Additions to *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae, Amarygmini) from East Asia, Part 3

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Abstract This is the third part of the study concerning the *Plesiophthalmus* and its allied genera, and ten new species are described from East Asia under the following names: *Plesiophthalmus sameshimai* sp. nov., *P. ardoinius* sp. nov., *P. wadai* sp. nov., *P. laoatronitidus* sp. nov., *P. brendelli* sp. nov., *P. cameronensis* sp. nov., *P. kerleyi* sp. nov., *P. kimanisensis* sp. nov., *P. cuccodoroi* sp. nov., and *P. keningauensis* sp. nov.

This paper is the third part of the additional study on the *Plesiophthalmus* and its allied genera from East Asia. I am going to describe ten new species of this genus, three of which form a peculiar species-group to be called the group of *Plesiophthalmus brendelli*. The members of this new species-group vary to some extent towards *Plesiamarygmus* and *Amarygmus* and may bridge the gap between these genera and *Plesiophthalmus*.

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The abbreviations used herein are as follows: NSMT: National Science Museum (Nat. Hist.), Tokyo; NHML: The Natural History Museum, London; SMNS: Staatliches Museum für Naturkunde, Stuttgart; MHNG: Muséum d'Histoire naturelle, Genève; MNHNP: Muséum National d'Histoire Naturelle, Paris; NHMP: National Museum (Nat. Hist.), Praha.

Depositories of the holotypes of the new species to be described are given in the text.

Plesiophthalmus sameshimai sp. nov.

(Figs. 1, 11–12)

Piceous, apical parts of terminal segments of antennae, mouth parts, apical portions of abdomen and tarsi lighter in colour, hairs on ventral parts of tarsi golden yellow; head with dark coppery lustre, pronotum strongly, somewhat vitreously shining, scutellum and elytra with somewhat dark brassy lustre, ventral surface somewhat alutaceous. Oblong-ovate, strongly convex above.

Head subdecagonal, weakly micro-shagreened in anterior portion, scattered with microscopic punctures, which become sparser in the middle; clypeus rather transversely hexagonal, bent ventrad, fronto-clypeal border nearly straight, noticeably depressed; genae rather ear-shaped, strongly raised, almost impunctate, with rounded outer margins; frons rather wide, steeply inclined forwards, with a vague micro-shagreened impression close to fronto-clypeal border on each side, diatone about the same in width as transverse diameter of an eye; vertex with a vague medio-longitudinal impression. Eyes not so large for a member of the genus, somewhat transversely commashaped in dorsal view, gently convex laterad, roundly, somewhat obliquely inlaid into head. Antennae nearly filiform, reaching basal 1/4 of elytra, ratio of the length of each segment from basal to apical: 0.59, 0.2, 1.09, 0.62, 0.81, 0.63, 0.59, 0.57, 0.52, 0.43, 0.64.

Pronotum trapezoidal, 1.43 times as wide as long, widest at basal 1/3; apex very slightly bisinuous, clearly bordered; base weakly bisinuous, indistinctly impressed along margin on each side; sides rather steeply declined to lateral margins, which are clearly bordered, visible from above, and feebly sinuate before base; front angles rectangular, hind angles slightly obtuse though the corners are angulate; disc gently convex, polished, sparsely scattered with microscopic punctures (visible under $\times 20$), with a pair of vague impressions at apical 1/5. Scutellum triangular with rounded sides, feebly convex, almost smooth though sparsely scattered with microscopic punctures.

Elytra 1.57 times as long as wide, 3.33 times the length and 1.49 times the width of pronotum, widest at the middle; dorsum rather strongly convex, highest at basal 1/4; disc finely punctato-striate, the striae often interrupted, the punctures small and rather closely set; intervals feebly convex, very weakly micro-shagreened and micro-aciculate, sparsely scattered with microscopic punctures (visible under ×20); sides steeply declined to lateral margins, gently impressed from side at basal 1/3; humeri weakly swollen; apices roundly produced.

Male anal sternite with outer margin finely impressed laterally. Profemur with anterior face spined at apical 1/3; male protibia gently curved with interior face gouged in basal 2/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.6, 0.39, 0.34, 0.27, 1.2; 0.8, 0.39, 0.31, 0.22, 1.21; 1.48, 0.61, 0.31, 1.27.

Male genitalia nearly fusiform, rather strongly curved in lateral view, 2.3 mm in length, 0.4 mm in width; lateral lobes fused, triangular, 0.62 mm in length, with prolonged apices, whose lateral portions are inversely rasp-like.

Body length: 11.5 mm.

Holotype: ♂, Shiiya-tôge, Kumamoto Pref., Kyushu, Japan, 28–VII–1996, Т. Sameshima leg. (NSMT).

Notes. This new species resembles *Plesiophthalmus laevicollis* HAROLD, 1878, belonging to the species-group of *P. nigrocyaneus*, widely distributed in Japan, but can be distinguished from the latter by the larger and wider body, with elytra hardly striate, intervals not convex and more weakly punctate, male protibia more noticeably gouged on the internal face of the basal part, and the male genitalia slenderer. Judging from the size of its eyes, the adult of this species might not be nocturnal.

Plesiophthalmus ardoinius sp. nov.

(Figs. 2, 13–14)

Brownish black, mouth parts, apical part of abdomen and epipleura lighter in colour, head, scutellum and legs piceous, pronotum and elytra piceous with feeble dark greenish tinge, hairs on antennae and mouth parts yellowish brown; head and legs moderately shining, pronotum, scutellum and elytra strongly, sericeously shining, ventral surface rather alutaceous in large parts, metasternum gently shining. Subovate, strongly convex above.

Head subdecagonal, very feebly micro-shagreened, rather closely, finely punctate, area between clypeus and frons depressed; clypeus semicircular, gently projected antero-ventrad, fronto-clypeal border curved and finely impressed; genae gently, obliquely raised, with outer margins moderately produced; frons somewhat T-shaped, steeply inclined forwards, shallowly impressed medio-longitudinally in posterior part; diatone 1/5 the width of transverse diameter of an eye. Eyes large, somewhat axshaped in dorsal view, rather strongly convex laterad, somewhat obliquely inlaid into head. Apical eight segments of antennae lost in the type specimen, ratio of the length of each segment from first to third: 0.58, 0.2, 1.11, —, —, —, —, —, —, —, —, —, —.

Pronotum trapezoidal, 1.71 times as wide as long, widest slightly behind basal 1/3; apex nearly straight in dorsal view, very clearly bordered and rimmed; base gently produced in middle, bisinuous laterally, finely impressed along margin on each side; sides rather steeply declined to lateral margins, which are rounded, clearly bordered, finely rimmed and visible from above; front angles rectangular and directed almost ventrad, hind angles obtusely angulate; disc moderately, rather transversely convex, polished, moderately scattered with very minute punctures. Scutellum triangular with rounded sides, feebly depressed from the level of pronotum and elytra, flattened and smooth, sparsely scattered with microscopic punctures, which are almost of the same size as those on pronotum.

Elytra 1.45 times as long as wide, 3.46 times the length and 1.38 times the width of pronotum, widest slightly before the middle; dorsum strongly convex, highest at basal 1/3, sutural part slightly depressed near base, though ridged in middle; disc punctato-striate, the punctures small and closely set; intervals gently convex, weakly micro-

aciculate, sparsely scattered with microscopic punctures (visible under $\times 20$); sides rather steeply declined to lateral margins, which are clearly grooved, feebly explanate laterad, gently impressed from side at basal 1/3; humeri very weakly swollen; apices rounded.

Anal sternite without modification except for a fine impression along outer margin. Profemur with anterior face produced in middle, spined at apical 2/5; male protibia gently elongated and curved, with interior face gouged in basal 4/7; all tarsi lost in the holotype.

Male genitalia nearly fusiform, moderately curved in lateral view, 3.26 mm in length, 0.6 mm in width; fused lateral lobes nearly triangular and prolonged apicad, 1 mm in length, inversely rasp-shaped in antero-lateral portions, with roundly harponous apices.

Body length: 11-13.5 mm.

Holotype: δ , Paksé, Sud Laos, 30–III–1967, J. RONDON leg. (MNHNP). Paratypes: 3 exs., same data as for the holotype.

Notes. This new species somewhat resembles *Plesiophthalmus thailandicus* MASUMOTO, 1990, belonging to the species-group of *P. nigroaeneus*, but can be distinguished from the latter by the more compact body, with head narrower, pronotum wider, less noticeably punctate and less sericeous, elytra clearly punctato-striate, the punctures slightly larger and more closely set, intervals a little more convex, and the male genitalia elongate.

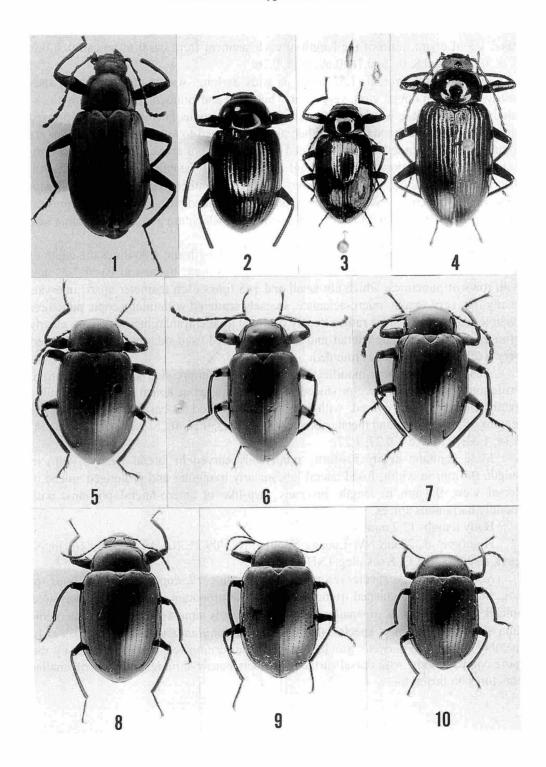
Plesiophthalmus wadai sp. nov.

(Figs. 3, 15–16)

Blackish brown, dorsal surface piceous, hairs on antennae, legs, etc., yellowish brown; head, medial part of pronotum, scutellum and legs moderately, somewhat vitreously shining, pronotum except medial part and major part of elytra moderately, rather sericeously shining, ventral surface weakly shining and rather alutaceous. Subovate, strongly convex above.

Head subdecagonal, very feebly micro-shagreened, rather closely punctate; clypeus semicircular, gently projected and bent ventrad, depressed in basal part, fronto-clypeal border curved and finely impressed; genae gently, obliquely raised antero-laterad, with outer margins moderately produced; frons somewhat T-shaped, steeply inclined forwards, weakly depressed in areas behind genae; diatone 1/4 the width of transverse diameter of an eye. Eyes large, somewhat ax-shaped in dorsal view, rather

Figs. 1–10. Habitus. —— 1, *Plesiophthalmus sameshimai* sp. nov., holotype, δ; 2, *P. ardoinius* sp. nov., holotype, δ; 3, *P. wadai* sp. nov., holotype, δ; 4, *P. laoatronitidus* sp. nov., holotype, δ; 5, *P. brendelli* sp. nov., holotype, δ; 6, *P. cameronensis* sp. nov., holotype, δ; 7, *P. kerleyi* sp. nov., holotype, δ; 8, *P. kimanisensis* sp. nov., holotype, δ; 9, *P. cuccodoroi* sp. nov., holotype, δ; 10, *P. keningauensis* sp. nov., holotype, δ.



strongly convex laterad, broadly inlaid into head. Antennae rather slender, reaching basal 1/3 of elytra, ratio of the length of each segment from basal to apical: 0.7, 0.2, 0.78, 0.67, 0.8, 0.8, 0.78, 0.76, 0.69, 0.65, 0.76.

Pronotum trapezoidal, 1.52 times as wide as long, widest at the middle; apex nearly straight in dorsal view, very clearly bordered and rimmed, the rim feebly thickened in middle; base gently produced in middle, bisinuous laterally, finely impressed along margin on each side; sides rather steeply declined to lateral margins, which are rounded, clearly bordered, finely rimmed and visible from above; front angles rectangular and directed almost ventrad, hind angles obtusely angulate with feeble hooks; disc moderately, rather transversely convex, polished, rather frequently scattered with very minute punctures. Scutellum triangular with rounded sides, noticeably depressed in apical 2/5, scattered with microscopic punctures, which are almost of the same size as those on pronotum.

Elytra 1.43 times as long as wide, 3.3 times the length and 1.56 times the width of pronotum, widest at the middle; dorsum strongly convex, highest at basal 1/3; disc with rows of punctures, which are small and 1-5 times each diameter apart; intervals nearly flat, very weakly micro-aciculate, sparsely scattered with microscopic punctures (visible under $\times 12$); sides rather steeply declined to lateral margins, which are clearly grooved, gently explanate laterad, and feebly impressed from sides at basal 1/3; humeri very weakly swollen; apices rounded.

Anal sternite without modification, except a fine impression along outer margin. Profemur with anterior face produced in middle, spined at apical 2/5; male protibia gently elongated and curved, with interior face gouged in basal 3/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.32, 0.25, 0.26, 0.25, 1.2; 0.58, 0.38, 0.34, 0.35, 1.23; 1.14, 0.57, 0.27, 1.27.

Male genitalia nearly fusiform, moderately curved in lateral view, 3.3 mm in length, 0.6 mm in width; fused lateral lobes nearly triangular and prolonged apicad in dorsal view, 0.8 mm in length, inversely rasp-like in antero-lateral portions, with roundly harponous apices.

Body length: 12.2 mm.

Holotype: 3, 20 km NW Louang Namtha, N21'09.2", 101'18.7", 900 \pm 100 m, N. Laos, E. Jendek & O. Šauša leg. (NHMP).

Notes. This new species resembles the preceding, *Plesiophthalmus ardoinius* sp. nov., but can be distinguished from the latter by the pronotum more strongly narrowed apicad, elytra with rows of smaller punctures, intervals almost flat, and the male genitalia slenderer. This new species also resembles *P. thailandicus* MASUMOTO, 1990 (a member of the *nigroaeneus* group) but can be discriminated from the latter by the more compact body, with dorsal surface more sericeously shining, and rows of smaller punctures on the elytra.

Plesiophthalmus laoatronitidus sp. nov.

(Figs. 4, 17–18)

Blackish brown, dorsal surface piceous, hairs on antennae, mouth parts, and ventral face of tarsi yellowish brown to golden yellow; head and two internal parts of pronotum moderately somewhat vitreously shining, medial and lateral parts of pronotum, scutellum and elytra sericeously shining, ventral surface somewhat alutaceous in major parts, metasternum gently shining. Oblong-ovate, strongly convex above.

Head subdecagonal, feebly micro-shagreened in anterior portion, rather closely, finely punctate, area between clypeus and frons noticeably depressed; clypeus semicircular, gently bent in front, fronto-clypeal border finely sulcate, impunctate along the sulcus; genae strongly, obliquely raised, with rounded outer margins; frons somewhat T-shaped, steeply inclined forwards; diatone 2/19 the width of transverse diameter of an eye; vertex with a weak medio-longitudinal impression. Eyes large, somewhat transversely comma-shaped in dorsal view, strongly convex laterad, roundly, somewhat obliquely inlaid into head. Antennae nearly filiform, reaching basal 1/4 of elytra, ratio of the length of each segment from basal to apical: 0.75, 0.2, 1.54, 0.75, 0.98, 1.02, 0.84, 0.77, 0.75, 0.64, 0.79.

Pronotum trapezoidal, 1.5 times as wide as long, widest at the middle; apex nearly straight though very slightly bisinuous, very clearly bordered and rimmed; base gently produced in middle, gently sinuous and finely impressed along margin on each side; sides rather steeply declined to lateral margins, which are clearly bordered, finely rimmed and visible from above; front angles rectangular and directed antero-ventrad, hind angles obtusely angulate; disc gently convex, polished, moderately scattered with microscopic punctures, with a shallow medial groove in apical 4/5, also with a pair of oblique, curved impressions at basal 1/4. Scutellum triangular with rounded sides, feebly depressed from the level of pronotum and elytra, almost smooth but sparsely scattered with microscopic punctures, which are almost of the same size as those on pronotum.

Elytra 1.63 times as long as wide, 3.56 times the length and 1.45 times the width of pronotum, widest at the middle; dorsum rather strongly convex, highest slightly before the middle, sutural part weakly ridged in area around the middle; disc punctate and grooved, the punctures small and finely striate; intervals gently convex, weakly micro-shagreened and micro-aciculate, sparsely scattered with microscopic punctures (visible under ×15); sides rather steeply declined to lateral margins, gently impressed from sides at basal 1/3; humeri very weakly swollen; apices rounded.

Anal sternite finely impressed along outer margin, slightly emarginate at apex in male. Male profemur with anterior face sharply spined at apical 1/3; male protibia elongated and curved with interior face gouged in basal 2/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.43, 0.22, 0.17, 0.18, 1.2; 0.91, 0.26, 0.24, 0.19, 1.3; 1.59, 0.32, 0.31, 1.29.

Male genitalia nearly fusiform, rather strongly curved in lateral view, 4.3 mm in

length, 1.1 mm in width; fused lateral lobes prolonged, 1.2 mm in length, inversely rasp-like in lateral portions, with roundly harponous apices.

Body length: 17-23 mm.

Holotype: &, Ban Van Eua, Vientiane, Laos, 15–III–1966, J. RONDON leg. (MNHNP). Paratypes: 1 ex., same data as for the holotype; 1 ex., Ban Van Eua, 29–III–1996, J. RONDON leg.

Notes. This new species resembles *Plesiophthalmus atronitidus* PIC, 1923, originally described from Hoa Binh, Tonkin (*P. atronitidus* group), but can be distinguished from the latter by the smaller and slenderer body, with clypeus less strongly projected anteriad, pronotum wider, subquadrate and less distinctly punctate, punctures in rows on the elytra larger, intervals punctured with smaller punctures and less noticeably wrinkled, and the male genitalia smaller but bolder.

Plesiophthalmus brendelli sp. nov.

(Figs. 5, 19–20)

Brownish black, medial parts of femora dark reddish brown, mouth parts, antennae and tarsi lighter in colour; dorsal surface sericeous, ventral surface somewhat alutaceous, femora and tibiae moderately shining. Oblong-ovate, strongly convex dorsad.

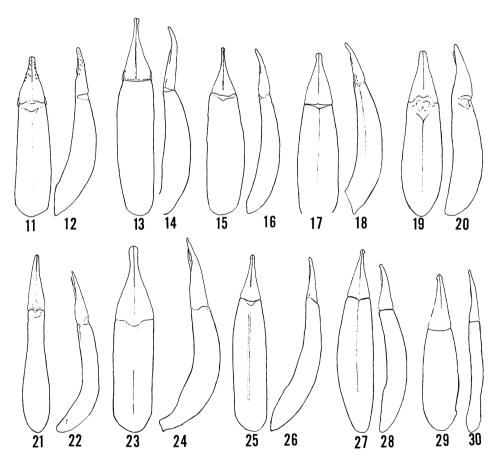
Head transversely subelliptical; clypeus transversely elliptical, with a transverse apical membranous part, scattered with larger and smaller punctures in anterior portion, fronto-clypeal border widely curved and shallowly grooved; genae rather noticeably, obliquely raised, smooth though scattered with microscopic punctures, with outer margins rounded; frons broad and almost vertical, very feebly convex in middle and weakly depressed in fronto-genal areas, weakly, rather closely punctate in lateral portions; diatone about twice the width of transverse diameter of an eye in dorsal view. Eyes almost hidden under pronotum in repose, somewhat comma-shaped in frontal view. Antennae not so slender, reaching basal third of elytra, becoming slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical: 0.65, 0.2, 0.82, 0.63, 0.76, 0.69, 0.64, 0.63, 0.62, 0.61, 0.63.

Pronotum subquadrate, 1.43 times as wide as long; apex rather remarkably rimmed, arched above, feebly bisinuous; base very slightly emarginate in middle opposite to scutellum, sinuous on each side; sides rather steeply declined to lateral margins, which are rimmed; front angles rather acute and produced ventrad, hind angles obtusely angulate; disc somewhat hemispherical, micro-shagreened, sparsely scattered with microscopic punctures, with a medio-longitudinal impression in apical 1/3, and also with a pair of vague oblique impressions close to base. Scutellum triangular with rounded sides, base slightly bisinuous, surface feebly convex, almost smooth though sparsely scattered with microscopic punctures.

Elytra subovate, 1.46 times as long as wide, 3 times the length and 1.44 times the width of pronotum; dorsum strongly convex, highest at basal 1/3; disc punctato-striate, the striae very fine, the punctures small and somewhat elongate; intervals gently con-

vex, micro-shagreened, almost impunctate, somewhat transversely, weakly aciculate; sides steeply declined to lateral margins, which are weakly impressed from both sides at basal third; humeri weakly swollen; apices very slightly, roundly produced.

Profemora not spined but widened in middle, haired on antero-ventral face in basal 3/5, mesofemora haired on posterior face in basal 3/4, metafemora haired on posterior face in basal 2/3; male protibia with interior face not gouged; ratios of the lengths of pro-, meso- and metatarsomeres: 0.46, 0.3, 0.25, 0.21, 1.2; 0.53, 0.28, 0.25, 0.28, 1.2; 0.8, 0.31, 0.27, 1.1.



Male genitalia elongated fusiform, 3.8 mm in length and 0.9 mm in width, rather strongly curved in lateral view; fused lateral lobes 1.3 mm in length, not serrate in lateral portions as in common *Plesiophthalmus*, with rounded apices.

Body length: 11 mm.

Holotype: ♂, Minzong, 3,000 ft alt., Lohit Valley, Assam Front, 25~27–III–1933, F. Kingdon WARD & R. J. H. KAULBAC leg. (NHML).

Notes. This new species belongs to the genus *Plesiophthalmus* in general features, *e.g.*, the subparallel-sided body with widened profemora (though not spined), elongate male protibiae (though not gouged in basal part of interior face), and so on. Related species are distributed in the Malay Peninsula and the Sunda Islands and form a species-group, the group of *P. brendelli*. Reddish yellow to yellowish brown femora are one of the distinct features of the members of this group.

This new species somewhat resembles *Plesiamarygmus ovoideus* (FAIRMAIRE, 1882), from Borneo and the Sunda Islands, but is easily distinguished from the latter by the fore and hind bodies not constricted but almost of the same width at each base. Anyway, this species-group will be placed in a position annectent to the members of the genera *Plesiophthalmus*, *Plesiamarygmus* and *Amarygmus*.

Plesiophthalmus cameronensis sp. nov.

(Figs. 6, 21–22)

Brownish black to piceous, medial parts of femora dark yellowish brown, hairs on antennae, mouth parts, ventral sides of tarsi and one face of each femur golden brown; head, pronotum, scutellum, elytra, legs and basal 5–6 segments of antennae vitreously shining, ventral surface somewhat alutaceous, femora and tibiae rather strongly, vitreously shining. Oblong-ovate, strongly convex dorsad.

Head transversely subelliptical, micro-shagreened in major portion, rather frequently scattered with microscopic punctures; clypeus trapezoidal, with a short transverse membranous part in front, fronto-clypeal border straightly grooved widely in middle, obliquely bent and finely sulcate in lateral parts; genae somewhat rhombical and strongly raised, polished, sparsely scattered with microscopic punctures, with outer margins rounded; frons somewhat depressed; diatone about twice the width of the transverse diameter of an eye in dorsal view. Eyes somewhat comma-shaped in frontal view. Antennae not so slender, extending to a little behind basal third of elytra, becoming very slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical: 0.59, 0.2, 0.73, 0.68, 0.8, 0.7, 0.62, 0.6, 0.53, 0.49, 0.7.

Pronotum subquadrate with gently rounded sides, 1.67 times as wide as long, widest at basal 1/3; apex widely, gently emarginate, rimmed and slightly sinuous on each side; base feebly produced in middle, straight in middle opposite to scutellum, weakly sinuous on each side; sides gently declined to lateral margins, which are noticeably grooved and finely rimmed; front angles subrectangular and directed anteroventrad, hind angles obtusely angulate; disc somewhat hemispherically convex, hardly

micro-shagreened, sparsely scattered with microscopic punctures, which are irregular in size, with a pair of vague depressions close to apex and also with those close to base. Scutellum triangular with feebly bisinuous base and rounded sides, gently convex, smooth though sparsely scattered with microscopic punctures.

Elytra subovate, 1.57 times as long as wide, slightly less than 3.5 times the length and 1.33 times the width of pronotum; dorsum strongly convex, highest slightly before basal 1/3; disc with rows of punctures, which are small and closely set; intervals slightly convex, rather closely, microscopically punctate, very weakly, somewhat transversely aciculate; sides steeply declined to lateral margins, which are weakly impressed from both sides at basal 2/5; humeri gently swollen; apices roundly produced.

Profemora widened in middle, haired on antero-ventral face in basal 3/4, mesofemora haired on posterior face in basal 3/4, metafemora haired on posterior face in basal 1/3; male protibia with interior face very slightly gouged; ratios of the lengths of pro-, meso- and metatarsomeres: 0.48, 0.31, 0.26, 0.22, 1.2; 0.55, 0.29, 0.26, 0.24, 1.21; 0.79, 0.35, 0.31, 1.18.

Male genitalia rather slender, 4.6 mm in length and 0.6 mm in width, moderately curved in lateral view, with basal piece elongate in anterior part; fused lateral lobes slender, 1.6 mm in length, not serrate in lateral portions, with simple apices.

Body length: 11.3 mm.

Holotype: &, Tanah Rata, Cameron Highlands, W. Malaysia, 27–IV–1993, S. NIRASAWA leg. (NSMT).

Notes. This new species resembles the preceding, *P. brendelli* sp. nov., in having the haired femora, but can be distinguished from the latter by the head, pronotum and scutellum vitreously shining, the elytra metallically shining and with rows of punctures, and the male genitalia differently shaped.

Plesiophthalmus kerleyi sp. nov.

(Figs. 7, 23–24)

Brownish black, medial parts of femora dark reddish brown, medial part of head reddish, hairs on antennae, mouth parts and ventral sides of tarsi yellowish brown; posterior part of head, pronotum, scutellum and elytra with coppery lustre, legs and basal 5–6 segments of antennae vitreously shining, ventral surface somewhat alutaceous, femora and tibiae moderately shining. Oblong-ovate, strongly convex dorsad.

Head transversely subelliptical, feebly micro-shagreened, scattered with micro-scopic punctures; clypeus semicircular, with a short, transverse membranous part in front, fronto-clypeal border widely curved and finely impressed; genae rather noticeably, obliquely raised, scattered with microscopic punctures, with outer margins rounded; frons rather broad, transversely impressed in middle; diatone about 1.8 times the width of the transverse diameter of an eye in dorsal view. Eyes somewhat commashaped in frontal view. Antennae not so slender, reaching basal third of elytra, becoming slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical:

0.83, 0.2, 0.72, 0.61, 0.79, 0.67, 0.63, 0.56, 0.59, 0.56, 0.71.

Pronotum subquadrate with rounded sides, 1.39 times as wide as long, widest at the middle; apex widely emarginate, rimmed and very slightly sinuous on each side; base feebly produced in middle, sinuous on each side; sides rather steeply declined to lateral margins, which are noticeably grooved and rimmed; front angles subrectangular and directed ventrad, hind angles obtusely angulate; disc somewhat hemispherically convex, scarcely micro-shagreened, rather frequently scattered with microscopic punctures, with a shallow medio-longitudinal impression in middle, and also with a pair of vague oblique impressions close to base. Scutellum triangular with rounded sides, base feebly bisinuous, surface slightly convex, smooth though sparsely scattered with microscopic punctures.

Elytra subovate, 1.43 times as long as wide, slightly less than 3 times the length and 1.47 times the width of pronotum; dorsum strongly convex, highest at basal 1/3; disc with rows of punctures, which are small and closely set; intervals gently convex, hardly micro-shagreened, microscopically punctate (the punctures not rounded but somewhat asterisk-shaped), weakly, irregularly aciculate; sides steeply declined to lateral margins, which are weakly impressed from both sides at basal third; humeri noticeably swollen; apices weakly roundly produced.

Profemora not spined but widened in middle, each femur not haired; male protibia gently elongate and curved, with interior face not gouged; ratios of the lengths of pro-, meso- and metatarsomeres: 0.47, 0.32, 0.26, 0.23, 1.2; 0.48, 0.27, 0.25, 0.26, 1.22; 0.8, 0.31, 0.26, 1.13.

Male genitalia elongated fusiform, 3.6 mm in length and 0.6 mm in width, moderately curved in lateral view; fused lateral lobes 1.36 mm in length, not serrate in lateral portions, with prolonged, spatulate apices.

Body length: ca. 11 mm.

Holotype: &, near Keningau, Borneo, 27–VI–1989, K. Kume leg. (NSMT). Paratypes: 1 ex., near Keningau, 18–IV–1989, K. Kume leg.; 2 exs., near Keningau, Borneo, 12–VI–1989, K. Kume leg.; 1 ex., near Keningau, 30–VI–1989, K. Kume leg.; 1 ex., "Borneo: Sarawak/Belaga, Long Linau/17.–21.3.1990/leg. A. Riedel" (SMNS); 1 ex., "BORNEO: SABAH/Kinabalu N. P.: Poring/500 m, 29.XI.–2.XII. 1996/leg. W. Schawaller" (SMNS); 1 ex., "SABAH: Batu Punggul Resort/24.VI.–1.VII.1996/leg. J. Kodada" (SMNS); 1 ex., Kapit, Sarawak, Malaysia, 17–V–1966, J. Domalaian leg. (NNHNP); 1 ex., "&//Pontianak/Borneo H//dube 1760//MUSEUM PARIS/COLL. P. Ardoin/1978" (NNHNP).

Notes. This resembles *P. brendelli* sp. nov. in general features, but can be distinguished from the latter by the dorsal surface metallically shining, the elytra not punctato-striate but with rows of small and close punctures, the femora without hairs, and the differently shaped male genitalia.

The three new species described above constitute a new species-group, Group of *P. brendelli*.

Plesiophthalmus kimanisensis sp. nov.

(Figs. 8, 25-26)

Brownish black; head, pronotum except lateral portions piceous with feeble brownish tinge, scutellum somewhat purplish, lateral portions of pronotum and elytra with metallic green lustre, the interior margins of metallic green areas on pronotum purplish, hairs on antennae, mouth parts and ventral sides of tarsi yellowish brown; head and pronotum moderately shining, scutellum and elytra strongly shining, ventral surface somewhat alutaceous, femora and tibiae moderately shining. Ovate, strongly convex dorsad.

Head transversely elliptical, feebly micro-shagreened, rather closely, irregularly punctate; clypeus semicircular, feebly convex in middle, fronto-clypeal border curved, deeply grooved in medial 3/5, finely sulcate in each lateral 1/5; genae rather small, weakly depressed posteriad towards eyes, with outer margins slightly produced in anterior parts, weakly sinuous in posterior parts; frons somewhat boldly X-shaped and gently convex, strongly sulcate along interior margins of eyes; diatone about 0.75 times the transverse diameter of an eye in frontal view. Eyes somewhat comma-shaped in frontal view, roundly produced laterad. Antennae rather slender, reaching basal fourth of elytra, becoming slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical: 0.4, 0.2, 0.41, 0.32, 0.38, 0.32, 0.39, 0.34, 0.33, 0.32, 0.43.

Pronotum subtrapezoidal, 1.69 times as wide as long, widest near base, roundly narrowed apicad; apex widely, evenly emarginate, deeply grooved, and boldly rimmed; base gently produced in middle though truncate opposite to scutellum, sinuous on each side; sides moderately declined to lateral margins, which are rather noticeably grooved and finely rimmed; front angles subrectangular, hind angles obtusely angulate; disc somewhat transversely convex, hardly micro-shagreened, rather frequently scattered with microscopic punctures, with a small impression at medio-basal part, and also with a pair of indistinct punctured impressions along base. Scutellum triangular with rounded sides, smooth and flat in major part, feebly depressed in large part, sparsely scattered with microscopic punctures, which are smaller than those on pronotum.

Elytra subovate, 1.38 times as long as wide, 3.38 times the length and slightly less than 1.35 times the width of pronotum; dorsum strongly convex, highest at basal 1/4; disc with rows of punctures, which are medium in size and not closely set (1–2.5 times the diameter of a puncture); intervals almost flat to feebly convex, microscopically punctate (the punctures barely visible under $\times 10$); sides steeply declined to lateral margins, which are bordered by punctures, feebly explanate laterad, and very weakly impressed from both sides at basal 3/8; humeri feebly swollen; apices very weakly produced.

Anal sternite finely bordered along outer margin, feebly truncate at apex in male. Profemora with anterior face sharply spined at apical 2/5; male protibia gently elongate and curved, with intero-ventral face gouged in basal 3/5; ratios of the lengths of pro-, meso- and metatarsomeres: 0.37, 0.27, 0.3, 0.31, 1.2; 0.61, 0.32, 0.31, 0.29, 1.26;

1.19, 0.49, 0.32, 1.28.

Male genitalia elongated fusiform, 2.65 mm in length and 0.51 mm in width, moderately curved in lateral view; fused lateral lobes 0.7 mm in length, rather strongly narrowed apical and apical 3/5, with apices roundly harpagous.

Body length: 9.3 mm.

Holotype: &, Kimanis Road, near Keningau, Sabah, Borneo, 3–V–1994, H. Ito leg. (NSMT). Paratypes: 1 ex., same data as for the holotype; 1 ex., "BORNEO, Sabah / Crocker Mts. 500–1900 m / Gunung Emas / 6.–21. V 1995 / Ivo Jenis leg. // COLL. H. J. Bremer" (SMNM).

Notes. This new species resembles *Plesiophthalmus beardae* MASUMOTO, 1999, from Borneo, but can be distinguished from the latter by the smaller and slenderer body, with head distinctly sulcate along the interior margins of eyes, pronotum more transverse, elytral intervals not flat but gently convex, elytral margin more noticeably explanate laterad, stout legs, and the differently shaped male genitalia.

Plesiophthalmus cuccodoroi sp. nov.

(Figs. 9, 27–28)

Brownish black, pronotum with a dark cyaneous patch at each lateral portion, whose interior margin is somewhat finely iridescent, anal sternite lighter in colour, hairs on antennae, mouth parts and ventral sides of tarsi yellowish brown; head, pronotum and scutellum feebly metallically shining, elytra strongly, vitreously shining and with somewhat coppery lustre, ventral surface somewhat alutaceous, femora and tibiae moderately shining. Ovate, strongly convex dorsad.

Head transversely elliptical, feebly micro-shagreened, rather closely irregularly punctate; clypeus somewhat transversely hexagonal, rather strongly bent ventrad in front, fronto-clypeal border noticeably grooved, clearly impressed widely in middle, bent anteriad and finely impressed in lateral parts; genae gently and obliquely raised, weakly produced laterad; frons somewhat boldly T-shaped and gently convex, finely though deeply sulcate along interior margins of eyes; diatone slightly larger than the transverse diameter of an eye in dorsal view. Eyes somewhat comma-shaped in frontal view. Antennae rather slender, reaching basal fourth of elytra and becoming slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical: 0.58, 0.2, 0.72, 0.48, 0.61, 0.58, 0.57, 0.53, 0.49, 0.47, 0.65.

Pronotum subtrapezoidal with rounded sides, 1.67 times as wide as long, widest at the middle; apex widely, evenly emarginate, finely, deeply bordered, and rimmed; base feebly produced in middle though truncate opposite to scutellum, gently sinuous on each side; sides gently declined to lateral margins, which are rather noticeably grooved and finely rimmed; front angles slightly acutely angulate, hind angles obtusely angulate; disc somewhat transversely convex, hardly micro-shagreened, moderately scattered with microscopic punctures, with a pair of vague, oblique punctured impressions close to base. Scutellum triangular with rounded sides, slightly depressed from

the level of elytra and sparsely scattered with microscopic punctures, which are smaller than those on pronotum, with a short transverse impression at apical 2/5.

Elytra subovate, 1.38 times as long as wide, 4.3 times the length and slightly less than 1.5 times the width of pronotum; dorsum strongly convex, highest at basal 1/3; disc with rows of punctures, which are medium in size and not closely set (1.5–2.5 times the diameter of a puncture apart); intervals almost flat to feebly convex, microscopically punctate (the punctures barely visible under ×15); sides steeply declined to lateral margins, which are bordered by punctures, feebly explanate laterad, and weakly impressed at basal third from both sides; humeri gently swollen; apices very weakly produced posteriad.

Profemora with anterior face spined at apical 2/5; male protibia gently elongate and curved, with interior face gouged in basal 3/5; ratios of the lengths of pro-, meso-and metatarsomeres: 0.31, 0.25, 0.24, 0.26, 1.2; 0.33, 0.27, 0.24, 0.28, 1.21; 0.9, 0.31, 0.33, 1.23.

Male genitalia elongated fusiform, 2.6 mm in length and 0.48 mm in width, moderately curved in lateral view; fused lateral lobes 0.6 mm in length, rather strongly narrowed apicad in apical 3/5, with apices not simply acute but roundly harpagous.

Body length: 8.6 mm.

Holotype: &, Sitahoan, Sumatra, IV-1981, DIEHL leg. (MHNG).

Notes. This resembles the preceding new species, *Plesiophthalmus kimanisensis* sp. nov., but can be distinguished from the latter by the pronotum more strongly narrowed apicad, the elytra with rows of larger punctures, and the bolder male genitalia.

Plesiophthalmus keningauensis sp. nov.

(Figs. 10, 29-30)

Blackish brown; head, pronotum except lateral portions piceous, lateral portions of pronotum and scutellum dark green, elytra with feeble greenish lustre, hairs on antennae, mouth parts and ventral sides of tarsi yellowish brown; head and pronotum moderately shining, scutellum and elytra rather strongly, vitreously shining, ventral surface somewhat alutaceous, femora and tibiae gently shining. Ovate, strongly convex dorsad.

Head somewhat transversely elliptical; clypeus rather transverse pentagonal, micro-shagreened, microscopically punctate, fronto-clypeal border weakly curved, deeply grooved in medial 3/5, bent anteriad, finely sulcate in each lateral 1/5, and extending to outer margins; genae gently produced and feebly raised laterad, weakly declined towards eyes; frons somewhat boldly X-shaped and rather noticeably convex, feebly micro-shagreened and irregularly, comparatively sparsely punctate, strongly sulcate along interior margins of eyes; diatone about 0.67 times the transverse diameter of an eye in dorsal view. Eyes somewhat subcordate in frontal view, weakly produced ventro-laterad. Antennae rather slender, reaching basal third of elytra, becoming slightly bolder apicad, ratios of the lengths of antennomeres from basal to apical: 0.4,

0.2, 0.38, 0.32, 0.37, 0.42, 0.4, 0.34, 0.28, 0.29, 0.41.

Pronotum subtrapezoidal, 1.6 times as wide as long, widest near base, roundly narrowed apicad; apex widely, evenly emarginate, deeply though roughly bordered, and boldly rimmed; base gently produced in middle though truncate opposite to scutellum, sinuous on each side; sides moderately declined to lateral margins, which are grooved and finely rimmed; front angles subrectangular, hind angles obtusely angulate; disc somewhat transversely convex, hardly micro-shagreened, moderately scattered with microscopic, somewhat ovate punctures, with a pair of vague impressions near base and also with a pair of impressions along basal margin. Scutellum triangular though the anterior part is almost semicircular because of the depressed apical part, surface smooth and flat, very sparsely scattered with microscopic punctures, which are smaller than those on pronotum.

Elytra subovate, 1.24 times as long as wide, 2.67 times the length and slightly less than 1.34 times the width of pronotum; dorsum strongly convex, highest at basal third; disc with rows of punctures, which are rather large in size and not closely set (1-2.5) times the distance of the diameter of a puncture); intervals feebly convex, microscopically punctate (the punctures barely visible under $\times 10$); sides steeply declined to lateral margins, which are grooved and punctate, finely rimmed, and very weakly impressed from both sides at basal 2/7; humeri feebly swollen; apices gently rounded.

Anal sternite finely bordered along outer margin, feebly truncate at apex in male. Profemora with anterior face sharply spined at apical 1/3; male protibia gently elongate and curved, with intero-ventral face very feebly gouged in middle; ratios of the lengths of pro-, meso- and metatarsomeres: 0.37, 0.26, 0.25, 0.27, 1.2; 0.38, 0.27, 0.24, 0.28, 1.19; 0.83, 0.32, 0.33, 1.22.

Male genitalia elongated fusiform, 2.22 mm in length and 0.4 mm in width, feebly curved in lateral view; fused lateral lobes 0.68 mm in length, gently narrowed apicad in apical 3/5, with roundly harpagous apices.

Body length: 6.7–7.6 mm.

Holotype: &, Keningau, Sabah, N. Borneo, V-1992, H. Ito leg. (NSMT). Paratype: 1 ex., same data as for the holotype.

Notes. This new species resembles *Plesiophthalmus kimanisensis* sp. nov., but can be distinguished from the latter by the smaller and more strongly convex body, with head less projected apicad, pronotum more clearly punctate, the rows of punctures on elytra larger and sparser, and the microscopic punctures in intervals smaller.

要 約

益本仁雄:キマワリ属(Plesiophthalmus)とその近縁属についての追加研究(その3). — キマワリ属(Plesiophthalmus)とその近縁属についての追加研究の第3回として、東アジア産のキマワリ属の10種を新種記載した。すなわち、Plesiophthalmus sameshimai sp. nov., P. ardoinius sp. nov., P. wadai sp. nov., P. laoatronitidus sp. nov., P. brendelli sp. nov., P. cameronensis sp. nov., P. kerleyi sp. nov., P. kimanisensis sp. nov., P. cuccodoroi sp. nov.および P. keningauensis sp. nov.である。このう

ち、P. brendelli sp. nov., P. cameronensis sp. nov., P. kerleyi sp. nov. O. 3種はたがいに近縁であり、新たにP. brendelli 種群とした。この仲間は、腿節の中央部が赤橙色で、前腿節は太くなるが刺状とならず、3の前脛節はわずかに伸長し内側に曲がるが、内面基部は多くのキマワリ属にみられるようにえぐられることがない。近縁属のPlesiamarygmus ovoideus (FAIRMAIRE)に似ているが、体側が平行であることなどキマワリ属の特徴をより多くもつのでキマワリ属に含めた。キマワリ属(Plesiamarygmus)マルキマワリ属(Amarvgmus)などを結ぶ種群である。

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A New Locality of *Pterostichus* (*Nialoe*) *ogaensis* (Coleoptera, Carabidae)

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Looking into a lot of carabids collected by the late Mr. IZUMI, I found a single specimen of an *Abax*-like species. After a careful examination of its male genital organ, it has become evident that the specimen can be determined as *Pterostichus* (*Nialoe*) *ogaensis* described by myself. However, its body form, which I mentioned as *Abax*-like, is different from that of the type series. A brief account of the differences is given below.

Pterostichus (Nialoe) ogaensis MORITA

Pterostichus (Nialoe) ogaensis MORITA, 1995, Elytra, Tokyo, 23: 283, figs. 1–9.

Specimen examined. 1♂, "Mikawa-rindô/Minamiaizu, Fukushima 1990. VI. 24/A. IZUMI leg."

Length: 12.4 mm (from apical margin of clypeus to apices of elytra).

Head narrow, PW/HW 1.33 [1.27-1.32 (M 1.31) in 4&& (type series)]; frontal furrows rather deep and straight, and divergent posteriad; frons and vertex smooth; vertex and genae more convex than in the type series.