

Linzer biol. Beitr.	49/1	327-331	28.7.2017
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## The first species of *Chinecallicerus* from Sichuan, China (Coleoptera: Staphylinidae: Aleocharinae: Geostibini)

Volker ASSING

**A b s t r a c t :** *Chinecallicerus pinnatus* nov.sp. (China: Sichuan: Wolong), the first representative of the genus to be recorded from outside Yunnan, is described, illustrated, and distinguished from its congeners. An updated key to the species of *Chinecallicerus* ASSING, 2004 is provided. The genus currently includes seven species, six of which are representely solely by their respective holotypes.

**K e y w o r d s :** Coleoptera, Staphylinidae, Aleocharinae, Geostibini, *Chinecallicerus*, China, Sichuan, taxonomy, new species, key to species.

### Introduction

The genus *Chinecallicerus* ASSING, 2004 of the aleocharine tribe Geostibini was previously represented by six species, all of them distributed in Yunnan, China (ASSING 2004, 2006, 2009, 2015). All the species are known only from their *respective* type localities, indicating a cryptic, probably subterranean reproduction habitat. Five of the six species are represented solely by their holotypes.

During a visit to the National Museum of Natural History, Praha, a *Chinecallicerus* male from Sichuan was discovered among unidentified material of Staphylinidae recently collected in China. An examination of this specimen revealed that it represents an undescribed species, the first record of the genus from the Chinese province Sichuan.

### Material and methods

The holotype of the newly described species is deposited in collections of the National Museum of Natural History, Prague.

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using a photographing device constructed by Arved Lompe (Nienburg) and CombineZ software and a digital camera (Nikon Coolpix 995).

Body length was measured from the anterior margin of the labrum to the abdominal apex, the length of the forebody from the anterior margin of the labrum to the posterior margin of the elytra, head length from the anterior margin of the clypeus (without anteclypeus) to the posterior constriction of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral"

side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

### Updated key to the species of *Chinecallicerus*

- 1 Large species, length of body 6.5-7.0 mm. Antennae gradually incrassate, antennomere V distinctly narrower than X (ASSING 2006: figure 15). Punctuation of abdomen conspicuously sparse (ASSING 2006: figure 19). Male tergites III and IV with distinct tubercle (ASSING 2006: figures 18-19); tergite VII with U-shaped elevation (ASSING 2006: figure 20); median lobe of aedeagus approximately 0.7 mm long (ASSING 2006: figures 23-24). Spermatheca as in ASSING (2006: figure 27). Northwest Yunnan (ASSING 2015: map 1) ..... *C. wrasei* ASSING
- Smaller species, length of body < 5.8 mm. Antennomeres V-X of subequal width, V not distinctly narrower than X. Punctuation of anterior abdominal tergites moderately dense. Male tergites III and IV unmodified; tergite VII with tubercle of different shape; median lobe of aedeagus much smaller, < 0.6 mm (note that the males of *C. schuelkei* and *C. reticulatus* are unknown) ..... 2
- 2 Whole forebody with pronounced microsculpture, practically matt (ASSING 2015: figures 1-2, 4, 10-11, 13). Head and pronotum with barely noticeable punctuation. East Yunnan ..... 3
- Forebody with some shine; at least head or elytra with superficial microsculpture. Head and/or pronotum mostly with more distinct punctuation. West Yunnan, Sichuan ..... 4
- 3 Maxillary palpi blackish-brown, except for the needle-shaped palpomere IV. Body smaller; length of forebody 2.0 mm. Head approximately as long as broad (ASSING 2015: figure 1). Eyes smaller, approximately as long as distance between posterior margin of eye to posterior constriction of head (ASSING 2015: figure 1). Antenna much shorter, approximately 1.75 mm long; antennomeres V-X approximately as broad as long and IV weakly transverse (ASSING 2015: figure 3). Pronotum more transverse, 1.1 times as broad as long (ASSING 2015: figure 1). Posterior margin of male tergite VIII truncate in the middle (ASSING 2015: figure 6). Median lobe of aedeagus as in ASSING (2015: figures 8-9). Northeast Yunnan (ASSING 2015: map 1) ..... *C. subater* ASSING
- Maxillary palpi yellowish. Body larger; length of forebody 2.4 mm. Head 1.15 times as broad as long (ASSING 2015: figure 10). Eyes larger, longer than distance between posterior margin of eye to posterior constriction of head (ASSING 2015: figure 10). Antennae longer, approximately 2.4 mm long; all antennomeres distinctly oblong (ASSING 2015: figure 12). Pronotum 1.06 times as broad as long (ASSING 2015: figure 10). Spermatheca as in ASSING (2015: figure 15). Southeast Yunnan (ASSING 2015: map 1) ..... *C. reticulatus* ASSING
- 4 Coloration paler: anterior abdominal segments, abdominal apex, and antennae yellowish brown to reddish brown. Eyes weakly bulging and smaller, distinctly shorter than postocular region in dorsal view. Elytra with granulate punctuation and weak longitudinal elevation on either side of suture (ASSING 2004: figure 8). Spermatheca as in ASSING (2004: figure 13). Northwest Yunnan (ASSING 2015: map 1) ..... *C. schuelkei* ASSING
- Coloration darker: abdomen and antennae blackish brown to blackish. Eyes bulging and larger, approximately as long as postocular region in dorsal view. Elytra with fine, not distinctly granulate punctuation ..... 5
- 5 Antennomere IV approximately as long as wide, V-X oblong (ASSING 2006: figure 3). Elytra at suture distinctly longer than pronotum. Legs yellowish. Posterior margin of male tergite VIII produced in the middle and somewhat truncate, but not distinctly serrate (ASSING 2006: figure 8). Median lobe of aedeagus 0.53 mm long, shaped as in ASSING (2006: figures 10-11). West Yunnan (ASSING 2015: map 1) .. *C. laevigatus* ASSING
- Antennomere IV wider than long (Fig. 2). Elytra approximately as long as, or shorter than pronotum (Fig. 1). Coloration of mid- and hindlegs predominantly brown. Posterior margin of tergite VIII serrate or bicuspidate ..... 6

- 6 Larger species; length of forebody 2.4 mm. Antennae longer, length 2.0 mm; antennomeres V-X weakly oblong (Fig. 2). Head and pronotum glossy (Fig. 1). Elytra shorter than pronotum (Fig. 1). Anterior half of tergite VII with sparse, but distinct punctation (Fig. 4). Male tergite VII (Figs 3-4) with pronounced fin-shaped median tubercle. Male tergite VIII bicuspidate posteriorly (Fig. 4). Median lobe of aedeagus larger, 0.6 mm long, and shaped as in Figs 5-6. Sichuan ..... *C. pinnatus* nov.sp.
- Smaller species; length of forebody 2.2 mm. Antennae shorter, antennomeres V-X approximately as long as wide or weakly transverse (ASSING 2009: figure 3). Head and pronotum with subdued shine. Elytra approximately as long as pronotum (ASSING 2009: figure 2). Abdominal tergite VII virtually impunctate in anterior half (ASSING 2009: figure 4). Male tergite VII with small smooth median tubercle. Posterior margin of tergite VIII serrate (ASSING 2009: figure 5). Median lobe of aedeagus smaller, 0.44 mm long, and shaped as in ASSING (2006: figure 7). West Yunnan (ASSING 2015: map 1)..... *C. serratus* ASSING

## Description

### *Chinecallicerus pinnatus* nov.sp. (Figs 1-6)

**Type material:** Holotype ♂: "CHINA: Sichuan Prov., Wolong National Nature Res., Yinshanggou vill. env., Panda valley, 2300 m, 30°58'08"N, 103°07'34"E / 24.VI.2014, sift #24, depression with accumulated debris under rock walls, in narrow river valley above 2nd tunnel, J. Hájek & J. Růžicka leg. / Holotypus ♂ *Chinecallicerus pinnatus* sp.n., det. V. Assing 2016" (NMP).

**Etymology:** The specific epithet is an adjective derived from the Latin noun pinna (fin) and alludes to the shape of the tubercle on the male tergite VII, which somewhat resembles a shark fin.

**Description:** Body length 4.6 mm; length of forebody 2.0 mm. Coloration: body blackish, with the elytra blackish-brown and the apex of the abdomen (posterior portion of segment VIII; segments IX-X) paler; legs dark-brown, except for the reddish-yellow tarsi and forelegs; antennae blackish-brown; maxillary palpi blackish-brown, with the terminal needle-shaped palpomere pale-yellowish.

**Head** (Fig. 1) approximately as long as broad and of subquadrate shape; punctation distinct, dense, and slightly granulose; interstices with shallow microreticulation and glossy. Eyes moderately convex, approximately as long as postocular region, but distinctly shorter than distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna (Fig. 2) approximately 2.0 mm long; antennomeres IV weakly transverse and V-X weakly oblong.

**Pronotum** (Fig. 1) indistinctly transverse, only 1.04 times as broad as long and 1.28 times as broad as head, broadest slightly before middle; punctation and microsculpture similar to those of head; pubescence of midline directed caudad.

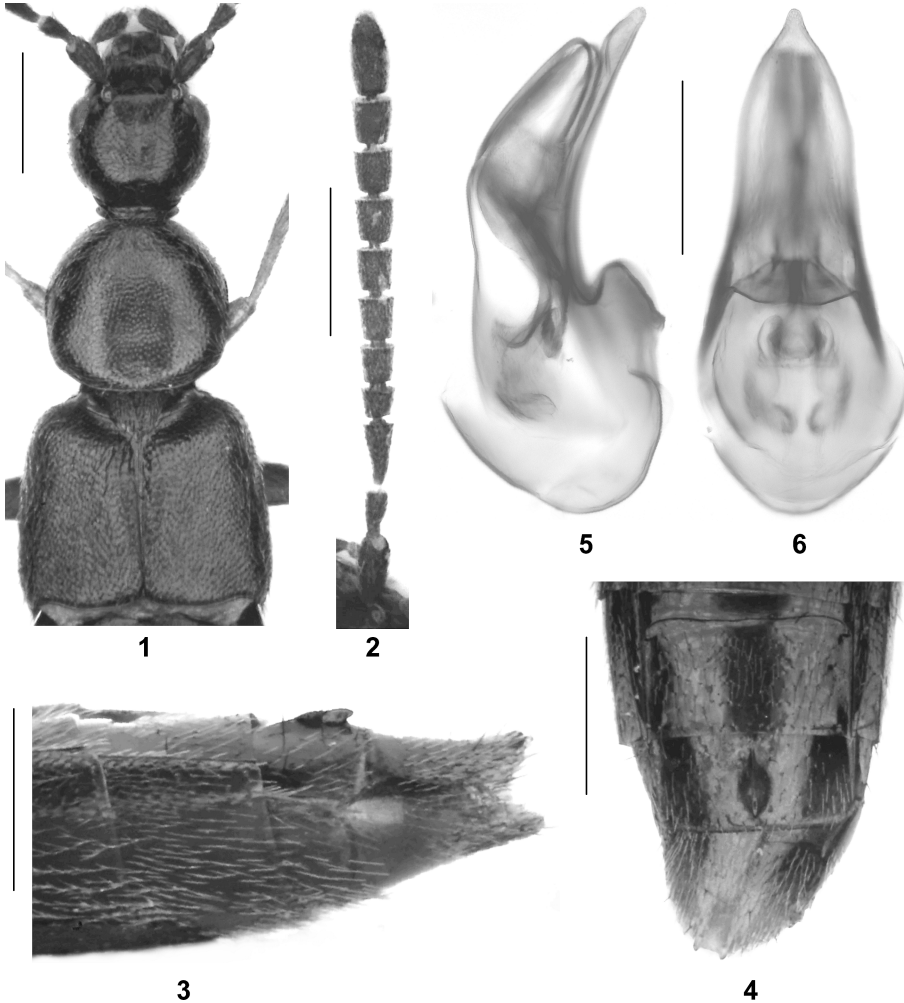
**Elytra** (Fig. 1) shorter than pronotum; punctation very dense and finely granulose; fine and rather dense; microreticulation very shallow. Hind wings fully developed.

**Abdomen** narrower than elytra; punctation moderately dense and fine on tergites III-VI, very sparse and even finer on tergite VII (Fig. 4); microsculpture very shallow on tergites III-VI, more distinct on tergite VII; tergites III and IV without sexual dimorphism; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with pronounced median tubercle in posterior half, this tubercle shaped like a shark's dorsal fin in lateral view (Fig. 3); posterior margin of tergite VIII with a median pair of acute processes (Fig. 4); sternite VIII with convex posterior margin; median lobe of aedeagus 0.6 mm long and shaped as in Figs 5-6.

♀: unknown.

**Distribution and natural history:** The type locality is situated in the Wolong National Nature Reserve, Sichuan, at an altitude of 2300 m. The holotype was sifted from debris near rock walls in a stream valley.



**Figs 1-9:** *Chinecallicerus subater* nov.sp.: forebody (1); median portion of head (2); antenna (3); postero-median portion of pronotum (4); abdomen (5); male tergite VIII (6); male sternite VIII (7); median lobe of aedeagus in lateral view (8); median lobe of aedeagus in ventral view (9). Scale bars: 1, 3, 5: 0.5 mm; 6-9: 0.2 mm; 2, 4: 0.1 mm.

### Acknowledgement

My thanks are extended to Jiri Hájek for his hospitality and assistance during my visit to the NMP.

### Zusammenfassung

*Chinecallicerus pinnatus* nov.sp. (China: Sichuan: Wolong), der erste Nachweis der Gattung außerhalb der chinesischen Provinz Yunnan, wird beschrieben, abgebildet und von anderen Arten der Gattung unterschieden. Eine aktualisierte Bestimmungstabelle wird erstellt. Die Gattung umfasst derzeit sieben; von sechs dieser Arten ist nur der jeweilige Holotypus bekannt.

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Author's address:

Dr. Volker ASSING  
Gabelsbergerstr. 2  
D-30163 Hannover, Germany  
E-mail: vassing.hann@t-online.de

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Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2017

Band/Volume: [0049\\_1](#)

Autor(en)/Author(s): Assing Volker

Artikel/Article: [The first species of \*Chinecallicerus\* from Sichuan, China \(Coleoptera: Staphylinidae: Aleocharinae: Geostibini\) 327-331](#)