New species of *Plateros* Bourgeois from Sulawesi (Coleoptera: Lycidae)

Новые виды *Plateros* Bourgeois с Сулавеси (Coleoptera: Lycidae)

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ABSTRACT. Thirteen new species of the genus *Plateros* Bourgeois, *P. bantaengensis*, *P. curticauda*, *P. gorochovi*, *P. latimojongensis*, *P. pallidimarginatus*, *P. pangoensis*, *P. rimbaensis*, *P. rubiginosus*, *P. uluwayensis*, *P. unisuturalis*, *P. wartabonensis*, *P. xanthellus* and *P. xenos* **spp.n.**, are described from the island of Sulawesi (Indonesia). The number of *Plateros* species on the island is thus more than doubled, reaching twenty four. Provided is a determination key to all known Sulawesi *Plateros*.

РЕЗЮМЕ. С острова Сулавеси (Индонезия) описывается тринадцать новых видов рода *Plateros* Bourgeois, *P. bantaengensis*, *P. curticauda*, *P. gorochovi*, *P. latimojongensis*, *P. pallidimarginatus*, *P. gorochovi*, *P. rimbaensis*, *P. rubiginosus*, *P. uluwayensis*, *P. unisuturalis*, *P. wartabonensis*, *P. xanthellus* и *P. xenos* **spp.n.** Число видов рода на острове таким образом более чем удваивается и достигает двадцати четырёх. Приводится определительная таблица для всех известных *Plateros* с Сулавеси.

Introduction

The genus *Plateros* Bourgeois, 1879, one of the largest in the family of net-winged beetles and one of the most widespread, includes over 800 species distributed in all biogeographic realms, mostly in the Palaeotropics [e.g. Kleine, 1933; Bocáková, 2001]. The number of its species is actually steadily rising in all them [e.g. Kazantsev, 2011; 2018], and the Papuan region, where the island of Sulawesi belongs to, is no exception [e.g. Bocáková, 1997; Kazantsev, 2015]. The number of *Plateros* species in Sulawesi had been just four, including two species described in genera later synonymized with *Plateros*, until a recent review, when it was raised to ten [Tvardik, Bocák, 2001] (in fact, eleven, as *Plateros princeps* (Kleine, 1939), described as a *Ditoneces* Waterhouse, 1879 species, was omitted from the review).

The present study is a further contribution to the knowledge of *Plateros* in this western-most and largest part of Wallacea. Examination of the Lycidae material accumulated in the Insect Centre (Moscow), Natural History Museum (London), and the Zoological Institute (St-Petersburg), leads to description of thirteen more new species, which brings the number of *Plateros* species reported from the island to twenty four.

Material and Methods

For examination the beetles were relaxed in water, then their detached abdomina were kept for several hours in 10% KOH at room temperature. The KOH treated aedeagi and terminal abdominal segments were then placed in microvials with glycerin for photographing.

MSP-1 zoom stereoscopic dissecting microscope with x8 x80 and Micromed-2/3 20 zoom stereoscopic light microscope with x100 x400 magnification range were used. Photographs were taken with Canon EOS 6D camera and Canon MP-E 65 mm lens.

The following acronyms are used in the paper: ICM — Insect Center, Moscow; NHML — Natural History Museum, London; ZIN — Zoological Institute, S-Petersburg.

Taxonomy

Plateros bantaengensis Kazantsev, sp.n. Figs 1, 15–16.

MATERIAL: Holotype, \bigcirc , Indonesia, S Sulawesi, ca. 10 km NE Bantaeng, 5°26'S 119°55'E, 440 m, 06.I.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Testaceous; head, metaventrite and tarsi light brown; antennomeres 3–10 dark brown (antennomere 11 missing in both antennae) (Fig. 1).

Vertex shining, with broad shallow round impression behind antennal prominence. Eyes relatively large, interocular distance ca. 1.4 times shorter than eye diameter. La-

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brum small, transverse, truncate anteriorly. Palps slender; ultimate palpomeres elongate, widest in the middle, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, from antennomere 3 serrate; antennomere 3 ca. 4.3 times longer than antennomere 2 and 1.2 times shorter than antennomere 4; antennomeres 3–11 with long erect pubescence (Fig. 1).

Pronotum transverse, ca. 1.2 times as wide as long, moderately bisinuate basally and strongly semi-circularly produced anteriorly, with almost parallel, slightly concave sides, conspicuous acute posterior and blunt anterior angles. Scutellum subquadrate, parallel-sided, truncate and medially slightly emarginate at apex (Fig. 1).

Elytra long, ca. 3.6 times longer than wide at humeri, parallel-sided, with four equally developed primary costae; interstices with even rows of small roundish cells; pubescence short and decumbent (Fig. 1).

Legs slender (Fig. 1).

Median lobe of aedeagus relatively short, widened in distal two thirds, with paired toothed blades apically (Figs 15-16).

Female. Unknown.

Length: 4.9 mm. Width (humerally): 1.1 mm.

ETYMOLOGY. The name of the new species is derived from 'Bantaeng', a locality in South Sulawesi where its type specimen was collected.

DIAGNOSIS. *Plateros bantaengensis* **sp.n.**, resembling *P. lalui* Tvardik et Bocák, 2001 in appearance, may be easily separated from all Sulawesi *Plateros* by the unique structures of the aedeagus (Figs 15–16).

REMARKS. Antennomere 11 is missing in the left antenna and antennomeres 10–11 are missing in the right antenna of the holotype.

Plateros curticauda Kazantsev, **sp.n.** Figs 2, 17–18.

MATERIAL: Holotype, ♂⁷, Indonesia, N Sulawesi, Bogani Nani Wartabone N.P., Alia Lake, 1300 m, 21.IX.2012, O. Jakonen leg. (ICM).

DESCRIPTION. **Male**. Dark brown; palps, except ultimate palpomeres, testaceous; narrow pronotal margins light brown testaceous (Fig. 2).

Vertex with shallow round impression and two small round pits behind antennal prominence. Eyes relatively large, interocular distance ca. 1.4 times shorter than eye diameter. Labrum small, transverse, anteriorly emarginate medially. Palps slender; ultimate palpomeres small, elongate, widest in proximal third, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral three fourths, antennomeres 4–8 serrate; antennomere 3 ca. 2.4 times longer than antennomere 3 and ca. 1.4 times shorter than antennomere 4; antennomeres 3–11 with scarce, relatively long erect pubescence (Fig. 2).

Pronotum transverse, ca. 1.6 times as wide as long, trapezoidal, slightly bisinuate basally and semi-circularly produced anteriorly, with slightly concave sides, long acute posterior and inconspicuous blunt anterior angles. Scutellum subquadrate, slightly narrowing distally, emarginate at apex (Fig. 2).

Elytra long, ca. 3.5 times longer than wide at humeri, parallel-sided, with four equally developed primary costae; interstices with even rows of small subquadrate cells; pubescence short and decumbent (Fig. 2).

Median lobe of aedeagus relatively short and robust, curved and dilated distally, with prominent toothed lobes in distal third (Figs 17–18).

Female. Unknown.

Figs 1–3. General view of *Plateros*, holotypes, males: 1 — *P. bantaengensis* **sp.n.**; 2 — *P. curticauda* **sp.n.**; 3 — *P. gorochovi* **sp.n.** Рис. 1–3. Общий вид *Plateros*, голотипы, самцы: 1 — *P. bantaengensis* **sp.n.**; 2 — *P. curticauda* **sp.n.**; 3 — *P. gorochovi* **sp.n.**

Length: 7.9 mm. Width (humerally): 1.9 mm.

ETYMOLOGY. The name of the new species is derived from the Latin for 'short tail', alluding to the shape of its aedeagus.

DIAGNOSIS. *Plateros curticauda* **sp.n.**, being somewhat similar to *P. lalui* Tvardik et Bocák, 2001 in the shape of the male genitalia, is easily separable by the dark brown to black upperside, as well as by the more robust median lobe of the aedeagus with more prominent distal toothed lobes (Figs 17–18).

Plateros gorochovi Kazantsev, **sp.n.** Figs 3, 19–20.

MATERIAL: Holotype, \bigcirc , Indonesia, N Sulawesi, Bogani Nani Wartabone N.P., 17–25.I.2011, A. Gorochov leg. (ZIN).

DESCRIPTION. Male. Dark brown; narrow elytral margins, trochanters and bases of femora light brown (Fig. 3).

Vertex with transverse impression behind antennal prominence. Eyes relatively small, interocular distance ca. 1.2 times greater than eye diameter. Labrum small, transverse, almost truncate anteriorly. Palps slender; ultimate palpomeres small, elongate, widest in the middle, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, narrow, antennomeres 5–7 feebly serrate; antennomere 3 ca. 2.8 times longer than antennomere 2 and 1.4 times shorter than antennomere 4; antennomeres 3–11 with relatively long scarce erect pubescence (Fig. 3).

Pronotum transverse, ca. 1.8 times as wide as long, trapezoidal, slightly bisinuate basally and semi-circularly produced anteriorly, with long narrow acute posterior and blunt rounded anterior angles. Scutellum subquadrate, parallel-sided, truncate at apex (Fig. 3).

Elytra long, ca. 3.9 times longer than wide at humeri, parallel-sided, slightly concave at lateral margins, with four equally developed primary costae; interstices with even rows of small subquadrate cells; pubescence short and decumbent (Fig. 3).

Median lobe of aedeagus relatively straight, narrow and conspicuously widened distally, provided with long and broad bidental blade (Figs 19–20).

Female. Unknown.

Length: 7.0 mm. Width (humerally): 1.6 mm.

ETYMOLOGY. The new species is named after Dr. A.V. Gorochov (ZIN) who collected the unique type specimen.

DIAGNOSIS. *Plateros gorochovi* **sp.n.** can be readily distinguished from all Sulawesi *Plateros* by the long narrow posterior pronotal angles and the peculiar aedeagal structures (Figs 3, 19–20).

Plateros latimojongensis Kazantsev, sp.n. Figs 4, 21–22.

MATERIAL: Holotype, ♂, Indonesia, S Sulawesi, Latimojong Mts, N slopes [of] Sinaji Mt., env. Uluway, 3°18′36′′S 120°01′40′′E, 2000 m, 19–20.01.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. Male. Uniformly black (Fig. 4).

Vertex with small inconspicuous round impression behind antennal prominence. Eyes relatively small, interocular distance ca. 1.2 times greater than eye diameter. Labrum small, transverse, truncate anteriorly. Palps slender; ultimate palpomeres small, elongate, slightly widened distally, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, filiform; antennomere 3 ca. 2.3 times longer than antennomere 2 and ca. 1.2 times shorter than antennomere 4; antennomeres 3–11 with scarce erect pubescence (Fig. 4).

Pronotum transverse, ca. 1.1 times as wide as long, moderately bisinuate basally and strongly produced forward anteriorly, with straight, parallel-sided lateral margins, straight posterior and conspicuous blunt anterior angles. Scutellum transverse, slightly narrowing distally, truncate at apex (Fig. 4).

Elytra long, ca. 4 times longer than wide at humeri,



Figs 4–6. General view of *Plateros*, holotypes: 4 – *P. latimojongensis* **sp.n.**; 5 – *P. pallidimarginatus* **sp.n.**; 6 – *P. pangoensis* **sp.n.**; 4–5 – males; 6 – female.

Рис. 4–6. Общий вид *Plateros*, голотипы: 4 — *P. latimojongensis* **sp.n.**; 5 — *P. pallidimarginatus* **sp.n.**; 6 — *P. pangoensis* **sp.n.**; 4–5 — самцы; 6 — самка.

parallel-sided, with four primary costae, costae 2 and 4 noticeably more raised than costae 1 and 3; interstices with uneven rows of small roundish cells; dense pubescence short and semi-erect (Fig. 4).

Legs slender (Fig.).

Median lobe of aedeagus more or less straight, its basal half with distinct constriction, distal half bearing dorsal paired hooked blades and ventral triangular projection (Figs 21–22).

Female. Unknown.

Length: 4.8 mm. Width (humerally): 0.9 mm.

ETYMOLOGY. The name of the new species is derived from the 'Latimojong Mountains', a locality in South Sulawesi where its type specimen was collected.

DIAGNOSIS. *Plateros latimojongensis* **sp.n.**, being similar in coloration and general appearance to *P. orobuensis* Tvardik et Bocák, 2001, is easily separable by the shape of the median lobe of the aedeagus with paired hooked blades (Figs 21–22).

Plateros pallidimarginatus Kazantsev, **sp.n.** Figs 5, 23–24.

MATERIAL: Holotype, ^{o³}, Indonesia, N Sulawesi, Bogani Nani Wartabone N.P., 1550–1600 m, 29.VIII.2018, S. Young leg. (ICM).

DESCRIPTION. **Male**. Dark brown to black; palps, except ultimate palpomeres, narrow pronotal margins, narrow lateral elytral margins testaceous; trochanters and bases of femora light brown (Fig. 5).

Vertex with shallow impression and two relatively large round pits behind antennal prominence. Eyes large, interocular distance almost 1.2 times shorter than eye diameter. Labrum small, transverse, slightly convex anteriorly. Palps slender; ultimate palpomeres robust, elongate, widest near the middle, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, filiform; antennomere 3 ca. 2.8 times longer than antennomere 2 and 1.4 times shorter than antennomere 4; antennomeres 3–11 with short erect pubescence (Fig. 5).

Pronotum transverse, ca. 1.5 times as wide as long, trapezoidal, moderately bisinuate basally and semi-circularly produced anteriorly, with almost straight sides, long acute posteriorly produced posterior and inconspicuous blunt anterior angles. Scutellum subquadrate, almost parallel-sided, constricted before apex and medially emarginate distally (Fig. 5).

Elytra long, ca. 3.7 times longer than wide at humeri, almost parallel-sided, only slightly concave at sides, with four strong, equally developed primary costae; interstices with even rows of small subquadrate cells; pubescence very short and decumbent (Fig. 5).

Legs slender (Fig. 5).

Median lobe of aedeagus curved and hooked distally, with two spines in proximal half, concave dorso-apical opening and barbed hook (Figs 23–24).

Female. Unknown.

Length: 9.2 mm. Width (humerally): 2.1 mm.

ETYMOLOGY. The name of the new species is derived from the Latin for 'with pale margins', alluding to the coloration of its pronotum and elytra.

DIAGNOSIS. *Plateros pallidimarginatus* **sp.n.** is somewhat similar to *P. milenae* Tvardik et Bocák, 2001, also with barbed hook of the median lobe of the aedeagus, easily separable by the coloration, large eyes and filiform antennae, as well as by the distinctly more curved and bearing more spines medial lobe of the aedeagus (Figs 5, 23–24).

Plateros pangoensis Kazantsev, **sp.n.** Fig. 6.

MATERIAL: Holotype, \mathcal{Q} , Indonesia, S Sulawesi, N slopes [of] Mt. Pangopango, 3°09'46"S 119°49'45"E, 1740–1780 m, 9–11.I.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. **Female**. Dark brown to black; pronotal margins light brown; elytra, except relatively broad sutural stripe, testaceous (Fig. 6).

Vertex with prominent transverse impression behind antennal prominence. Eyes relatively small, interocular distance ca. 1.2 times greater than eye diameter. Labrum transverse, anteriorly slightly emarginate. Palps slender; ultimate palpomeres considerably longer than wide, almost parallelsided, obliquely truncate and flattened at apex. Antennal sockets separated by relatively broad lamina. Antennae attaining to elytral middle, antennomeres 4–10 strongly serrate; antennomere 3 ca. 3.4 times longer than antennomere 2 and 1.2 times longer than antennomere 4; antennomeres 3–11 with relatively long decumbent pubescence and separate longer erect apical bristles (Fig. 6).

Pronotum transverse, ca. 1.3 times as wide as long, trapezoidal, slightly bisinuate posteriorly and strongly semicircularly produced anteriorly, with long sharp posterior and obsolete anterior angles. Scutellum subquadrate, slightly widening distally, medially minutely emarginate at apex (Fig. 6).

Elytra long, ca. 3.3 times longer than wide at humeri, parallel-sided, with four almost equally developed primary costae; interstices with even rows of small roundish cells; pubescence short and decumbent (Fig. 6).

Male. Unknown.

Length: 8.5 mm. Width (humerally): 2.0 mm.

ETYMOLOGY. The name of the new species is derived from 'Pangopango Mountain', a locality in Tana Toraja, South Sulawesi, where its type specimen was collected.

DIAGNOSIS. *Plateros pangoensis* **sp.n.** can be easily separated from all other Sulawesi *Plateros* by the coloration (Fig. 6).

REMARKS. *Plateros pangoensis* **sp.n.** is being described after a female due to its peculiar coloration pattern, very different from all other Sulawesi *Plateros*. As the serrate female antennae are usually characteristic of species with ramose male antennae, it seems reasonable to expect the same antennal structure in *P. pangoensis* **sp.n.** males.

Plateros rimbaensis Kazantsev, sp.n. Figs 7, 25–26.

MATERIAL: Holotype, ♂, Indonesia, S Sulawesi, W Palopo, trail nr. Puri Rimba Resort, 2°58′00″S 120°05′13″E, 720–850 m, 23–27.I.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Dark brown to black; pronotum, except anterior median spot,, very bases of elytra, trochanters, proximal half of femora and tibiae basally testaceous (Fig. 7).

Vertex with inconspicuous elongate sub-rectangular impression behind antennal prominence. Eyes moderately large, interocular distance subequal in length to eye diameter. Labrum small, transverse, slightly convex anteriorly. Palps slender; ultimate palpomeres elongate, gradually narrowing distally, glabrous and almost pointed at apex. Antennal sockets separated by narrow lamina. Antennae long, attaining to elytral three fourths, strongly serrate; antennomere 3 ca. 3.3 times longer than antennomere 2 and subequal in length to antennomere 4; antennomeres 3–11 with short erect pubescence (Fig. 7). Pronotum transverse, ca. 1.4 times as wide as long, bisinuate basally and moderately semi-triangularly produced anteriorly, with almost parallel and straight sides, short acute posterior and noticeable blunt anterior angles. Scutellum subquadrate, parallel-sided, truncate at apex (Fig. 7).

Elytra long, ca. 3.2 times longer than wide at humeri, almost parallel-sided, only slightly concave at sides, with four more or less equally developed primary costae; interstices with even rows of small roundish cells; pubescence short and decumbent (Fig. 7).

Legs slender (Fig. 7).

Median lobe of aedeagus elongate, narrow and straight, abruptly bent distally and retroussé and dentate at apex (Figs 25–26).

Female. Unknown.

Length: 5.2 mm. Width (humerally): 1.2 mm.

ETYMOLOGY. The name of the new species is derived from 'Puri Rimba', a resort west of Palopo, South Sulawesi, near which its type specimen was collected; also from 'rimba', the Indonesian for 'jungle'.

DIAGNOSIS. *Plateros rimbaensis* **sp.n.** can be placed near *P. celebensis* Pic, 1921 of a similar coloration pattern, separable by the anterior dark pronotal spot (Fig. 7); it also differs from all known Sulawesi *Plateros* in the elongate, narrow and straight medial lobe of the aedeagus, abruptly bent distally and retroussé and dentate at apex (Figs 25–26).

Plateros rubiginosus Kazantsev, sp.n. Figs 8–9, 27–28.

MATERIAL: Holotype, \bigcirc , Indonesia, S
 Sulawesi, N slopes [of] Mt. Pangopango, 3°09'46''S 119°49'45''E, 1740–1780 m, 9–

11.I.2020, S. Kazantsev leg. (ICM); paratype, ^Q, same label (ICM). DESCRIPTION. **Male**. Dark brown to black; pronotum and elytra rusty red with bright red pubescence (Fig. 8).

Vertex with prominent semi-circular impression behind antennal prominence. Eyes large, interocular distance ca. 1.2 times shorter than eye diameter. Labrum small, transverse, truncate anteriorly. Palps slender; ultimate palpomeres considerably longer than wide, almost parallel-sided in proximal two thirds, outwardly curved distally, obliquely truncate and flattened at apex. Antennal sockets separated by narrow lamina. Antennae attaining to elytral three fifths, antennomere 3 triangular, antennomeres 4–10 ramose, ramus of antennomere 4 (shortest) ca. 2.1 times shorter than stem and ramus of antennomere 8 (longest) ca. 1.3 times shorter than stem; antennomere 3 (stem) ca. 2.8 times longer than antennomere 2 and ca. 1.1 times shorter than antennomere 4; antennomeres 3–11 with scarce short erect pubescence (Fig. 8).

Pronotum transverse, ca. 1.3 times as wide as long, trapezoidal, moderately bisinuate basally and strongly semicircularly produced anteriorly, with slightly concave sides, long acute posterior and obsolete anterior angles. Scutellum subquadrate, parallel-sided, truncate at apex (Fig. 8).

Elytra long, ca. 3.8 times longer than wide at humeri, parallel-sided, only very slightly wider in distal fourth; with four prominent, equally developed primary costae; interstices with even rows of small subquadrate cells; pubescence dense, short and decumbent (Fig. 8).

Legs slender (Fig. 8).

Median lobe of aedeagus more or less simple and straight, only noticeably widened and bent in distal half (Figs 27–28). **Female**. Similar to male, but eyes smaller, interocular

Figs 7–9. General view of *Plateros*: 7—*P. rimbaensis* **sp.n.**; 8–9—*P. rubiginosus* **sp.n.**; 7–8— holotypes, males; 9— paratype female. Рис. 7–9. Общий вид *Plateros*: 7—*P. rimbaensis* **sp.n.**; 8–9—*P. rubiginosus* **sp.n.**; 7–8— голотипы, самцы; 8— паратип, самка.

distance subequal to eye diameter, antennae serrate, with short decumbent pubescence and separate long erect bristles, and elytra widest at humeri, slightly narrowing distally (Fig. 9).

Length: 9.4 (holotype male) -10.2 (paratype female) mm. Width (humerally): 2.1 (holotype male) -2.4 (paratype female) mm.

ETYMOLOGY. The name of the new species is derived from the Latin for 'rusty red', alluding to the coloration of its upperside.

DIAGNOSIS. *Plateros rubiginosus* **sp.n.**, may be distinguished from *P. princeps* (Kleine, 1939), also with ramose male antennae, by the rusty red coloration of upperside and distinctly shorter antennal rami (Fig. 8).

Plateros uluwayensis Kazantsev, sp.n. Figs 10–11.

MATERIAL: Holotype, \mathcal{D} , Indonesia, S Sulawesi, Latimojong Mts, N slopes [of] Sinaji Mt., env. Uluway, 3°18'36''S 120°01'40''E, 2000 m, 19–20.I.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. Female. Dark brown to black; elytral apices, with lateral streak extending to proximal third, testaceous (Fig. 10).

Vertex with inconspicuous transverse impression and two small roundish pits behind antennal prominence. Eyes relatively small, interocular distance ca. 1.4 times greater than eye diameter. Labrum small, transverse, almost truncate anteriorly. Palps slender; ultimate palpomeres small, elongate, slightly widened distally, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, filiform; antennomere 3 ca. 2.2 times longer than antennomere 2 and ca. 1.3 times shorter than antennomere 4; antennomeres 3–11 with short decumbent pubescence and separate longer erect bristles (Figs 10–11).

Pronotum transverse, ca. 1.4 times as wide as long, semitrapezoidal, moderately bisinuate posteriorly and semi-circularly produced anteriorly, densely pubescent, with long sharp posterior and blunt rounded anterior angles. Scutellum transverse, almost parallel-sided, medially emarginate at apex (Figs 10–11).

Elytra long, ca. 3.6 times longer than wide at humeri, parallel-sided, densely pubescent, with four almost equally developed primary costae, only costa 3 noticeably weaker in distal fourth; interstices with even proximally to uneven distally rows of small roundish cells; pubescence dense, short and decumbent (Fig. 10).

Male. Unknown.

Length: 6.1 mm. Width (humerally): 1.5 mm.

ETYMOLOGY. The name of the new species is derived from 'Uluway', a locality in South Sulawesi where its type specimen was collected.



Figs 10–14. General view and anterior part of body of *Plateros*, holotypes: 10–11—*P. uluwayensis* **sp.n**.; 12–13—*P. unisuturalis* **sp.n**.; 14—*X. wartabonensis* **sp.n**.; 10, 12, 14— general view; 11, 13— anterior part of body, dorsally; 10–11— female; 12–14— males. Рис. 10–14. Общий вид и передняя часть тела *Plateros*, голотипы: 10–11—*P. uluwayensis* **sp.n**.; 12–13—*P. unisuturalis* **sp.n**.; 14—*X. wartabonensis* **sp.n**.; 10, 12, 14— общий вид; 11, 13— передняя часть тела, сверху; 10–11— самка; 12–14— самцы.

166

DIAGNOSIS. *Plateros uluwayensis* **sp.n.** can be easily separated from all other Sulawesi *Plateros* by the coloration (Fig. 10).

REMARKS. *Plateros uluwayensis* **sp.n.** is being described after a female due to its peculiar coloration pattern, very different from all other Sulawesi *Plateros*.

Plateros unisuturalis Kazantsev, sp.n. Figs 12–13, 29–30.

MATERIAL: Holotype, ♂, Indonesia, S Sulawesi, W Palopo, trail nr. Puri Rimba Resort, 2°58′00″S 120°05′13″E, 720–850 m, 23–27.1.2020, S. Kazantsev leg. (ICM).

DESCRIPTION. **Male**. Orange testaceous; ultimate labial palpomeres, maxillary palpomeres 3–4, antennomere 1 distally, antennomeres 3–11, femora and tibiae distally, tarsi and abdomen, except terminal segments (ventrite 8 and tergites 9–10), dark brown (Fig. 12).

Vertex with small deep round impression behind antennal prominence. Eyes moderately large, interocular distance subequal in length to eye diameter. Labrum small, transverse, almost truncate anteriorly, inconspicuously emarginate medially. Palps slender; ultimate palpomeres small, elongate, gradually widened distally, obliquely truncate and flattened at apex. Antennal sockets separated by narrow lamina. Antennae attaining to elytral four fifths, antennomeres 3–10 serrate; antennomere 3 ca. 2.5 times longer than antennomere 2 and 1.5 times shorter than antennomere 4; antennomeres 3– 11 with long erect pubescence (Figs 12–13).

Pronotum transverse, ca. 1.2 times as wide as long, conspicuously bisinuate basally and triangularly produced anteriorly, with almost straight parallel sides, acute rounded posterior and conspicuous blunt anterior angles. Scutellum trapezoidal, slightly widening and rounded distally (Fig. 13).

Elytra long, ca. 3.8 times longer than wide at humeri, noticeably widening distally, with four equally developed primary costae; interstices 4–5 with even rows of small sub-rectangular transverse cells, interstice 1 with irregular reticulation, except in the middle, interstices 2–3 with even rows of small sub-rectangular transverse cells, except basally; pubescence short and decumbent (Fig. 12).

Legs relatively robust (Fig. 12).

Aedeagus with elongate narrow curved median lobe; phallobase relatively broad, with fused lateral sutures (Figs 29–30).

Female. Unknown.

Length: 10.2 mm. Width (humerally): 2.4 mm.

ETYMOLOGY. The name of the new species is derived from the Latin for 'with one suture', alluding to the fused lateral sutures of its phallobase.

DIAGNOSIS. *Plateros unisuturalis* **sp.n.** is somewhat similar to *P. tanatorajensis* Tvardik, Bocák, 2001 in the shape of the male genitalia, separable by the testaceous upperside, as well as by the differently bent median lobe of the aedeagus (Figs 12–13, 29–30).

REMARKS. *Plateros unisuturalis* **sp.n.**, 10.2 mm long, is the largest male *Plateros* specimen known from Sulawesi so far. Only the female of *Plateros toliensis* Tvardik et Bocák, 2001, 10.9 mm long, somewhat exceeds it in length [Tvardik, Bocák, 2001].

Plateros wartabonensis Kazantsev, sp.n. Figs 14, 31–32.

MATERIAL: Holotype, O^{*}, Indonesia, N Sulawesi, Bogani Nani Wartabone N.P., 1100 m, 09.VIII.2018, S. Young leg. (ICM).

DESCRIPTION. Male. Dark brown; pronotum, except at disk, elytra and terminal abdominal segments (ventrite 8 and

tergites 9-10) testaceous (Fig. 14).

Vertex with conspicuous round impression behind antennal prominence. Eyes moderately large, interocular distance ca. 1.1 times shorter than eye diameter. Labrum small, transverse, truncate anteriorly. Palps slender; ultimate palpomeres narrow, elongate, almost parallel-sided, obliquely truncate and flattened at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral four fifths, antennomeres 3–10 ramose, rami of antennomeres 3–7 ca. 2 times shorter than stems, rami of antennomeres 8–10 ca. 3.3–5.3 times shorter than stems; antennomere 3 (stem) ca. 3 times longer than antennomere 2 and ca. 1.3 times shorter than antennomere 4; antennomeres 3–11 with very long semi-erect pubescence (Fig. 14).

Pronotum transverse, ca. 1.6 times as wide as long, moderately bisinuate basally and strongly triangularly produced anteriorly, with almost straight sides, short acute posterior and conspicuous blunt anterior angles. Scutellum subquadrate, parallel-sided, slightly emarginate at apex (Fig. 14).

Elytra long, ca. 3.4 times longer than wide at humeri, slightly widening distally, with four equally developed primary costae; interstices with even rows of small subquadrate to elongate sub-rectangular cells; dense pubescence short and decumbent (Fig. 14).

Legs slender (Fig. 14).

Median lobe of aedeagus elongate and narrow, with conspicuously widened and twisted distal third (Figs 31–32). **Female**. Unknown.

Length: 5.1 mm. Width (humerally): 1.4 mm.

ETYMOLOGY. The name of the new species is derived from 'Bogani Nani Wartabone' Park, in North Sulawesi, where its type specimen was collected.

DIAGNOSIS. *Plateros wartabonensis* **sp.n**. is easily separable from other Sulawesi *Plateros* with ramose male antennae by the combination of testaceous upperside and short antennal rami (Fig. 14). It may be distinguished from *P. flavidus* Kleine, 1933 and *P. toliensis* Tvardik et Bocák, 2001, in neither of which males are known, but ramose antennae expected due to their serrate female antennae, by the strongly produced forward anterior pronotal margin. The characteristic male genital structures also distinguish the new species from all Sulawesi congeners (Figs 31–32).

Plateros xanthellus Kazantsev, sp.n. Figs 33–35.

MATERIAL: Holotype, ♂, [Indonesia], Sulawesi Tengah, Mt. Tambusisi, 500 ft, 1°40' S 121°20' E, 3–13.IV.1980, M.J.D. Brendell, B.M. 1980–280 (NHML).

DESCRIPTION. **Male**. Yellow testaceous; antennomeres 1–2 and abdomen light to dark brown (antennomere 11 missing) (Fig. 33).

Vertex with conspicuous round impression behind antennal prominence. Eyes large, interocular distance ca. 1.3 times shorter than eye diameter. Labrum small, transverse, almost truncate anteriorly. Palps slender; ultimate palpomeres robust, elongate, oval, almost pointed at apex. Antennal sockets separated by minute lamina. Antennae attaining to elytral two thirds, antennomeres 3–10 serrate; antennomere 3 ca. 3.5 times longer than antennomere 2 and ca. 1.1 times shorter than antennomere 4; antennomeres 3–11 with moderately long semi-erect pubescence (Fig. 33).

Pronotum transverse, ca. 1.5 times as wide as long, feebly bisinuate basally and strongly almost triangularly produced anteriorly, with straight sides, short acute long posterior and conspicuous blunt anterior angles. Scutellum transverse, triangular, inconspicuously emarginate at apex (Fig. 33).



Figs 15–22. Aedeagi of *Plateros*, holotypes, males: 15–16 — *P. bantaengensis* sp.n.; 17–18 — *P. curticauda* sp.n.; 19–20 — *P. gorochovi* sp.n.; 21–22 — *P. latimojongensis* sp.n.; 15, 17, 19, 21 — dorsally; 16, 18, 20, 22 — laterally. Scale bars: 0.5 mm. Рис. 15–22. Эдеагусы *Plateros*, голотипы, самцы: 15–16 — *P. bantaengensis* sp.n.; 17–18 — *P. curticauda* sp.n.; 19–20 — *P. gorochovi* sp.n.; 21–22 — *P. latimojongensis* sp.n.; 15, 17, 19, 21 — cверху; 16, 18, 20, 22 — сбоку. Масштабные линейки: 0.5 мм.



Figs 23–32. Aedeagi of *Plateros*, holotypes, males: 23-24 - P. pallidimarginatus **sp.n.**; 25-26 - P. rimbaensis **sp.n.**; 27-28 - P. rubiginosus **sp.n.**; 29-30 - P. unisuturalis **sp.n.**; 31-32 - P. wartabonensis **sp.n.**; 23, 31 - dorsally; 25, 27, 29 - ventrally; 24, 26, 28, 30, 32 - laterally. Scale bars: 0.5 mm.

Рис. 23–32. Эдеагусы *Plateros*, голотипы, самцы: 23–24 — *P. pallidimarginatus* **sp.n.**; 25–26 — *P. rimbaensis* **sp.n.**; 27–28 — *P. rubiginosus* **sp.n.**; 29–30 — *P. unisuturalis* **sp.n.**; 31–32 — *P. wartabonensis* **sp.n.**; 23, 31 — сверху; 25, 27, 29 — снизу; 24, 26, 28, 30, 32 — сбоку. Масштабные линейки: 0.5 мм.

Elytra long, ca. 3.1 times longer than wide at humeri, slightly widening distally, with four equally developed primary costae, except noticeably stronger in proximal third humeral costa; interstices with even rows of small roundish cells; pubescence short and decumbent (Fig. 33).

Legs slender (Fig. 33).

Median lobe of aedeagus relatively short and robust, inconspicuously bent, with elongate rounded dents in distal half (Figs 34–35).

Female. Unknown.

Length: 5.5 mm. Width (humerally): 1.4 mm.

ETYMOLOGY. The name of the new species is derived from the Latin for 'yellowish', alluding to its coloration.

DIAGNOSIS. *Plateros xanthellus* **sp.n.** is distinguishable from the similarly coloured *P. flavidus* Kleine, 1933, known just by the female holotype, by only slightly serrate male antennae (vs. presumably ramose male antennae in *P. flavidus*) and less transverse pronotum (Fig. 33), while its aedeagus, with relatively short and robust median lobe, with elongate rounded dents in distal half (Figs 37–38), allows separating the new species from all other Sulawesi congeners.

Plateros xenos Kazantsev, sp.n. Figs 36–38.

MATERIAL: Holotype, \bigcirc , [Indonesia], Sulawesi Tengah, nr. Morowali, Ranu River Area, 27.I–20.IV.1980, M.J.D. Brendell, B.M. 1980–280 (NHML); paratype, \bigcirc , same label (NHML).

DESCRIPTION. **Male**. Yellow testaceous; antennomeres 1–2 and abdomen light brown; antennomeres 3–11 dark brown (Fig. 36).

Vertex with conspicuous round impression behind antennal prominence. Eyes moderately large, interocular distance ca. 1.5 times shorter than eye diameter. Labrum small, transverse, almost truncate anteriorly. Palps slender; ultimate palpomeres narrow, elongate, narrowing distally, widest in the middle. Antennal sockets separated by minute lamina. Antennae attaining to elytral three fourths, antennomeres 3–10 ramose, rami of antennomeres 5–7 subequal in length to stems; antennomere 3 (stem) ca. 3.3 times longer than antennomere 2 and ca. 1.5 times shorter than antennomere 4; antennomeres 3– 11 with relatively long erect pubescence (Fig. 36).

Pronotum transverse, ca. 1.4 times as wide as long, trapezoidal, moderately bisinuate basally and noticeably semi-

Figs 33–38. General view and aedeagi of *Plateros*, holotypes, males: 33–35 — *P. xanthellus* **sp.n.**; 36–38 — *P. xenos* **sp.n.**; 33, 36 — general view; 34–35, 37–39 — aedeagi; 33–34, 36–37 — dorsally; 35, 38 — laterally. Scale bars: 0.5 mm. Рис. 33–38. Общий вид и эдеагусы *Plateros*, голотипы, самцы: 33–35 — *P. xanthellus* **sp.n.**; 36–38 — *P. xenos* **sp.n.**; 33, 36 — общий вид; 34–35, 37–39 — эдеагусы; 33–34, 36–37 — сверху; 35, 38 — сбоку. Масштабные линейки: 0.5 мм.



circularly produced anteriorly, with short acute posterior and distinct blunt anterior angles. Scutellum subquadrate, slightly narrowing distally, inconspicuously emarginate at apex (Fig. 36).

Elytra long, ca. 3 times longer than wide at humeri, almost parallel-sided, with four equally developed primary costae, except noticeably stronger in proximal third humeral costa; interstices with even rows of small roundish cells; pubescence short and decumbent (Fig. 36).

Legs slender, relatively long (Fig. 36).

Median lobe of aedeagus elongate and narrow, slightly bent in distal fourth, without distinct swellings or dents (Figs 37–38).

Female. Similar to male, but eyes smaller, with interocular distance subequal in length to eye diameter, and antennae serrate, with their pubescence shorter and decumbent.

Length: 4.2-4.8 mm. Width (humerally): 1.1-1.2 mm.

ETYMOLOGY. The name of the new species is derived from the Greek for 'stranger', alluding to the strange shape of its aedeagus.

DIAGNOSIS. *Plateros xenos* **sp.n.** is separable from *P. princeps* (Kleine, 1939), also with long male antennal rami, by the smaller size, testaceous antennomeres 1–2, uniformly yellow head, legs, pronotum and elytra (Fig. 36). It may be distinguished from the similarly coloured *P. flavidus* Kleine, 1933, known only by the female holotype, by the smaller size, relative large female eyes and conspicuously produced forward anterior pronotal margin (Fig. 36), while the male genital structures, with narrow simple slightly bent distally median lobe (Figs 37–38), easily distinguish the new species from all Sulawesi congeners, where males have been described.

REMARKS. It is possible that the tip of the median lobe of aedeagus in the Holotype of *P. xenos* **sp.n.** is missing.

A KEY TO SPECIES OF *PLATEROS* FROM SULAWESI

- 1. Male antennae ramose (Figs 8, 14) 2
- Male antennae at most serrate (e.g. Figs 1–3, 7) 5
- 2. Upperside rusty red; male antennal rami at most 1.3 times shorter than relevant stems (Fig. 8); aedeagus with more or less simple and straight median lobe, only noticeably widened and slightly bent in distal half (Figs 27–28) ...

- Male antennal rami at most 2 times shorter than relevant stems (Fig. 14); pronotum 1.6 times wider than long, anterior margin strongly produced forward, anterior angles conspicuous; aedeagus with conspicuously widened and twisted distal third (Figs 31–32)
 - P. wartabonensis sp.n.
- Smaller (less than 5 mm); antennomeres 1–2 testaceous; head, legs, pronotum and elytra uniformly yellow (Fig. 36); aedeagus with narrow, simple, only slightly bent median lobe (Figs 37–38)...... *P. xenos* sp.n.
- 5. Elytra uniformly orange or yellow testaceous (Figs 1, 12)
 6. Elytra dark brown to black, sometimes with paler margins, at most testaceous with wide dark sutural stripe (Figs
- 2–7, 10) 11
- 6. Female antennomeres 3–10 serrate, males unknown ... 7

- Female antennomeres 3–10 almost parallel-sided, male antennae at most serrate
 8
- Legs yellow; pronotum ca. 1.83 times wider than long, anterior pronotal angles distinct.....
- P. flavidus Kleine, 1933
 8. Legs uniformly yellow testaceous (Fig. 33); aedeagus with relatively short and robust median lobe, with elongate rounded dents in distal half (Figs 34–35)
 P. xanthellus sp.n.

- Femurs and tibiae testaceous with dark distal parts (Fig. 12); aedeagus with elongate narrow curved median lobe; phallobase with fused lateral sutures (Figs 29–30)
 P. unisuturalis sp.n.
- 10. Legs testaceous, except dark distal tarsomeres (Fig. 1); aedeagus with conspicuously widened distal two thirds (Figs 15–16)...... *P. bantaengensis* sp.n.
 Tibiae dark distally; aedeagus with inconspicuously wid-
- ened distal third *P. lalui* Tvardik et Bocák, 2001
- 12. Pronotum narrowed anteriorly, with basal dark spot..... *P. celebensis* Pic, 1921
- Pronotum not narrowed anteriorly, with anterior dark spot (Fig. 7); aedeagus with narrow straight medial lobe, abruptly bent distally, retroussé and dentate at apex (Figs 25–26)
 P. rimbaensis sp.n.
- 13. Elytra uniformly dark brown to black (e.g. Figs 2–3) ... 14
 Elytra dark brown to black with paler margins or apices,
- 14. Eye diameter greater than interocular distance (e.g. 11g. 2)
- Eye diameter shorter than interocular distance (e.g. Fig. 4)
 17
- Eye diameter 1.1 times greater than interocular distance; aedeagus slender, straight, widened distally
 P. kalamensis Tvardik et Bocák, 2001
- Aedeagus with strongly curved and hooked distally median lobe *P. milenae* Tvardik et Bocák, 2001
- Median lobe of aedeagus relatively short and robust, with prominent toothed lobes in distal third (Figs 17–18) *P. curticauda* sp.n.

- 20. Elytra with paler apices (Fig. 10) P. uluwayensis sp.n.

- Elytra dark with paler margins (e.g. Figs 3, 5) 21
- Posterior pronotal angles strongly produced backwards (Fig. 5); aedeagus with curved and hooked distally median lobe, with two spines in proximal half and barbed hook ventrally (Figs 23–24) *P. pallidimarginatus* sp.n.

- Antennomeres 3–10 serrate; pronotal margins lighter than disk; aedeagus with slender, curved in the middle and widened distally median lobe; internal sac membranous
 P. tanatorajensis Tvardik et Bocák, 2001

..... P. rubromamasensis Tvardik et Bocák, 2001

Discussion

There are at least four notable colour patterns in Sulawesi Plateros: with black, or mostly black, elytra (Figs 2–5, 7, 10), with testaceous, or mostly testaceous, elytra (Figs 1, 12, 14, 33, 36), with testaceous elytra and broad dark sutural stripe (Fig. 6) and with reddish upperside (Figs 8-9). While species with mostly black and testaceous upperside have already been signalled from the island [Tvardik, Bocák, 2001], the red upperside and the broad dark sutural stripe on testaceous elytra are reported for the first time. It is noteworthy that it is predominantly black or testaceous elytra that have been recorded in this genus east of Sulawesi, in New Guinea and the surrounding islands (e.g. Bocáková, 1997; Kazantsev, 2011; 2015), whereas patterns with testaceous elytra with broad dark sutural stripe and with reddish upperside are widespread in the mimicry complexes west of the island, in many parts of the Oriental and even East Palaearctic regions (e.g. Kazantsev, 2005; 2011; Kazantsev, Young, 2011; Kazantsev, Telnov, 2019). It is also worth mentioning that Sulawesi Plateros species with testaceous elytra and broad dark sutural stripe or with reddish upperside do not seem to be part of mimetic assemblages of Mullerian type here, as no other Lycidae of similar coloration have been discovered on the island.

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