

## New genera of Alleculinae (Coleoptera: Tenebrionidae) from Oriental region. Part I - *Borbochara* gen. n.

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**Taxonomy, new genus, new species, new combinations, description, lectotype designation, key, Coleoptera, Tenebrionidae, Alleculinae, *Borbochara*, Oriental region**

**Abstract.** Genus *Borbochara* gen. n. with the species *Borbochara bicolor* sp. n. as a type species, *Borbochara brunnea* sp. nov. and *Borbochara kabourecki* sp. n.; *Borbochara nana* (Borchmann, 1929) comb. n. as transformed species from the genus *Allecula* Fabricius, 1801 and *Borbochara postfemoralis* (Borchmann, 1932) comb. n. as transformed species from the genus *Ommatochara* Borchmann, 1932 are described, illustrated and keyed. Lectotype is designated for *B. postfemoralis* (Borchmann, 1932). Redescriptions of the species *Borbochara nana* and *Borbochara postfemoralis* are added. Species of the new genus *Borbochara* gen. n. differ from the species of the similar genera *Ommatochara*, *Allecula* and *Borboesthes* Fairmaire, 1897 mainly by backwards thornly extended sharp-angled posterior angles of pronotum and by very narrow space between eyes, which is narrower or almost as long as length of antennomere 2.

### INTRODUCTION

Borchmann (1932) described the genus *Ommatochara* Borchmann, 1932, with 7 species from the Philippines and 1 from Borneo. Later, Pic (1944) added 1 species of this genus from south India. Species of this genus have longitudinally oval body like species of the genus *Borboesthes* Fairmaire, 1897 and posterior angles of pronotum rectangular or slightly obtuse-angled and with large and transverse eyes with space between eyes narrow, but distinctly broader than length of antennomere 2. Species of new genus *Borbochara* gen. n. differ from the species of the genera *Allecula* Fabricius, 1801, *Borboesthes* and *Ommatochara* mainly by backwards thornly extended sharp-angled posterior angles of pronotum and by very narrow space between eyes, which is narrower or almost as long as length of antennomere 2. The new genus *Borbochara* gen. n. with the species *Borbochara bicolor* sp. n. as type species and *Borbochara brunnea* sp. n. and *Borbochara kabourecki* sp. nov. are described, illustrated and keyed with the species *Borbochara nana* (Borchmann, 1929) comb. n., which is transferred from the genus *Allecula* and *Borbochara postfemoralis* (Borchmann, 1932) comb. n., which is transferred from the genus *Ommatochara* and distinctly belonging to the presently described genus *Borbochara*. Lectotype is designated for *B. postfemoralis* (Borchmann, 1929). Redescriptions of the species *Borbochara nana* and *Borbochara postfemoralis* are added.

## MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the 'ocular index' dorsally (Campbell & Marshall, 1964) and 'pronotal index' (Campbell, 1965), are used in this paper as well. The ocular index equals (100x minimum dorsal distance between eyes) / (maximum dorsal width across eyes). The pronotal index is calculated as (100x length of pronotum along midline) / (width across basal angles of pronotum).

The following codens are used:

MTDG collection of Museum für Tierkunde, Dresden, Germany;

VNPC collection of Vladimír Novák, Praha, Czech Republic;

ZMUH collection of Zoologisches Institut und Museums der Universität Hamburg, Germany.

Moreover, a double slash (//) separates data on different labels and a slash (/) data in different rows.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with soft imaging system Analysis.

## RESULTS

### **Type material studied:**

*Ommatochara bakeri* Borchmann, 1932: 352.

1 syntype: white label 'Island / Sibuyän / Baker' printed in black // red label 'Type' printed in black // white label 'Ommatochara / Bakeri n. sp.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, (ZMUH).

*Ommatochara minutissima* Borchmann, 1932: 353.

1 syntype: white label 'Island of / Basilan / Baker' printed in black // red label 'Type' printed in black // white label 'Ommatochara / minutissima n.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, (ZMUH).

*Ommatochara palawana* Borchmann, 1932: 350.

1 syntype: white label 'P. Princessa / Palawan / Baker' printed in black // red label 'Typus' printed in black // white label '1931' printed in black / '17' black handwritten // white label 'Ommatochara / palawana n.' black handwritten, (MTDG).

*Ommatochara ruficollis* Borchmann, 1932: 354.

1 syntype: white label 'Island of / Basilan / Baker' printed in black // red label 'Type' printed in black // white label 'Ommatochara / ruficollis n. sp.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, (ZMUH); 1 paratype: white label 'Iligan / Mindanao / Baker' printed in black // white label '1931' printed in black / '17' black handwritten // red label 'Paratypus' printed in black // white label 'Ommatochara / ruficollis Bm' black handwritten, (MTDG).

*Ommatochara sericea* Bochmann, 1932: 351.

1 syntype: white label 'Sandakan / Borneo / Baker' printed in black // white label '15898' black handwritten // red label 'Type' printed in black // white label 'Cistelopsis / sericea n.' black handwritten // white label 'Ommatochara / sericea n. sp.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, (ZMUH); 1 paratype: white label 'Sandakan / Borneo / Baker' printed in black // white label '1931' printed in black // '17' black handwritten // red label 'Paratypus' printed in black // white label 'Ommatoch. / sericea n. sp.' black handwritten, (MTDG).

*Ommatochara suturalis* Borchmann, 1932: 351.

1 syntype: white label 'Banchao / Luzon' black handwritten // white label '1924' printed in black // red label 'Type' printed in black // white label 'Ommatochara / suturalis n. sp.' black handwritten, (MTDG); 1 syntype: yellow label 'Luzon / Mt. Banchao' printed in black // yellow label '1924' printed in black // red label 'Type' printed in black // white label 'Ommatochara / suturalis n. sp' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, (ZMUH).

*Ommatochara tibialis* Borchmann, 1932: 349.

1 syntype: white label 'Island / Sibuyan / Baker' printed in black // red label 'Type' printed in black // white label 'Ommatochara / tibialis n. sp.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black, [ZMUH].

### ***Borbochara* gen. n.**

**Type species.** *Borbochara bicolor* sp. n.

**Description.** General shape (Fig. 1) narrow, *Borboresthes*-like. Body small, elongately oval. Head as in Fig. 2, small, short, narrow, widest across eyes. Eyes large, dark, transverse, deeply excised. Space between eyes very narrow, almost as long as or narrower than length of antennomere 2. Antennae narrow, long, distinctly exceeding half of body length. Antennomeres narrow, unicolorous pale brown with pale brown setation. Antennomere 2 shortest, antennomeres 3-11 with shallow punctures and microgranulation, antennomeres 3-10 slightly widened at apex, antennomeres 4-11 longer than antennomere 3. Maxillary palpus unicolorous pale brown with pale brown setation and microgranulation. Ultimate palpomere of maxillary palpus broadly triangular, penultimate palpomere shortest, second palpomere longest, palpomeres with microgranulation. Pronotum (Fig. 2) semicircular, transverse, widest in base, longest in the middle. Anterior angles inconspicuous, base bisinuate, slightly excised against scutellum. Posterior angles sharply dilated backwards to thorn, lateral margins slightly excised near posterior angles or almost parallel, then rounded anteriorly. Surface densely punctate, punctures large, interspaces narrow. Elytra elongately oval, with pale brown setation, surface punctate, punctures in elytral striae large and deep, touching one another or interspace between punctures very narrow. Elytral intervals with small punctures and microgranulation, slightly shiny. Elytral epipleura well developed,

evenly narrowing in posterior half, in anterior half before abdominal sternite 5 parallel, then narrowing to rounded apex. Ventral side of body punctuate, abdomen five-segmented with microgranulation and shallow punctures. Legs unicolorous pale brown with pale brown setation. Femora distinctly thicker than tibia. Tibia and tarsi narrow, anterior tibia straight or curved and distinctly excised (Fig. 4) in inner part of posterior half. Outer part of anterior tibia with two distinct sharp margins. Middle and posterior tibia straight or slightly curved. Tarsomeres narrow, penultimate tarsomeres of each tarsus distinctly broadened and lobed. Posterior tarsomere 1 slightly curved in posterior half. Aedeagus as in Figs 6 and 7, shiny, large, basal piece broad and large, strongly rounded laterally, apical piece small, narrow and short.

Female. Body more oval. Space between eyes finely broader. Antenna shorter. Tibia without excision, not curved.

**Differential diagnoses.** *Borbochara* gen. n. is similar to genera *Allecula* Fabricius, 1801, *Borboesthes* Fairmaire, 1897 and *Ommatochara* Borchmann, 1932 from which differs mainly by very narrow space between eyes (almost as long as or narrower than length of antennomere 2) and strongly sharp-angled backwards extended posterior angles of pronotum. Genera *Allecula*, *Borboesthes* and *Ommatochara* with space between eyes usually distinctly broader than length of antennomere 2 and posterior angles of pronotum normal, not extended backwards.

**Name derivation.** The compound name formed of the first part of name *Borboesthes* (*Borbo-*) and the ending *-chara* marking affinity to the genus *Ommatochara*. Gender: feminine.

**Distribution.** Indonesia, Malaysia, Philippines.

#### KEY TO THE SPECIES

- 1 (2) Posterior angles of pronotum strongly sharp-angled, thornly extended backwards. Space between eyes very narrow, almost as long as length of antennomere 2. *Borbochara* gen. n. .... 3
- 2 (1) Posterior angles not sharp, without extension backwards. Space between eyes distinctly broader than length of antennomere 2 ..... *Allecula* Fabricius, 1801; *Borboesthes* Fairmaire, 1897; *Ommatochara* Borchmann, 1932
- 3 (4) Elytra unicolorous brown. Anterior tibia of males with fine signs of sexual dimorphism as in Fig. 11. Habitus as in Fig. 8, head and pronotum as in Figs 9. Length 5.49 mm, from Malaysia. .. *Borbochara brunnea* sp. n.
- 4 (3) Elytra bicolorous. .... 5
- 5 (6) Basic colouration of elytra reddish-brown, pronotum broadest in half of lateral margin. Habitus as in Fig. 24, head and pronotum as in Fig. 25. Length 4.33, from Philippines. .... *Borbochara postfemoralis* (Borchmann, 1932) comb. n.
- 6 (5) Basic colouration of elytra dark blackish-brown, pronotum broadest in basal angles ..... 7
- 7 (8) Anterior part of elytral suture narrowly dark blackish-brown. Elytra with large reddish-brown drop-shaped spot in middle. Anterior tibia of males with strong signs of sexual dimorphism as in Fig. 4. Habitus as in Fig. 1, head and pronotum as in Figs 2. Length 5.29 mm, from Malaysia ..... *Borbochara bicolor* sp. n.
- 8 (7) Elytral suture completely reddish-brown ..... 9
- 9 (10) Males with antennomere 3 distinctly shorter than antennomere 4, space between eyes as long as length of antennomere 2. Habitus as in Fig. 20, head and pronotum as in Figs 21. Length 4.30 mm, from Indonesia ... *Borbochara nana* (Borchmann, 1929) comb. n.

10 (9) Males with antennomere 3 as long as length of antennomere 4, space between eyes slightly broader than length of antennomere 2. Habitus as in Fig. 15, head and pronotum as in Figs 16. Length 4.94 mm, from Indonesia ..... *Borbochara kaboureki* sp. n.

***Borbochara bicolor* sp. n.**  
(Figs 1-7)

**Type locality.** Malaysia West, Johor.

**Type material.** Holotype (1 ♂) labelled: 'MALAYSIA W, Johor / 15 km NW of Kota Tinggi / MUNTAHAK mt., 200 m leg. / 7.-13.iii.2002, P. Čechovský', (VNPC); Paratypes: (1 ♂, 1 ♀): the same data as holotype, (VNPC); (1 ♂): 'MALAYSIA - W, Perak, / 40 km SE of IPOH, 900 m, / Banjaran Titi Wangsa, / RINGLET, 25.iii.-3.iv. / 2002, P. Čechovský leg.', (VNPC); (1 ♀): 'MALAYSIA West, PAHANG / Cameron Highlands, TANAH / RATA, 3.ii.-19.ii.2005 / P. Čechovský lgt. 1200-1500 m', (VNPC). The types are provided with a printed red label: '*Borbochara bicolor* sp. nov. HOLOTYPUS [or PARATYPUS] V. Novák det. 2008'.

**Description of holotype.** Habitus of male holotype as in Fig. 1. Body length 5.29 mm, width 1.82 mm.

Head (Fig. 2) small, brown, with denser pale brown setation, basal part behind eyes with a few dark setae at sides. Eyes large, dark, transverse, emarginate, with very narrow interspace between eyes. Head widest across eyes 0.91 mm, approximately 0.54 times as wide as pronotal base. Ocular index equal to 4.62. Length of head (visible part) 0.67 mm. Clypeus pale brown with long pale brown setation. Head with relatively dense, middle-sized, shallow punctures, interspaces between punctures narrow with microgranulation, shiny. Anterior part of clypeus without punctuation, with microgranulation.

Antenna. Relatively long (3.16 mm, i.e. reaching 0.60 of body length), all antennomeres unicolorous pale brown, concolorous with legs, with relatively long pale brown setation. Antennomeres with large, shallow punctures and microgranulation, slightly shiny. Antennomere 2 shortest, antennomeres 3-10 slightly widened at apex, antennomeres 4-11 distinctly longer than antennomere 3. Antennomeres 3-11 relatively narrow and long. Ratios of relative lengths of antennomeres 1-11 equal to 0.76:0.41:1.00:1.17:1.13:1.15:1.22:1.25:1.26:1.32:1.38. Length / maximum width ratios of antennomeres 1-11 equal to 1.81:1.24:2.62:3.07:2.97:2.90:3.10:2.72:3.10:3.84:4.76.

Maxillary palpus unicolorous pale brown, concolorous with clypeus, with short and sparse pale brown setation and microgranulation, slightly shiny. Palpomere 2 and penultimate palpomere with a few long, pale brown setae at apex. Second palpomere longest, distinctly broadest at apex, penultimate palpomere shortest, ultimate palpomere broadly triangular, both distinctly broadest at apex. Ratios of relative lengths of palpomeres 2-4 equal to 1.84:1.00:2.00. Length / maximum width ratios of palpomeres 2-4 equal to 2.73:1.27:0.86.

Pronotum (Fig. 2) unicolorous reddish-brown, semicircular, with pale brown setation, 1.87 times as wide as head with eyes together, longest in the middle 0.97 mm, widest at base 1.70 mm. Pronotal index equal to 57.12. Border almost complete, only in the middle of anterior and posterior part indistinct, posterior margin bisinuate and slightly excised against

scutellum. Posterior angles sharply, thornly dilated backwards, lateral margins slightly excised near posterior angles and rounded anteriorly. Anterior angles not conspicuous. Surface densely and shallowly punctuate, punctures large, inside with microgranulation, interspaces very narrow with microgranulation, slightly shiny.

Elytra longitudinally oval, bicolorous, dark blackish brown with reddish-brown middle drop-shape spot with long pale brown setation. Reddish-brown spot reaching up elytral intervals from 1 to 3 in posterior half, in anterior half continually broadening to drop-shape spot from elytral intervals 1 to 5. Apex of elytra narrowly dark blackish-brown. Elytra 3.65 mm long and 1.82 mm wide, very slightly broader than pronotum, widest near base. Length / maximum width ratio equal to 2.01. Surface punctuate, punctures in elytral striae large and deep, touching one another or interspace between punctures very narrow. Elytral intervals with small punctures and microgranulation, slightly shiny. Elytral epipleura well developed, unicolorous, paler than elytra, concolorous with ventral part of body, evenly narrowing in posterior half, in anterior half before abdominal sternite 5 parallel, then narrowing to rounded apex.

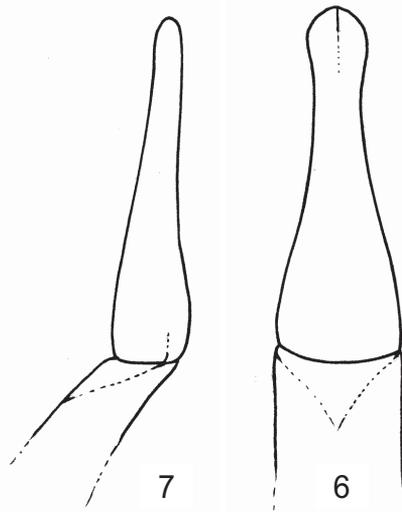
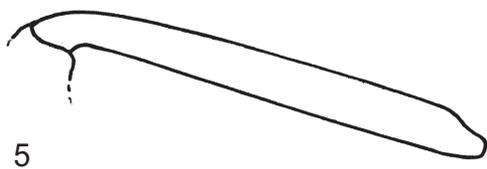
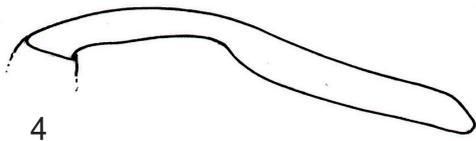
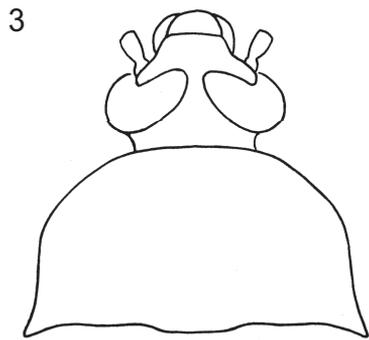
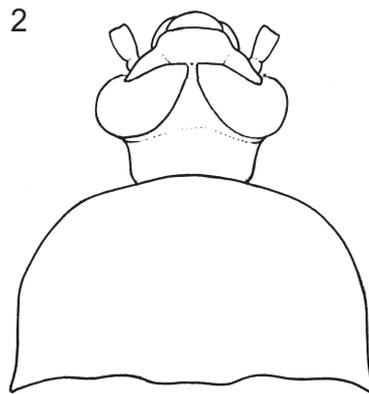
Scutellum small, reddish-brown pentagonal, concolorous with elytron spot with small punctures and microgranulation.

Legs (Fig. 4) unicolorous pale brown, with dense pale brown setation. Femora thicker than tibia. Posterior femora distinctly thicker than anterior and middle femora at middle. Anterior tibia curved and distinctly excised in inner part of posterior half, then in inner part of anterior half thicker with distinct margin. Outer part of anterior tibia with two distinct sharp margins. Middle tibia slightly curved, posterior tibia curved and excised at posterior half, triangular in cross-section, with distinct two margins at inner part and one margin in outer part. Tarsomeres narrow, anterior tarsomeres 3 and 4, middle tarsomere 4 and posterior tarsomere 3 slightly broadened and lobed. Posterior tarsomere 1 slightly curved in posterior half. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00:0.64:0.95:1.29:1.72 (protarsus), 1.00:0.46:0.29:0.66:0.95 (mesotarsus), and 1.00:0.25:0.28:0.41 (metatarsus). Both anterior tarsal claws with 12 visible teeth.

Ventral side of body brown, paler than dorsal side. Abdomen with relatively sparse short pale brown setation, slightly shiny, with microgranulation and sparse punctuation, punctures small.

Aedeagus (Figs 6-7). Pale brown, distinctly shiny. Basal piece strongly rounded, 3.63 times as long as apical piece. Basal half of basal piece more than twice as wide as its apical width. Apical piece narrowing to rounded apex in dorsal view, apex slightly drop-shaped in lateral view.

**Female** (Figs 3, 5). Antennae shorter than antennae of male, reaching only 0.53 of body length, antennomeres 4-11 only inconspicuously longer than antennomere 3. Space between eyes very narrow, but distinctly broader than space between eyes of male, ocular index approximately 10.26. Head and pronotum as in Fig. 3. Tibia narrow, straight, without excision. Both anterior tarsal claws with 8 visible teeth. Ratios of relative lengths of antennomeres 1-11 equal to 0.70:0.41:1.00:1.09:0.97:1.00:1.04:1.13:1.12:1.04:1.16. Length / maximum width ratios of antennomeres 1-11 equal to 1.68:1.33:2.45:2.81:2.26:2.72:3.09:3.36:2.97:3.09:3.22. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00:0.74:0.72:1.12:1.72



Figs 1-7. *Borbochara bicolor* sp. n.: 1- Habitus of male holotype; 2- Head and pronotum of male holotype; 3- Head and pronotum of female; 4- Anterior tibia of male holotype; 5- Anterior tibia of female; 6- Aedeagus, dorsal view; 7- Aedeagus, lateral view.

(protarsus), 1.00:0.45:0.44:0.57:0.91 (mesotarsus), and 1.00:0.21:0.25:0.44 (metatarsus).

**Variability.** The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males (n = 3). Length 4.89 mm (4.52-5.29 mm); head length 0.62 mm (0.57-0.67 mm); head width 0.84 mm (0.80-0.91 mm). Ocular index 4.94 (4.24-5.95). Pronotal length (along midline) 0.90 mm (0.81-0.97 mm); pronotal width at base 1.55 mm (1.43-1.70 mm). Pronotal index 57.78 (56.54-59.69). Elytral length 3.37 mm (3.14-3.65 mm); elytral width 1.70 mm (1.57-1.82 mm).

Females (n = 2). Length 4.92 mm (4.72-5.12 mm); head length 0.65 mm (0.61-0.68 mm); head width 0.82 mm (0.80-0.84 mm). Ocular index 11.89 (11.55-12.22). Pronotal length (along midline) 0.84 mm (0.80-0.88 mm); pronotal width at base 1.59 mm (1.51-1.67 mm). Pronotal index 53.03 (52.92-53.24). Elytral length 3.44 mm (3.31-3.56 mm); elytral width 1.79 mm (1.76-1.81 mm).

**Differential diagnosis.** *Borbochara bicolor* sp. n. differs from the similar *B. postfemoralis* (Borchmann, 1932) comb. n. mainly by basic colouration of elytra dark blackish-brown and by pronotum broadest in basal angles, while *B. postfemoralis* with basic colouration of elytra reddish-brown and pronotum broadest near half of lateral margin. *B. bicolor* differs from similar species *B. brunnea* sp. n. mainly by bicolorous elytra, while *B. brunnea* has elytra unicolorous brown. *B. bicolor* differs from similar species *B. kaboureki* sp. n. and *B. nana* (Borchmann, 1929) comb. n. by anterior part of elytral suture dark blackish-brown, while *B. kaboureki* and *B. nana* have elytral suture completely reddish-brown. For further details see the key above.

**Name derivation.** Named after bicolorous upper part of body.

**Distribution.** Malaysia.

***Borbochara brunnea* sp. n.**

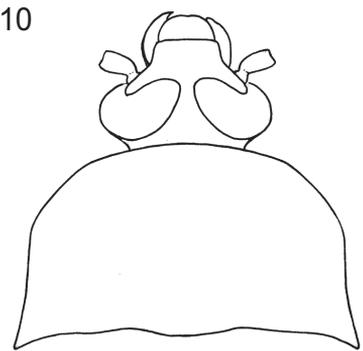
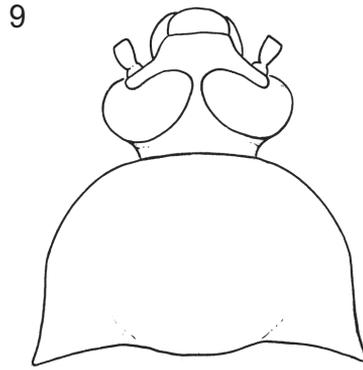
(Figs 8-14)

**Type locality.** Malaysia West, Pahang, Cameron Highlands.

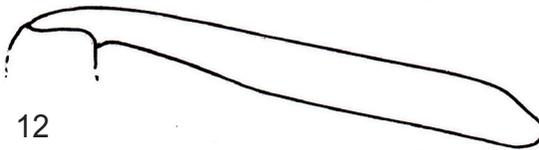
**Type material.** Holotype (1 ♂) labelled: 'MALAYSIA West, PAHANG / Cameron Highlands, / TANAH RATA, 3.-19.ii.2005 / P. Čechovský lgt. 1200-1500 m', (VNPC); Paratypes: (1 ♂): the same data as holotype, (VNPC); (1 ♂): 'MALAYSIA-W, Perak, / 25 km NE of IPOH, 1200 m, / Banjaran Titi Wangsa mts., / KORBU mt., 27.i.-2.ii. / 1999, P. Čechovský leg.', (VNPC); (1 ♀): 'MALAYSIA-W, Perak, / 25 km NE of IPOH, 2100 m, / Banjaran Titi Wangsa mts., / KORBU mt., 4.-13.iii. / 1998, P. Čechovský leg.', (VNPC); (1 ♀): 'MALAYSIA W., Pahang / 30 km E IPOH, 1500 m / Cameron Highlands / TANAH RATA, 7.-9.i.1999 / P. Čechovský leg.', (VNPC). The types are provided with a printed red label: '*Borbochara brunnea* sp. nov. HOLOTYPE [or PARATYPE] V. Novák det. 2008'.



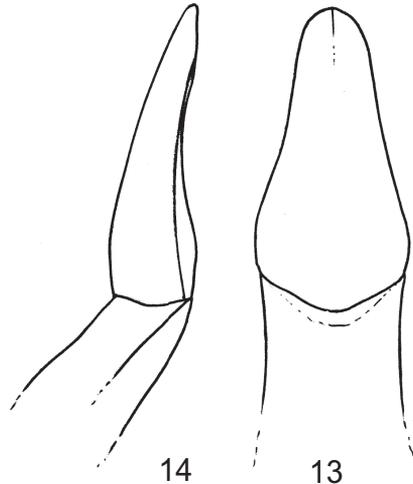
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Figs 8-14. *Borbochara brunnea* sp. n.: 8- Habitus of male holotype; 9- Head and pronotum of male holotype; 10- Head and pronotum of female; 11- Anterior tibia of male holotype; 12- Anterior tibia of female; 13- Aedeagus, dorsal view; 14- Aedeagus, lateral view.

**Description.** Habitus of male holotype as in Fig. 8. Body brown, length 5.49 mm, width 1.89 mm.

Head (Fig. 9) small, with sparse pale brown setation, posterior part brown, anterior part with clypeus paler than posterior part. Sides behind eyes with a few dark setae. Eyes large, dark, transverse, emarginate, interspace between eyes distinct but very narrow. Head widest across eyes 0.92 mm, approximately 0.55 times as wide as pronotal base. Length of head (visible part) 0.82 mm. Ocular index equal to 5.97. Head with dense, large and shallow punctures, interspaces between punctures very narrow, in posterior part slightly shiny; in anterior part interspaces with distinct microgranulation, punctuation of clypeus indistinct.

Antenna. Relatively long (3.28 mm, i.e. reaching 0.60 of body length), unicolorous pale brown, concolorous with anterior part of head and anterior legs, with relatively long pale brown setation. Antennomeres 1 and 2 slightly shiny, antennomeres 3-11 relatively narrow, rugose with sparse large punctures. Antennomere 2 shortest, antennomeres 3-10 conspicuously widened at apex; antennomeres 4-11 distinctly longer than antennomere 3. Ratios of relative lengths of antennomeres 1-11 equal to 0.81:0.34:1.00:1.08:1.16:1.15:1.20:1.30:1.23:1.25:1.28. Length / maximum width ratios of antennomeres 1-11 equal to 1.49:0.69:2.58:2.69:3.32:2.88:3.00:2.97:3.06:3.23:3.09.

Maxillary palpus pale brown, concolorous with apical part of head and antennae, with short pale brown setation and with microgranulation, slightly shiny. Second and penultimate palpomere with a few long setae at apex. Second palpomere longest, distinctly broadest at apex, penultimate palpomere shortest, ultimate palpomere broadly triangular, both distinctly broadest at apex. Ratios of relative lengths of palpomeres 2-4 equal to 1.62:1.00:1.74. Length / maximum width ratios of palpomeres 2-4 equal to 2.49:1.25:0.79.

Pronotum (Fig. 9) unicolorous brown, concolorous with elytra, slightly shiny with relatively long pale brown setation; 1.82 times as wide as head with eyes together, longest in the middle 0.93 mm, widest at base 1.67 mm. Pronotal index equal to 55.89. Border almost complete, only in the middle of anterior and posterior part indistinct; posterior margin bisinuate against scutellum without excision. Posterior angles sharply and thornily dilated backwards, lateral margins excised near posterior angles and rounded anteriorly. Anterior angles not conspicuous. Surface densely punctate, punctures large and very shallow, interspaces very narrow with microsculpture.

Elytra unicolorous brown, concolorous with pronotum, with pale brown, dense setation, 3.74 mm long and 1.89 mm wide, widest near elytral half. Length / maximum width ratio equal to 1.98. Surface punctate, punctures in elytral striae large, separated by less than one diameter. Elytral intervals with sparse, small punctures and microgranulation, slightly shiny. Elytral epipleura well developed, lighter than elytra, pale brown, evenly narrowing in basal half, in apical half before abdominal sternite 5 parallel, then narrowing to rounded apex.

Scutellum brown, concolorous with elytra, with dark margins and few long, pale brown setae, surface with microgranulation.

Legs (Fig. 11) unicolorous pale brown, with dense and short pale brown setation. Femora thicker than tibia. Posterior femora at middle distinctly thicker than anterior and middle femora. Anterior tibia curved and distinctly excised in inner part of posterior half, then in inner part of anterior half broadened anteriorly with distinct margin. Outer part of anterior tibia with two distinct sharp margins. Middle tibia slightly curved, posterior tibia curved and excised at posterior half, with distinct two margins at inner part. Tarsomeres

narrow, penultimate tarsomeres of each tarsus broadened and lobed. Posterior tarsomere 1 slightly curved in posterior half. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00:0.61:0.79:1.07:1.61 (protarsus), 1.00:0.45:0.40:0.68:1.02 (mesotarsus), and 1.00:0.24:0.25:0.44 (metatarsus). Both anterior tarsal claws with 15 visible teeth.

Ventral side of body brown, slightly darker than dorsal side, with pale brown short setation. Abdomen five-segmented with pale brown setation and microgranulation, more matt.

Aedeagus (Figs 13-14) brown, slightly shiny. Basal piece 4.77 times as long as apical piece, strongly and regularly rounded. Basal half of basal piece more than twice as wide as its apex in dorsal view. Apical piece short, longitudinally triangular, narrowing to rounded apex in dorsal view.

**Female.** Antennae shorter than antennae of male, reaching only 0.49 of body length, antennomeres 4-11 shorter than antennomere 3. Space between eyes very narrow, but distinctly broader than space between eyes of male, ocular index approximately 11.84. Head and pronotum as in Fig. 10. Tibia narrow, straight, without excision. Both anterior tarsal claws with 10 visible teeth. Ratios of relative lengths of antennomeres 1-11 equal to 0.64:0.35:1.00:0.94:0.92:0.92:0.94:1.00:0.88:0.90:1.12. Length / maximum width ratios of antennomeres 1-11 equal to 1.66:1.14:2.85:2.38:2.76:2.63:2.68:2.85:2.38:2.55:3.05. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00:0.87:0.44:0.84:1.69 (protarsus), 1.00:0.39:0.39:0.56:1.00 (mesotarsus), and 1.00:0.16:0.32:0.43 (metatarsus).

**Variability.** The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males (n = 3). Length 5.36 mm (5.19-5.49 mm); head length 0.80 mm (0.71-0.86 mm); head width 0.90 mm (0.87-0.92 mm). Ocular index 6.32 (5.97-6.98). Pronotal length (along midline) 0.89 mm (0.87-0.93 mm); pronotal width at base 1.62 mm (1.56-1.67 mm). Pronotal index 55.53 (54.53-56.16). Elytral length 3.67 mm (3.46-3.80 mm); elytral width 1.86 mm (1.77-1.92 mm).

Females (n = 2). Length 6.04 mm (5.82-6.26 mm); head length 0.83 mm (0.78-0.87 mm); head width 0.93 mm. Ocular index 11.85 (10.77-12.93). Pronotal length (along midline) 1.02 mm (0.99-1.04 mm); pronotal width at base 1.81 mm (1.80-1.82 mm). Pronotal index 56.21 (54.40-58.02). Elytral length 4.20 mm (4.05-4.35 mm); elytral width 2.16 mm (1.95-2.36 mm).

**Differential diagnosis.** *Borbochara brunnea* sp. n. differs from the similar *B. bicolor* sp. n., *B. kaboureki* sp. n., *B. postfemoralis* (Borchmann, 1932) comb. n. and *B. nana* (Borchmann, 1929) comb. n. mainly by unicolorous brown elytra, while *B. bicolor*, *B. kaboureki*, *B. nana* and *B. postfemoralis* have elytra bicolorous. For further details see the key above.

**Name derivation.** Named after unicolorous brown (*brunneus-brunnea*) upper part of body.

**Distribution.** Malaysia.

*Borbochara kaboureki* sp. n.

(Figs 15-19)

**Type locality.** Indonesia, North Sumatra, Brastagi, Mt. Sibayak.

**Type material.** Holotype (1 ♂) labelled: 'N. SUMATRA - Brastagi / Mt. Sibayak, 1500-2000 m / 20.-26.iv.1998 / lgt. Vít Kabourek', (VNPC); Paratype (1 ♀) labelled: 'NORTH SUMATRA / Brastagi env. / 1.iv.1998 / lgt. Vít Kabourek', (VNPC).

**Description of holotype.** Habitus of male holotype as in Fig. 15. Body length 4.94 mm, width 1.77 mm.

Head (Fig. 16) small, brown, with pale brown setation, basal part behind eyes with a few dark setae at sides. Eyes large, dark, transverse, deeply emarginate, with narrow interspace between eyes. Head widest across eyes 0.83 mm, approximately 0.56 times as wide as pronotal base. Ocular index equal to 17.45. Length of head (visible part) 0.57 mm. Clypeus with long, sparse pale brown setation, small, sparse and shallow punctures and microgranulation. Basal part of head with dense, large and coarse punctures, interspaces between punctures narrow with microgranulation, slightly shiny.

Antenna. Relatively long (2.73 mm, i.e. reaching 0.55 of body length), all antennomeres unicolorous pale brown, concolorous with legs and maxillary palpus, with long pale brown setation. Antennomeres with large punctures and microgranulation, slightly shiny. Antennomere 2 shortest, antennomere 3 as long as length of antennomere 4, antennomeres 3-10 slightly widened at apex. Ratios of relative lengths of antennomeres 1-11 equal to 0.78:0.42:1.00:1.00:1.03:1.04:1.15:1.10:1.04:1.10:1.17. Length / maximum width ratios of antennomeres 1-11 equal to 1.75:1.31:3.13:2.25:2.31:2.42:2.68:2.64:2.27:3.29:3.23.

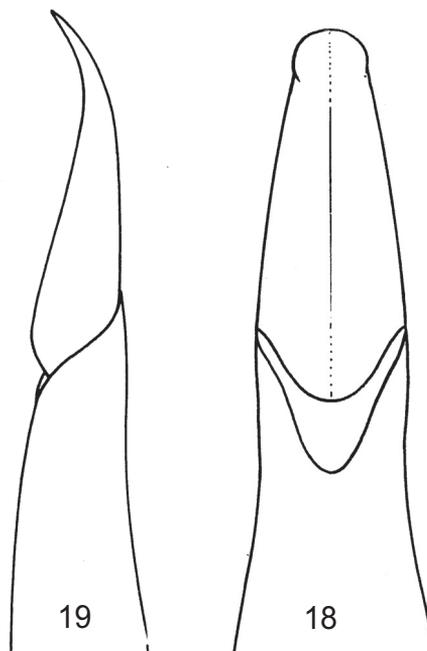
Maxillary palpus unicolorous pale brown with pale brown setation and microgranulation, slightly shiny. Second palpomere longest, penultimate palpomere shortest, both distinctly broadest at apex, ultimate palpomere broadly triangular. Ratios of relative lengths of palpomeres 2-4 equal to 1.94:1.00:2.85. Length / maximum width ratios of palpomeres 2-4 equal to 3.03:1.30:0.94.

Pronotum (Fig. 16) unicolorous reddish-brown, semicircular, with pale brown setation, 1.80 times as wide as head with eyes together, longest in the middle 0.88 mm, widest at base 1.49 mm. Pronotal index equal to 58.97. Borders almost complete, posterior margin bisinuate and slightly excised against scutellum. Posterior angles sharply, thornly dilated backwards, lateral margins straight in posterior half. Anterior angles not conspicuous, anterior half regularly rounded anteriorly. Surface densely and coarsely punctuate, punctures large with microgranulation, interspaces very narrow with microgranulation, slightly shiny.

Elytra longitudinally oval, bicolorous, dark blackish brown with reddish-brown middle spot with long pale brown setation. Reddish-brown spot broadest near half, reaching up elytral intervals from 1 to 4. Elytral suture reddish-brown. Elytra 3.49 mm long and 1.77 mm wide, widest near elytral half. Length / maximum width ratio equal to 1.97. Surface punctuate, punctures in elytral striae large and deep, touching one another or interspace between punctures very narrow. Elytral intervals with small punctures and microgranulation, slightly shiny. Elytral epipleura well developed, broad, unicolorous, paler than elytra,

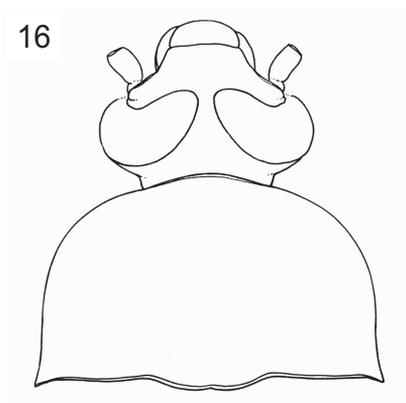


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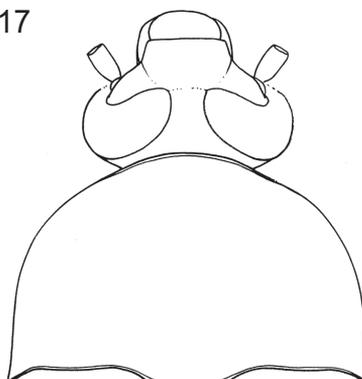
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17



Figs 15-19. *Borbochara kabourecki* sp. n.: 15- Habitus of male holotype; 16- Head and pronotum of male holotype; 17- Head and pronotum of female; 18- Aedeagus, dorsal view; 19- Aedeagus, lateral view.

concolorous with ventral part of body, evenly narrowing in posterior half, in anterior half before abdominal sternite 5 parallel, then narrowing to rounded apex.

Scutellum reddish-brown pentagon, concolorous with elytron spot with pale brown long setation and microgranulation.

Legs unicolorous pale brown, with pale brown setation. Femora thicker than tibia. Anterior tibia straight, outer part of anterior tibia with two distinct sharp margins, upper margin with row of short teeth. Middle and posterior tibia straight with setation denser

than setation of anterior tibia. Tarsomeres narrow, penultimate tarsomeres of each tarsus slightly broadened and lobed. Posterior tarsomere 1 slightly curved in posterior half. Ratios of relative lengths of tarsomeres 1-5 and 1-4 equal to 1.00:0.31:0.71:0.69:1.47 (protarsus), 1.00:0.37:0.32:0.43:0.92 (mesotarsus), and 1.00:0.21:0.24:0.47 (metatarsus). Both anterior tarsal claws with 8 visible teeth.

Ventral side of body brown, paler than dorsal side. Abdomen with relatively sparse short pale brown setation, slightly shiny, with microgranulation and sparse punctuation, punctures middle-sized. Ultimate abdominal sternite with shallow depression in middle of anterior half.

Aedeagus (Figs 18-19). Pale brown, distinctly shiny. Basal piece strongly regularly rounded, 3.29 times as long as apical piece. Basal half of basal piece more than twice as wide as its apical width dorsally. Apical piece regularly narrowing in dorsal view, apex regularly rounded in lateral view.

**Female** (Fig. 17). Body longitudinally oval similar to body of male, length 4.54 mm. Length of head (visible part) 0.63 mm, head widest across eyes, width 0.79 mm. Ocular index equal to 15.55. Head and pronotum as in Fig. 17. Length of pronotum 0.81 mm, pronotum widest in base, 1.35 mm. Pronotal index equal to 59.90. Ratios of relative lengths of antennomeres 1-6 equal to 0.69:0.42:1.00:1.26:1.22:1.25.

**Differential diagnosis.** *Borbochara kabourecki* sp. n. differs from the similar *B. brunnea* sp. n. mainly by bicolorous elytra, while *B. brunnea* has elytra unicolorous brown. *B. kabourecki* differs from the similar *B. postfemoralis* (Borchmann, 1932) comb. n. mainly by basic colouration of elytra dark blackish-brown, while *B. postfemoralis* has basic colouration of elytra reddish-brown. *B. kabourecki* differs from the similar *B. bicolor* sp. n. mainly by elytral suture completely reddish-brown, while *B. bicolor* has anterior part of elytral suture dark blackish-brown. *B. kabourecki* differs from the similar *B. nana* (Borchmann, 1929) comb. n. mainly by length of antennomere 3 as long as length of antennomere 4 in males, while *B. nana* has antennomere 4 distinctly longer than length of antennomere 3 in males.

**Name derivation.** This species is dedicated to its collector, Vít Kabourek (Zlín).

**Distribution.** Indonesia, North Sumatra.

***Borbochara nana* (Borchmann, 1929) comb. n.**  
(Figs 20-23)

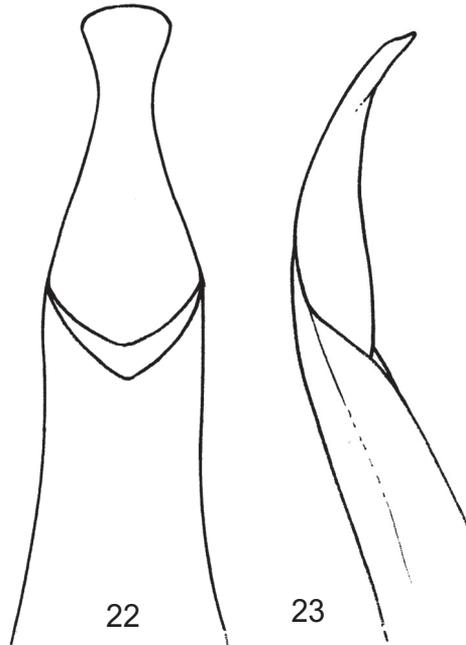
*Allecula nana* Borchmann, 1929: 27.

**Type locality.** Indonesia, Sumatra, Brastagi.

**Type material.** 1 syntype: red label 'Type' black handwritten // white label 'J. B. CORPORAL' / 'Sumatra's O. K.' / Brastagi' printed in black '14. 2. 21' black handwritten / '1 300 M' printed in black // white label 'Allecula' printed in black / 'nana Brm' black



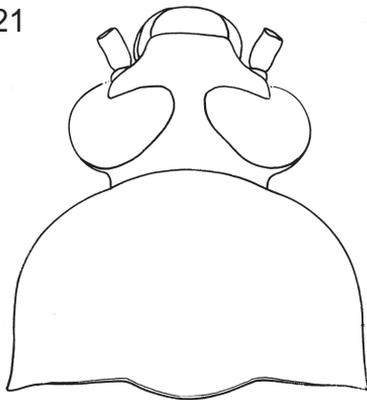
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Figs 20-23. *Borbochara nana* (Borchmann, 1929) comb. n.: 20- Habitus of male syntype; 21- Head and pronotum of male syntype; 22- Aedeagus, dorsal view; 23- Aedeagus, lateral view.

handwritten // white label 'Sammlung' / 'F. Borchmann' / 'Eing. Nr. 5, 1943' printed in black, (ZMUH).

**Other material examined.** 'INDONESIA - SUMATRA north / BRASTAGI Gn Sinabung / 14.-17.iii.1998; 1400-2000 m / L. Bocák lgt.', 5 specimens, (VNPC).

**Redescription.** Body small, elongately oval, length of examined syntype 4.30 mm, maximum width 1.39 mm. Habitus as in Fig. 20, colouration from pale brown to dark brown with pale brown setation. Head as in Fig. 21 small, reddish-brown, with pale brown setation,

microgranulation and shallow punctures. Eyes large, dark, transverse, deeply emarginate, with narrow interspace between eyes. Head widest across eyes 0.75 mm, approximately 0.64 times as wide as pronotal base. Ocular index equal to 10.29. Length of head (visible part) 0.57 mm. Antenna unicolorous pale brown with pale brown setation, microgranulation and shallow punctures, dull. Length of antenna 2.61 mm, reaching up 0.61 of body length. Ratios of relative lengths of antennomeres 1-11 equal to 0.88:0.36:1.00:1.26:1.22:1.12:1.45:1.41:1.40:1.33:1.40. Length / maximum width ratios of antennomeres 1-11 equal to 2.04:1.11:2.07:2.43:2.09:2.41:2.90:2.93:2.79:2.33:2.62. Maxillary palpus pale brown with pale brown setation, ultimate palpomere broadly triangular. Pronotum (Fig. 21) unicolorous reddish-brown, semicircular, with pale brown setation and microgranulation, with dense punctuation, punctures middle-sized and shallow; longest in the middle 0.72 mm, widest at base 1.18 mm. Pronotal index equal to 61.20. Anterior angles inconspicuous, posterior angles sharply, thornly dilated backwards, lateral margins straight in posterior half. Elytra longitudinally oval, bicolorous, dark blackish-brown with reddish-brown unclear spot in elytral interspaces from 1 to 4 and with long pale brown setation. Elytra 3.01 mm long and 1.39 mm wide, widest near elytral half. Punctures in elytral striae large and deep, touching one another or interspace between punctures very narrow. Elytral intervals narrow with middle punctures. Elytral epipleura well developed, unicolorous pale brown. Legs unicolorous pale brown with pale brown setation. Posterior tarsomere 1 slightly curved. Penultimate tarsomeres of each tarsus broadened and lobed. Anterior tibia straight, outer part with two distinct sharp margins. Aedeagus as in Figs 22, 23 with basal piece strongly regularly rounded, 3.03 times as long as apical piece. Apical piece distinctly narrowest before apex dorsally and beak-shaped laterally.

**Differential diagnosis.** *Borbochara nana* (Borchmann, 1929) comb. n. differs from similar species *B. brunnea* sp. n. mainly by colouration of elytra bicolorous, while *B. brunnea* has elytra unicolorous brown. *B. nana* differs from similar species *B. bicolor* sp. n. mainly by elytral suture completely reddish-brown, while *B. bicolor* has anterior part of elytral suture dark blackish-brown. *B. nana* differs from similar species *B. kabourecki* sp. n. mainly by length of antennomere 4 distinctly longer than length of antennomere 3, while *B. kabourecki* has antennomere 3 as long as length of antennomere 4. *B. nana* differs from similar species *B. postfemoralis* (Borchmann, 1932) comb. n. mainly by basic colouration of elytra, which is dark blackish-brown, while *B. postfemoralis* has basic colouration of elytra reddish-brown.

**Distribution.** Indonesia. Sumatra.

***Borbochara postfemoralis* (Borchmann, 1932) comb. n.**

(Figs 24-25)

*Ommatochara postfemoralis* Borchmann, 1932: 354.

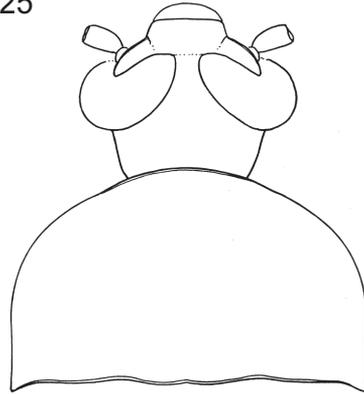
**Type locality.** The Philippines, Mindanao, Butuan and Iligan.

**Type material.** Lectotype (here designated) (♂) labelled: white label 'Iligan / Mindanao / Baker' printed in black // white label '1931' printed in black / '17' black handwritten //



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25



Figs 24-25. *Borbochara postfemoralis* (Borchmann, 1932) comb. n.: 24- Habitus of male lectotype; 25- Head and pronotum of male lectotype.

red label 'Paratypus' printed in black // white label 'Ommatochara / postfemoralis / n. sp.' black handwritten [MTDG]; Paralectotype (♀) labelled: white label 'Butuan / Mindanao / Baker' printed in black // red label 'Type' printed in black // white label 'Ommatochara / postfemoralis n. sp.' black handwritten // white label 'Sammlung / F. Borchmann / Eing. Nr.5, 1943' printed in black [ZMUH]; Paralectotype (♀) labelled: white label 'Butuan / Mindanao / Baker' printed in black // white label '1931' printed in black / '17' black handwritten // red label 'Typus' printed in black // white label 'Ommatochara / postfemoralis n. sp.' black handwritten [MTDG].

**Redescription.** Body small, elongately oval, length of examined lectotype 4.33 mm, maximum width 1.57 mm. Habitus as in Fig. 24, colouration from pale brown to dark brown with pale brown setation. Head as in Fig. 25 small, reddish-brown, with pale brown setation, microgranulation and large, shallow punctures. Eyes large, dark, transverse, deeply emarginate, with narrow interspace between eyes. Head widest across eyes 0.77 mm, approximately 0.57 times as wide as pronotal base. Ocular index equal to 10.60. Length of head (visible part) 0.75 mm. Antenna unicolorous pale brown with pale brown setation and dense punctuation, slightly shiny. Ratios of relative lengths of antennomeres 1-8 equal to 0.67:0.41:1.00:1.24:1.21:1.19:1.24:1.31. Length / maximum width ratios of antennomeres 1-8 equal to 1.86:1.50:2.15:3.43:2.60:2.41:4.81:4.47. Maxillary palpus pale brown with pale brown setation, ultimate palpomere broadly triangular. Pronotum (Fig. 25) unicolorous reddish-brown, semicircular, with pale brown setation and microgranulation, with dense punctuation, punctures middle-

sized and shallow; longest in the middle 0.77 mm, widest near half of lateral margin 1.35 mm. Pronotal index equal to 56.81. Anterior angles inconspicuous, posterior angles sharply, thornly dilated backwards, lateral margins straight in posterior half, pronotum broadest in half of lateral margin. Elytra longitudinally oval, bicolorous, with pale brown setation. Basic colouration reddish-brown with unclear dark blackish-brown spot near lateral margins of elytra from both sides, broadest near half, reaching elytral intervals 5 or 6. Elytra 2.91 mm long and 1.57 mm wide, widest near one third of elytral length from base. Punctures in elytral striae large and deep, touching one another or interspace between punctures very narrow. Elytral epipleura well developed, unicolorous reddish-brown, concolorous with ventral side of body. Legs unicolorous pale brown with pale brown setation. Posterior tarsomere 1 slightly curved. Penultimate tarsomeres of each tarsus broadened and lobed. Anterior tibia straight, outer part with two distinct sharp margins.

**Differential diagnosis.** *Borbochara postfemoralis* (Borchmann, 1932) comb. n. differs from similar *B. bicolor* sp. n., *B. kabourecki* sp. n. and *B. nana* (Borchmann, 1929) comb. n. mainly by basic colouration of elytra reddish-brown, while *B. bicolor*, *B. kabourecki* and *B. nana* have basic colouration of elytra dark blackish-brown. *B. postfemoralis* differs from similar *B. brunnea* sp. n. mainly by bicolorous elytra, while *B. brunnea* has elytra unicolorous brown. For further details see the key above.

**Distribution.** Philippines.

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