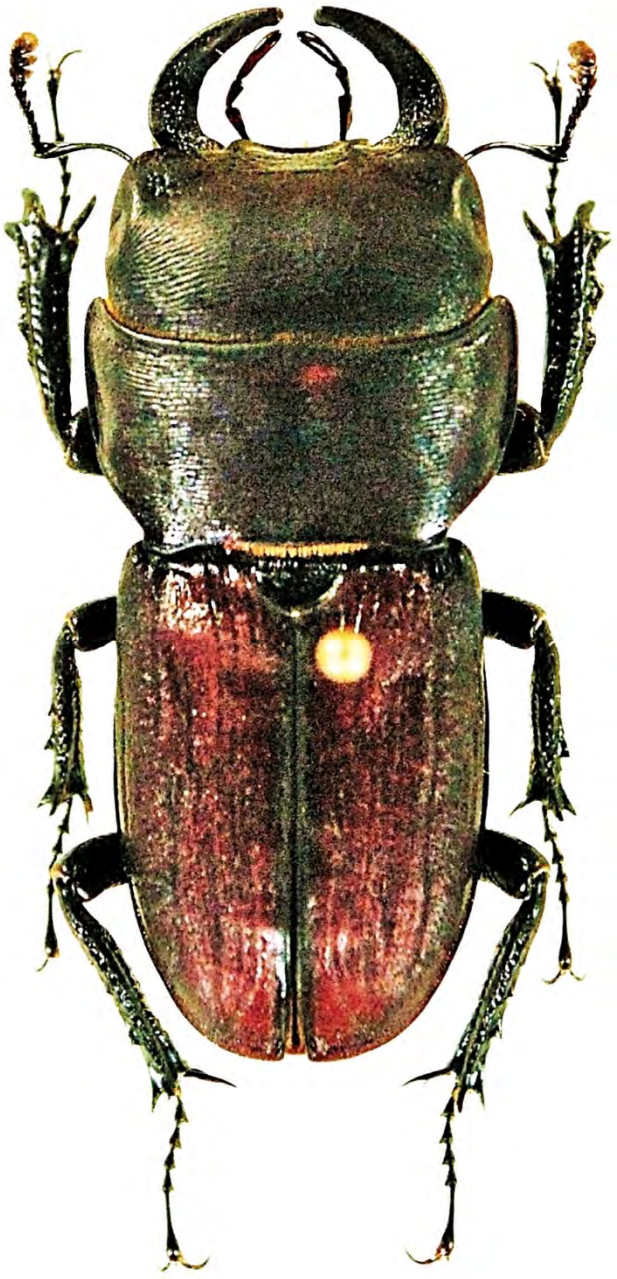
Beetles World

Journal of biodiversity in Coleoptera



No. 22

September 30, 2020

Imprint

Beetles World

ISSN 1867 - 2892
Covered by Zoological Record

Beetles World

Is an occasional published journal devoted to taxonomy and to biodiversity of *Coleoptera*. We offer cooperation on the new description for every taxonomist from all parts of the world. Any descriptions and taxonomical act should be in accordance with the criteria defined by ICZN. Articles must be in English or in another mainly spoken language in science with English abstract. All rights, including reprinting of extracts, electronic or optical reproduction and translation are belonging to the publisher.

Editor & Publisher

Dr. Klaus-Dirk Schenk
Hermann-Löns-Str. 10,
37287 Wehretal – Germany
E-mail: dr.kdirkschenk@unitybox.de

Editorial Board

Andreas Kirchner, Neuburg - Germany
Karl Martini, Ingolstadt - Germany
Frank Fiedler, Grossbreitenbach - Germany

Pictures & Layout

Frank Fiedler, Grossbreitenbach – Germany
E-mail: info@frankfiedler.com
Web: http://www.frankfiedler.com

Contents

Cover
♂ ***Noseolucanus zhengi*** from Motuo, Tibet

The second species of *Capreolucanus* Didier, 1928 (Coleoptera: Lucanidae: Lucaninae) from Yunnan, China

Cheng-Bin Wang

Engineering Research Center for Forest and Grassland Disaster Prevention and Reduction, Mianyang Normal University, 166 Mianxing West Road, Mianyang 621000, Sichuan Province, P. R. China. Email: entomologist@qq.com

Abstract

A new species of stag beetle, ***Capreolucanus zhuchuangi*** spec. nov. (*Coleoptera: Lucanidae: Lucaninae*) is described from Yunnan Province, China. The differential diagnosis of the new species from *C. sicardi* Didier, 1928 is provided. Important morphological characters of the new species are illustrated.

Keywords

Capreolucanus, China, Lucanidae, Lucaninae, new species, taxonomy

Introduction

The monotypic genus *Capreolucanus* (*Coleoptera: Lucanidae: Lucaninae: Capreolucanini*) was erected by Didier in 1928 for *Capreolucanus sicardi* from North Vietnam (Didier, 1928). Nagai described two subspecies: *C. sicardi akitai* from Northwest Thailand and *C. sicardi nosei* from North Myanmar (Nagai, 2002). Huang & Chen carefully studied specimens of *C. sicardi* from China in the fascicles III of their milestone books, *Stag Beetles of China* (Huang et Chen, 2017). They found specimens of this species from different localities seem to support their own geographical form, and believed the subspecific classification is meaningless and not suitable. In the present study, the author describes and illustrates a new species, ***Capreolucanus zhuchuangi*** spec. nov., collected from Yunnan Province, China. Important morphological characters of the new species are illustrated in colour plates.

Materials and methods

Specimen was relaxed and softened in a HH-2 digital homoeothermic water bath at 44.4℃ for 24 hours, then transferred to distilled water to clean, observe and dissect. In order to examine the genitalia, the abdomen was detached and treated with a 10% solution of potassium hydroxide for 12 hours, then transferred to distilled water to flush the remaining KOH and stop any further bleaching. After examination, the body parts were mounted on a glass slide with Euparal Mounting Medium for future studies. Habitus photographs were taken using a Canon macro photo lens MP-E 65mm on a Canon 5DS R. Detailed photographs with transmitted light were performed using a Shanghai BM-SG12S microscope with a Canon 550D. The final deep focus images were created with Zerene Stacker 1.04 stacking software. Adobe Photoshop CS6 was used for post-processing. The morphological terminology follows Holloway (2007) and Huang & Chen (2010, 2013, 2017).

The material examined for this study is deposited in the insect collection of Mianyang Normal University, Mianyang, China (MYNU).

Measurement criteria in millimetres (mm) are as follows:

- Body length: length between the apex of mandible and the elytral apex along the midline.
- Elytral length: length between the basal border and the apex of elytra along suture.
- Elytral width: widest part of both elytra combined.
- Head length: length between the anterior apex of clypeus and the posterior margin of occiput along the midline.
- Head width: widest part of head (including eyes).
- Mandible length: length from the apex of mandible to its base.
- Pronotal length: length of the pronotum along the midline.
- Pronotal width: widest part of pronotum.

Results

Genus *Capreolucanus* Didier, 1928

Chinese Vernacular name: 狍锹属

***Capreolucanus zhuchuangi* Wang, spec. nov.**
http://zoobank.org/2AF4FBBB-2C81-4B27-9A6E-C522D05F7DA5

Chinese Vernacular name: 朱创狍锹

Figs. 1A–D; 2A–F; 3A–C

Type material. Holotype: ♂, CHINA, Yunnan: Xishuangbanna Prefecture, Jinghong City, Gasa town [嘎洒镇], power station near Huihuo Village [回火村], 1150 m, light trap, 10.VII.2020, Yi Li leg. (MYNU).

Description.

Male holotype. Size small for the genus, body 14.0 mm long, widest at lateral corners of pronotum. Length of different body parts: head (1.5 mm), mandible (2.7 mm), pronotum (3.0 mm), elytra (6.8 mm); width: head (3.7 mm), pronotum (4.9 mm), elytra (4.8 mm).

Habitus (Figs. 1A-D). Colour black; pronotum with two cross-like orange red stripes flank midline: the longitudinal bands curved inwards; the horizontal bands curved forwards; all legs orange red in about apical 1/3. Body generally glabrous; metasternum without distinct pubescence.

Head (Figs. 1A-C) wider than long, widest at eyes. Clypeolabrum trapezoidal, straight at apical margin. Forehead with anterior margin forming a low substraight ridge. Disc with a large semi-circular depressed area. Preocular margin slightly emarginate; postocular margin obliquely straight. Front corners round. Mandible about 1.7 times as long as head, weakly incurved in apical part; inferior edge of internal surface with 10-11 continuous round teeth; superior edge of internal surface with 3 small round teeth, basal one pointing inwards, medial one pointing interodorsally, subapical one pointing dorsally. Eyes big and prominent. Antennal club with 3 antennomeres; antennomere VI moderately extended inwards; antennomere VII strongly extended inwards; antennomeres VIII-X lamellate. Mentum widely triangular.

Pronotum (Fig. 1A) 1.6 times wider than long, widest at subround lateral corners. Front and hind corners round. Lateral margin obliquely straight between front and lateral corners, and between lateral and hind corners. Midline area slightly depressed.

Legs (Figs. 1A-C). Protibia with 9-10 continuous lateral teeth along outer margin, subacute to obtuse at different level; apex bifurcate with acute branches at tip. Mesotibiae and metatibiae without lateral spines.

Male abdomen and genitalia. Abdominal sternite VII (Fig. 2A) slightly emarginate in middle of apical margin. Abdominal tergite VIII (Fig. 2B) subpentagonal, with round lateral corners; abdominal sternite VIII (Fig. 2C) with transverse membranous area in lateral of basal part. Abdominal pleurite IX (Fig. 2E) narrowly separated dorsally; abdominal sternite IX (Fig. 2D) with a transverse short membranous area along apical margin. Aedeagus (Fig. 3A) in ventral view about 2.8 times longer than wide. Basal piece (Figs. 3A-B) distinctly constricted in basal part, about 1.5 times as long as parameres, with a pair of sclerotized dorsal plates (Fig. 3B); ventral plate (Fig. 3A) semicircular and membranous at apex of distal end of basal piece; a triangular sclerotized area present behind membranous apex. Paramere without basal process (Fig. 3B); apex triangularly round in lateral view (Fig. 3C). Penis (Fig. 3A) slender and slightly incurved at apex, distinctly shorter than parameres. Flagellum (Fig. 3A) slender and rather long, about 21 times as long as parameres, with simple apex.

Female. Unknown.

Etymology. The new species is dedicated to Mr. Chuang Zhu (Xuzhou, China), an amateur entomologist. The name is a noun in the genitive case.

Distribution. China (Yunnan).

Differential diagnosis. The new species has unique appearance different to *Capreolucanus sicardi* Didier, 1928, the presence of two cross-like orangered stripes on pronotum in particular (Figs. 1A, D). Besides, in *C. zhuchuangi* **sp. n.**: all legs are orangered in about apical 1/3 (Figs. 1A-D), inferior edge of mandibular internal surface with 10-11 continuous round teeth (Figs. 1A-B), medial and subapical teeth on superior edge of mandibular internal surface small (Fig. 1C), medial tooth pointing interodorsally (Fig. 1C), lateral margin of pronotum obliquely straight between lateral and hind corners (Fig. 1A), abdominal sternite VIII without membranous area in central part (Fig. 2C), abdominal pleurite IX narrowly separated dorsally (Fig. 2E), abdominal sternite IX with a short transverse membranous area along apical margin (Fig. 2D), penis slightly incurved at apex (Fig. 3A), flagellum about 21 times as long as parameres (Fig. 3A); while in *C. sicardi*: all legs unicolour, inferior edge of mandibular internal surface without teeth, medial and subapical teeth on superior edge of mandibular internal surface big, medial tooth pointing frontodorsally, lateral margin of pronotum emarginate between lateral and hind corners, abdominal pleurite IX relatively widely separated dorsally, sternite VIII with transverse membranous area in central part, abdominal sternite IX with a wide transverse membranous area along apical margin, penis strongly incurved in apical half, flagellum about 12 times as long as parameres.

Acknowledgements

I would like to express my sincere gratitude to Chang-Chin Chen (Tianjin, China) for his help to the community of insect amateurs from China. The author thanks to Jian-Yue Qiu, Hao Xu and other colleagues from MYNU for their accompanying in the way of learning taxonomy. The author appreciates Gui-Qiang Huang (Liupanshui Normal University, Liupanshui, China) and some scholar-tyrants of Chinese entomologists or taxonomists, letting him like studying more and more, to destroy their monopoly and arrogance. My appreciation is due also to Wen-I Chou (Taitung, China), Li He and Chao Zhou (Chengdu, China), Tian-Long He (Huainan, China), Bo-Yan Li (Guizhou University, Guiyang, China), Ye-Jie Lin and Hong-Zhang Zhou (Institute of Zoology, Chinese Academy of Sciences, Beijing, China), Bin Liu and Xiang Zhu (Beijing, China), Lu Qiu (Southwest University, Chongqing, China), Jan Růžička (Czech University of Life Sciences, Prague, Czech Republic), Xia Wan (Anhui University, Hefei, China), Fa-Lei Wang (Chongqing, China), Peng Wang (Kunming, China), Qiao-Zhi Yang (University College London, UK), Mao Ye (Xiangyang, China) and Bi-Sheng Zhan (Zhenjiang, China) for their considerable help in my study. This study was supported by the Natural Science Foundation of Huaguoshan (NSFH-2020).

References

DIDIER, R. (1928-1929): Etudes sur les coléoptères lucanides du Globe. 5-6. Fasc. 3 [1928]: 1-65, fasc. 4 [1929]: 65–108. Paris: M. Mendel.

HOLLOWAY, B. A. (2007): Lucanidae (Insecta: Coleoptera). Fauna of New Zealand, 61: 1-254.

HUANG H. & CHEN C.-C. (2010): Stag Beetles of China I. Formosa Ecological Company, Taipei, 288 pp.

HUANG H. & CHEN C.-C. (2013): Stag Beetles of China II. Formosa Ecological Company, Taipei, 716 pp.

HUANG, H. & CHEN C.-C. (2017): Stag Beetles of China III. Formosa Ecological Company, Taipei, 524 pp.

NAGAI, S. (2002): Notes on some SE. Asian Stag-beetles (Coleoptera, Lucanidae), with descriptions of several new taxa (3). Gekkan-Mushi, 372: 11-14.

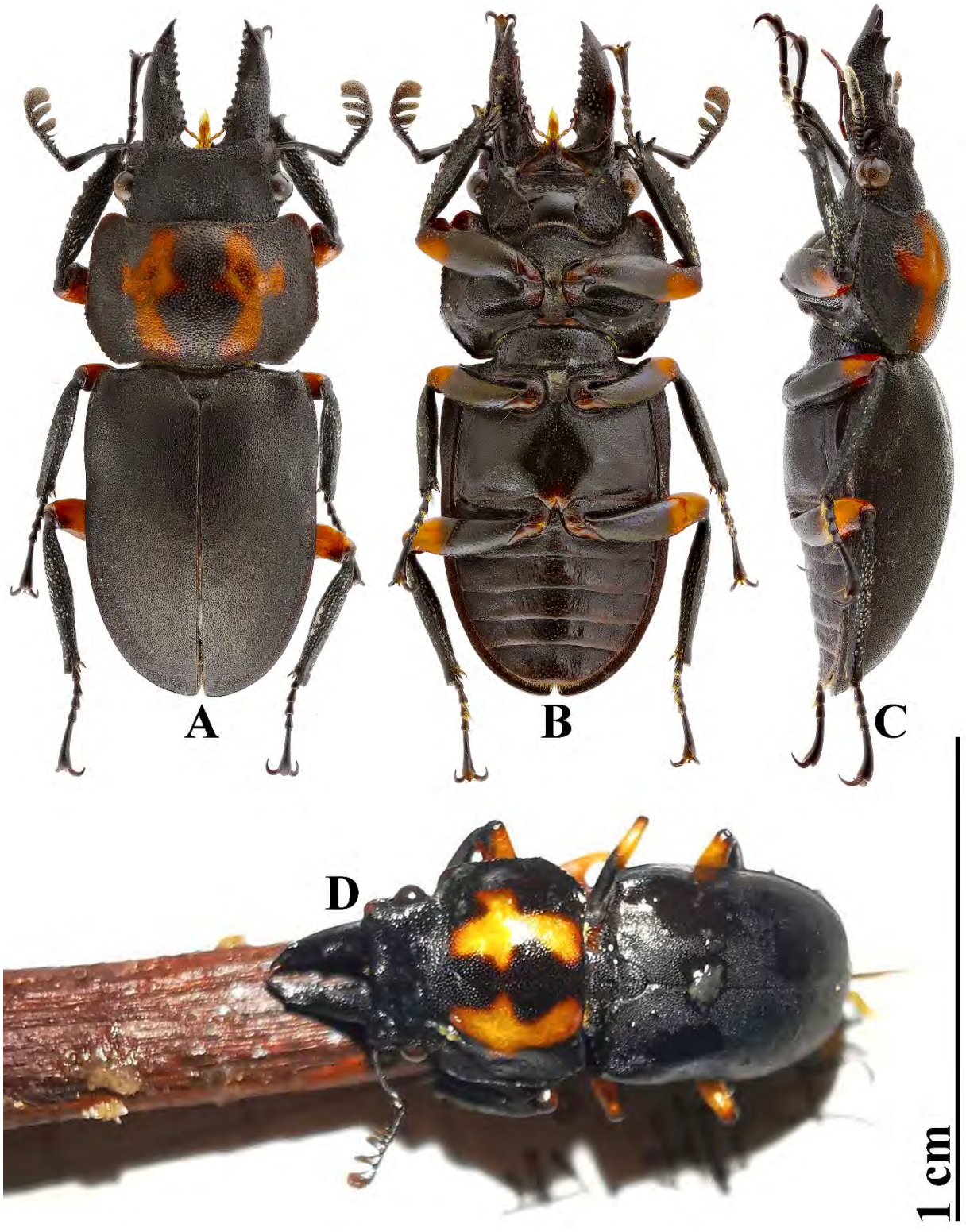


FIGURE 1. Male habitus of ***Capreolucanus zhuchuangi*** spec. nov. (holotype) in dorsal (A), ventral (B) and lateral (C) view, and alive status (D)

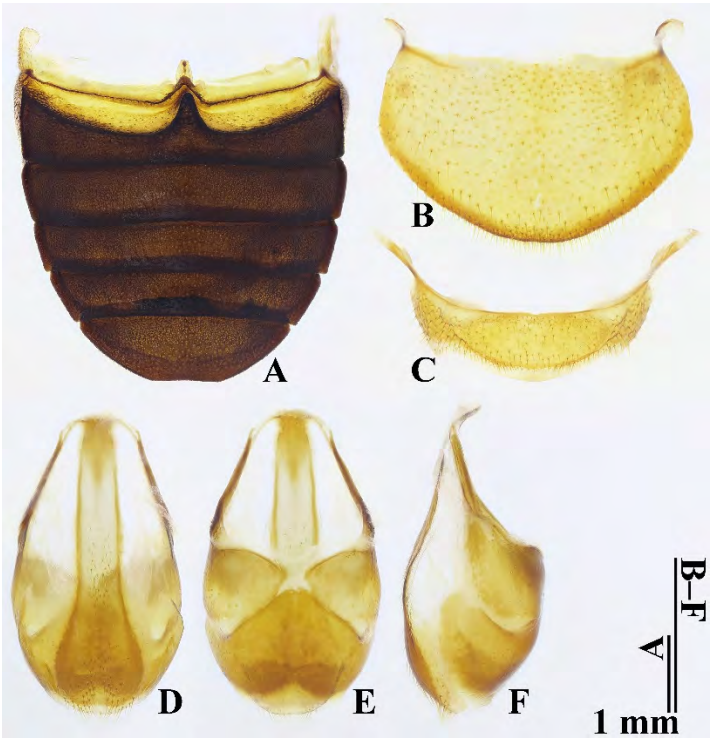


FIGURE 2. Male abdomen of ***Capreolucanus zhuchuangi*** spec. nov. (holotype). abdomen in ventral view (A); abdominal tergite VIII in dorsal view (B); abdominal sternite VIII in ventral view (C); D-F, abdominal segment IX in ventral (D), dorsal (E) and lateral (F) view.

FIGURE 3. Aedeagus of ***Capreolucanus zhuchuangi*** spec. nov. (holotype) in ventral (A), dorsal (B) and lateral (C) view.

Notes about the genus *Eolucanus* with description of two new taxa (*Coleoptera, Lucanidae*)

Klaus-Dirk Schenk

Abstract

Two new taxa of the genus *Eolucanus* Kurosawa, 1970 are described. *Eolucanus jonnae* spec. nov. from northern India and *Eolucanus davidis guizhouensis* sspec nov. from China, Guizhou Province are figured and compared with the related taxa.

An extraordinary big male of *Eolucanus prometheus* (Boucher et Huang, 1991) from Tibet, Bomi area and a pair of *Eolucanus adi* from northeast India, Arunachal Pradesh are pictured. The recently described taxa *Eolucanus adi* (Okuda et Maeda, 2015) **comb. nov.** and *Eolucanus gracilis charchokpai* (Okuda et Maeda, 2014) **comb. nov.** are transferred from the genus *Lucanus* Scopoli to the genus *Eolucanus* Kurosawa, 1970.

All described taxa of the genus *Eolucanus* are listed in a table.

Keywords

Eolucanus *jonnae, Eolucanus davidis guizhouensis, Eolucanus adi, Eolucanus gracilis charchokpai,* new species, India, China, Tibet, Myanmar

Introduction

Eolucanus (type species: *Lucanus gracilis* Albers, 1889) was originally established by Kurosawa as a subgenus of the genus *Lucanus* (KUROSAWA, 1970). In 1986 Kikuta raised *Eolucanus* to the genus-level (KIKUTA, 1986).

Later the status of *Eolucanus* as a valid genus was supported by the fundamental phylogenetic and systematic study of Lucanidae by Huang and Chen (HUANG ET CHEN, 2013). All taxa of the genus *Eolucanus* are living in the Mountains of the Himalaya and the Mountains of western China and of Myanmar.

The genus *Lucanus* Scopoli 1763 is now separated by most entomologists in the subgenera *Lucanus* Scopoli, 1763, and *Pseudolucanus* Hope et Westwood, 1845. The Himalayan species *Lucanus atratus* Hope, 1831 and *Lucanus confusus* (Boucher, 1994) are belonging to the subgenus *Pseudolucanus*. These two species can be easily distinguished from the taxa of *Eolucanus* by the antennal club with broad lamellae.
All actually known taxa of the genus *Eolucanus* are listed in a table indicating the geographic distribution, size, type locality and type depository. By following Huang et Chen *Eolucanus adi* (Okuda et Maeda, 2015) **comb. nov.** and *Eolucanus gracilis charchokpai* **(**Okuda et Maeda, 2014) **comb. nov.** are included in the genus *Eolucanus*.

The new taxa *Eolucanus jonnae* spec. nov. from northern India, Uttaranchal State and *Eolucanus davidis guizhouensis* sspec. nov. from China, Guizhou Province are described.

Eolucanus jonnae spec. nov.

Fig. 1: ***Eolucanus jonnae*** spec. nov. ♂ holotype (28.7 mm),
northern India, Uttaranchal, Gangotri District
(specimen in collection Dr. K.- D. Schenk, Wehretal, Germany)

Fig. 2: ***Eolucanus jonnae*** spec. nov. ♂ holotype, head and prothorax

Holotype. ♂, northern India, Uttaranchal (now Uttarakhand), Gangotri District, 3100 m, N 30.59576 °, E 78.56403°, 24.-25.VI.2007, P. Bretschneider leg., in coll. Dr. K. - D. Schenk, Wehretal, Germany.

Paratypes. 1 ♂, same collecting data, in coll. Dr. K. - D. Schenk, Wehretal, Germany.

Etymology. This new species is dedicated to the author´s youngest granddaughter Jonna.

Description and diagnosis

♂ **Holotype** (Fig. 1 and Fig. 2), total length 28.7 mm, mandibles length 4.5 mm, prothorax width 9.3 mm, elytra length 16.0 mm, elytra width 10.9 mm.
♂ **Paratype**, total length 28.5 mm.

This new species is rather similar to *Eolucanus* pani (Huang, 2006) in external features. The body is rather stout and less elongate, shining black colour. Mandibles flattened, strongly incurved at about middle with a tiny blunt protuberance just behind the tip. Clypaeolabrum triangular at anterior margin and pointed at middle. Elytra shining black, less elongate. Metasternum densely covered with long, orange hairs. Protibiae with two larger spines and several short denticles, apical fork very long with acute tips. The closest species to *E. jonnae* spec. nov. is obviously *E. pani* (Huang, 2006), which is shown in Fig. 8.

Eolucanus jonnae spec. nov. is belonging to the *Eolucanus davidis* group**.** The closest species seems to be *E. pani*. *Eolucanus jonnae* spec. nov. can be distinguished from and *E. pani* by the following combination of external morphological characters:

1) Body stouter, elytra less elongated;
2) Mandibles and head more densely and stronger punctured, more shining;
3) Pronotum more densely and stronger punctured, more shining;
4) Posterior angles of pronotum wider;
5) Metasternum densely covered with long, orange hairs;
6) Protibiae with only two larger spines and several short denticles.

The female of this new species is unknown.

Eolucanus davidis guizhouensis sspec. nov.

♂ ♀

Fig. 3: ***Eolucanus davidis guizhouensis*** sspec. nov. ♂ holotype (37.5) mm and ♀ paratype (allotype), China, Guizhou, Liupanshui city env., Mt. Jiu-Cai-Ping (specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

Holotype. ♂, China, Guizhou, Liupanshui City env., Mt. Jiu-Cai-Ping, 2900 m, 1.-5. VII. 2008, H. Quin leg., in coll. Dr. K. - D. Schenk, Wehretal, Germany.

Paratypes. 7 ♂, 1 ♀ (allotype), same collecting data, in coll. Dr. K. - D. Schenk, Wehretal, Germany.

Etymology. The name of the new subspecies is indicating the collecting site, Guizhou Province of China.

Description and diagnosis

Holotype, (Fig. 3 and 4), ♂, total length 37.5 mm, mandibles length 6.7 mm, head length 5.3 mm, prothorax width 11.8 mm, elytra length 19.3 mm, elytra width 14.1 mm.
Paratypes, ♂, total length 29.0-38.5 mm.

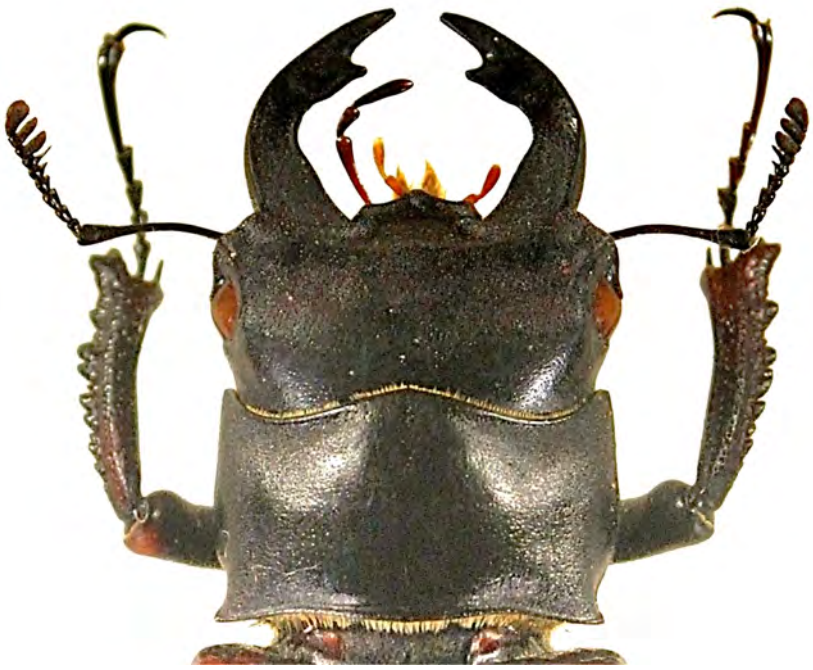


Fig. 4: Anterior part of ***Eolucanus davidis guizhouensis*** sspec. nov. ♂ holotype (37,5 mm)
China, Guizhou, Liupanshui city env., Mt. Jiu-Cai-Ping
(specimen in collection Dr. K.- D. Schenk, Wehretal, Germany)

Eolucanus) davidis guizhouensis *sspec. nov.* is rather similar by external features to the nominotypical subspecies *Eolucanus davidis davidis* (Deyrolle, 1878), It is differing from *E. davidis davidis* (Fig. 5) by the following combination of external morphological characters:

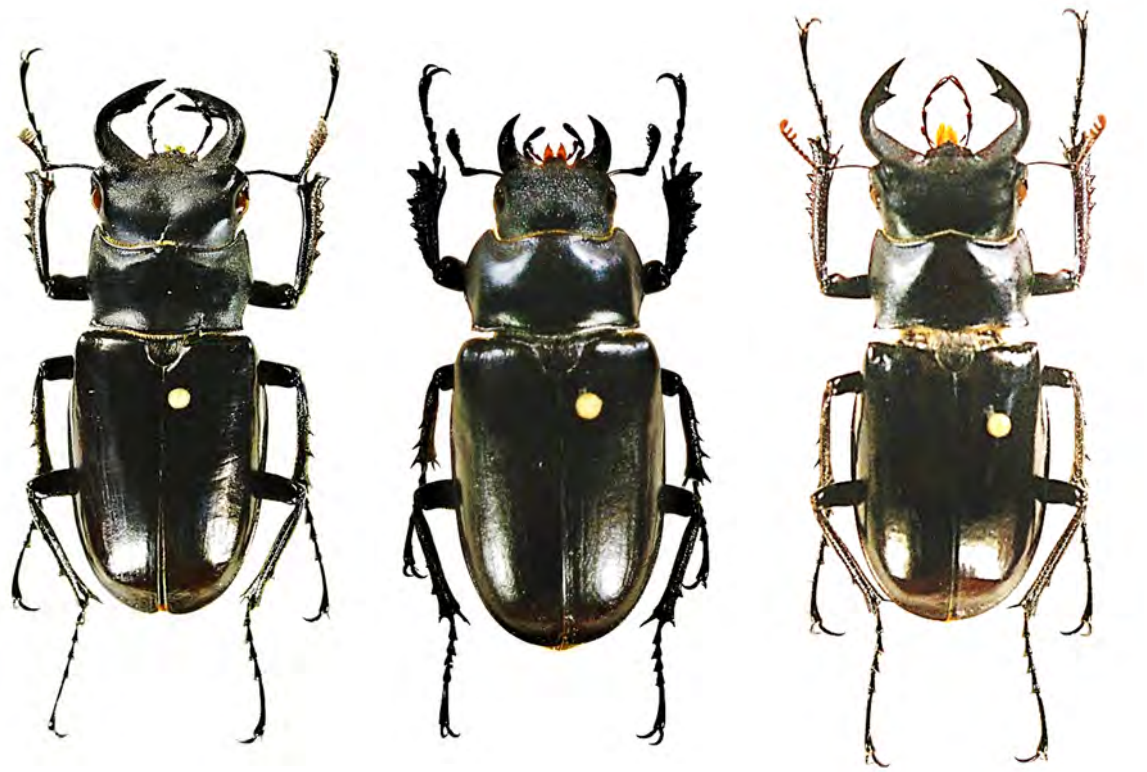
1) Head, mandibles, prothorax and anterior legs blackish brown. Elytra and partly middle and hind legs more light yellowish brown. Elytra at suture, anterior and lateral margins blackish brown;
2) Entire body of bigger size, head more massive;
3) Mandibles more flattened, the sharp tooth just behind the apex of mandible stronger;
4) The wide and triangular clypaeolabrum longer with a rounded central tip;
5) Posterior angels of pronotum slightly wider;
6) Tips of the long fork of the anterior tibiae rounder;
   The 7 - 10 lateral denticles rounded also.

♀ (Allotype) (Fig. 3)

1) Total length of the body 29.1 mm;
2) Body blackish brown. Elytra yellowish brown tending to blackish brown at suture, anterior and lateral margins;
3) Head at central part more sparsely and more deeply punctured;
4) Posterior part of pronotum wider.

Eolucanus davidis guizhouensis sspec. nov. was compared with 17 ♂ and 3 ♀ of *E. davidis davidis* from Sichuan Province, China, stored in the collection of the author. A pair of *E. davidis davidis* from Sichuan Province is pictured in Fig. 5.

Eolucanus davidis davidis (Deyrolle, 1878)



a b c

Fig. 5: ***Eolucanus davidis* davidis** ♂, 32.2 mm (a) and ♀, 32.0 mm (b) from China, Sichuan province and ***Eolucanus davidis*** sspec. incert, ♂, 33.8 mm from China, Shaanxi Province, Mt. Tai-bai-shan
(specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

Eolucanus davidis davidis has been recorded so far from Sichuan, Yunnan, Gansu and Chonquing Provinces of China (HUANG ET CHEN. 2010).

There are 2 ♂ specimen of *E. davidis davidis* in the author´s collection which have been collected in the more north-eastern Shaanxi Province of China (Fig. 5c). Those specimens are differing slightly from the specimens from Sichuan by the following morphological characters:

1) Body more elongate, head and pronotum less wide, elytra anteriorly less wide;
2) The ventral tooth behind the tip of mandibles is very sharp and placed more apart from the mandible tip.

Despite Shaanxi Province is a new recorded location for *E. davidis* the slight morphological differences should fall into the variation of different locations of the same taxon.

Eolucanus kerleyi (Boucher, 1994)

a b c

Fig. 6: ***Eolucanus kerleyi*** ♂ 34.6 mm (a) and ♀ (b) from northern India, Uttaranchal, and ***Eolucanus oberthuri*** from northern India, Sikkim, 36.1 mm (c) (specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

Eolucanus kerleyi (Boucher, 1994) is very similar to *E. oberthuri* (Planet, 1896). *E. kerleyi* is found in the western part of Nepal and in the Uttaranchal State of northern India also.

E. kerleyi is sympatric distributed in Uttaranchal with *E. jonnae* spec. nov. and *E. gracilis gracilis. E. kerleyi* can be separated from *E. oberthuri* by the different overall morphology as described by Boucher (Boucher, 1994).

E. oberthuri is known from northern India (Sikkim, Darjeeling, Bengal) and has been recently reported also from southern Tibet (Yadong, Cuona) (Huang et Chen, 2015 and 2017).

The male *Eolucanus* with the long lamellae pictured by Fujita on plate 24, Fig. 199-1 as *L. kerleyi* is in fact *Lucanus (Pseudolucanus) confusus* (misidentification).

Eolucanus prometheus (Boucher et Huang, 1991)

♂ ♀

Fig. 7: very large ♂ of ***Eolucanus prometheus*** 39.6 mm
and ♀ 31.2 from se Tibet, Bomi area
(specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

Eolucanus prometheus (Boucher et Huang, 1991) was described on a single ♂ collected from Bomi, south-eastern Tibet. Huang et Chen examined 2 ♂ and 3 ♀ from Linzhi County, Mt. Sejila-shan and moved this taxon to the genus *Eolucanus* Kurosawa (HUANG ET CHEN, 2010).

The body length of male *E. prometheus* stated in the literature is 32.2 mm for the holotype (BOUCHER ET HUANG, 1991), 32.0-36.0 mm (HUANG ET CHEN, 2010) and 31.9-36.1 mm (FUJITA, 2010).

Fig. 7 is showing a very large male of 39.6 mm total length. This male has been collected at the type locality Bomi, Tibet in 2004. The specimen has been captured at daytime on a Rhododendron-tree in a mountain forest at 3100 m.

Eolucanus pani (Huang, 1991)

♂ ♀

Fig. 8: ***Eolucanus pani*** ♂ and ♀ ***from*** south-eastern Tibet
(specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

The rare species *Eolucanus pani* is reported so far only from south-eastern Tibet, Bomi area (type locality) (HUANG ET CHEN, 2010).

The male *Eolucanus* pictured by Fujita on plate 24, Fig. 198-1 as *L. atratus* is in fact *Eolucanus pani* (misidentification).

Eolucanus adi (Okuda et Maeda, 2015)

♂ ♀

Fig. 9: ♂ and ♀ of ***Eolucanus adi*** from n India, Arunachal Pradesh, Along District (specimens in collection Dr. K.- D. Schenk, Wehretal, Germany)

Eolucanus adi (Okuda et Maeda, 2015) comb. nov. was described originally in the genus *Lucanus* Scopoli (Okuda et Maeda, 2015). 3 ♂ and 5 ♀ (type series) have been collected in northeaster India, Arunachal Pradesh, Lower Dibang Valley, 2350 m. Okuda et Maeda compared *E. adi* with *E. lesnei* (Planet, 1905) from Myanmar. But *E. adi* is by external morphology obviously closer to *E. pani* (Huang, 2006).

E. pani is living in the closeby Motuo-area of southeast Tibet. Males of *E. adi* are differing from *E. pani* by the stouter body, the somewhat less abruptly inclined mandibles, the shorter and more rounded clypaeolabrum and by the spines of the foretibiae.

Fig. 9 is showing a pair identified as *E. adi* coming from north-eastern India, Arunachal Pradesh, Along District, Maschuka.

E. adi has been recently reported also from southern Tibet (Motuo area) (Huang et Chen, 2017).

LUCANIDAE:
Genus EOLUCANUS

Familia: LUCANIDAE Latreille, 1804
Tribus: LUCANINI Latreille, 1804
Genus: Eolucanus Kurosawa, 1970
(Type species = Lucanus gracilis Albers, 1889)

Species / Subspecies / Author / Year	Distribution / Type locality / Type depository	Size mm
adi (OKUDA et MAEDA, 2015) *Lucanus*	ne India (Arunachal Pradesh) TL: Lower Dibang Valley, Arunachal Pradesh TD: OMNH	♂ 31.8 – 33.4 ♀ 27.0 – 33.3
davidis davidis (DEYROLLE, 1878) *Pseudolucanus*	China (Sichuan, Yunnan, Chongqing, Gansu, Shaanxi) TL: Chine centrale TD: MNHN (ST)	♂ 28,6 – 36,0 ♀ 23,3 – 29,5
davidis guizhouensis SCHENK, 2020	China (Guizhou) TL: China, Guizhou TD: KDSPC	♂ 29,0 – 37,5 ♀ 29,1
gracilis gracilis (ALBERS, 1889) *Lucanus*	India (Assam, Sikkim, Uttaranchal), Nepal China (sc Tibet), TL: Sikkim, Radong valley TD: female type in Hannover Museum destroyed	♂ 27,0 – 33,2 ♀ 28,0 – 31,6
gracilis charchokpai (OKUDA et MAEDA, 2014) *Lucanus*	ne India (Arunachal Pradesh) TL: West Kameng, Arunachal Pradesh TD: OMNH	♂ 23.7 – 29.5 ♀ 27,8
jonnae SCHENK, 2020	n India (Uttaranchal) TL: Gangotri Distr. Uttaranchal TD: KDSPC	♂ 28,7 - 29,3 ♀ unknown
kerleyi (BOUCHER, 1994) *Pseudolucanus*	w Nepal, India (Uttaranchal) TL: Silgarhi-Doti, Dalaum area TD: BMNH	♂ 29.5 - 41,0 ♀ 25,2 - 33,9
lesnei (PLANET, 1905) *Pseudolucanus*	China (Yunnan, Sichuan, Tibet), Bhutan, Myanmar (Kachin) TL: Set Chouen (= Sichuan) du Yunnan et du Tibet TD: MNHN	♂ 28,0 - 36,0 ♀ 29,0 - 33,5
mingyiae (HUANG, 2006) *Pseudolucanus*	China (nw Yunnan), n Myanmar TL: Haba Snow Mts., Zhongdian County, nw Yunnan TD: BVQC	♂ 34,4 - 38,6 ♀ 29,5 - 32,0

oberthuri (PLANET, 1896) *Pseudolucanus*	India (Sikkim, Darjeeling, Bengal), Nepal, China (Tibet) TL: Sikkim TD: MNHN	♂ 27,9 – 40,9 ♀ 28,0 – 32,9
pani (HUANG, 2006) *Pseudolucanus*	China (Tibet) TL: Hanmi, Motuo County, se Tibet TD: BAUP	♂ 31,9 – 33,0 ♀ 28,5 – 31,5
prometheus (BOUCHER et HUANG, 1991) *Pseudolucanus*	China (Tibet) TL: Bomi-Tede, Xizang Prov., China TD: BAUP	♂ 31,9 – 36,1 ♀ 28,5 – 31,5

Abbreviations used for museums and private collections:

Museums:

BAUP	Beijing Agricultural University, Beijing, China
BMNH	British Museum of Natural History, London, U.K.
BVQC	Biological Laboratory of Qingdao Vocational and Technical College, Qingdao, China
MNHN	Museum d´Histoire Naturelle, Paris, France
OMNH	Osaka Museum of Natural History, Osaka, Japan
OXUM	Hope Entomological Collection, University Museum, Oxford, U.K.

Private collections:

KDSPC	K.-D. Schenk Private Collection, Wehretal / Germany

References cited

- BOUCHER, S. ET HUANG, J. (1991): Deux nouveau *Pseudolucanus* east-himalayens. Comparison morphologique avec les espèces voisines (Col. Lucanidae). Bulletin de la Societe entomologique de France, 96 (1), p. 31-39.
- BOUCHER, S. (1994): Deux nouveau *Pseudolucanus* sud-himalayens du groupe "*atratus*" Hope. Comparison morphologique avec les autres espèces du groupe (Coleoptera, Lucanidae). Bulletin de la Societe entomologique de France, 99, p. 505-515.
- FUJITA, H. (2010): The Lucanid Beetles of the World. Mushi-Sha, Tokyo.
- HUANG, H. (2006): New descriptions and notes on Chinese stag-beetles, with discovery of the second species of *Noseolucanus* from SE Tibet (Coleoptera, Lucanidae). Coleoptera 10 (2006), p. 11-34.
- HUANG, H. & CHEN, C. C. (2010): Stag Beetles of China I. Formosa Ecological Company, Taiwan.
- HUANG, H. & CHEN, C. C. (2013): Stag Beetles of China II. Formosa Ecological Company, Taiwan.

- HUANG, H. & CHEN, C. C. (2017): Stag Beetles of China II. Formosa Ecological Company, Taiwan.
- KIKUTA, T. (1986): On the higher taxa of the stag beetle family Lucanidae. Special Bulletin of the Japanese Society of Coleopterology; 2, p. 131-138.
- KRAJCIK, M. (2001 and 2003): Lucanidae of the world, Catalogue part 1 and 2, Plzen, Czech Republic.
- KUROSAWA, Y. (1970): The stag-beetles collected by the Lepidopterological Research Expedition in Nepal-Himalaya in 1963. Special Bulletin of the Lepidopterological Society of Japan, 4, p. 159-167.
- MIZUNUMA, T. ET NAGAI, S. (1994): The Lucanid Beetles of the World. Mushi-Sha, Tokyo.
- OKUDA, N. ET MAEDA, T. (2014): Two new species and a new subspecies of the family Lucanidae (Coleoptera) from Arunachal Pradesh, northeastern India. Gekkan Mushi, no 522, p. 13-18.
- OKUDA, N. ET MAEDA, T. (2015): Two new species of the genus *Lucanus* Scopoli and two new subspecies of the genus *Hexarthrius* Hope (Coleoptera, Lucanidae) from Arunachal Pradesh, northeastern India. Gekkan Mushi, no 527, p. 19-26.

Address of the author:

Dr. Klaus-Dirk Schenk
D-37287 Wehretal
Germany
E-mail: dr.kdirkschenk@unitybox.de