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ORIGINAL ARTICLE

A taxonomic review of the genus *Ochinoeus* (Coleoptera: Lycidae), with descriptions of three new species from China

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Key words. Net-winged beetles, Metriorhynchini, *Ochinoeus*, alpha taxonomy, East Asia

Abstract. The lycid genus *Ochinoeus*, Kubecek, Bray & Bocak, 2015 is reviewed. The genus originally contained four species, three of which are from China: *O. hainanensis* Kubecek, Bray & Bocak, 2015, *O. habashanensis* Kubecek, Bray & Bocak, 2015, and *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015. In this study, three new species are described from China, including *O. guangxiensis* sp. n., *O. yunnanus* sp. n., and *O. xizangensis* sp. n. All of the Chinese *Ochinoeus* species are illustrated with macrophotographs of their habitus and aedeagi. In addition, a distribution map and identification key to males of all species of *Ochinoeus* are provided.

ZooBank Article Registration: https://zoobank.org/urn:lsid:zoobank.org:pub:DCFCDA10-3FC7-4059-A028-EA6015D0176E

INTRODUCTION

The genus *Ochinoeus* was proposed by Kubecek et al. (2015) for four newly described species based on the molecular phylogeny of Metanoeina, a subtribe established by Sklenarova et al. (2014) and placed in the tribe Metriorrhynchini (Lycidae) (Bocak, 2002; Kusy et al., 2019). The genus can be easily distinguished from all other genera of Metanoeina by the following characters (Kubecek et al., 2015): elytral secondary costae inconspicuous or completely reduced medially; phallus widened apically, internal sac with inconspicuous apical thorns; ovipositor with short and closely attached valvifers which are aligned with the axis of the coxites.

Originally, this genus included four species distributed in China and northern Laos (Kubecek et al., 2015). During our study, we assembled a series of *Ochinoeus* specimens from southern China, which allowed us to review this genus. We identified three new species from China, which are described herein. Meanwhile, all species from China are illustrated in more detail to make them better known, and to enable comparison with the new species. The results will provide us with a better understanding of the species diversity of the Chinese *Ochinoeus* fauna.

MATERIAL AND METHODS

The studied specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZAS) and the Museum of Hebei University, Baoding, China (MHBU).

The studied specimens were first softened in water, followed by the dissection of the genitalia of both sexes. Subsequently, the male genitalia were cleared in 10% NaOH solution, examined and photographed in glycerol, and finally glued onto a paper card for permanent preservation. Images of adults were captured using a Canon EOS 80D digital camera, and those of the genitalia were taken with a Leica M205A stereomicroscope; both were stacked in Helicon Focus 7 software (Helicon Soft Ltd., https://www.heliconsoft.com/heliconsoft-products/helicon-focus). The final plates were edited in Adobe Photoshop CS3.10.0.1.

The measurements were conducted using Image J 1.50i (NIH, Bethesda, MD, USA). The body length was measured from the anterior margin of the head to the elytral apex, and the width across the elytral humeri. The pronotal length was measured from the middle of the anterior margin to the middle of the posterior margin of the pronotum and the width across its widest part. The diameter of the eye was measured at the maximum point and the interocular distance at the minimum point.

The distribution information was collected from the original publication (Kubecek et al., 2015) and the present studied material. The distribution map was prepared by the ArcMap 10.8 and edited in Adobe Photoshop CS3.10.0.1.

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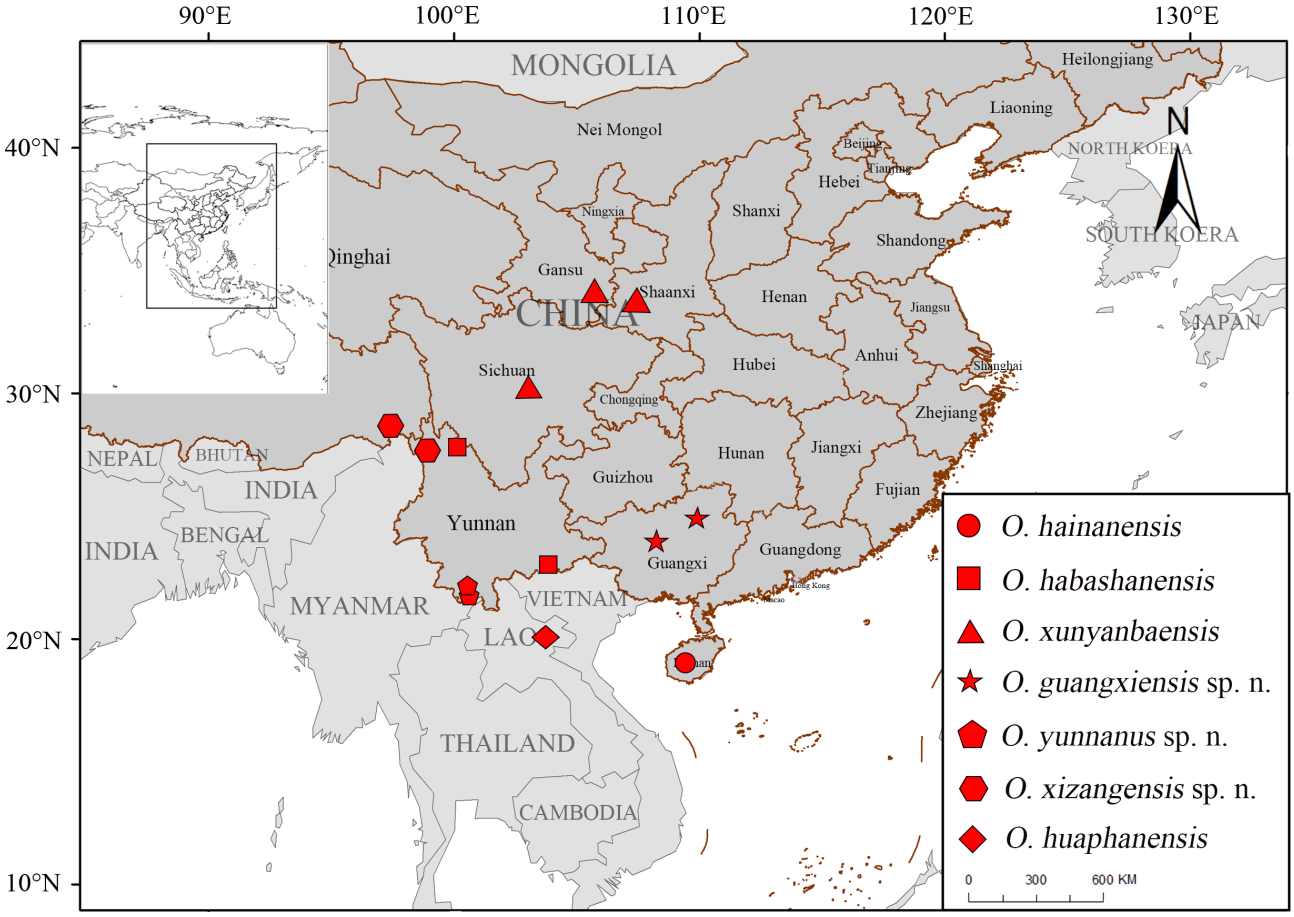

Fig. 1. Global distribution map of *Ochinoeus*.

TAXONOMY

Family Lycidae

Subfamily Metriorrhynchinae

Tribe Metriorrhynchini

Subtribe Metanoeina

Updated key to the genera of Metanoeina

1 Each elytron with four primary costae and five secondary costae 2
– Each elytron with only four primary costae ....*Xylometanoeus* Sklenarova, Kubecek & Bocak, 2014
2 Elytral secondary costae well-developed medially, transverse costae regular and well-developed; male genitalia with internal sac bearing well-developed, long thorns 3
– Elytral secondary costae inconspicuous to completely reduced medially, transverse costae sometimes missing; male genitalia with internal sac bearing inconspicuous, short thorns ..... *Ochinoeus* Kubecek, Bray & Bocak, 2015
3 Pronotal carinae weakly developed and obscure; lamella of antennomere III slender, at least 2.0× as long as the corresponding antennomere itself; male genitalia with internal sac bearing more than two thorns, subequal in length..... ..... *Metanoeus* Waterhouse, 1879
– Pronotal carinae well-developed and distinct; lamella of antennomere III robust, at most 1.5× as long as the corresponding antennomere itself; male genitalia with internal sac bearing two sclerotized thorns, one of them twice as long as the other.....*Matsudanoeus* Sklenarova, Kubecek & Bocak, 2014

Genus *Ochinoeus* Kubecek, Bray & Bocak, 2015

Ochinoeus Kubecek, Bray & Bocak, 2015: 116. Type species: *O. huaphanensis* Kubecek, Bray & Bocak, 2015 (original designation).

Updated diagnosis. Body small to medium in size (7.0–15.0 mm in length), dark brown to black, pronotum and elytra red, brown to dark brown, covered with short pubescence. Antennae 11-segmented, scapus pear-shaped, pedicel short, antennomeres III–X flabellate in males (Figs 2, 3), serrate in females, XI nearly parallel-sided. Pronotum (Fig. 4) nearly trapezoidal, with seven areolae, frontal-medial (Fig. 4a) and basal carinae (Fig. 4d) well-developed, but sometimes fronto-lateral (Fig. 4b) and/or postero-lateral (Fig. 4c) carinae reduced and almost invisible. Scutellum slightly narrowed posteriorly and clearly emarginate at apex. Elytra with four well-developed primary costae (Fig. 5a) and five weakly developed secondary costae (Fig. 5b), irregular or missing especially at centre of elytra. Male genitalia (Fig. 6) without parameres; phallobase circular, with extensive membrane ventrally; phallus barrel-shaped, expanded ventrally at apical part, protruding apically, rounded or hooked at apex; internal sac with two weakly sclerotized or inconspicuous thorns apically. Female genitalia (Kubecek et al., 2015: Fig. 33) with slender and short coxites, closely attached to valvifers, which are always shorter than coxites. Vagina (Kubecek

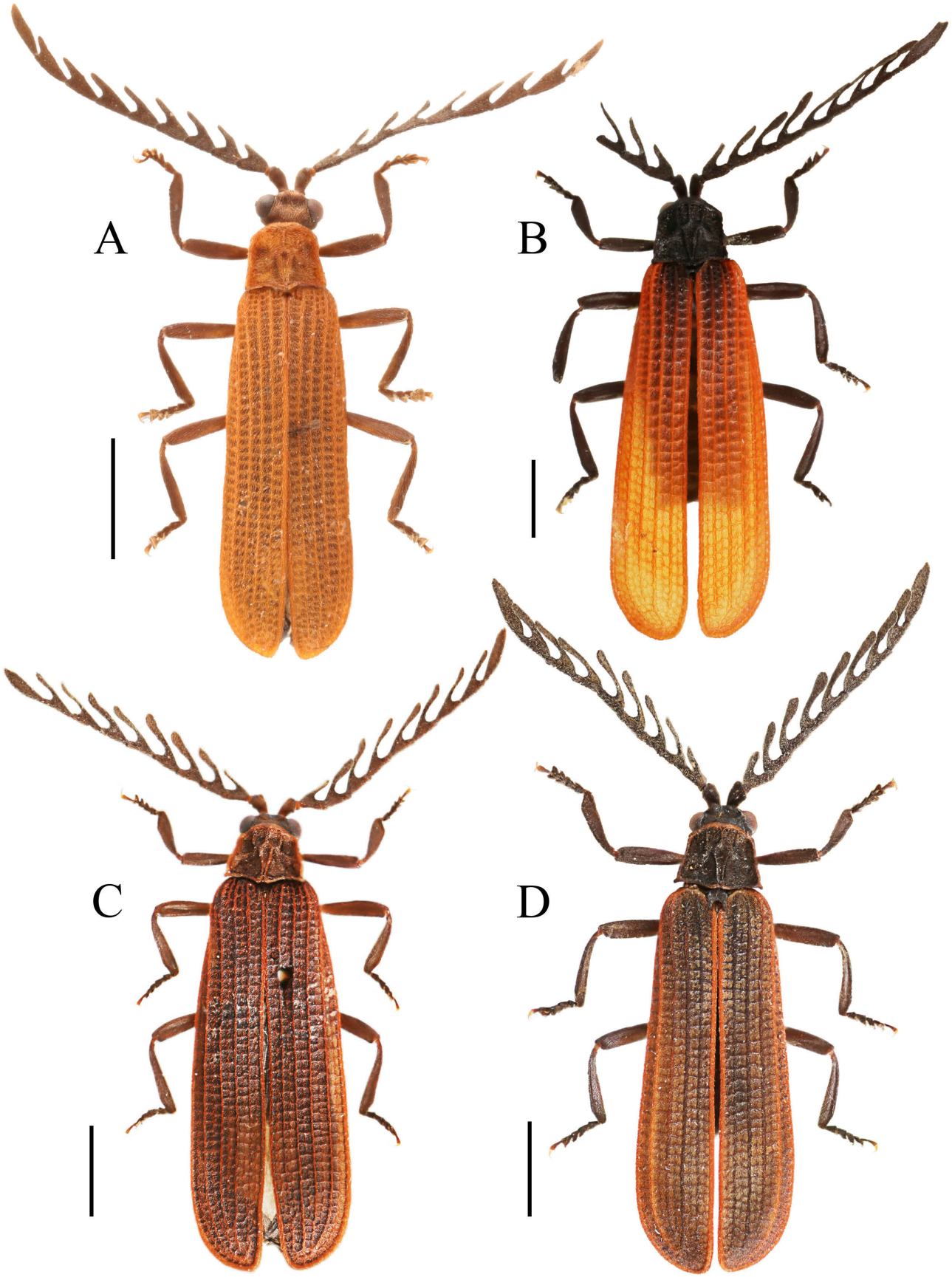

Fig. 2. Male habitus, dorsal view: A – *Ochinoeus hainanensis* Kubecek, Bray & Bocak, 2015; B – *O. habashanensis* Kubecek, Bray & Bocak, 2015; C – *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015; D – *O. guangxiensis* sp. n. Scale bars: 2.0 mm.

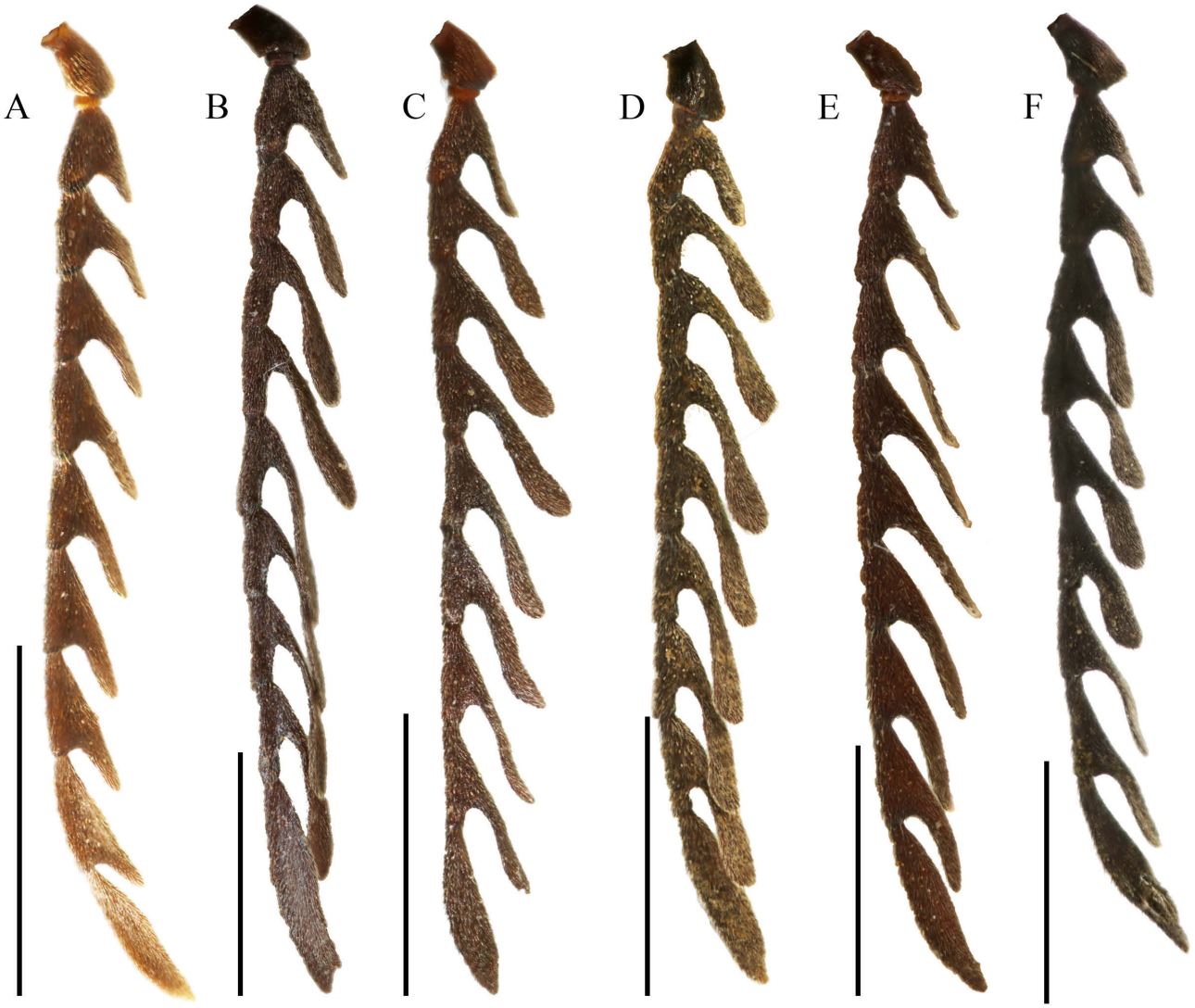

Fig. 3. Male antennae of *Ochinoeus* species, lateral view: A – *O. hainanensis* Kubecek, Bray & Bocak, 2015; B – *O. habashanensis* Kubecek, Bray & Bocak, 2015; C – *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015; D – *O. guangxiensis* sp. n.; E – *O. yunnanus* sp. n.; F – *O. xizangensis* sp. n. Scale bars: 2.0 mm.

et al., 2015: Fig. 33) expanded and membranous, lateral glands with basally sclerotized ducts.

Distribution (Fig. 1). China (Shaanxi, Gansu, Chongqing, Sichuan, Guizhou, Guangxi, Hainan, Yunnan, Xizang), Laos.

Included species. *Ochinoeus huaphanensis* Kubecek, Bray & Bocak, 2015, *O. hainanensis* Kubecek, Bray & Bocak, 2015, *O. habashanensis* Kubecek, Bray & Bocak, 2015, *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015, *O. guangxiensis* sp. n., *O. yunnanus* sp. n., and *O. xizangensis* sp. n.

Ochinoeus hainanensis Kubecek, Bray & Bocak, 2015

Figs 1, 2A, 3A, 4A, 5A, 6A–C

Ochinoeus hainanensis Kubecek, Bray & Bocak, 2015: 120, Figs 4, 7, 15, 21, 31, 32.

Redescription. Body length 7.0–9.1 mm, width at humeri 1.7–1.8 mm.

Male (Fig. 2A). Body black to dark brown, pronotum reddish orange, sometimes with a black patch in middle of disc; elytra and scutellum reddish orange.

Head dorsally flat, eyes moderately large, interocular distance 1.0–1.2× maximum eye diameter. Antennae reaching apical fifth of elytra when folded back, lamellae of antennomeres IV–X with their bases extending along whole length of corresponding stem and tapered laterally, 1.2–1.3× longer than the corresponding antennomere itself, antennomere XI fusiform and 4.5× as long as wide (Fig. 3A).

Pronotum (Fig. 4A) 1.2–1.3× as wide as long, with anterior angles rounded, posterior angles weakly projecting and acute, anterior margin feebly arched, lateral margins nearly straight and posterior margin bisinuate; disc with fronto-lateral carinae reduced in anterior part, postero-lateral carinae weakly developed and indistinct, posterior carinae strongly converging posteriorly and joining in the middle.

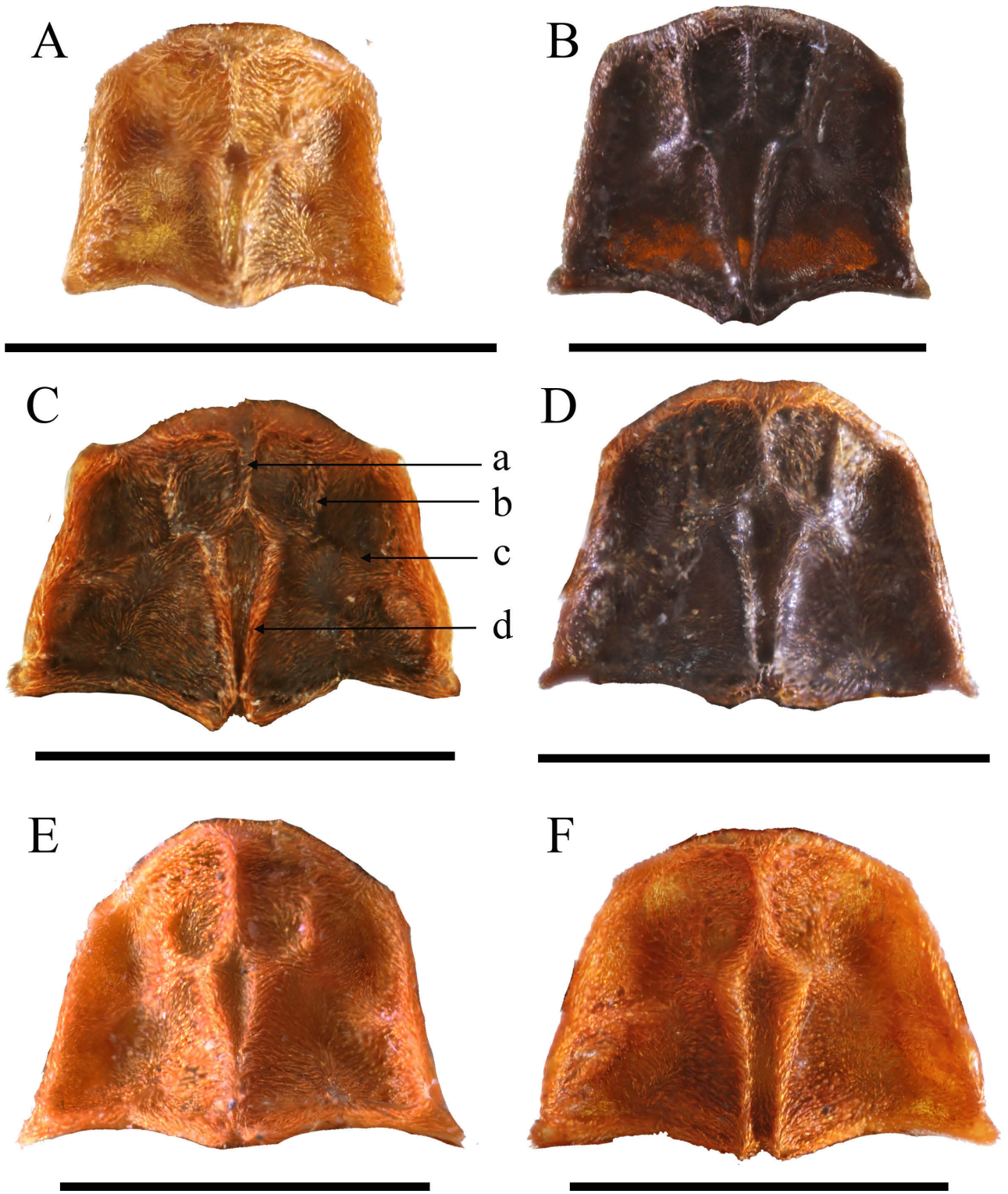

Fig. 4. Pronotum of *Ochinoeus* species (a – frontal-medial carina; b – fronto-lateral carina; c – postero-lateral carina; d – basal carina), dorsal view: A – *O. hainanensis* Kubecek, Bray & Bocak, 2015; B – *O. habashanensis* Kubecek, Bray & Bocak, 2015; C – *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015; D – *O. guangxiensis* sp. n.; E – *O. yunnanus* sp. n.; F – *O. xizangensis* sp. n. Scale bars: 2.0 mm.

Elytra (Fig. 5A) slightly widened posteriorly, 2.7–2.8× as long as wide and 5.7–5.8× as long as pronotum, primary costae well-developed, secondary costae marked at humeri and apical part, while reduced and indistinct in middle part; cells mostly squared.

Aedeagus: phallus slender and 4.1× as long as wide, slightly widened medially and widely rounded at apex in dorsal and ventral views (Fig. 6A, B); phallus moderately expanded ventrally in lateral view, nearly straight dorsally, narrowly rounded at apex (Fig. 6C); internal sac with short apical thorns (Fig. 6A, B).

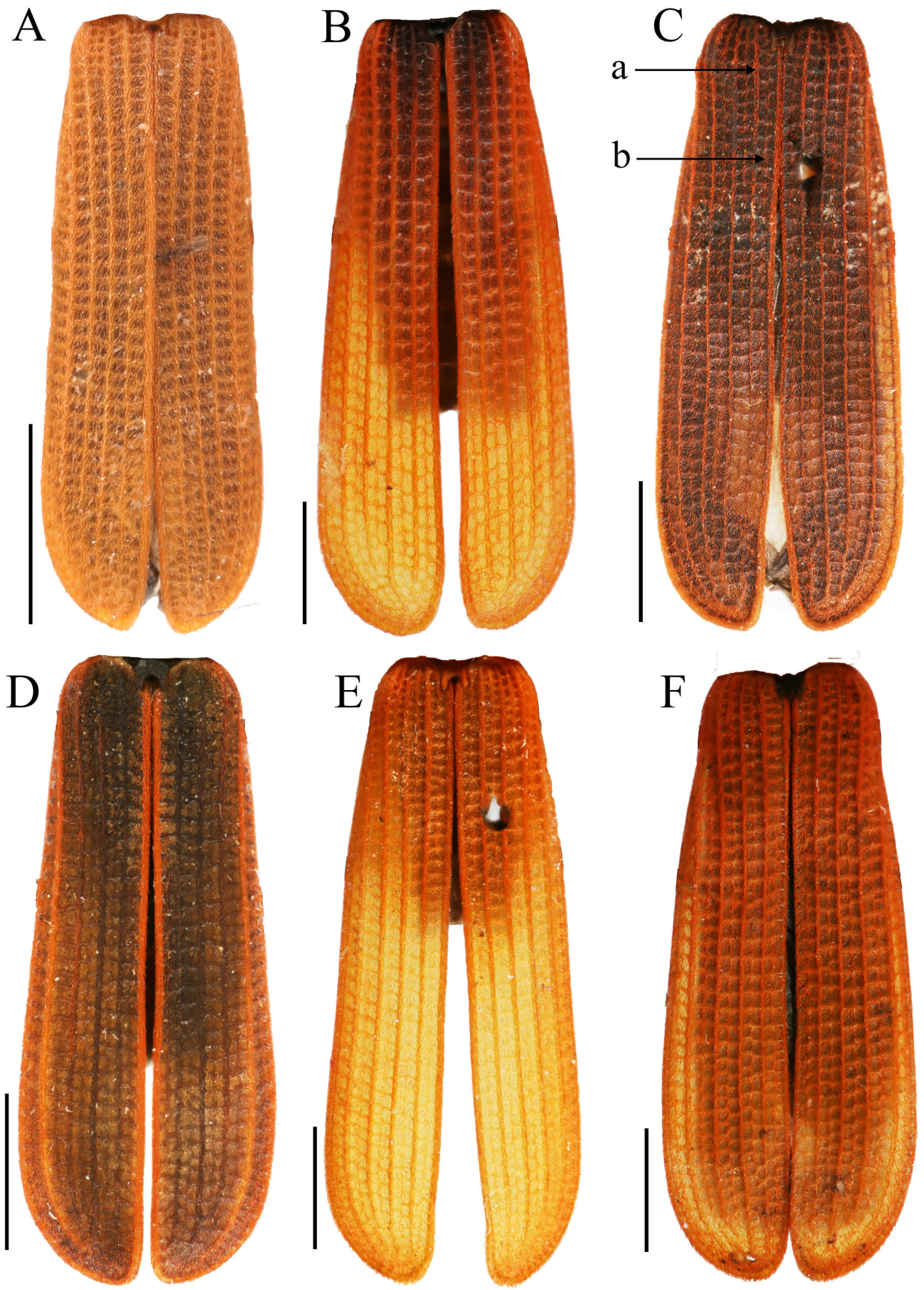

Fig. 5. Male elytra of *Ochinoeus* species (a – primary costa; b – secondary costa), dorsal view: A – *O. hainanensis* Kubecek, Bray & Bocak, 2015; B – *O. habashanensis* Kubecek, Bray & Bocak, 2015; C – *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015; D – *O. guangxiensis* sp. n.; E – *O. yunnanus* sp. n.; F – *O. xizangensis* sp. n. Scale bars: 2.0 mm.

Fig. 6. Aedeagi of *Ochinoeus* species: A–C – *O. hainanensis* Kubecek, Bray & Bocak, 2015; D–F – *O. habashanensis* Kubecek, Bray & Bocak, 2015; G–I – *O. xunyanbaensis* Kubecek, Bray & Bocak, 2015; J–L – *O. guangxiensis* sp. n.; M–O – *O. yunnanus* sp. n.; P–R – *O. xizangensis* sp. n. A, D, G, J, M, P – ventral views; B, E, H, K, N, Q – dorsal views; C, F, I, L, O, R – lateral views. Scale bars: 0.5 mm.

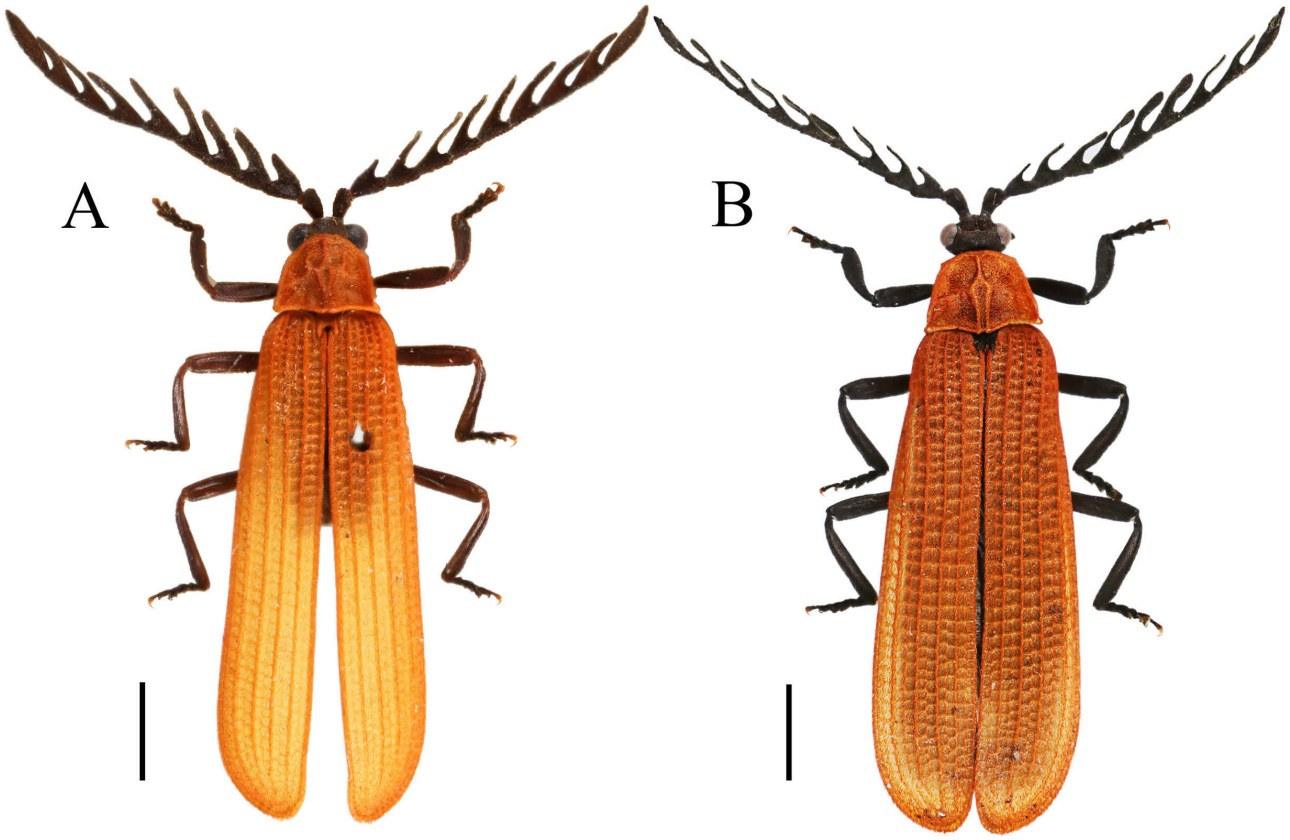

Fig. 7. Male habitus, dorsal view: A – *Ochinoeus yunnanus* sp. n.; B – *O. xizangensis* sp. n. Scale bars: 2.0 mm.

Female. Not available to us, genitalia described by Kubecek et al. (2015).

Material examined. CHINA: 1♂ (IZAS), Hainan, Jianfengling, 18.iii.1980, 700 m, leg. Fuji Pu; 1♂ (MHBU), Hainan, Wuzhishan, Shuiman, 13.v.2013, 637 m, leg. Junyan Su; 1♂ (IZAS), Hainan, Jianfengling, 23.iv.1980, 1000 m, leg. Shuyong Wang.

Type locality. China, Hainan, Jianfengling.

Distribution (Fig. 1). China (Hainan).

Remarks. With the discovery of additional specimens, greater variation in the characteristics of this species has been observed, including variation in body length and colouration. Also, the original manuscript only illustrated the first five antennomeres of the male and a small central part of the elytra, thus it is necessary to provide general views for these features here. Further, macrophotographs of the habitus, pronotum and aedeagus are provided to facilitate comparison with the new species and to aid in distinguishing each species in the key.

Ochinoeus habashanensis Kubecek, Bray & Bocak, 2015

Figs 1, 2B, 3B, 4B, 5B, 6D–F

Ochinoeus habashanensis Kubecek, Bray & Bocak, 2015: 120, Figs 8, 16, 22, 25, 26.

Redescription. Body length 10.0–12.0 mm, width at humeri 2.0–2.5 mm.

Male (Fig. 2B). Body black, pronotum uniformly yellow or black, sometimes black with yellow margins; elytra red and black at humeri, scutellum black.

Head dorsally flat, eyes moderately large, interocular distance 1.2–1.3× maximum eye diameter. Antennae reaching the apical quarter of elytra when folded back, lamellae of antennomeres III–X nearly parallel-sided along the entire length, 1.5–2.5× as long as the corresponding antennomere itself, antennomere XI fusiform and 5.3× as long as wide (Fig. 3B).

Pronotum (Fig. 4B) 1.2–1.3× as wide as long, with anterior angles rounded; posterior angles sharply projecting, anterior margin weakly arched, lateral margins nearly straight and posterior margin nearly bisinuate; disc with postero-lateral carinae weakly developed and indistinct, posterior carinae strongly converging posteriorly and joining in the middle.

Elytra (Fig. 5B) moderately widened posteriorly, 2.3× as long as wide, 5.5× as long as pronotum, primary costae well-developed, secondary costae weakly developed and often interrupted, cells squared or rectangular.

Aedeagus: phallus stout and 3.9× as long as wide, strongly widened centrally and abruptly constricted apically in dorsal and ventral views (Fig. 6D, E); phallus strongly expanded ventrally in lateral view, distinctly sinuate dorsally, sharply hooked and bent dorsally at apex (Fig. 6F); internal sac with short apical thorns (Fig. 6D, E).

Female. Unknown.

Material examined. CHINA: 1♂ (MHBU), Yunnan, Pingbian, Daweishan, 22.v.1996, 1700 m, leg. Leiyi Zhen; 1♂, 1♀ (MHBU), Yunnan, Lanpin, Lashashan, 1700 m, 8.vii.2017, leg. Jishan Xu.

Type locality. China, Yunnan, Habashan.

Distribution (Fig. 1). China (Yunnan).

Remarks. As in *O. hainanensis*, the male habitus, antenna, pronotum, elytra and aedeagus are illustrated for this species to make comparison with other species easier.

Ochinoeus xunyanbaensis Kubecek, Bray & Bocak, 2015

Figs 1, 2C, 3C, 4C, 5C, 6G–I

Ochinoeus xunyanbaensis Kubecek, Bray & Bocak, 2015: 121, Figs 6, 14, 20, 29–30.

Redescription. Body length 8.0–10.0 mm, width at humeri 2.0–2.5 mm.

Male (Fig. 2C). Body black-brown, pronotum and elytra brownish red, more or less darkened at disc, scutellum brownish red.

Head dorsally flat, eyes moderately large, interocular distance 1.2–1.3× maximum eye diameter. Antennae reaching apical quarter of elytra when folded back, lamellae of antennomeres III–X nearly parallel-sided along the entire length, 1.4–2.0× as long as the corresponding antennomere itself, antennomere XI fusiform and 4.6× as long as wide (Fig. 3C).

Pronotum (Fig. 4C) 1.3–1.4× as wide as long, with anterior angles rectangular, posterior angles weakly projecting and acute, anterior margin moderately arched, lateral margins nearly straight and posterior margin bisinuate; disc with postero-lateral carinae reduced and indistinct, posterior carinae strongly converging posteriorly, but never joining.

Elytra (Fig. 5C) moderately widened posteriorly, 2.3–2.4× as long as wide, 6.5× as long as pronotum, with primary costae moderately developed, secondary costae weekly developed, irregular and often interrupted, cells rectangle or irregular.

Aedeagus: phallus slender and 4.9–5.0× as long as wide, moderately widened centrally and abruptly constricted apically in dorsal and ventral views (Fig. 6G, H); phallus moderately expanded ventrally in lateral view, feebly sinuate dorsally, rounded at apex (Fig. 6I); internal sac with short apical thorns (Fig. 6G, H).

Female. Unknown.

Material examined. CHINA: 1♂ (IZAS), Shaanxi, Ningshan, Huoditang, 26.vi.1999, 1580–1650 m, leg. Decheng Yuan; 1♂ (MHBU), Sichuan, Liziping, Gongyihai, 25.vii.2016, leg. Caixia Yuan, Saihong Dong & Shanshan Liu; 1♂ (MHBU), Gansu, Huixian, Jialing, Wangjiatan, 7.vi.2021, leg. Rui Liu.

Type locality. China, Shaanxi, Xunyangba.

Distribution (Fig. 1). China (Shaanxi, Gansu, Sichuan).

Remarks. Similar to *O. habashanensis*, the habitus is illustrated for the first time here, and its distribution range is greatly expanded with the discovery of additional specimens.

Ochinoeus guangxiensis sp. n.

Figs 1, 2D, 3D, 4D, 5D, 6J–L

ZooBank taxon LSID:
46AFCFAA-411D-4C65-BB01-5BBE1C3D8E89

Diagnosis. This species resembles *O. xunyanbaensis* in general appearance, but differs in the following characters: pronotum black with red margins, anterior angle rounded (Fig. 4D), whereas *O. xunyanbaensis* is uniformly brownish red and anterior angle rectangular (Fig. 4C); scutellum black and elytra bicoloured (Fig. 2D), whereas scutellum brownish red and elytra unicoloured in *O. xunyanbaensis* (Fig. 2C); phallus stout and 3.2–3.3× as long as wide, strongly widened centrally in dorsal and ventral views (Fig. 6J, K), whereas phallus slender and 4.9–5.0× as long as wide, moderately in widened centrally in *O. xunyanbaensis* (Fig. 6G, H).

Description. Body length 10.0–11.0 mm, width at humeri 2.5–2.6 mm.

Male (Fig. 2D). Body black to dark brown, pronotum black with narrow brownish red margin, elytra black, brownish red at humeri, elytral costae IV and all margins; scutellum black.

Head dorsally flat, eyes moderately large, interocular distance 1.3× maximum eye diameter. Antennae reaching apical quarter of elytra when folded back, lamellae of antennomeres III–X nearly parallel-sided along the entire length, 1.3–2.0× as long as the corresponding antennomere itself, antennomere XI fusiform and 5.3× as long as wide (Fig. 3D).

Pronotum (Fig. 4D) 1.35× as wide as long, with anterior angles rounded, posterior angles sharply projecting, anterior margin feebly arched, lateral margins nearly straight and posterior margin weakly bisinuate; disc with middle postero-lateral carinae greatly reduced and indistinct, posterior carinae feebly converging posteriorly.

Elytra (Fig. 5D) moderately widened posteriorly, 2.3× as long as wide, 6.0× as long as pronotum, with primary costae well-developed, secondary costae weakly developed, marked at humeri and apical part of elytra, often interrupted in middle part, cells mostly irregular.

Aedeagus: phallus stout and 3.2–3.3× as long as wide, strongly widened centrally and progressively narrowed apically, truncate at apex in dorsal and ventral views (Fig. 6J, K); phallus strongly expanded ventrally in lateral view, bisinuate dorsally, subrounded at apex (Fig. 6L); internal sac with short apical thorns (Fig. 6J, K).

Female. Unknown.

Type material. Holotype: ♂ (MHBU), CHINA, Guangxi, Wuming, Damingshan, 25.v.2011, 600–900 m, leg. Haoyu Liu. Paratype: 1♂ (IZAS), CHINA, Guangxi, Jinxiu, Yinshanzhan, 10.v.1999, leg. Xuezhong Zhang.

Type locality. China, Guangxi, Wuming, Damingshan.

Etymology. The name of the species is derived from the name of the type locality, Guangxi Autonomous Region, China.

Distribution (Fig. 1). China (Guangxi).

Ochinoeus yunnanus sp. n.

Figs 1, 3E, 4E, 5E, 6M–O, 7A

ZooBank taxon LSID:
8ED690D1-5D50-4126-BD36-CE67B7600E33

Diagnosis. This species resembles *O. habashanensis* in the shape of phallus, but differs in the following characters: pronotum with anterior margin strongly arched, fronto-lateral carinae missing at apical part (Fig. 4B), whereas anterior margin feebly arched, fronto-lateral carinae well-developed in *O. habashanensis* (Fig. 4E); elytra and scutellum uniformly reddish orange (Fig. 7A), whereas elytra bicoloured and scutellum black in *O. habashanensis* (Fig. 2B); internal sac strongly sclerotized, with large apical thorns (Fig. 6O), whereas weakly sclerotized with small apical thorns in *O. habashanensis* (Fig. 6F).

Description. Body length 12.3–12.5 mm (holotype 12.5 mm), width at humeri 2.7–2.8 mm (holotype 2.8 mm).

Male (Fig. 7A). Body black to dark brown, pronotum, scutellum and elytra reddish orange.

Head dorsally flat, eyes moderately large, interocular distance 1.22× maximum eye diameter. Antennae reaching apical quarter of elytra when folded back, lamellae of antennomeres III–X nearly parallel-sided along the entire length, 1.3–2.3× as long as the corresponding antennomere itself, antennomere XI fusiform and 4.7× as long as wide (Fig. 3E).

Pronotum (Fig. 4E) 1.35× as wide as long, with anterior angles rounded, posterior angles sharply projecting, anterior margin strongly arched, lateral margins nearly straight and posterior margin feebly bisinuate; disc with fronto-lateral missing at apical part, postero-lateral carinae greatly reduced and indistinct, posterior carinae confluent with each other at posterior half.

Elytra (Fig. 5E) moderately widen posteriorly, 2.5× as long as wide, 6.5× longer than pronotum, with primary costae well-developed, secondary costae weakly developed, often interrupted in middle part, cells most rectangle.

Aedeagus: phallus stout and about 3.2× as long as wide, strongly widened centrally and abruptly narrowed apically in dorsal and ventral views (Fig. 6M, N); phallus strongly expanded ventrally in lateral view, slightly bisinuate dorsally, sharply hooked and bent dorsally at apex (Fig. 6O); internal sac with large apical thorns (Fig. 6M, O).

Female. Unknown.

Type material. Holotype: ♂ (IZAS, IOZ(E)1120854), CHINA, Yunnan, Xishuangbanna, Damenglong, 20.v.1958, 650 m, leg. Chunpei Hong. Paratype: 1♂ (IZAS, IOZ(E)1121159), CHINA, Yunnan, Menghai, Nannuoshan, 28.iv,1957, 1100–1200m, leg. Guangji Hong.

Type locality. China, Yunnan, Xishuangbanna, Damenglong.

Etymology. The specific name is derived from the name of the type locality, Yunnan Province, China.

Distribution (Fig. 1). China (Yunnan).

Ochinoeus xizangensis sp. n.

Figs 1, 3F, 4F, 5F, 6P–R, 7B

ZooBank taxon LSID:
94237959-54C4-47D2-8B1C-DC38AC655FE0

Diagnosis. This species resembles *O. huaphanensis* Kubecek, Bray & Bocak, 2015 in the general shape of the phallus, but differs in the following characters: eyes small, interocular distance 1.5× maximum eye diameter (Fig. 7B), whereas eyes large, interocular distance ~1.0× maximum eye diameter in *O. huaphanensis* (Kubecek et al., 2015: Fig. 3); pronotum with posterior carinae nearly parallel to each other (Fig. 4F), whereas converging posteriorly and joining in *O. huaphanensis* (Kubecek et al., 2015: Fig. 9); phallus nearly symmetric in ventral view (Fig. 6P), whereas asymmetric in *O. huaphanensis* (Kubecek et al., 2015: Fig. 27).

Description. Body length 12.4–12.5 mm (holotype 12.5 mm), width at humeri 2.8–3.0 mm (holotype 3.0 mm).

Male (Fig. 7B). Body black, pronotum and elytra reddish orange, scutellum black.

Head dorsally flat, eyes small, interocular distance 1.5× maximum eye diameter. Antennae reaching apical quarter of elytra when folded back, lamellae of antennomeres III–X nearly parallel-sided along the entire length, 1.4–1.8× as long as the corresponding antennomere itself, antennomere XI fusiform and 5.0× as long as wide (Fig. 3F).

Pronotum (Fig. 4F) 1.4× as wide as long, with anterior angles rounded, posterior angles feebly projecting and acute, anterior margin feebly arched, lateral margins nearly straight and posterior margin feebly bisinuate; disc with fronto- and postero-lateral carinae greatly reduced and indistinct, posterior carinae nearly parallel to each other.

Elytra (Fig. 5F) moderately widened posteriorly, 2.4× as long as wide, 6.3× as long as pronotum, with primary costae well-developed, secondary costae weakly and often irregularly developed, cells irregular.

Aedeagus: phallus slender and 4.3× as long as wide, moderately widened centrally and progressively narrowed apically, rounded at apex in dorsal and ventral views (Fig. 6P, Q); phallus moderately expanded ventrally in lateral view, slightly sinuate dorsally, narrowly rounded at apex (Fig. 6R); internal sac with short apical thorns (Fig. 6P, Q).

Female. Unknown.

Type material. Holotype: ♂ (MHBU), CHINA, Xizang, Cawarong, Tangduilaka, 18.vii.2021, 3255 m, leg. Guodong Ren. Paratype: 1♂ (IZAS, IOZ(E)1127208), CHINA, Yunnan, Weixi, Lidiping, 16.viii.1984, 3200 m, leg. Shuyong Wang.

Type locality. China, Xizang, Cawarong.

Etymology. The name of the species is derived from the name of the type locality, Xizang Autonomous Region, China.

Distribution (Fig. 1). China (Xizang, Yunnan).

A key to males of *Ochinoeus*

1 Pronotal fronto-lateral carinae well-developed along entire length (Fig. 4B, C, D) 2
– Pronotal fronto-lateral carinae at least reduced anteriorly (Fig. 4A, E, F) 4
2 Elytra reddish orange (Fig. 5B); phallus hooked at apex (Fig. 6D–F); China (Yunnan) ..... *O. habashanensis*
– Elytra brownish red or black (Fig. 5C, D); phallus rounded at apex (Fig. 6G–L) 3

3 Pronotum black with narrow brownish red margins, scutellum black (Fig. 2D); phallus robust (3.2–3.3× as long as wide), strongly widened centrally in dorsal and ventral views (Fig. 6J, K); China (Guangxi)..... *O. guangxiensis* sp. n.
– Pronotum and scutellum uniformly brownish red (Fig. 2C); phallus slender (4.9–5.0× as long as wide), feebly widened centrally in dorsal and ventral views (Fig. 6G, H); China (Shaanxi, Gansu, Sichuan)..... *O. xunyanbaensis*
4 Pronotal fronto-lateral carinae well-developed and marked at basal part (Fig. 4E); phallus hooked at apex (Fig. 6O); China (Yunnan) ..... *O. yunnanus* sp. n.
– Pronotal fronto-lateral carinae reduced and indistinct along entire length (Fig. 4A, F); phallus rounded at apex (Fig. 6C, R) 5
5 Lamellae of antennomeres III–X tapered laterally, at most 1.3× as long as the corresponding antennomere itself (Fig. 3A); phallus feebly narrowed apically in ventral or dorsal view (Fig. 6A); China (Hainan)..... *O. hainanensis*
– Lamellae of antennomeres III–X nearly parallel-sided along entire length, at least 1.4× as long as the corresponding antennomere itself (Fig. 3F); phallus clearly narrowed apically in ventral or dorsal view 6
6 Eyes small, interocular distance 1.5× maximum eye diameter (Fig. 7B); pronotum with posterior carinae nearly parallel to each other (Fig. 4F); China (Xizang)..... *O. xizangensis* sp. n.
– Eyes large, interocular distance ~1.0× maximum eye diameter (Kubecek et al., 2015: Fig. 3); pronotum with posterior carinae converging posteriorly and joining (Kubecek et al., 2015: Fig. 9); Laos (Hua Phan) ..... *O. huaphanensis*

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REFERENCES

Bocak L. 2002: Revision and phylogenetic analysis of Metriorrhynchinae. — *Eur. J. Entomol.* **99**: 315–351.

Kubecek V., Bray T.C. & Bocak L. 2015: Molecular phylogeny of Metanoeina net-winged beetles identifies *Ochinoeus*, a new genus from China and Laos (Coleoptera: Lycidae). — *Zootaxa* **3955**: 113–122.

Kusy D., Motyka M., Bocak M., Masek M. & Bocak L. 2019: Phylogenomic analysis resolves the relationships among net-winged beetles (Coleoptera: Lycidae) and reveals the parallel evolution of morphological traits. — *Syst. Entomol.* **44**: 911–925.

Sklenarova K., Kubecek V. & Bocak L. 2014: Subtribal classification of Metriorrhynchini (Insecta: Coleoptera: Lycidae): An integrative approach using molecular phylogeny and morphology of adults and larvae. — *Arthropod Syst. Phylog.* **72**: 37–54.

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