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New species of *Charaphloeus* Casey, 1916 from the central Amazon area (Brazil) (Coleoptera: Laemophloeidae)

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In a recent paper, the author identified the characters of *Charaphloeus* Casey, 1916 (Laemophloeidae) more precisely and described and illustrated ten new species from the lowland natural rain forests of the Amazon basin in Peru (Bremer 2023). In this paper the author is describing six *Charaphloeus* species from the central part of the Amazon basin near Manaus, Brazil. Species described and illustrated herein are *Charaphloeus barclayi* sp. nov., *C. hurtadoi* sp. nov., *C. ingratus* sp. nov., *C. paulus* sp. nov., *C. vonmartii* sp. nov. and *C. wallacei* sp. nov. Specimens of these new species were collected using light traps from trees of the genus *Eschwaleira* von Martius, 1828. Two *Charaphloeus* species described in the first paper from Peru (Bremer (2023) are also occurring in the central part of the Amazon basin (*Charaphloeus karneri* Bremer, 2023 and *C. prosopis* Bremer, 2023). They bring up the number of the known species from the central part of the Amazon area to eight species.

Keywords: taxonomy, lined flat bark beetles, Amazonian lowland rainforest, South America

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INTRODUCTION

In a first paper on *Charaphloeus* Casey, 1916 (Laemophloeidae Ganglbauer, 1899) the author defined the genus characters of *Charaphloeus* more precisely. Twenty-two freshly collected and mounted species from the lowland natural rain forests of the Amazon basin of Peru were investigated. Ten of these new species were also described and illustrated (Bremer 2025). Until this activity only species of this genus were known from North and from Central America.

In the second paper six additional new *Charaphloeus* species from the central part of the Amazon basin of Brazil are described and illustrated. These six species were traced within undetermined Laemophloeidae material in the BMNH. The following newly described and illustrated species are *Charaphloeus barclayi* sp. nov., *C. hurtadoi* sp. nov., *C. ingratus* sp. nov., *C. paulus* sp. nov., *C. vonmartii* sp. nov. and *C. wallacei* sp. nov.

MATERIAL AND METHODS

Nearly all species were collected from trees of the genus *Eschweilera* von Martius, 1828 (Lecythidaceae).

The material was studied using a Nikon SMZ1270 stereo microscope. Images were prepared in a commercial photo studio in Saarland, Germany.

Species are arranged alphabetically in the list since a phylogenetic arrangement is not yet possible. An elytral "cell" is a special figure on elytra, see definition in Lefkovitch (1962: 170).

Abbreviations of material depositories:

BMNH – The Natural History Museum (formerly British Museum, Natural History), London, United Kingdom;
ZSM – Zoologische Staatssammlung, Munich, Germany.

RESULTS

New descriptions

***Charaphloeus barclayi* sp. nov.** (Figs 1–4)

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Type material designated. Holotype ♂ BMNH: Brazil, Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G.; *Eschweilera wachenheimii:* 01.V.1996; Tree No. 105; Tray No. 9; BMNH{E} 2003-84.

Paratypes: Same data as holotype but 16.III.1995, *Eschweilera wachenheimii,* Tree No. 77 Tray No. 2, BMNH{E} (1♂ BMNH); same data as holotype but 16.III.1996, *Eschweilera wachenheimii,* Tree No 47, Tray No. 4, BMNH{E} (1♂ BMNH).

Etymology. Patronymic. Dedicated to Maxwell V. L Barclay, Senior Curator in Charge at the Natural History Museum, Department of Life Sciences, London, United Kingdom with thanks for long-standing cooperation.

Diagnosis. Small; very lustrous; testaceous; epistomal suture almost straightly crossing over to the other side (not as usual bent, triangularly backwards); laterally the eyes are asymmetrically protruding; anterior angles of pronotum widely rounded, lateral margin of pronotum rounded towards the tiny, scarcely protruding hind angles; elytra relatively short, widest shortly in front of middle.

Description. Body length: 1.46-1.57 mm. Body width: 0.61-0.68 mm. Length to width of elytra ratio 1.33-1.39:1; width to length of pronotum ratio 1.58-1.66:1. Upper side and underside testaceous, lustrous, elytra with three darker coloured stripes. Antennae and legs yellow. Head. Mandibles large, bifid, the mandibles circumvent the relatively large labrum. Frons wide, disc somewhat higher situated than the eyes to which the sides are dropping; a median suture is translucent; surface with tiny, very widely separated punctures; the lateral margins of frons distinctly edged, along eyes straight, somewhat in front of eyes the edges turn inside with an obtuse angle, terminating slightly protruding, at the meeting point of epistomal suture and lateral edges of frons; the epistomal suture is almost straight crossing over to the opposite side; the frons drops off to the lower leveled epistomal suture; in some specimens the epistome is darker coloured. The epistome is short; its sides are narrowed anteriorly, they are slightly emarginated; the anterior margin is widely and shallowly emarginated. The labrum is tongue-shaped protruding. The eyes are relatively small and they distinctly and asymmetrically protrudes, their widest point is situated somewhat behind their middle. On the hind side of eyes, there are

short, markedly retracted temples. Antennae. With a club of three antennomeres; in males, antennomere 10 is about as long as wide, antennomere 9 is slightly longer than wide, antennomere 11 is 2 times as long as wide and apically narrowly rounded. Bent backwards, the antennae overlap one third of elytra. Pronotum. Very broad; surface between sublateral lines convex, between sublateral lines and lateral margins barely convex; anterior angles widely rounded; the sides of pronotum are widely rounded, and they are narrowing until a point shortly of hind angles; hind angles are inconspicuous and tiny pointed; between hind angles and the meeting point of the sublateral lines with the posterior margin the margin is somewhat emarginated, the broad median part of the posterior margin is straight and narrowly edged; longitudinally the surface is less convex than transversely; between sublateral lines the anterior margin is somewhat rounded protruding towards head; anterior margin with short, tiny, anteriorly protruding setae, these setae are apically forked (visible at approximately 125-fold magnification); surface with tiny, distinctly separated punctures. Elytra. Scutellar shield indicated pentagonal. Elytra elongate oval; markedly convex transversely, far less so longitudinally. Maximum of width at one third. Apex rounded. A lateral "cell" is formed by indistinct rows of punctures; a first and a third and a fourth or fifth and a fifth and seventh very short rows of puncture are connected near the anterior margin of elytra feigning further "cells". The punctures of the first row are brownly coloured within the first third of length; approximately at the third and seventh rows of punctures there are narrow brown stripes, and they have within the apex brown, not really marked areas; interstices with a few tiny punctures; subhumeral carinae rudimental. The whole underside of head, prosternum, ventrites I and II is nearly impunctate. Head. Last maxillary and labial palpomeres small, very elongate oval, truncated near the apex. When compared to other species, the triangular gula is relatively small, it is knitted together with the plain neck shield, the anterior margin of the gula is edged (not so the other parts of anterior margin; the anterior angles of this shield are rounded. Prosternum. Numerous very short setae are found on the anterior margin. They are forked apically (just visible at 100-fold magnification). The prosternal process is wide; its end is terminating just behind the procoxae. Ventrite II. The translucent median suture is leaving the anterior 40 per cent vacant. Ventrites III-VII. The anterior margin of ventrite III acuminate in the middle. The lateral parts of the ventrites III-VI with a few minute punctures. Legs. Legs short, tibiae thin. Tarsal formula 5-5-4 in males, 5-5-5 in females.

Differential diagnosis. The hind angles of the pronotum of *Charaphloeus wallacei* sp. nov. and *C. barclayi* sp. nov. are tiny, the anterior angles of pronotum are widely rounded, and the pronotal sides in front of the hind angles are also widely rounded. The main difference between *C. barclayi* sp. nov. and *C. wallacei* sp. nov.: *C. barclayi* sp. nov. has a straight epistomal suture, (*C. wallacei* sp. nov. has an arcuate epistomal suture); the body lengths of *C. wallacei* sp. nov. are in average smaller than those of *C. barclayi* sp. nov. (1.18-1.54 mm *vs* 1.46-1.62 mm). The eyes of both species are similarly small, but the eyes of *C. barclayi* sp. nov. are more laterally protruding. Two species from the lowland natural rain forests of the Amazon basin of Peru have similarly widely rounded anterior angles of the pronotum, *Charaphloeus sumptuosus* Bremer, 2025 and *C. astudior* Bremer, 2025. Both species have larger mandibles. *Charaphloeus astudior* is insofar special as it presents in males an emargination with rough edges on the lateral sides of frons over the antennal insertion which both species from the Central Amazon area do not present.

Fig. 1. *Charaphloeus barclayi* sp. nov., male, habitus, dorsal view.

Fig. 2. *Charaphloeus barclayi* sp. nov., male, habitus, ventral view.

***Charaphloeus hurtadoi* sp. nov.** (Figs 5–6)

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Fig. 3. *Charaphloeus barclayi* sp. nov., head and pronotum, dorsal view.

Fig. 4. *Charaphloeus barclayi* sp. nov., head and prosterum, ventral view.

Type material designated. Holotype ♂ BMNH: Brazil: Am., Reserva Ducke, 26 km, NE Manaus, Hurtado J. C. G., *Eschweilera atropetiolata*, 2.V.1996, Tree No. 5, Tray No. 1. BMNH{E} 2003-84 (yellow strip of paper: C84a 19).
Paratypes: Brazil: Am., Reserva Ducke, 26 NE Manaus, Hurtado, J. C. G., *Eschweilera wachenheimii*, 01.IV.1996, Tree No 108, Tray No. 2, BMNH{E} 2003-84 (1♂ BMNH); Brazil: Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G., *Eschweilera*

wachenheimii, 01.V.1996, Tree No 105, Tray No. 9, BMNH{E} 2003-84. (1♀ BMNH)

Diagnosis. Of medium length, relatively narrow. Lateral corners of frons acute; frons plane; epistomal suture not very distinct. Antennae of medium length, with a club of three antennomeres, antennomeres 8-10 somewhat longer than wide.

Description. Body length: 1.79-1.92 mm. Body width: 0.69-0.75 mm. Ratios. Length to width of elytra ratio 1.45-1.47:1; width to length of pronotum ratio 1.45-1.5:1. Coloration: uniformly testaceous, lustrous. Head. Frons plane, towards epistomal sutures slightly dropping in the middle; frons with a few tiny punctures; laterally the frons is bounded by dark, narrow crests; these crests straightly directed anteriorly; a short way apart from the eyes these crests are moving with an obtuse angle inside; more anteriorly they meet the epistomal suture and form with it a right-angled angle. The epistomal suture draws backwards, being indistinct in the middle. The sides of epistome are narrowing and being emarginated; anterior margin broadly emarginated. Labrum anteriorly rounded. Mandibles rounded and bifid. Antennae overlap a third of elytra, with a club of three antennomeres; antennomeres 8-10 somewhat longer than wide. Pronotum. Heart-shaped; anterior corners narrowly rounded; sides within 60 per cent rounded and thenposteriorly narrowing more straightly towards hind corners; hind angles are somewhat stressed and rectangular. Lateral part of hind margin emarginated. Median part straight and margined. Sublateral lines meet anterior and posterior margins od prosternum, they are grooved. Prosternum moderately convex transversely. Surface with minute, widely separated punctures. Elytra. Scutellar shield indicated pentagonal; elytra widest at one third; laterally on each elytron with a distinct "cell"; its sides are brownly coloured but not incised or impressed. Subhumeral carinae rudimentary. Surface convex transversely. Apex, rounded, without longitudinal impressions. Legs. Short, protibiae slightly bent, tibiae straight. Tarsal formula 5-5-4 in males, 5-5-5 in females. Underside not examined.

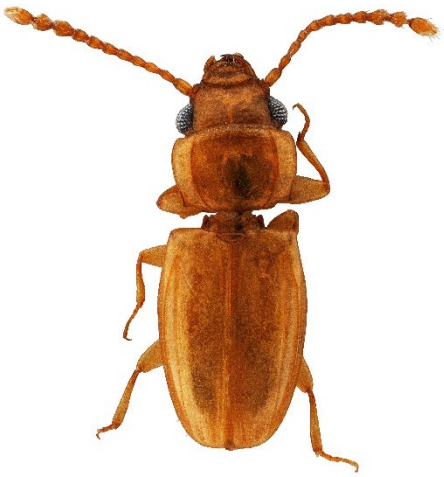

Fig. 5. *Charaphloeus hurtadoi* sp. nov., male, habitus, dorsal view.

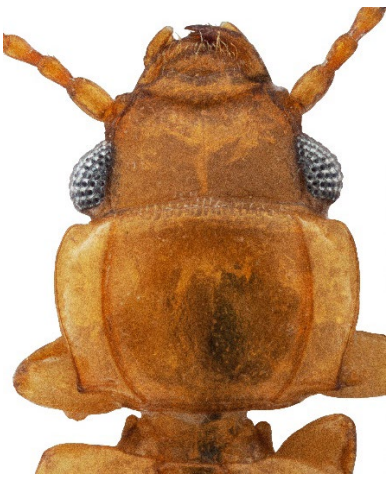

Fig. 6. *Charaphloeus hurtadoi* sp. nov., head and pronotum, dorsal view.

***Charaphloeus ingratus* sp. nov.** (Figs 7–8)

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Type material designated. Holotype ♂ BMNH: BRAZIL, Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G., *Eschweilera pseudodecolorans*, 15.X.1995, Tree no. 130, Tray no. 2; BMNH2003-84{E} (yellow paper strip, printed C84a.18).

Etymology. Named from Latin 'ingratus' = disagreeable.

Diagnosis. Testaceous, lustrous. Tiny, transversely the shape is narrow. Eyes relatively large, only a little protruding. Anterior corners of pronutum shortly rounded, the sides of pronotum slightly narrowing towards posterior corners. Elytra convex transversely, subhumeral carinae missing; a lateral "cell" faintly discernible on each elytron.

Description. Body length: 1.26 mm. Body width: 0.47 mm. Ratios. Length to width of elytra ratio 1.49:1; width to length of pronotum ratio 1.55:1. Coloration: Testaceous, lustrous. Head. Frons plane, with a few tiny punctures at the back part of frons. Aside eyes very narrow, scarcely visible crests are found; in front of eyes these crests seemingly getting higher and higher situated and better visible (caused by an increasing depression of the anterior part of frons, probably only in males); in the depressed part of frons the punctures are slightly larger, and they become better visible. The epistomal suture is only slightly incised. The epistome is short, its punctures are larger than on the anterior side of frons; the narrowing sides of epistome are emarginated; its anterior margin is widely emarginated. The labrum is short, anteriorly rounded, with some setae. The mandibles are relatively short, embracing the labrum. The antennae are short, reaching to the hind part of pronotum, with a club of three antennomeres, antennomeres 9+10 are nearly as long as wide; the antennomere 11 is shortly oval, and is consisting of a basal, lustrous part and a shorter opaque anterior part. Pronotum. The nearly straight, anterior margin with tiny setae, they are apically forked (visible at 150-fold magnification). The anterior corners are narrowly rounded; the sides are nearly straightly narrowing in the anterior 65 per cent before they are shortly sinuate; the indistinct posterior corners are blunt. The external part of hind margin between corners and the meeting points of sublateral lines are slightly emarginated; the median part of posterior margin is straight and margined. The pronotum is transversely convex, but laterally less so than in its median part. The median part of pronotum is nearly impunctate, laterally there are some minute punctures.

Fig. 7. *Charaphloeus ingratus* sp. nov., holotype habitus, dorsal view.

Elytra. Scutellar shield broad, posteriorly rounded, anteriorly straight. Maximum width of elytra a third behind the anterior margin. Apex rounded, without longitudinal impressions. Elytra uniformly convex. Subhumeral carinae are missing. A lateral "cell" is only indistinctly discernible on each

elytron. There is only a stria where the medial boundaries of a "cell" are expected. Next to the median suture only a partially brown coloured row of small punctures is found. Some minute punctures are irregularly scattering on the elytra; they do not form regular rows or striae. Underside not examined. Legs. Short. Tibiae thin and straight. Tarsal formula of the male holotype 5-5-4.

Fig. 8. *Charaphloeus ingratus* sp. nov., head and pronotum, dorsal view.

***Charaphloeus paulus* sp. nov.** (Figs 9–12)

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Type material designated. Holotype ♂ BMNH: BRAZIL, Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G.; *Eschweilera atropetiolata*, 2.V.1996, Tree No. 5, Tray No. 9; BMNH{E} 2003-84.

Etymology. From Latin 'paulus' = small.

Diagnosis. A protruding part of the neck shield of the underside is visible from above in front of the eyes. The socket of the antennomere 1 is situated and attached on the hind part of the laterally peeping neck shield. The anterior part of this neck shield is freely visible from above. Pronotum with obtuse anterior corner; sides somewhat bent towards the not well-developed hind corners; the hind margin is moderately marginated inside the point where the sublateral lines meet the posterior margin; sublateral lines are grooved; the surface of pronotum inside the sublateral lines are moderately convex; the surface between sublateral lines and sides are less convex.

Description. Body length: 1.84 mm. Body width: 0.78 mm. Ratios. Length to width of elytra ratio 1.41:1; width to length of pronotum ratio 1.68:1. Pronotum, elytra and underside brilliantly testaceous; head light brown. Head. Frons wide, plane, with minute, widely separated punctures; laterally the frons is terminating next to eyes at narrow crests; in front of eyes the crests are divert inside with an obtuse angle; the crests terminate right-angled at the lateral ends of the epistomal suture; outside the crests the rounded corners of the underside neck shield are peeping out; on them he sockets of the first antennomeres are attached. The frontoclypeal suture is rounded directed towards the back and slightly incised. The epistome is short, anteriorly narrowed, and anteriorly broadly and deeply emarginated; labrum anteriorly rounded, with short hairs. Mandibles bifid, laterally rounded and close to labrum. Antennae are overlapping a fourth of elytra; their scapes are much longer than wide and being wider than the following antennomeres; antennomere 2 almost as long as antennomere 4, and antennomere 3 slightly longer than antennomere 4. There is a club of 3 antennomeres; antennomere 9 is slightly longer than the antennomere 10; antennomere 11 consists in two parts, the lower part being brilliant and pointed at a tip, the apical part is dull. Pronotum. Wide, slightly convex transversely, anterior corners distinctly rounded; the sides are rounded narrowing to the right-angled hind corners. Anterior margin straight, with short, anteriorly directed setae, these being

anteriorly forked (just visible at 100-fold magnification); the sublateral lines are somewhat grooved; a few medium-sized punctures are found beyond the sublateral lines; between the hind corners and the sublateral lines the posterior margin is moderately emarginated; its median part is straight and margined. Surface with only a few tiny punctures. Elytra. Scutellar shield broad, posteriorly rounded, anteriorly straight. Elytra broadly convex transversely; the humeral carinae rudimentary; On each elytron a distinct lateral "cell" is present. Parallel to median suture on both sides feebly incised striae are present between 15 per cent downwards and 30 per cent upwards the elytra; in the middle of each elytron there are feebly discernible rows with tiny punctures. Elytra widest at one- third; the apex is rounded and without longitudinal impressions. Underside. The lustrous underside is nearly impunctate; only on the ventrites III-VII there are a few tiny punctures which are the origin of short, tender hairs. The pro-, meso- and metacoxae are situated far apart from each other. The last segment of maxillary palpomeres is long oval, and near the end beleveled. The very short triangular gula is incorporated into the neck shield. The prosternal process is wide; at its end it terminates a little beyond the procoxae; its end is even and wide end. Its end is contacting the margined end of ventrite I. The ventrite I is reversely trapezoidal and terminates with its straight posterior end at the short anterior process of the ventrite II. The ventrite II possesses a translucent median suture; this suture terminates posteriorly in a notch. The ventrite III has an anterior margin which possesses in the middle a spine which fits into the notch of ventrite II. Legs. Short, tibiae straight.

Fig. 9. *Charaphloeus paulus* sp. nov., habitus, dorsal view (probably a female).

Fig. 10. *Charaphloeus paulus* sp. nov., habitus, ventral view (probably a female).

Differential diagnosis. *Charaphloeus flavescens* (Sharp, 1899) from Guatemala is a species related to *C. paulus* sp. nov. (the type of *C. flavescens* deposited in BMNH). *C. flavescens* was depicted in Bremer & Hauth 2020, p.44, Fig. 76 as a photograph: The antennae of *C. flavescens* are distinctly longer than the antennae of *C. paulus* sp. nov., and their antennomeres 9-11 are markedly longer than wide. The punctations of the pronotum and the frons of *C. flavescens* are set much closer than the corresponding punctations of *C. paulus* sp. nov., and the punctures are larger; furthermore, the eyes of *C. paulus* sp. nov. are protruding more beyond the contour of head than the eyes of *C. flavescens*.

Fig. 11. *Charaphloeus paulus* sp. nov., head, dorsal view.

Fig. 12. *Charaphloeus paulus* sp. nov., pronotum, dorsal view.

***Charaphloeus vonmartii* sp. nov.** (Figs 13–14)

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Type material designated. Holotype ♂ BMNH: BRAZIL, Am., Reserva Ducke, 20 km NE Manaus, Hurtado, J. C. G.; *Microphotis guyanensis*, 22.iii.1996, Tree No. 165, Tray No. 7. BMNH{E} 2003-84.

Paratypes: Brazil: Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G., *Eschweilera wachenheimii*, 02.V.1996, Tree No 43, Tray No. 2, BMNH{E} 2003-84 (1♀ BMNH); BRAZIL, Am., Reserva Ducke, 20 km NE Manaus, Hurtado, J. C. G.; *Escheilera wachenheimerii*, 04.iv.1996; Tree No. 108, Tray No. 2. BMNH{E} 2003-84 (1♂ BMNH).

Etymology. Patronymic. Named in memory of Carl Friedrich Philipp Ritter von Martius, German botanist. By command of the King of Bavaria, von Martius and his zoologist companion Johann Baptist Ritter von Spix travelled through Brazil between 1817-1821, collecting plants and animals. The collected material became the core of the Botanical State Collection and the Zoological State Collection in Munich. Back in Munich, von Martius described many of the plants, he collected among them the genus of the trees *Eschweilera* von Mutius, 1828. For instance, nearly all specimens of the species described in this paper were collected on *Eschweilera* trees. His scientifically most importing work was the “Comprehensis Flora of Brazil”, which he initiated in the year 1840; it was completed post humously in the year 1906.

Diagnosis. Relatively small; testaceous, very lustrous. Sparsely punctured; the lateral anterior parts of frons are somewhat protruding anteriorly and are anteriorly pointed; the lateral parts of frons meet the epistomal suture approximately in a right

angle; outside the crests the rounded corners of the underside neck shield are peeping out similarly in *C. paulus* sp. nov. but are often hidden by the antennomeres 1; the epistomal suture is distinct and somewhat grooved. The pronotum is narrow, its anterior angles are obtuse, the hind angles are right angled. Elytra are elongate oval.

Description. Body length: 1.45-1.47 mm. Body width: 0.59+0.62 mm. Length to width of elytra ratio 1.44+1.47:1; width to length of pronotum ratio 1.49+1.54:1. Coloration of upper side and underside testaceous; lustrous. Head and pronotum slightly darker. Head. Frons wide, plane, with a few tiny, widely separated punctures; the lateral margins of frons are not edged; edged sides of frons start first in front of eyes; the edged margins slightly bent inside somewhat in front of eyes; beyond the outer side of edges the lateral corners of the underside neck shield may peep out; the edged lateral margins join rectangularly with the lateral part of the epistomal suture. The epistomal suture is incised like a groove in the whole part of the suture, this is best visible when the head is somewhat increased. The eyes are relatively large and somewhat symmetrically bulging to the outside. The antennae present a club of three antennomeres; in males, antennomere 10 is about as long as wide in both sexes; males and females have approximately the same length of the antennae, reaching nearly to the middle of elytra. Pronotum. Relatively narrow; anterior angles narrowly rounded; the sides are posteriorly somewhat narrowing and moderately bent towards a little before the right-angled hind angles. Anterior margin straight, with tiny setae directed anteriorly, these anteriorly directed setae are forked. Sublateral lines are moderately grooved, reaching hind and anterior margins. Pronotum slightly convex transversely. Between hind angles and the points where the sublateral lines reach the posterior margin the posterior margins are somewhat emarginated; the median part of posterior margin is straight and margined. Elytra. Scutellar shield wide, anteriorly straight, posterior part rounded. Elytra widest at 1/3 of length. One indistinct "cell" is found laterally on each elytron; one row of punctures parallel to elytral sutures is found on each elytron; the punctures of this row are partially darker coloured. Apex without longitudinal impressions. The epipleura reach the apex. Underside. Pro-, meso and metacoxae widely separated from each other. Neck shield of the underside of head is plane, impunctate. Last maxillary palpomeres and labial palpomeres are elongate oval, near their ends these are beleveled. Prosternum. Impunctate. Median part of proventrite medially flattened, posteriorly with a wide and short prosternal process; prosternal process straight terminally, scarcely protruding prosternal coxae. Ventrite I. Reversely trapezoidal, impunctate; anteriorly its straight margin is edged. Posteriorly its margin is straight. Ventrite II. Anterior process of ventrite II straight, it contacts with the straight posterior margin of ventrite I. The translucent median line of ventrite II terminates at its anterior margin. Posteriorly the median suture is notched. The surface of ventrite II including its epimera are impunctate. Ventrite III. Middle part of anterior margin acuminate. Its spine fits into the notched end of the median suture. Ventrites III-VII are feebly micro reticulated. Legs. Tarsal formula 5-5-4 in males, 5-5-5 in females. Legs short, relatively thin, slightly widened towards end.

Differential diagnosis. *Charaphloeus vonmartii* sp. nov. and *C. certus* Bremer, 2025 are very similar concerning body shape; these taxa differ especially in the shape of the frons, the form of the antennal club and the tarsal formula. *C. certus* presents in contrast to *C. vonmartii* sp. nov. an impressed anterior part of frons with larger punctures (possibly only in males); the antennal club of *C. certus* is shorter and broader; *C. vonmartii* sp. nov. has tarsal formula 5-5-4 in males and 5-5-5

in females; *C. certus* has a formula 5-5-5 in both sexes.

Fig. 13. *Charaphloeus vonmartii* sp. nov., male, habitus, dorsal view.

Fig. 14. *Charaphloeus vonmartii* sp. nov., male, forebody, dorsal view.

***Charaphloeus wallacei* sp. nov.** (Figs 15–16)

urn:lsid:zoobank.org:act:C0CE06AF-ECEF-49B8-A781-979AB91A436A

Type material designated. Holotype ♂ BMNH: Brazil, Am., Reserva Ducke, 26 km NE Manaus, Hurtado, J. C. G. – *Eschweilera pseudodecolorans*, 23.III.1996. – Tree No 119, Tray No. 2; BMNH{E} 2003-84.

Paratypes. Same data as holotype but Tree No. 119, Tray No. 5 (1♂ ZSM); same data as holotype but Tree No. 119, Tray No. 10 (1♀ BMNH); same data as holotype but Tree 119, Tray No. 4 (1♂ & 1♀ BMNH); same data as holotype but Tree 119, Tray No. 4 (1♀ BMNH); same data as holotype but Tree 119, Tray No. 8 (1♀ BMNH); same data as holotype but *Eschweilera wachenheimerii,* 16.X.1995, Tree No. 77, Tray No. 4 (1♀ BMNH); same data as holotype but 01.IV.1996, Tree No. 108, *Eschweilera wachenheimerii*, Tray N. 2 (1♂ BMNH); same data as holotype but Tree No. 108, Tray No.3 (1♂ ZSM); same data as holotype but Tree No. 108, Tray No. 6 (1♂ BMNH); same data as holotype but *Eschweilera wachenheimerii*, 01.V.1996, Tree No. 105, Tray No. 4 (2♀ BMNH); same data as holotype but Tree No. 105, Tray No. 6 (1♀ BMNH).

Note. All the type specimens were collected at light traps from trees of the genus *Eschweilera* von Martius, 1828.

Etymology. Patronymic. The species epithet is dedicated to Alfred Russel Wallace (1823-1913), English naturalist, geographer, anthropologist, biologist and illustrator.

Diagnosis. Tiny. Very shiny; testaceous; with moderately protruding mandibles; epistomal suture distinct, with straight components which are turning backwards and meet very obtuse-angled in the middle; eyes are laterally asymmetrically protruding; anterior angles of pronotum widely rounded, lateral margins of pronotum rounded towards the tiny hind angles; elytra relatively short and with arched sides, widest at one third. *Charaphloeus wallacei* sp. nov. is very similar to *C. barclayi* sp. nov.; it possesses a

similar shape of pronotum. The eyes of *C. wallacei* sp. nov. and of *C. barclayi* sp. nov. are small; they are asymmetrically somewhat protruding; the epistomal suture of *C. wallacei* sp. nov. is turning backwards, the epistomal suture of *C. barclayi* sp. nov. is nearly straight. The anterior parts of epistome of both species are reflecting golden. The labrum is large and rounded anteriorly. The mandibles are arched until their pointed ends.

Description. Body length 1.18-1.54 mm. Body width 0.5-0.6 mm. Length to width of elytra ratio 1.48-1.50:1; width to length of pronotum ratio 1.48-1.56:1. Upper side and underside are uniformly testaceous and brilliant; legs and antennae are yellow. Head. The strong mandibles are somewhat protruding beyond the labrum, at their inner side with a small denticle at about 60 per cent of their length, this denticle is mostly concealed by the labrum; the frons is wide and nearly plane, in males the anterior and more the lateral parts of the frons are faintly depressed; frons with a few tiny punctures close to neck; the anterior, lateral corners of frons are inconspicuously pointed; the lateral edges at the eyes are nearly straight, somewhat in front of eyes they are turning inside with an obtuse angle; they terminate with the epistomal suture with an obtuse angle. The lateral parts of the epistomal suture are directed backwards, its sides are straight; it is well visible over its whole length. The epistome is short, in its anterior part it has frequently a golden shine; its sides are narrowing anteriorly and are slightly emarginated; its anterior margin is deeply emarginated. The labrum is opaque, anteriorly rounded. The eyes distinctly protrude, these are widest behind their middle. Antennae. Short with a club of three antennomeres, somewhat longer in males than in females; it may overlap 40 per cent of elytra in males when bent posteriorly. Pronotum. Wide, short. Conspicuous by its widely rounded anterior angles; its sides are strongly rounded and the hind angles are tiny; the lateral lines are complete to anterior and posterior margins and narrowly impressed; between the lateral lines, the anterior margin is nearly straight, and its tiny setae are protruding, being biforked. In between the sublateral lines the surface is more convex than the outer side; on the surface, there are minute, sparse, elongated punctures. The anterior margin between frontal angles and anterior lines is straight; between the sublateral lines, the anterior margin is slightly and rounded protruding towards the head. The posterior margin is moderately protruding towards the elytra. Elytra. Scutellar shield broad, rounded of its back side. Elytra are elongate oval; at the apex the elytral suture is slightly retracted. The maximum width is at one third. A lateral "cell" is only indistinctly visible by its darker coloured lateral margins. Two more median "cells" are visible by its darker coloured, shortly anteriorly connected rows; and then followed by an interstice interruption; in the apical part of elytra there are darker coloured, short stripes. The surface is evenly convex; with rows of minute, indistinct punctures. The interstices are plane and impunctate. Epipleura complete. Underside of head. The last maxillary palpomeres are very elongate oval, truncated shortly behind their apices; the apical labial palpomeres are small, elongate oval, beleveled shortly behind their apices; the mentum is very short and broadly rectangular; the flat neck shield is wide, impunctate; it encloses the triangular gula; the lateral sides of gula are discernible as slightly impressed lines. Pro-, meso- and metacoxae are widely separated. Prosternum. Anterior margin with short, erect, apically bifurcated hairs (just visible at 125-fold magnification); disc and prothoracic hypomera are impunctate; the prosternal process is wide, its end is truncated at posterior margin; the procoxae are open behind. Ventrite I. Reversal trapezoid, plane, with a few tiny punctures, somewhat dropping anteriorly. Ventrite II. Disc moderately and regularly convex; with tiny,

widely separated punctures; median suture in the hind 60 per cent translucent; median and posterior the median suture is triangularly notched for accommodating with the centrum spine of the anterior margin of the ventrite III. Ventrite III. Anterior margin straight, in its middle acuminate with a tiny spine; surface is with a few minute punctures. Ventrites IV-VII. Nearly impunctate. Legs. Short, tibiae thin, nearly straight. Tarsal formula 5-5-5 in females, 5-5-4 in males.

Differential diagnosis. *Charaphloeus wallacei* sp. nov. and *C. barclayi* sp. nov. possess very similar shapes of their pronotum; see below at *C. barclayi* sp. nov.

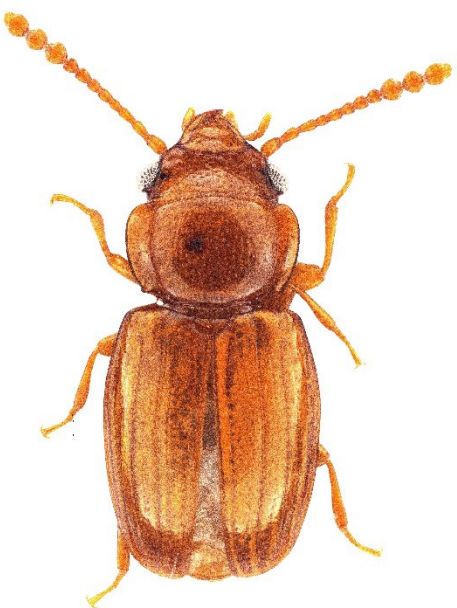

Fig. 15. *Charaphloeus wallacei* sp. nov., female, habitus, dorsal view.

Fig. 16. *Charaphloeus wallacei* sp. nov., female, habitus, ventral view.

DISCUSSION

The type species of the genus *Charaphloeus*, the North American *C. convexulus* (LeConte, 1879), possesses first metatarsomeres which are approximately as long as the second metatarsomeres and longer than the penultimate metatarsomeres (a drawing by Thomas 1993: p. 62, fig. 75). Concerning the lengths of the North and the Central American species no further data are yet available. It cannot be excluded that among *Charaphloeus* species there are different taxa, probably at the subspecies rank, because the yet studied South American species (more than 20 species studied by the author) possess first metatarsomeres which are definitely shorter than the second metatarsomeres and subequal to the penultimate metatarsomeres. By this feature their tarsomeres are identical with the tarsomeres of the genus *Laemophloeus* Dejean, 1835. However, it is probably too early to draw conclusion concerning taxonomic ranks from these few findings because the North American *Charaphloeus* are not reviewed yet, we have very likely

from the Central American *Charaphloeus* adequate photographs but the single species are not investigated, and concerning South American *Charaphloeus* we only know roughly well the *Charaphloeus* from the lowland natural rain forests of the Amazon basin but not from other landscapes.

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REFERENCES

Bremer H.J. 2023. Central American *Laemophloeus,* which could possibly belong to *Charaphloeus* Casey, 1916. Mitteilungen der Münchner Entomologischen Gesellschaft. 113: 73–84.

Bremer H.J. 2025. Genus characters of *Charaphloeus* Casey, 1916 and descripttion of 10 new species of *Charaphloeus* from the lowland rain forests of the Amazon basin of Peru. Mitteilungen der Münchner Entomologischen Gesellschaft. 114–115: 3–36.

Casey T.L. 1916. Some random studies among the Clavicornia. Memoirs on the Coleoptera. 7: 35–300.

Lefkovitch L.P. 1962. A revision of African Laemophloeidae (Coleoptera: Cucujidae). Bulletin of the British Museum (Natural History) Entomology. 12(4): 167–245.

Thomas M.C. 1993. The flat bark beetles of Florida (Coleoptera: Silvanidae, Passandridae, Laemophloeidae). Arthropods of Florida and Neighboring Land Areas. 15: 1–83.

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