strongly modified, hook-shaped, slightly flattened, antennomeres IV–V cylindrical; proportions in length of antennomeres I–XI as 54 : 8 : 60 : 50 : 38 : 38 : 38 : 36 : 32 : 26 : 30, their proportions in width as 12 : 6 : 10 : 7 : 7 : 6 : 6 : 5 : 4 : 4 : 4. Two basal antennomeres with sparse adpressed setae, following ones covered with adpressed setae on anterior side and with very long setae directed downwards on ventral side.

Pronotum transverse 1.6 times as wide as long (widest at anterior quarter), about 1.5 times narrower than elytra at level of shoulder tubercles. Anterior margin concave, posterior margin slightly convex, lateral margins sinuous. Anterior margin unbordered, lateral and posterior margins bordered. Anterior angles slightly swollen, protruding; posterior angles almost rectangular; all angles with setigerous pore bearing long pale seta. Surface shagreened, impunctate. Disc with transverse furrow. Procoxal cavities closed posteriorly. Prosternal process very narrow, almost invisible between procoxae.

Scutellum about 1.65 times as wide as long, subtriangular with slightly rounded apex. Surface shagreened, impunctate, with depressed central part. Elytra 1.6 times as long as wide, widened near apex; surface with fine but distinct microsculpture, sparsely covered with very small punctures, visible only at high magnification and with sparse erect setae on apical slope. Humeral calli well developed. Epipleura moderately wide at anterior quarter, gradually narrowing towards apex, where turned outward so their bottom margin is visible from above. Epipleural surface impunctate but with fine microsculpture, sparsely covered with erect setae in apical part. Hind wings well developed.

Legs moderately long and narrow, covered with pale semi-adpressed setae. Protarsomere I not extended, 2.62 times as long as wide, protarsomere II subtriangular, length ratio

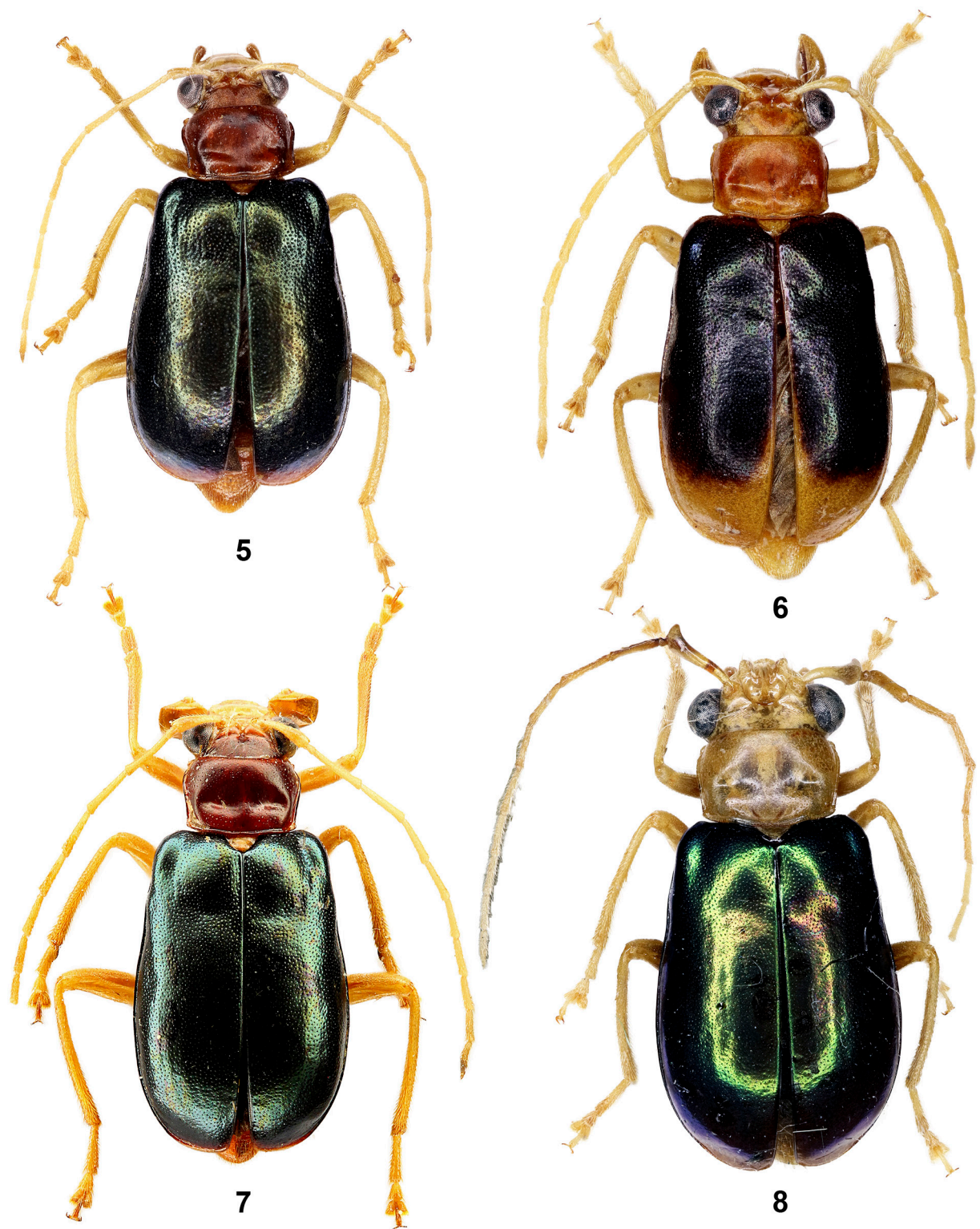


Figs 1–4. *Palpoxena*, general view.

1 – *P. achehensis* sp. n., male, holotype; 2 – *P. antonini*, male, holotype; 3 – *P. bipartita*; 4 – *Palpoxena* sp., male.

Рис. 1–4. *Palpoxena*, общий вид.

1 – *P. achehensis* sp. n., самец, голотип; 2 – *P. antonini*, самец, голотип; 3 – *P. bipartita*; 4 – *Palpoxena* sp., самец.



Figs 5–8. *Palpoxena*, general view.

5 – *Palpoxena* sp., female; 6 – *P. klimenkoi* sp. n., male, holotype; 7 – *P. laeta*, male; 8 – *P. parasabahensis* sp. n., male, holotype.

Рис. 5–8. *Palpoxena*, общий вид.

5 – *Palpoxena* sp., самка; 6 – *P. klimenkoi* sp. n., самец, голотип; 7 – *P. laeta*, самец; 8 – *P. parasabahensis* sp. n., самец, голотип.

of protarsomeres I–IV as 21 : 12 : 8 : 17; width ratio of protarsomeres I–III as 8 : 8 : 13. Mesotarsomere I elongate, 2.87 times as long as wide, length ratio of mesotarsomeres I–IV as 23 : 12 : 9 : 20; width ratio of mesotarsomeres I–III as 8 : 8 : 13. Metatarsomer I long, nearly parallel, 4.12 times as long as wide, length ratio of metatarsomeres I–IV as 36 : 12 : 9 : 22; width ratio of metatarsomeres I–III as 8 : 8 : 12. All tibiae without spurs. Tarsal claws appendiculate.

Ventral side sparsely covered with pale setae. Last abdominal ventrite trilobed, with median lobe truncated. Pygidium slightly convex with rounded apex, surface covered with sparse punctures bearing dark adpressed seta. Aedeagus long and narrow (Figs 25–27), 3.14 times as long as wide, with two narrow and sinuate convergent apical processes forming triangular apex. Apex of aedeagus slightly bent down in lateral view. Ventral side convex with long narrow median impression. Length of aedeagus 2.55 mm, its width 0.4 mm.

Paratype is similar to the holotype, body length 8.4 mm.

Differential diagnosis. *Palpoxena achehensis* sp. n. belongs to the *P. bipartita* (Jacoby, 1879) species group from Sumatra. Members of this group have elytra red with the basal part black and the hook-shaped antennomere III. This new species differs from *P. bipartita* in the swollen but not flattened maxillary palpomere III; large eyes; the flattened space between antennal sockets; the clypeus with the excavation almost reaching eyes and with narrow space between this excavation and the eye margin having the tubercle bearing the tuft of bristles on each side. In addition, this species has antennae slender, extended beyond apex of elytra, antennomere III is slightly flattened, antennomeres IV–V are cylindrical. *Palpoxena bipartita* has the flattened maxillary palpomere III; small eyes; the space between antennal sockets with a somewhat heart-shaped structure; the clypeus with the excavation which ends far from eyes margins and wide and flat space between excavation of the clypeus and eye margin. Antennae of this species are robust, not reaching elytral apex, antennomere III–V are distinctly flattened. See also the key.

Distribution. Sumatra.

Etymology. The name of the new species refers to one of the collecting locality.

Palpoxena sp.

(Figs 4, 5, 15, 24, 34–36)

Material. 1♂ (PR), "Indonesien, Sumatra, Aceh Prov, Bukit Lawang Vill. h~210-240m, N 03°33'01", E 098°06'39" N 03°33'15", E 098°06'05" 30.I.2018 P. Romantsov leg."; 1♀ (PR), same data but "29.I.2018".

Description. Labrum, mandibulae (except black mandibular apex) brown. Genae and clypeus brown, the latter with darkened basal half; occiput dark brown. Pronotum dark brown. Elytra bluish black with reddish apex. Antennae and legs light brown. Underside of body brown. Body length 8.9 mm. General view as in Fig. 4.

Body oblong, convex, slightly widened posteriorly, about 2.23 times as long as wide. Head (Fig. 15) impunctate. Labrum small, strongly convex with several setae along anterior margin. Maxillary palpomere III half-ellipsoid, convex dorsally, and concave ventrally, with protruding upper anterior margin, which distinctly hangs over last palpomere from above. Clypeus smooth and shining with shallow and wide excavation. Genae short, about 2.33 times shorter than transversal diameter of eye and about 2.66 times shorter than longitudinal diameter of eye. Very narrow frontal tubercles elongated and convex, not touching each other,

separated by wide and flat back part of clypeus. Posterior margin of frontal tubercles separated from vertex by thin furrow. Eyes large, strongly convex, slightly oval (1.14 times as long as wide); interocular space 1.66 times as wide as transverse diameter of eye. Space between antennal sockets wide, flat and lustrous without setae. Vertex shagreened, impunctate with deep depression before frontal tubercles. Antennae rather long, extended beyond apex of elytra (1.13 times longer than body length). Antennomere I club-shaped, antennomeres II–XI cylindrical, antennomere XI with pointed apex. Length ratio of antennomeres I–XI as 44 : 8 : 48 : 44 : 40 : 38 : 36 : 34 : 30 : 26 : 32; width ratio as 11 : 6 : 7 : 7 : 7 : 7 : 6 : 6 : 6 : 6 : 6. Two basal antennomeres with sparse adpressed setae, following antennomeres covered with denser adpressed setae; in addition, antennomere III has long setae directed downwards on ventral side.

Pronotum transverse, 1.47 times as wide as long (widest at anterior quarter), about 1.43 times narrower than elytra at level of humeral calli. Anterior margin almost straight, posterior margin slightly convex, lateral margins sinuous. Anterior margin unbordered, lateral and posterior margins bordered. Anterior angles swollen, slightly protruding; posterior angles almost rectangular; all angles with setigerous pore bearing long pale seta; lateral margins with extra short setae. Surface shagreened with very fine punctures visible under high magnification along margins and with almost impunctate central part. Disc with transverse furrow. Procoxal cavities closed posteriorly.

Scutellum 1.56 times as wide as long; subtriangular with rounded apex; surface flat shagreened and impunctate. Elytra 1.6 times as long as wide, widened near apex; surface shagreened, covered with small punctures and with sparse erect setae on apical slope. Humeral calli well developed. Epipectus moderately wide at anterior quarter, gradually narrowing towards apex. Epipectus surface smooth and impunctate, covered with sparse erect setae in apical part. Hind wings well developed.

Legs moderately long and narrow, covered with pale semi-adpressed setae. Protarsomere I enlarged and swollen with flat pad on ventral surface, 1.56 times as long as wide; protarsomere II subtriangular. Proportions in length of protarsomeres I–IV as 36 : 9 : 10 : 26; proportions of protarsomeres I–III in width as 23 : 9 : 10. Mesotarsomere I swollen and slightly enlarged with flat pad in apical two-thirds of ventral surface; 1.88 times as long as wide. Length ratio of mesotarsomeres I–IV as 32 : 12 : 10 : 23; width ratio of mesotarsomeres I–III as 17 : 9 : 18. Metatarsomere I long, nearly parallel, 4.55 times as long as wide. Length ratio of metatarsomeres I–IV as 41 : 15 : 10 : 24; width ratio of metatarsomeres I–III as 9 : 10 : 17. All tibiae without spurs. Tarsal claws appendiculate.

Ventral surface sparsely covered with pale setae. Last abdominal ventrite trilobed with straight truncated median lobe. Pygidium convex with rounded apex, surface covered with sparse punctures bearing dark adpressed seta and with transverse wrinkles in basal half. Aedeagus long and narrow (Figs 34–36), 7.3 times as long as wide, with convergent apical processes forming triangular apex. Apex of aedeagus very slightly bent down in lateral view. Ventral side with longitudinal deep elongate furrow of uneven width. Length of aedeagus 3.65 mm, its width 0.5 mm.

Female is similar to the male, but with maxillary palpomere III swollen, not flattened and last ventrite entire. General view as in Fig. 5. Body length 8 mm. Spermatheca as in Fig. 24. Length of spermatheca 0.375 mm, its width 0.2 mm.

Differential diagnosis. *Palpoxena* sp. belongs to the *P. laeta* Baly, 1861 species group from Peninsular Malaysia, Sumatra and Borneo and differs from the majority of similar species from the group by the protarsomere I strongly enlarged and swollen. *Palpoxena* sp. having the strongly enlarged and swollen protarsomere I is most similar to *Palpoxena shayakhmetovai* from Peninsular Malaysia, but

differs in the body colouration (occiput and pronotum are dark brown, elytra are bluish black with the reddish apex) and in the aedeagus with sharper apex (see also the key). Moreover, *Palpoxena* sp. has more enlarged protarsomere I: its length/width ratio 1.66 instead of 1.77–1.9 in *P. shayakhmetovai*. It is likely that *Palpoxena* sp. is the Sumatran subspecies of *P. shayakhmetovai*. An additional material is necessary for a final decision on its taxonomic position.

Remark. Kizub [2016] mentioned in the original description of *Palpoxena shayakhmetovai* that it has last ventrite entire and not trilobed. However, this is probably a mistake, since all members of this genus have last ventrite trilobed. Sometimes it happens that slits of trilobed last ventrite hard to see (they can be clogged with something). Jan Bezděk (personal communication, April 21, 2022) checked the series of this species in his collection and informed me that all males have the last abdominal ventrite as usual in this genus and sent me their photos.

Distribution. Sumatra.

Palpoxena klimenkoi sp. n.

(Figs 6, 16, 37–39)

Material. Holotype, ♂ (PR): “MALAYSIA, S Borneo, Sabah, Nabawan dist., ~7 km N Pensiangan vill., h~530m N 04°35'16", E 116°19'27" 05.III.2014 P. Romantsov leg.”

Description. Head and pronotum brown. Elytra dark bluish with narrow basal area, epipleural very narrow sutural margin and wide apical area brown. Antennae, legs and underside of body light brown. Body length 9 mm. General view as in Fig. 6.

Body oblong, convex, slightly widened posteriorly, about 2.2 times as long as wide. Head (Fig. 16) impunctate. Labrum small, slightly convex with several setae near anterior margin. Maxillary palpomere III half-ellipsoid with convex dorsal and almost flat ventral sides, the latter with wide furrow in middle. Upper anterior margin of this palpomere slightly elongated and sharpened and distinctly hangs over last palpomere in dorsal view. Clypeus smooth and shining, rather narrowly transverse, concave, with fine groove at bottom of this depression. Middle part of this groove bordered by row of short setae located only above on proximal slope of clypeus. Genae short, 2.22 times shorter than transversal diameter of eye and 2.77 times shorter than longitudinal diameter of eye. Frontal tubercles narrow elongated and convex, their tops almost touch each other, but separated by very narrow deep furrow. Posterior margin of frontal tubercles separated from vertex by thin furrow. Eyes large, strongly convex, oval (1.19 times as long as wide); interocular space 1.47 times as wide as transverse diameter of eye. Space between antennal sockets lustrous and widely concave without setae. Vertex impunctate, covered by very fine microsculpture and with deep depression before frontal tubercles. Antennae rather thick, almost equal body length. Antennomere I club-shaped, antennomeres II–XI cylindrical, antennomere XI with pointed apex. Length ratio of antennomeres I–XI as 38 : 10 : 40 : 39 : 38 : 36 : 35 : 32 : 32 : 25 : 31; width ratio as 12 : 6 : 9.5 : 9 : 9 : 8.5 : 8.5 : 8 : 7 : 6 : 8. Two basal antennomeres with sparse adpressed setae, following antennomeres covered with adpressed setae without long setae directed downwards on ventral side.

Pronotum transverse, 1.41 times as wide as long (barely perceptibly widened at anterior quarter), 1.54 times narrower than elytra at level of humeral calli. Anterior margin slightly concave, posterior margin slightly convex, lateral margins weakly sinuous. Anterior margin unbordered, lateral and posterior margins bordered. Anterior angles not swollen, very slightly protruding; posterior angles obtuse; all angles with setigerous pore bearing long pale seta. Surface finely shagreened without punctures. Disc with transverse furrow. Procoxal cavities closed posteriorly.

Scutellum about 1.7 times as wide as long, subtriangular, with rounded apex. Surface almost flat, shining and impunctate. Elytra 1.49 times as long as wide, slightly widened at posterior third. Surface shagreened, densely covered with small punctures, with a few short setae on sides of posterior third. Humeral calli well developed. Epipleura moderately wide at anterior quarter, gradually narrowing towards apex. Epipleural surface smooth and impunctate, covered with sparse semi-erect setae in apical part. Hind wings well developed.

Legs moderately long and narrow, covered with pale semi-adpressed setae. Protarsomere I very slightly enlarged, 2.25 times as long as wide; protarsomere II subtriangular. Length ratio of protarsomeres I–IV as 27 : 13 : 10 : 24; width ratio of protarsomeres I–III as 12 : 10 : 16. Mesotarsomere I slightly enlarged, 3.45 times as long as wide. Length ratio of mesotarsomeres I–IV as 38 : 13 : 10 : 23; width ratio of mesotarsomere I–III as 11 : 9 : 15. Metatarsomere I long, nearly parallel, 4.55 times as long as wide. Length ratio of metatarsomeres I–IV as 41 : 15 : 10 : 24; width ratio of metatarsomeres I–III as 9 : 10 : 17. All tibiae without spurs. Tarsal claws appendiculate.

Ventral side sparsely covered with pale setae. Last abdominal ventrite trilobed with straight truncated median lobe. Pygidium convex with widely rounded apex, surface shagreened, covered with sparse punctures, bearing light, rather long adpressed seta. Aedeagus long and narrow (Figs 37–39), almost parallel, 7.3 times as long as wide, with convergent apical processes forming triangular apex. Apex of aedeagus straight in lateral view. Ventral side with longitudinal deep furrow in apical third. Length of aedeagus 4 mm, its width 0.45 mm.

Differential diagnosis. *Palpoxena klimenkoi* sp. n. belongs to the *P. laeta* species group from Peninsular Malaysia, Sumatra and Borneo. The new species differs from others members of the group in an unusual body colouration: elytra dark bluish, with the narrow basal area, the epipleural very narrow sutural margin and the wide apical area brown. In addition, only this new species has antennomeres III–VIII thickened, about 1.4–1.5 times wider than the antennomere II, covered with sparser, short and adpressed setae on the ventral surface. Other members of this species group have antennomeres III–VIII equal or slightly (not more than 1.2 times) wider than the antennomere II, covered with dense and long setae, directed downwards on ventral surface. See also the key.

Distribution. Borneo (Sabah).

Etymology. The new species is named after my late friend Aleksey Klimenko who accompanied me during the field work in Malaysia in 2014.

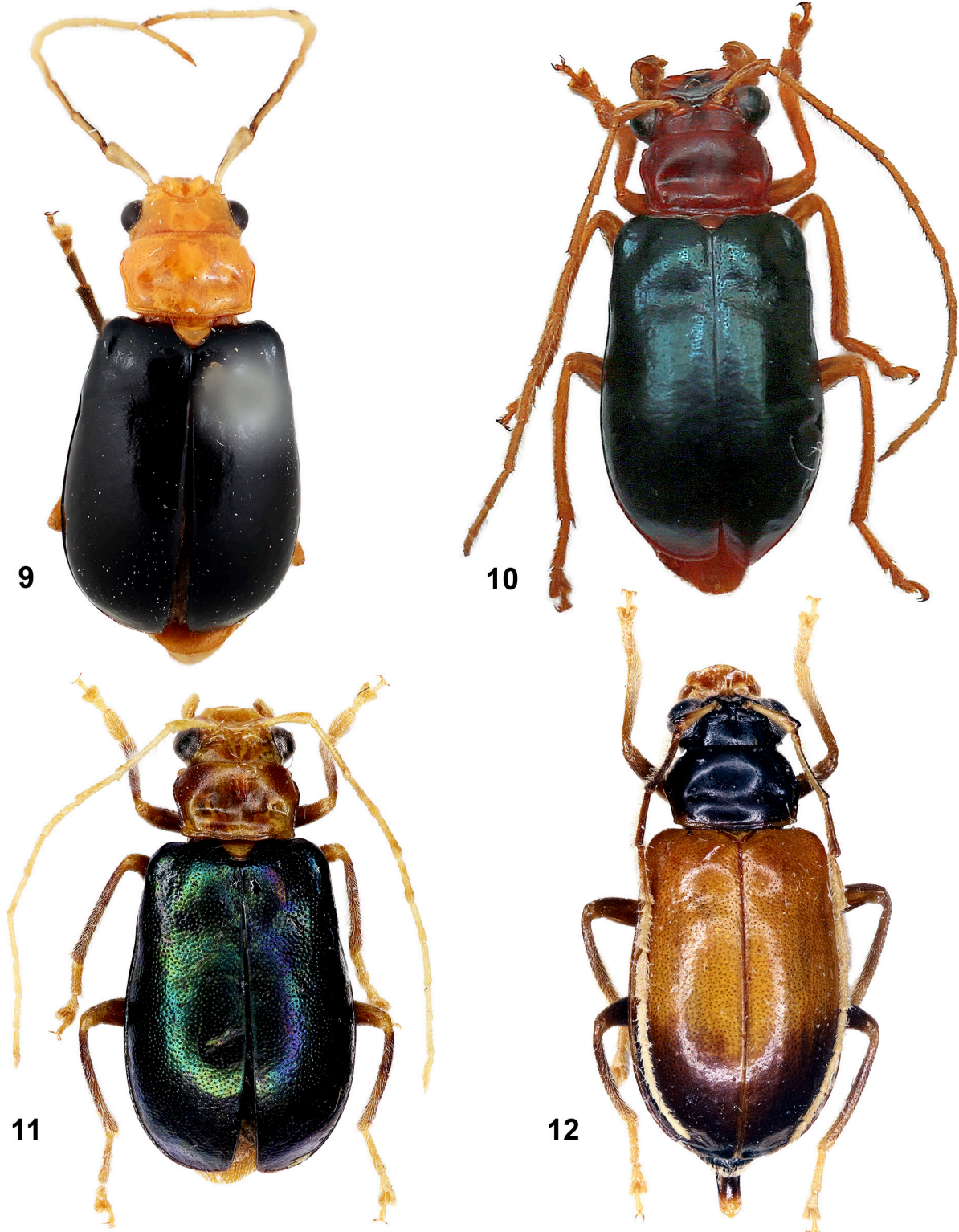
Palpoxena parasabahensis sp. n.

(Figs 8, 18, 43–45)

Material. Holotype, ♂ (PR): “Borneo Isl., Sabah Keningau distr., Trus Madi mts, h~1130 m., N 05.36202, E 116.28084 Pushenkov A. leg., 2007”

Description. Head, pronotum, ventral surfaces and legs entirely brown; elytra bright green with reddish apex. Antennae brown except antennomere I with black spot in apical half of ventral side and antennomere II and III darkened on ventral side. Body length 9.4 mm. General view as in Fig. 8.

Body rather wide, oblong, convex, slightly widened posteriorly, 2.16 times as long as wide. Head (Fig. 18) impunctate. Labrum very large, triangular, with rounded edges, protruding up. Two long and curved, rather narrow structures extend from base of labral inner side. These structures extend across entire cavity of clypeus and almost reach its opposite wall. Maxillary palpomere III globose, not flattened. Clypeus widely and very deeply excavated with projecting structure, which protrudes

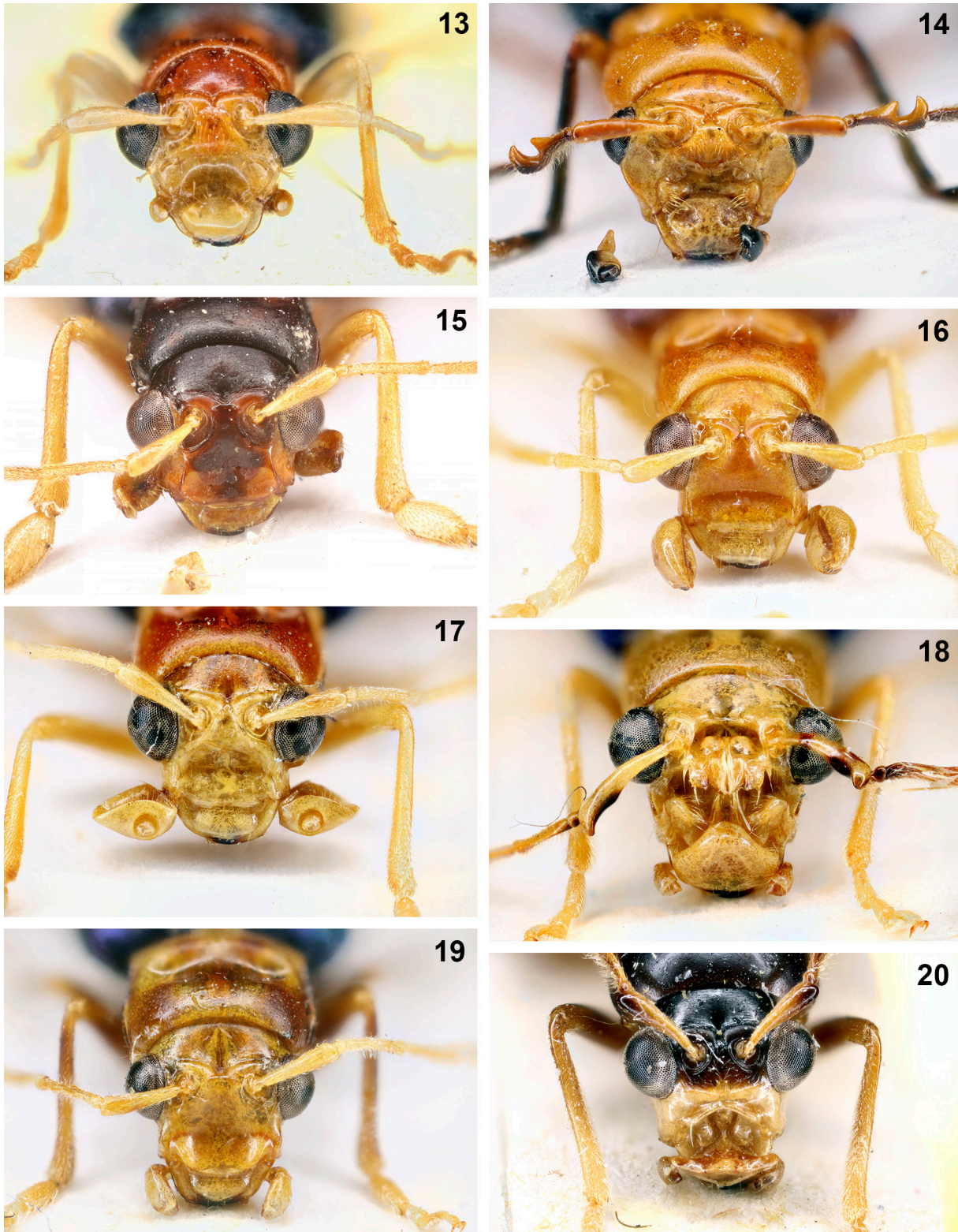


Figs 9–12. *Palpoxena*, general view.

9 – *P. sabahensis*, male, paratype; 10 – *P. shayakhmetovai*, male, holotype; 11 – *P. trusmadiensis* sp. n., male, holotype; 12 – *P. variabilis*, male.

Рис. 9–12. *Palpoxena*, общий вид.

9 – *P. sabahensis*, самец, паратип; 10 – *P. shayakhmetovai*, самец, голотип; 11 – *P. trusmadiensis* sp. n., самец, голотип; 12 – *P. variabilis*, самец.



Figs 13–20. *Palpoxena*, head and details of structure of males.
 13 – *P. achehensis* sp. n., holotype; 14 – *P. bipartita*; 15 – *Palpoxena* sp.; 16 – *P. klimenkoi* sp. n., holotype; 17 – *P. laeta*; 18 – *P. parasabahensis* sp. n., holotype; 19 – *P. trusmadiensis* sp. n., holotype; 20 – *P. variabilis*.
 Рис. 13–20. *Palpoxena*, голова и детали строения самцов.
 13 – *P. achehensis* sp. n., голотип; 14 – *P. bipartita*; 15 – *Palpoxena* sp.; 16 – *P. klimenkoi* sp. n., голотип; 17 – *P. laeta*; 18 – *P. parasabahensis* sp. n., голотип; 19 – *P. trusmadiensis* sp. n., голотип; 20 – *P. variabilis*.

anteriorly to frontal tubercles and overhangs clypeus excavation. Lateral borders of clypeal excavation on each side emarginated with protruding up lobe-shaped structure, bearing long erect setae. Genae short, 1.23 times shorter than transversal diameter of eye and 1.33 times shorter than longitudinal diameter of eye. Frontal tubercles wide, slightly convex and smooth, separated by deep depression. Posterior margin of frontal tubercles weakly and indistinctly separated from vertex. Eyes large, strongly convex, almost round (1.08 times as long as wide); interocular space about 1.8 times as wide as transverse diameter of eye. Vertex impunctate, with deep depression before frontal tubercles. Antennae rather long, extended beyond apex of elytra (1.11 times longer than body length). Antennomere I irregular shape, widened anteriorly and slightly curved with protruding outer angle. Antennomeres III–IV flattened. Antennomeres V–XI cylindrical, antennomere XI with pointed apex. Length ratio of antennomeres I–XI as 65 : 8 : 40 : 43 : 40 : 35 : 34 : 30 : 30 : 27 : 30, width ratio as 21 : 8 : 10 : 7 : 5 : 5 : 5 : 5 : 5 : 5 : 5. Two basal antennomeres with sparse adpressed setae, following antennomeres covered with denser adpressed setae; antennomeres III–IV with long setae directed downwards on ventral side. Pronotum transverse, 1.49 times as wide as long (barely perceptibly widened at anterior quarter), 1.33 times narrower than elytra at level of humeral calli. Anterior margin slightly concave, posterior margin slightly convex, lateral margins weakly sinuous. Anterior margin unbordered, lateral and posterior margins bordered. Anterior angles very slightly swollen, almost not protruding; posterior angles almost rectangular; all angles with setigerous pore bearing long pale seta. Surface very finely shagreened, with very small, poorly visible punctures. Disc transversely depressed. This depression comparatively short (2/3 width of pronotum) and consists of two wide transverse furrows with almost flat bridge between them. Procoxal cavities closed posteriorly.

Scutellum wide, nearly 2 times as wide as long; subtriangular, with rounded apex. Surface almost flat, shining and impunctate. Elytra 1.48 times as long as wide, slightly widened at posterior third. Surface shagreened, dense covered with small punctures. Apical slope with several adpressed, curved, short setae. Humeral calli well developed. Epipleura moderately wide at anterior quarter, gradually narrowing towards apex, where turned outward so their bottom margin visible from above. Epipleural surface impunctate, with few short setae in apical part. Hind wings well developed.

Legs moderately long and narrow, covered with pale semi-adpressed setae. Protarsomere I not very enlarged, 2.2 times as long as wide; protarsomere II subtriangular. Length ratio of protarsomeres I–IV as 22 : 12 : 10 : 21; width ratio of protarsomeres I–III as 10 : 10 : 16. Mesotarsomere I 2.31 times as long as wide. Length ratio of mesotarsomeres I–IV as 22 : 10 : 11 : 21; width ratio of mesotarsomere I–III as 9.5 : 11 : 19. Metatarsomere I long, nearly parallel, 3.58 times as long as wide. Length ratio of metatarsomeres I–IV as 34 : 10 : 10 : 22; width ratio of metatarsomeres I–III as 9.5 : 10 : 16. All tibiae without spurs. Tarsal claws appendiculate.

Ventral side sparsely covered with pale setae. Last abdominal ventrite trilobed, with straight, truncated, wide median lobe. Pygidium convex, with widely rounded apex. Aedeagus comparatively short (Figs 43–45), subparallel, 6 times as long as wide, with convergent apical processes forming triangular apex with elongated tips. Apex of aedeagus in lateral view slightly bent down apically, apical third of aedeagus with angulate convexity on underside. Ventral side with deep elongate median furrow in apical third. Length of aedeagus 2.25 mm, width 0.38 mm.

Differential diagnosis. *Palpoxena parasabahensis* sp. n. belongs to the *P. variabilis* (Jacoby, 1886) species group from Borneo. Members of this group have clypeus deeply excavated, sometimes with unusual structures, maxillary palpomere III globose, not flattened and enlarged labrum, protruding in varying degrees. *Palpoxena*

parasabahensis sp. n. differs from others members of the group in the studied region in the unusual form of apex of the antennomere I with protruding outer angle and in metallic green elytra with reddish brown apex. Other members of the group have not metallic elytra and antennomere I with club-shaped apex. See also the key.

Palpoxena caeruleipennis (Baly, 1888) from Thailand, Cambodia, Laos, Vietnam belonging to the same group has similar antennomere I and the deeply excavated clypeus with additional structures. But this species easily differs from *P. parasabahensis* sp. n. in dark blue elytra, the slightly flattened maxillary palpomere III and in the structure of the labrum with two long, irregular shaped processes on each side of the apex (Fig. 23).

Distribution. Borneo (Sabah).

Etymology. The species name refers to similarity with *P. sabahensis* Mohamedsaid, 1997.

Palpoxena trusmadiensis sp. n.

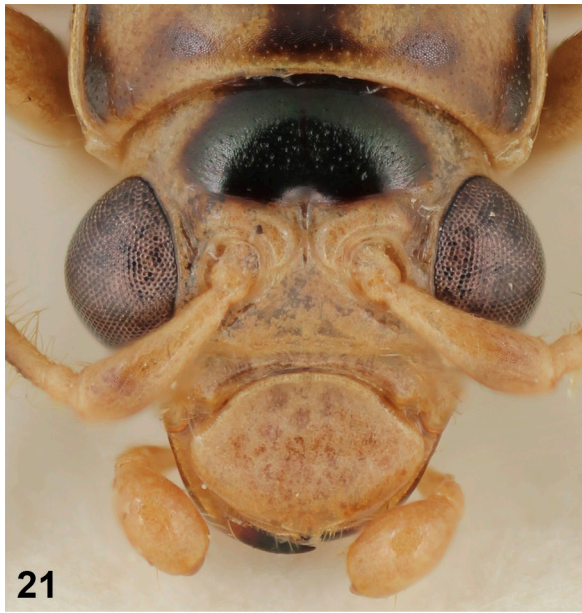
(Figs 11, 19, 51–53)

Material. Holotype, ♂ (ZIN): "MALAYSIA, N Borneo, Sabah, Keningau dist., Trus Madi Mt., h~1250m, N 05°26'35", E 116°27'5" at light, 05.IV.2013 P. Romantsov leg.". Paratype: 1♂ (PR), same data but "24-26. III.2012".

Description. Holotype. Body brown. Pronotum with blurred dark brown pattern. Elytra dark green-bluish or dark bluish, without reddish apex. Legs brown, femora with blurred dark brown pattern, tibiae almost completely darkened. Antennae entirely brown. Body length 8.4 mm. General view as in Fig. 11.

Body rather wide, oblong, convex, slightly widened posteriorly, 2.0 times as long as wide. Head (Fig. 19) impunctate. Labrum small, widely triangular, with wide rounded anterior margin. Surface smooth and impunctate, with several setae along anterior margin. Maxillary palpomere III slightly enlarged and flattened. Clypeus widely and relatively deeply excavated, without extra structures. Clypeal depression bordered by convexity distally and partially laterally. This convexity most developed on its sides where it protrudes above surface of clypeus. Genae comparatively long, about 1.8 times shorter than transversal diameter of eye and 2.06 times shorter than longitudinal diameter of eye. Frontal tubercles narrow, slightly convex and smooth, separated by deep depression. Posterior margin of frontal tubercles indistinctly separated from vertex by thin furrow. Eyes rather large, convex, oval (1.15 times as long as wide); interocular space 1.93 times as wide as transverse diameter of eye. Vertex impunctate but shagreened, with deep depression before frontal tubercles. Antennae moderately long, just slightly extended beyond apex of elytra (1.03 times longer than body length). Antennomere I club-shaped, antennomeres III–VII slightly expanded on apex, antennomeres VIII–X cylindrical, antennomere XI slightly lanceolate, with pointed apex. Length ratio of antennomeres I–XI as 44 : 7 : 47 : 40 : 34 : 32 : 32 : 32 : 27 : 23 : 27, width ratio as 10 : 6 : 7 : 7 : 7 : 7 : 6 : 6 : 5 : 5 : 7. Two basal antennomeres with sparse adpressed setae, following antennomeres covered with denser adpressed setae; besides ventral side of antennomeres III–XI with long setae directed downwards, the longest on antennomeres III–VII.

Pronotum transverse, 1.49 times as wide as long (widest at anterior quarter), 1.48 times narrower than elytra at level of humeral calli. Anterior margin concave; posterior margin weakly and lateral margins distinctly sinuous. Anterior margin unbordered, lateral and posterior margins bordered. Anterior angles weakly swollen, slightly protruding laterally; posterior angles almost rectangular. All angles with setigerous pore bearing long pale seta, lateral margins with extra short setae. Surface very finely shagreened, without visible punctures. Disc transversely depressed by wide and



Figs 21–27. *Palpoxena*, details of structure.
 21 – *P. antonini*, male, holotype, head; 22 – *P. sabahensis*, male, paratype, head; 23 – *Palpoxena caeruleipennis*, male, head; 24 – *Palpoxena* sp., spermatheca; 25–27 – *P. achehensis* sp. n., holotype, aedeagus: 25 – dorsal view, 26 – lateral view, 27 – ventral view.

Рис. 21–27. *Palpoxena*, детали строения.
 21 – *P. antonini*, самец, голотип, голова; 22 – *P. sabahensis*, самец, паратип, голова; 23 – *Palpoxena caeruleipennis*, самец, голова; 24 – *Palpoxena* sp., сперматека; 25–27 – *P. achehensis* sp. n., голотип, эдеагус: 25 – вид сверху, 26 – вид сбоку, 27 – вид снизу.



Figs 28–45. *Palpoxena*, aedeagi.
 28–30 – *P. antonini* holotype; 31–33 – *P. bipartita*; 34–36 – *Palpoxena* sp.; 37–39 – *P. klimenkoi* sp. n., holotype; 40–42 – *P. laeta*; 43–45 – *P. parasabahensis* sp. n., holotype. 28, 31, 34, 37, 40, 43 – dorsal view; 29, 32, 35, 38, 41, 44 – lateral view; 30, 33, 36, 39, 42, 45 – ventral view.

Рис. 28–45. *Palpoxena*, эдеагусы.

28–30 – *P. antonini*, голотип; 31–33 – *P. bipartita*; 34–36 – *Palpoxena* sp. 37–39 – *P. klimenkoi* sp. n., голотип; 40–42 – *P. laeta*; 43–45 – *P. parasabahensis* sp. n., голотип. 28, 31, 34, 37, 40, 43 – вид сверху; 29, 32, 35, 38, 41, 44 – вид сбоку; 30, 33, 36, 39, 42, 45 – вид снизу.



Figs 46–56. *Palpoxena*, aedeagi. 46–48 – *P. sabahensis*, paratype; 49, 50 – *P. shayakhmetovai*, holotype; 51–53 – *P. trusmadiensis* sp. n., holotype; 54–56 – *P. variabilis*. 46, 49, 51, 54 – dorsal view; 47, 50, 52, 55 – lateral view; 48, 53, 56 – ventral view.

Рис. 46–56. *Palpoxena*, эдеагусы.

46–48 – *P. sabahensis*, паратип; 49, 50 – *P. shayakhmetovai*, голотип; 51–53 – *P. trusmadiensis* sp. n., голотип; 54–56 – *P. variabilis*. 46, 49, 51, 54 – вид сверху; 47, 50, 52, 55 – вид сбоку; 48, 53, 56 – вид снизу.

comparatively short (2/3 width of pronotum) furrow weakened in middle. Procoxal cavities closed posteriorly.

Scutellum 1.5 times as wide as long, subtriangular, with rounded apex. Surface almost flat, with fine microsculpture. Elytra 1.43 times as long as wide, slightly widened at posterior third. Surface finely shagreened, densely covered with small punctures. Apical slope with several semi-appressed slightly curved setae. Humeral calli well developed. Epipleura moderately wide at anterior quarter, gradually narrowing towards apex, where turned outward so their bottom margin visible from above. Epipleural surface impunctate and lustrous, with few short setae in apical part. Hind wings well developed.

Legs moderately long and narrow, covered with pale semi-appressed setae. Protarsomere I moderately enlarged, 1.67 times as long as wide, with slightly rounded lateral margins and equal in width to protarsomere III. Protarsomere II subtriangular. Length ratio of protarsomeres I–IV as 25 : 11 : 11 : 20; width ratio of protarsomeres I–III as 15 : 8 : 15. Mesotarsomere I elongate, 2.8 times as long as wide. Length ratio of mesotarsomeres I–IV as 25 : 11 : 11 : 20; width ratio of mesotarsomere I–III as 9 : 9 : 15. Metatarsomere I long, nearly parallel, 4.86 times as long as wide. Length ratio of metatarsomeres I–IV as 34 : 10 : 11 : 20; width ratio of metatarsomeres I–III as 7 : 7 : 13. All tibiae without spurs. Tarsal claws appendiculate.

Ventral side sparsely covered with pale setae. Last abdominal ventrite trilobed, with straight, truncated, wide median lobe. Pygidium convex, with very widely rounded apex. Aedeagus (Figs 51–53) 6.9 times as long as wide, with slightly sinuous lateral margins widest near middle. Aedeagus apically with convergent processes forming triangular apex. Aedeagus in lateral view looks slightly sinuous, with slightly bent down apex and with slight gentle convexity in apical quarter of underside. Ventral side with deep elongate furrow in apical third. Length of aedeagus 2.75 mm, its width 0.4 mm.

Paratype is similar to the holotype, but dark bluish, without greenish tint. Body length 8.2 mm.

Differential diagnosis. I can't attribute this species to any group mentioned in this work. *Palpoxena trusmediensis* sp. n. having weakly enlarged maxillary palpomere III is similar to members of the *P. variabilis* species group, but easily differs from them in the small labrum and the shallowly depressed clypeus without unusual structures. *Palpoxena trusmediensis* sp. n. differs from all members of the *P. laeta* species group in relatively small and just slightly flattened palpomere III. See also the key.

Distribution. Borneo (Sabah).

Etymology. The name of the new species refers to the type locality.

A preliminary key to species of the genus *Palpoxena* from Malaysia and Indonesia

- 1(6). Clypeus deeply excavated sometimes with unusual structures, labrum enlarged and more or less protruding. Maxillary palpomere III globose, not flattened. Antennomeres III–IV or III–V distinctly flattened *Palpoxena variabilis* species group from Borneo
- 2(3). Elytra red, usually with apical part and sometimes with basal one black. Antennomeres III–V flattened. Clypeus (Fig. 20) deeply excavated, with broad triangular projection hanging on frons; labrum strongly protruding, without extra structures. General view as in Fig. 12, aedeagus as in Figs 54–56. Body length 7–9.2 mm. Borneo (Malaysia: Sarawak; Indonesia: West Kalimantan) *Palpoxena variabilis*
- 3(2). Elytra black or green, with reddish apex. Labrum less protruding. Antennomeres III–IV flattened.
- 4(5). Head, pronotum and ventral surfaces entirely reddish brown, elytra black, apical extremity reddish; legs brown, with tibiae and tarsi darkened. Eyes small, interocular space near 4 times as broad as the transverse diameter of eye. Antennomere I with club-shaped apex. Labrum trapezoidal, without unusual structures on inner side. Elytra almost impunctate. General view as in Fig. 9, clypeus as in Fig. 22, aedeagus as in Figs 46–48. Body length 7.5–10.7 mm. Borneo (Malaysia: Sabah) *Palpoxena sabahensis*
- 5(4). Head, pronotum, ventral surfaces and legs entirely brown; elytra bright green with reddish brown apex. Eyes larger, interocular space 2.35 times as broad as the transverse diameter of eye. Apex of antennomere I with protruding outer angle. Labrum triangular with rounded edges, with two long structures on inner side. Elytra finely but distinctly punctate. General view as in Fig. 8, clypeus as in Fig. 18, aedeagus as in Figs 43–45. Body length 9.4 mm. Borneo (Malaysia: Sabah) *Palpoxena parasabahensis* sp. n.
- 6(1). Clypeus not modified: shallowly depressed without unusual structures, labrum usually small; if large, then not protruding. All antennomeres more or less cylindrical or antennomeres III–IV slightly flattened and antennomere III hook-shaped.
- 7(10). Antennomere III strongly modified, hook-shaped. Labrum large. Elytra red, with basal part black.
- 8(9). Legs yellow with tibiae and tarsi blackish. Maxillary palpomere III flattened, discoidal. Eyes small, interocular space near 2.9 times as broad as transverse diameter of eye, genae rather long, 1.22–1.3 times shorter than transverse diameter of eye. Space between antennal sockets with somewhat heart-shaped structure which came close to frontal tubercles. Clypeus (Fig. 14) with less deep and wide excavation, ends far from eyes margins, space between them rather wide and flat. Antennae more robust, not reaching elytral apex, antennomere III–V distinctly flattened. General view as in Fig. 3, aedeagus as in Figs 31–33. Body length 8.5–9 mm. Sumatra *Palpoxena bipartita*
- 9(8). Legs yellow. Maxillary palpomere III swollen, not flattened. Eyes large, interocular space nearly 1.6 times as broad as the transverse diameter of eye, genae rather short, 2.9 times shorter than transverse diameter of eye. Space between antennal sockets flattened. Clypeus (Fig. 13) with deep and wide excavation almost reaching eyes, narrow space between them with tubercle bearing tuft of bristles on each side. Antennae slender, extended beyond apex of elytra; antennomere III slightly flattened, antennomeres IV–V cylindrical. General view as in Fig. 1, aedeagus as in Figs 25–27. Body length 7.9–8.4 mm. Sumatra *Palpoxena achehensis* sp. n.
- 10(7). Antennomere III not modified. Labrum small; if large head, pronotum and legs bicolorous. Elytra bluish, green or black often with apex reddish brown.

- 11(12). Labrum strongly enlarged, forming transverse subelliptical plate. – Head (Fig. 21) yellowish brown, vertex with large metallic black spot, with blurred margin. Pronotum pale brown, with black pattern. Elytra metallic green, with extreme lateral margin of epipleura brown. Legs yellowish brown, with darkened basal outer halves of all femora and apical two thirds of all tibiae, tarsi darkened. Maxillary palpomere III enlarged, oval. General view as in Fig. 2, aedeagus as in Figs 28–30. Body length 9.6–10.1 mm. Peninsular Malaysia (Pahang), Borneo (Malaysia: Sabah)
..... *Palpoxena antonini*
- 12(11). Labrum small.
- 13(14). Maxillary palpomere III slightly enlarged and flattened, but just a little wider than palpomere II. Elytra dark green-bluish or dark bluish without reddish apex, tibiae darkened. General view as in Fig. 11, clypeus as in Fig. 19, aedeagus as in Figs 51–53. Body length 8.2–8.9 mm. Borneo (Malaysia: Sabah)
..... *Palpoxena trusmadiensis* **sp. n.**
- 14(13). Maxillary palpomere III strongly modified, much wider than palpomere II
..... *Palpoxena laeta* species group from Peninsular Malaysia, Sumatra and Borneo
- 15(18). Protarsomere I strongly enlarged and swollen, about 1.2 times wider than protarsomere III.
- 16(17). Aedeagus with less sharp apex. Body reddish brown, elytra bluish black, with apical extremity reddish. General view as in Fig. 10, aedeagus as in Figs 49, 50. Body length 8 mm. Peninsular Malaysia (Pahang, Perak, Kelantan) *Palpoxena shayakhmetovai*
- 17(16). Aedeagus with sharper apex. Body brown. Occiput and pronotum dark brown. Elytra bluish black, with reddish apex. Legs light brown. General view as in Figs 4, 5; clypeus as in Fig. 15, aedeagus as in Figs 34–36. Body length 8–8.9 mm. Sumatra *Palpoxena* sp.
- 18(15). Protarsomere I slightly enlarged and swollen, about 1.2–1.6 times narrower than protarsomere III.
- 19(20). Upperside of body not metallic. Pronotum black. Elytra reddish brown, with black apical area or entirely black. Maxillary palpomere III broadened and flattened. Body length 7–9.2 mm. Peninsular Malaysia, Borneo (Malaysia: Sarawak), Sumatra
..... *Palpoxena jacobyi* (Baly, 1888)
- 20(19). Pronotum usually brown. Elytra bluish, greenish, or purplish with narrow or wide apical area brown. Sometimes body upperside entirely purplish.
- 21(22). Elytra bluish, greenish, or purplish with narrow apical area brown, sometimes all upperside of body purplish. Antennomeres III–VIII equal or slightly

- (not more than 1.2 times) wider than antennomere II, covered with dense and long setae directed downwards on ventral side. Maxillary palpomere III extremely transformed. General view as in Fig. 7, clypeus as in Fig. 17, aedeagus as in Figs 40–42. Body length 7.6–11 mm. Peninsular Malaysia, Borneo (Malaysia: Sarawak) *Palpoxena laeta*
- 22(21). Elytra dark bluish, with narrow basal area, epipleural very narrow sutural margin and wide apical area brown. Antennomeres III–VIII thickened, about 1.4–1.5 times wider than antennomere II, covered with sparser, short and adpressed setae on ventral surface. Maxillary palpomere III half-ellipsoid, with slightly elongated and sharpened apical margin. General view as in Fig. 6, clypeus as in Fig. 16, aedeagus as in Figs 37–39. Body length 9 mm. Borneo (Sabah)
..... *Palpoxena klimenkoi* **sp. n.**

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References

- Baly J.S. 1861. Descriptions of new genera and species of Phytophaga. *Journal of Entomology*. 1: 193–206.
- Bezděk J. 2017. Four new species of Galerucinae (Coleoptera: Chrysomelidae) from Malaysia and Indonesia. *Studies and Reports. Taxonomical Series*. 13(1): 1–13.
- Kizub I. 2016. Notes on Oriental Galerucinae Latreille, 1802 with description of a new species of the genus *Palpoxena* Baly, 1861 (Coleoptera: Chrysomelidae). *Munis Entomology & Zoology*. 11(1): 18–25.
- Mohamedsaid M.S. 1997. The Malaysian species of the genus *Palpoxena* Baly (Coleoptera: Chrysomelidae: Galerucinae). *Serangga*. 2(1): 53–64.
- Mohamedsaid M.S. 2004. Catalogue of the Malaysian Chrysomelidae (Insecta: Coleoptera). Sofia – Moscow: Pensoft. 239 p.
- Mohamedsaid M.S., Furth D.G. 2011. Secondary sexual characteristics in the Galerucinae (sensu stricto) (Coleoptera: Chrysomelidae). *International Scholarly Research Notices*. 2011: 1–60. DOI: 10.5402/2011/328670

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