

**A new species of the genus *Acrolocha*  
(Coleoptera: Staphylinidae: Omaliinae)  
from Yunnan Province, China**

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**Abstract.** *Acrolocha zhongdianensis* sp. nov. is described from China, Yunnan and illustrated. The key to *Acrolocha* Thomson, 1858 species of the eastern Palaearctic Region is presented.

**Key words.** Coleoptera, Staphylinidae, Omaliinae, *Acrolocha*, taxonomy, description, new species, mainland China, Palaearctic Region

### Introduction

The Holarctic genus *Acrolocha* Thomson, 1858 of the tribe Omaliini includes 17 described species (HERMAN 2001, SCHÜLKE & SMETANA 2015), four of which are known from East Asia: *A. horiguchii* Watanabe, 2007 and *A. kanagawana* Watanabe, 2007 from central Honshu (Japan) (WATANABE 2007), *A. miyamorii* Watanabe, 1990 from Hokkaido (Japan) and Iturup (Kuril Islands) (WATANABE 1990), and *A. wahuiensis* Zhong, Zhao & Li, 2009, which has been recently described from Mt. Wahui, Sichuan Province, China (ZHONG et al. 2009).

The aim of this paper is the description of a new species of *Acrolocha*, which was collected by the second author in China during his field trip in August 2003. Additionally, the key to *Acrolocha* species of the eastern Palaearctic Region is presented.

### Material and methods

Specimens were studied using a Nikon SMZ 745T and a Nikon Eclipse E200 stereomicroscopes. All measurements are given in millimeters and were made with an ocular micrometer mounted on a stereoscopic microscope. Data on labels are given verbatim in single quotations; different lines are separated by a single vertical bar, additional notes are given in square brackets. All types are provided with an additional label: 'HOLOTYPE [or

PARATYPE] | *Acrolocha* | *zhongdianensis* sp.n. | Shavrin A.V. & Smetana A. des. 2016' [red rectangular printed label].

The specimens examined are deposited in the following collections:

ASCD A.V. Shavrin collection, Daugavpils, Latvia;

ASCT A. Smetana collection, deposited at The National Museum of Nature and Science, Toshiba, Japan;

NMPC National Museum, Prague, Czech Republic (J. Hájek).

## Description of the new species

### *Acrolocha zhongdianensis* sp. nov.

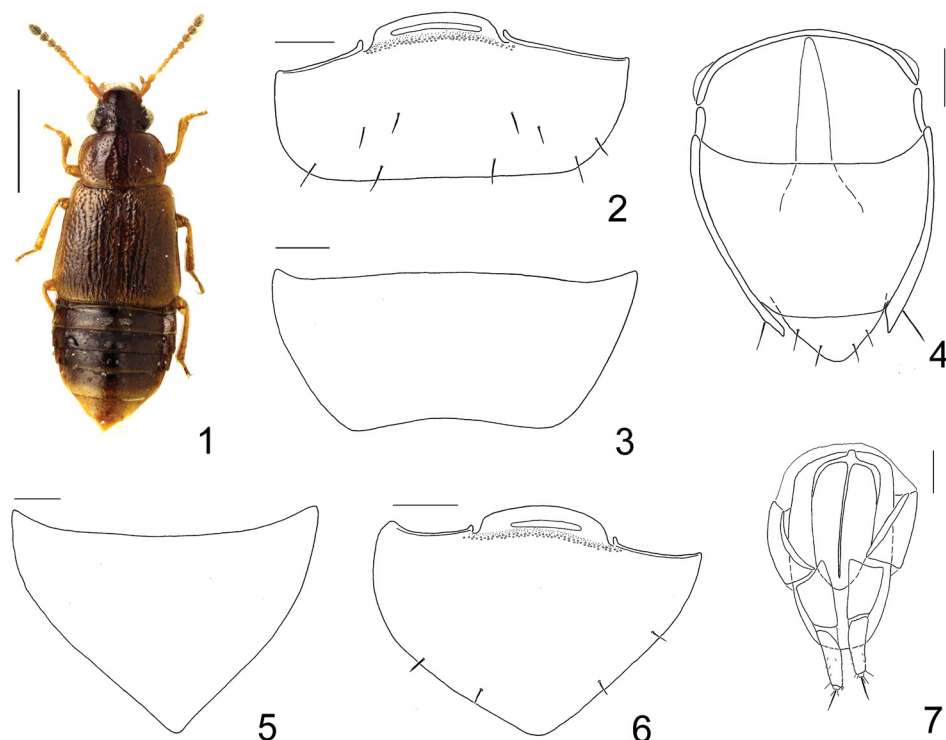
(Figs 1–10)

**Type material.** HOLOTYPE: ♂, 'CHINA: N-Yunnan Zhong- | dian Co. 36 km ESE Zhong- | dian, 27°40.9'N' 100°01.5'E | 3500-3550 m, 23.VIII.2003 | A. Smetana [C133]' [white, rectangular and printed label] (ASCT). PARATYPES: 2 ♂♂ 2 ♀♀, same data as the holotype (1 ♂ 1 ♀ in ASCT, 1 ♂ in ASCD, 1 ♀ in NMPC), 1 ♂: 'CHINA: N-Yunnan Zhongdian | Co. 10km SW Zhongdian, Xue Shan 27°46.5'N' 99°36.5'E | 3800m 20.VIII.2003 | A. Smetana [C129]' (ASCT); 1 ♀, 'CHINA: N-Yunnan Zhong- | dian Co., pass 28km ESE Zhong-dian, 27°43.9'N' 99°58.2'E | 3700-3750m 22.VIII.2003 | A. Smetana [C131]' (ASCT).

**Additional material examined.** 1 ♂, without head and abdomen, with the same data as the holotype, is not include in the type series (deposited in ASCD).

**Description.** Measurements (n = 7, in mm): maximum width of head including eyes: 0.45–0.52; length of head (from base of labrum to neck constriction): 0.27–0.35; length of antennae (holotype): 0.55; length of eyes: 0.12–0.15; length of temples (from posterior margin of eye to neck constriction): 0.02; length of pronotum: 0.35–0.40; maximum width of pronotum: 0.57–0.62; sutural length of elytra (length of elytra from apex of scutellum to posterior margin of sutural angle): 0.67–0.80; maximum width of elytra: 0.82–0.87; width of abdominal segment IV: 0.77–0.90; length of aedeagus: 0.52; total length of body (from base of labrum to apex of abdomen): 2.10–2.75 (holotype: 2.45). Habitus as in Fig. 1.

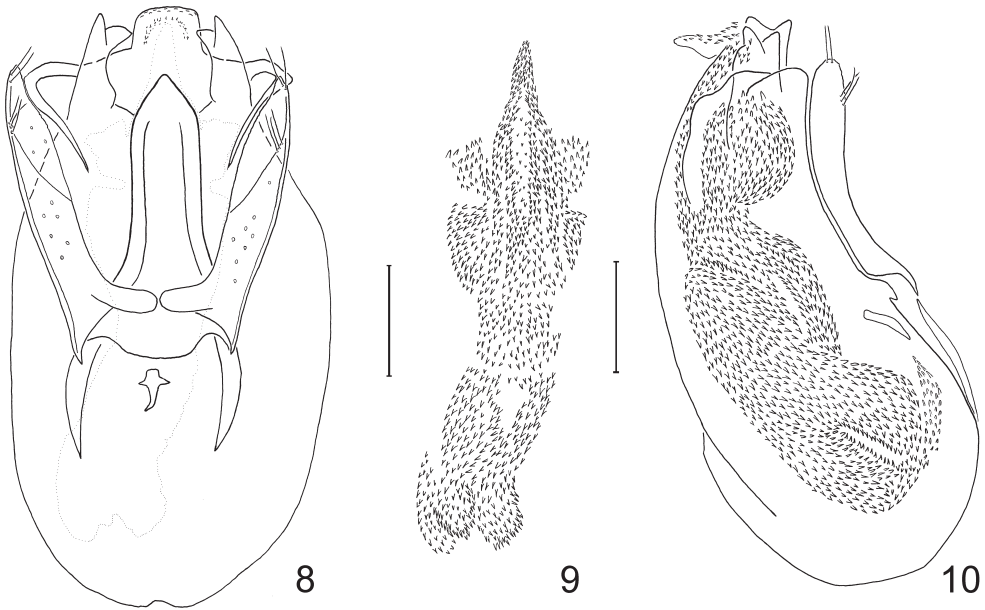
Body and antennomeres VI–XI castaneous brown; lateral and posterior margins of pronotum, elytra, paratergites, apical margin of abdominal tergite VII and entire abdominal tergite VIII yellow brown; mouthparts, ocelli, antennomeres I–V, and sometimes lateral and apical margins of elytra and legs yellow. Punctuation of vertex irregular and sparse, moderately deep; punctuation of pronotum irregular, sparse and fine, denser laterally, with distinct or indistinct midline consisting of row of small punctures, with impunctate elongate areas on both sides of midline and anterolateral portions; scutellum impunctate; base of elytra and portion around scutellum with very indistinct moderately small punctuation; abdomen without visible punctuation. Forebody glossy; head with coriaceous microsculpture, stronger on vertex; anterior and posterior median parts of disc and/or antero- and posteriolateral portions of pronotum with irregular wavy microsculpture; scutellum glossy, without microsculpture; elytra with very strong coriaceous microsculpture, coarser on first third of elytra (interstices between irregular lines of microsculpture weakly convex), more gentle, smoothed and cellular-shaped posteriorly; abdominal tergites with variable cellular microsculpture: IV–V with coarse and moderately large, VI with fine and small, VII–VIII with smaller but distinctly coarser than that of VI.



Figs 1–7. *Acrolocha zhongdianensis* sp. nov.: 1 – habitus, 2 – male abdominal sternite VIII, 3 – male abdominal tergite VIII, 4 – male genital segment, 5 – female abdominal tergite VIII, 6 – female abdominal sternite VIII, 7 – female genital segment. Scale bars = 1.0 mm (Fig. 1), 0.1 mm (Figs 2–7).

Head 1.4–1.6 times as broad as long, with slightly elevated frons and vertex, and slightly convex infraorbital ridges separated from vertex by moderately deep and short straight grooves beginning from anterior parts of each ocellus. Eyes large, somewhat convex; postocular parts extremely short, strongly narrowed posteriad, about 1/6 or 1/7 as long as longitudinal diameter of eye. Ocelli large, distance between ocelli subequal to distance between ocellus and posterior margin of eye. Maxillary palpi with moderately narrow palpomeres, palpomere IV (apical) three times as long as penultimate. Antennae short, reaching posterior margin of pronotum when turned backwards; apical five antennomeres with strong pubescence; antennomeres with lengths  $\times$  widths (holotype): I: 0.12  $\times$  0.05; II: 0.05  $\times$  0.05; III: 0.05  $\times$  0.02; IV: 0.02  $\times$  0.02; V–VI: 0.03  $\times$  0.02; VII: 0.04  $\times$  0.03; VIII: 0.04  $\times$  0.04; IX–X: 0.05  $\times$  0.05; XI: 0.07  $\times$  0.05.

Pronotum slightly convex, transverse, 1.5–1.6 times as broad as long, 1.1–1.2 times as wide as head, widest in middle part, gradually rounded anteriorly and slightly narrowing towards posterior angles; middle part of anterior margin slightly rounded; surface of disc with two indistinct pairs of moderately wide depressions: one longitudinal beginning in apical third of



Figs 8–10. Aedeagus of *Acrolocha zhongdianensis* sp. nov.: 8 – aedeagus, parameral view (outline of endophallus shown as point line); 9 – endophallus, parameral view; 10 – aedeagus, lateral view. Scale bars = 0.1 mm.

pronotum and almost reaching posterior margins, second one oval, near mediolateral margins of pronotum.

Elytra 1.1–1.2 times as broad as long, about twice as long and 1.4 times as wide as pronotum, somewhat parallel-sided in anterior half, slightly widened in middle; hind margin of elytra straight or indistinctly truncate towards suture.

Apical metatarsomeres distinctly longer than four preceding tarsomeres.

Abdomen about as wide as elytra, with two moderately wide wing-folding patches (tomentose spots) on abdominal tergite IV and two small indistinctly rounded patches on abdominal tergite V, with distinct palisade fringe on apical margin of abdominal tergite VII.

**Male.** First four protarsomeres distinctly widened. Apical margin of abdominal tergite VIII (Fig. 3) slightly emarginated. Apical margin of abdominal sternite VIII (Fig. 2) straight. Male genital segment as in Fig. 4. Aedeagus (Fig. 8) broad, with narrow lanceolate parallel-sided median lobe, narrowing towards acute apex in anterior fourth; parameres cylindrical and thick, slightly exceeding apex of median lobe, with slightly widened apex bearing two apical and three short preapical setae; apex of aedeagus with pair of lateral auriculate processes at level of apices of parameres and with pair of strongly sclerotized tooth-like processes above median lobe; endophallus very large and complicated (Fig. 9). Aedeagus laterally as in Fig. 10.

**Female.** First four protarsomeres not widened. Apical margins of abdominal tergite VIII (Fig. 5) and sternite VIII (Fig. 6) elongated and rounded apically. Female genital segment as in Fig. 7.

**Differential diagnosis.** Based on the size of body, head with slightly elevated vertex, and general character of coriaceous microsculpture of the forebody, the new species is similar to *A. miyamorii*, known from Russia and Japan (WATANABE 1990, 2007), and to *A. wahuiense*, known from Sichuan, China (ZHONG et al. 2009). From *A. miyamorii* it differs in the coloration of the body (*A. miyamorii* is reddish brown to dark reddish brown), narrower body and slightly shorter apical antennomeres VII–X, and in less defined longitudinal depressions on the pronotum. From *A. wahuiense*, which is similarly coloured and has pronotal depressions of similar shape, it differs in sparser punctation on the pronotum, distinctly narrower apical segment of the maxillary palpi, wider apical antennomeres VII–X, and in wider pronotum. From both species, *A. zhongdianensis* sp. nov. differs in very strong microsculpture of the elytra and in absence of visible punctation of middle and apical parts of the elytra (in compared species with rows of large punctures), in the shape of apical margin of the male abdominal sternite VIII, in the shape of apical part of aedeagus (median lobe narrower, with more acute apex, parameres wider and shorter, apical tooth-like processes as those in *A. wahuiense*, but distinctly longer than apex of parameres). Additionally, based on the coloration and general shape of the aedeagus, *A. zhongdianensis* sp. nov. is similar to *A. amabilis* (Heer, 1841), distributed in Europe and Turkey, from which it differs in smaller size, sparser punctation of the head and the pronotum, and in details of morphology of the aedeagus.

For comparison see Figs 10–12 in WATANABE (1990), Figs 1–9 in ZHONG et al. (2009) and Fig. 34f in ZANETTI (1987). External differences from all known eastern Palaearctic species are given in the key below.

**Collecting circumstances.** All specimens were collected at elevations of 3500–3800 m a.s.l. by sifting of rotting wood, mushrooms, various debris and rhododendron leaves in a primary *Abies* and *Betula* forest with *Rhododendron* undergrowth (locality: C 129); by sifting of mushrooms growing under a huge *Abies* tree in a degraded original *Abies* and *Larix* forest with *Rhododendron*, *Sorbus* and other broadleaved bushes undergrowth (locality: C 131), and by sifting rotting wood and mushrooms in a remnant of a primary *Abies* and *Betula* forest with *Rhododendron* undergrowth (locality: C 133). The species seems to be attracted to mushrooms in various stage of decay.

**Etymology.** The species epithet is the Latinized adjective of Zhōngdiàn (Chinese: 中甸), a nearby city, where the species occurs.

### Key to species of *Acrolocha* of the eastern Palaearctic Region

- 1 Head between eyes flattened. Elytra without strong microsculpture, with coarse punctures arranged in longitudinal rows. Metatrochanters with posterior angulated projection (see WATANABE 2007: Figs 2, 7). Male abdominal sternite VIII with thin median projections. .... 2
- Head between eyes distinctly convex. Elytra with strong microsculpture, with or without punctures. Metatrochanters lacking projection. Male abdominal sternite VIII lacking median projections. .... 3
- 2 Pronotum distinctly convex, widest in middle part. Elytra dark brown, less than twice as long as pronotum. Inner side of male metafemur with distinct triangular tooth in median

- portion (WATANABE 2007: Fig. 2). Apical margin of male abdominal sternite VIII with three median projections (see WATANABE 2007: Fig. 3). Median lobe of aedeagus wide, parameres narrow (see WATANABE 2007: Figs 4–6). Body length: 2.20–2.40 mm. Japan. .... *A. horiguchii* Watanabe, 2007
- Pronotum flattened, widest in anterior third. Elytra yellowish-brown, more than twice as long as pronotum. Inner side of male metafemur without triangular tooth in median portion (WATANABE 2007: Fig. 7). Apical margin of male abdominal sternite VIII with deep emargination and long median projection (see WATANABE 2007: Fig. 8). Median lobe of aedeagus moderately narrow, parameres wide (see WATANABE 2007: Figs. 9–11). Body length: 1.80–2.10 mm. Japan. .... *A. kanagawana* Watanabe, 2007
- 3 Punctuation of elytra distinct near base and scutellum, microsculpture of elytra very coarse. Apical margin of male abdominal sternite VIII straight (Fig. 2). Apical part of median lobe of aedeagus narrow, parameres wide and short (Fig. 8). Body length: 2.10–2.75 mm. China. .... *A. zhongdianensis* sp. nov.
- Punctuation of elytra arranged in longitudinal rows, interspaces between punctures with coriaceous microsculpture. Apical margin of male abdominal sternite VIII rounded. Apical part of median lobe of aedeagus wide, parameres narrow, moderately long. .... 4
- 4 Pronotum with Y-shaped median elevation and with distinct curved depressions on each side of elevation. Median lobe of aedeagus moderately wide, parameres narrow (WATANABE 1990: Figs 11–12). Body reddish-brown to dark reddish-brown. Body size: 1.90–2.00 mm. Russia and Japan. .... *A. miyamorii* Watanabe, 1990
- Pronotum lacking median elevation, with midline consisting of small punctures, with indistinct longitudinal depressions on each side of midline and with indistinct small lateral depressions. Median lobe of aedeagus narrow, parameres wide (ZHONG et al. 2009: Figs 8–9). Body dark brown. Body size: 1.75–2.18 mm. China. .... *A. wahuensis* Zhong, Zhao & Li, 2009

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