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Revision of the *Alevonota* species of the Palaearctic region IV. Three new species from Sichuan, China (Coleoptera: Staphylinidae: Aleocharinae: Geostibini)

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ASSING V. 2020: Revision of the *Alevonota* species of the Palaearctic region IV. Three new species from Sichuan, China (Coleoptera: Staphylinidae: Aleocharinae: Geostibini). *Acta Musei Moraviae, Scientiae biologicae* **105(2):** 219–226. – Three species of *Alevonota* Thomson, 1858, all of them from West Sichuan, China, are described and illustrated: *Alevonota pliciventris* sp. nov. (Gongga Shan); *A. ambulans* sp. nov. (Shalui Shan); *A. tenuilobata* (Erlang Shan). The genus is now represented in the Palaearctic region by 49 species, 28 of them West Palaearctic and 21 East Palaearctic.

Keywords. Coleoptera, Staphylinidae, Aleocharinae, Geostibini, *Alevonota*, taxonomy, new species, Palaearctic region, China

Introduction

The genus *Alevonota* Thomson, 1858 was previously represented in the Palaearctic region by 46 species, 28 of them West Palaearctic and 18 East Palaearctic (ASSING 2017, 2018, 2019, ASSING & WUNDERLE 2008). Four species have been described from China (PACE 1998, 2004) and seven from Taiwan (ASSING 2019). The species known from China were recorded from Beijing (*A. sericata* Pace, 1998), Sichuan (*A. foedicornis* Pace, 2004, *A. pulchricornis* Pace, 2004), and Guangxi (*A. sinensis* Pace, 2004). The descriptions of *A. sinensis* and *A. pulchricornis* are based on single males, that of *A. foedicornis* on a unique female, and that of *A. sericata* on a male and a female.

Some Aleocharinae recently made available to me by Michael Schülke (Berlin) included nine specimens of *Alevonota* from several Chinese provinces (Sichuan, Shaanxi, Yunnan). An examination of this material revealed that they belong to seven species, all of them probably undescribed. Four of these species are represented exclusively by females and are consequently not named. The remaining three species are described in this paper.

Material and methods

The material treated in this study is deposited in the following collections:

MNB . . . . . Museum für Naturkunde Berlin (coll. Schülke; M. Schülke)
cAss . . . . . author´s private collection

The morphological studies were conducted using Stemi SV 11 (Zeiss) and Discovery V12 (Zeiss) microscopes, and a Jenalab compound microscope (Carl Zeiss

Jena). The images were created using digital cameras (Axiocam ERc 5s, Nikon Coolpix 995), as well as Labscope and Picolay software.

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.

Taxonomy

Alevonota pliciventris sp. nov. (Figs 1–8, 16)

Type material examined. Holotype ♂ [in poor condition: apical halves of antennae and left elytron missing]: "CHINA: W-Sichuan (15), Daxue Shan, Hailuogou Glacier Park, Camp 2, 2550–2700 m, 29.35.16N, 102.01.53E, 30./31.05.1997, M. Schülke / Holotypus ♂ *Alevonota pliciventris* sp. n., det. V. Assing 2020" (MNB). Paratype ♀: "CHINA: W-Sichuan (14), Daxue Shan, Hailuogou Glacier Park, Camp 3, 3000–3100 m, 29.34.22N, 101.59.39E, 29.05.1997, M. Schülke" (cAss).

Description. Body length 3.0–3.7 mm; length of forebody 1.4–1.5 mm. Habitus as in Fig. 1. Coloration: head blackish-brown to blackish; pronotum dark-brown; elytra yellowish; abdomen reddish to brown with tergite VI and the anterior half of tergite VII more or less distinctly darker; legs yellow; antennae reddish.

Head (Fig. 2) approximately as broad as long; punctation moderately dense and rather fine, median dorsal portion practically impunctate; interstices with pronounced microreticulation. Eyes approximately 0.7–0.8 times as long as distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna (Fig. 3) 1.4 mm long and slender; antennomeres IV–X weakly transverse.

Pronotum (Fig. 2) approximately as broad as long and 1.16–1.18 times as broad as head; punctation dense and fine, somewhat more distinct than that of head; interstices with distinct microreticulation.

Elytra (Fig. 2) nearly as long as pronotum; punctation dense and fine, weakly defined; interstices with pronounced microsculpture. Hind wings fully developed.

Abdomen (Fig. 4): tergites III–V with shallow and nearly impunctate anterior impressions; punctation of remainder of tergites III–V moderately dense and fine, that of tergite VI slightly less dense, and that of tergite VII very sparse; all tergites with fine transverse microsculpture; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with pronounced oblong tubercle in postero-median portion; posterior margin of tergite VIII angularly produced on either side of middle (Fig. 5); sternite VIII with strongly convex posterior margin; median lobe of aedeagus (Figs 6–7) 0.32 mm long; ventral process rather broad in ventral view and apically narrow in lateral view.

♀: posterior margin of tergite VIII strongly convex (Fig. 16); posterior margin of sternite VIII weakly concave in the middle; spermatheca (Fig. 8) with relatively small distal and large proximal portion.

Comparative notes. This species is distinguished from the species previously described from China by much paler elytra, an apically narrower and more acute ventral process of the aedeagus (lateral view), and the shape of the spermatheca. For illustrations of the sexual characters of *A. sericata*, *A. pulchricornis*, *A. foedicornis*, and *A. sinensis* see PACE (1998, 2004).

Distribution and natural history. The type specimens were collected in two localities in Gongga Shan, West Sichuan, at altitudes between 2550 and 3100 m.

Etymology. The specific epithet is an adjective composed of the Latin noun plica (fold, carina) and ventris (of the abdomen). It alludes to the pronounced oblong tubercle on the male tergite VII.

Alevonota ambulans sp. nov. (Figs 9–15)

Type material examined. Holotype ♂: "CHINA: W-Sichuan 1999, Ganzi Tibet. Aut. Pref., Yajiang Co., Shalui Shan, Bachtal 6 km WSW Yajiang, 3250 m, 30°01N, 102°57E, Laubstreu, Rinde, Pilze, 4.VII., leg. M. Schülke / Holotypus ♂ *Alevonota ambulans* sp. n., det. V. Assing 2020" (MNB).

Description. Body length 3.5 mm; length of forebody 1.4 mm. Habitus as in Fig. 9. Coloration: head brown; remainder of body reddish; legs yellow; antennae yellowish-red.

Head (Fig. 10) weakly oblong; punctation rather sparse and very fine; interstices with distinct microreticulation. Eyes very small, less than one-third as long as distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna (Fig. 11) 0.95 mm long and distinctly incrassate; antennomeres IV distinctly transverse, V–X of gradually increasing width and increasingly transverse, X more than twice as broad as long.

Pronotum (Fig. 10) weakly oblong and approximately 1.15 times as broad as head; punctation dense and very fine; interstices with distinct microreticulation.

Elytra (Fig. 10) of reduced length, approximately 0.6 times as long as pronotum, without distinct humeral angles; punctation dense, fine, and weakly granulose; interstices with pronounced microsculpture. Hind wings completely reduced.

Abdomen (Fig. 12): tergites III–V with moderately deep anterior impressions; punctation of tergites III–V rather dense and fine, that of tergite VI slightly less dense, and that of tergite VII very sparse; microsculpture of tergites III–V composed of transverse meshes, that of tergites VI–VII of a mix of isodiametric and short transverse meshes; posterior margin of tergite VII without palisade fringe.

♂: tergite VII unmodified; posterior margin of tergite VIII broadly, obtusely produced in the middle (Fig. 13); sternite VIII with strongly convex posterior margin; median lobe of aedeagus (Figs 14–15) 0.33 mm long and very slender both in lateral and in ventral view.

♀: unknown.

Comparative notes. *Alevonota ambulans* is readily distinguished from all other *Alevonota* species known from China by significantly smaller eyes, completely reduced hind wings, much shorter elytra, the absence of a palisade fringe at the posterior margin of tergite VII, and by a more slender median lobe of the aedeagus.

Distribution and natural history. The type locality is situated in Shalui Shan, West Sichuan. The holotype was sifted from litter at an altitude of 3250 m.

Etymology. The specific epithet is the present participle of the Latin verb ambulare (to walk) and alludes to the absence of hind wings.

Alevonota tenuilobata sp. nov. (Figs 17–23)

Type material examined. Holotype ♂: "CHINA W-Sichuan (Ganzi Tibet. Aut. Pref., Luding Co.), W Erlang Shan Pass, 2600 m, 7 km SSE Luding, 29°51N/102°15E, 20.–29.VI.1999 D.W. Wrase / Holotypus ♂ *Alevonota tenuilobata* sp. n., det. V. Assing 2020" (MNB).

Description. Body length 3.3 mm; length of forebody 1.5 mm. Habitus as in Fig. 17. Coloration: head dark-brown; pronotum brown; elytra yellow; abdomen reddish with tergite VI and the anterior portion of tergite VII slightly darker; legs yellow; antennae yellowish-red.

Head (Fig. 18) approximately as broad as long; punctation rather sparse and very fine, barely visible in the microreticulation. Eyes approximately 0.7–0.8 times as long as distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna (Fig. 19) 0.95 mm long and distinctly incrassate; antennomeres IV distinctly transverse, V–X of gradually increasing width and approximately twice as broad as long.

Pronotum (Fig. 18) weakly transverse, approximately 1.05 times as broad as long and 1.25 times as broad as head; punctation rather dense and very fine, barely visible in the distinct microreticulation.

Elytra (Fig. 18) 0.8 times as long as pronotum; punctation dense and fine; interstices with pronounced microreticulation. Hind wings present.

Abdomen (Fig. 20): tergites III–V with moderately deep impunctate anterior impressions; punctation of remainder of tergites III–V moderately dense and fine, that of tergites VI–VII very sparse; all tergites with fine transverse microsculpture; posterior margin of tergite VII with palisade fringe.

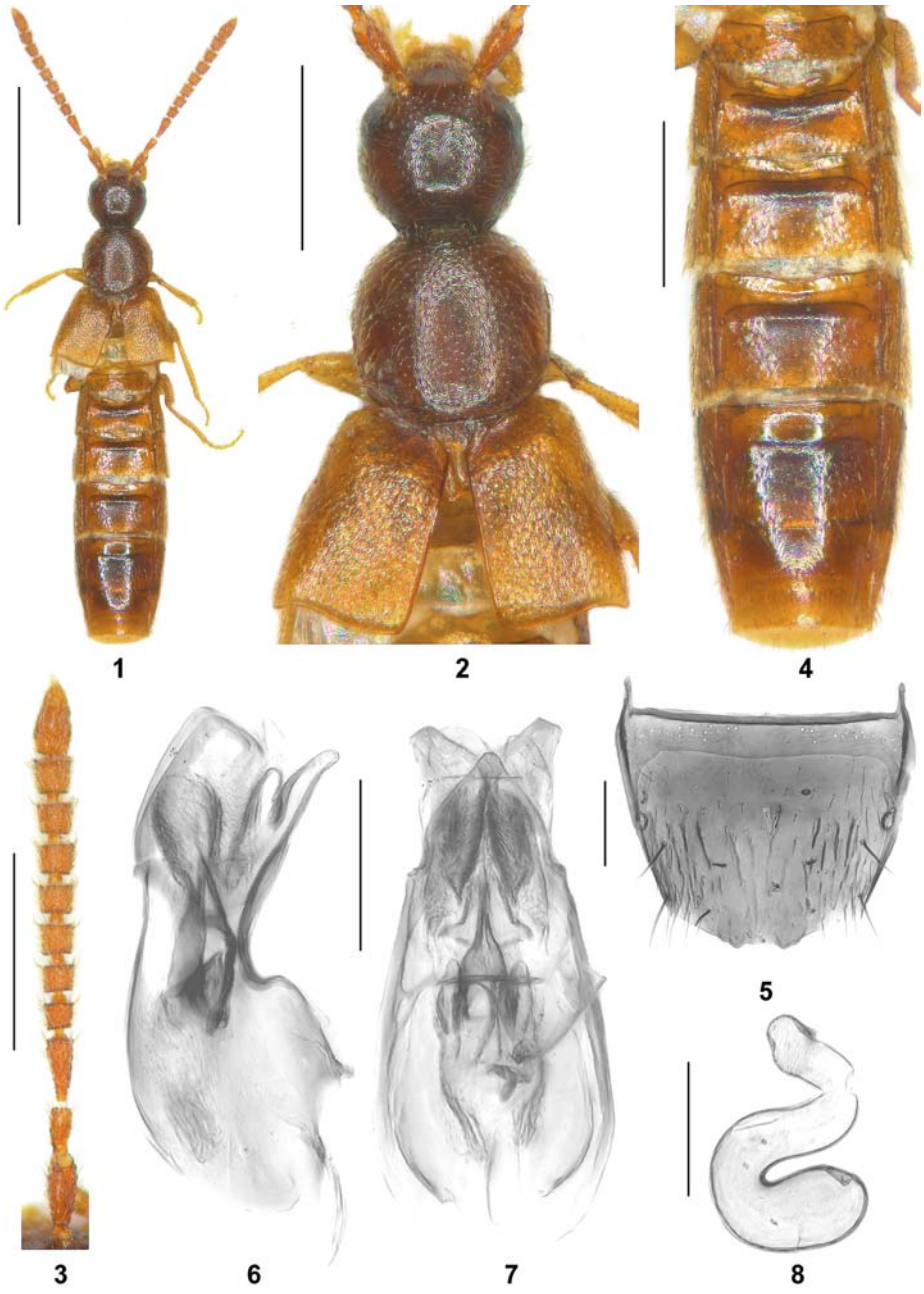
♂: tergite VII unmodified; posterior margin of tergite VIII broadly, obtusely produced in the middle (Fig. 21); sternite VIII with strongly convex posterior margin; median lobe of aedeagus (Figs 22–23) 0.45 mm long; ventral process broad in ventral view and apically very slender and acute in lateral view.

♀: unknown.

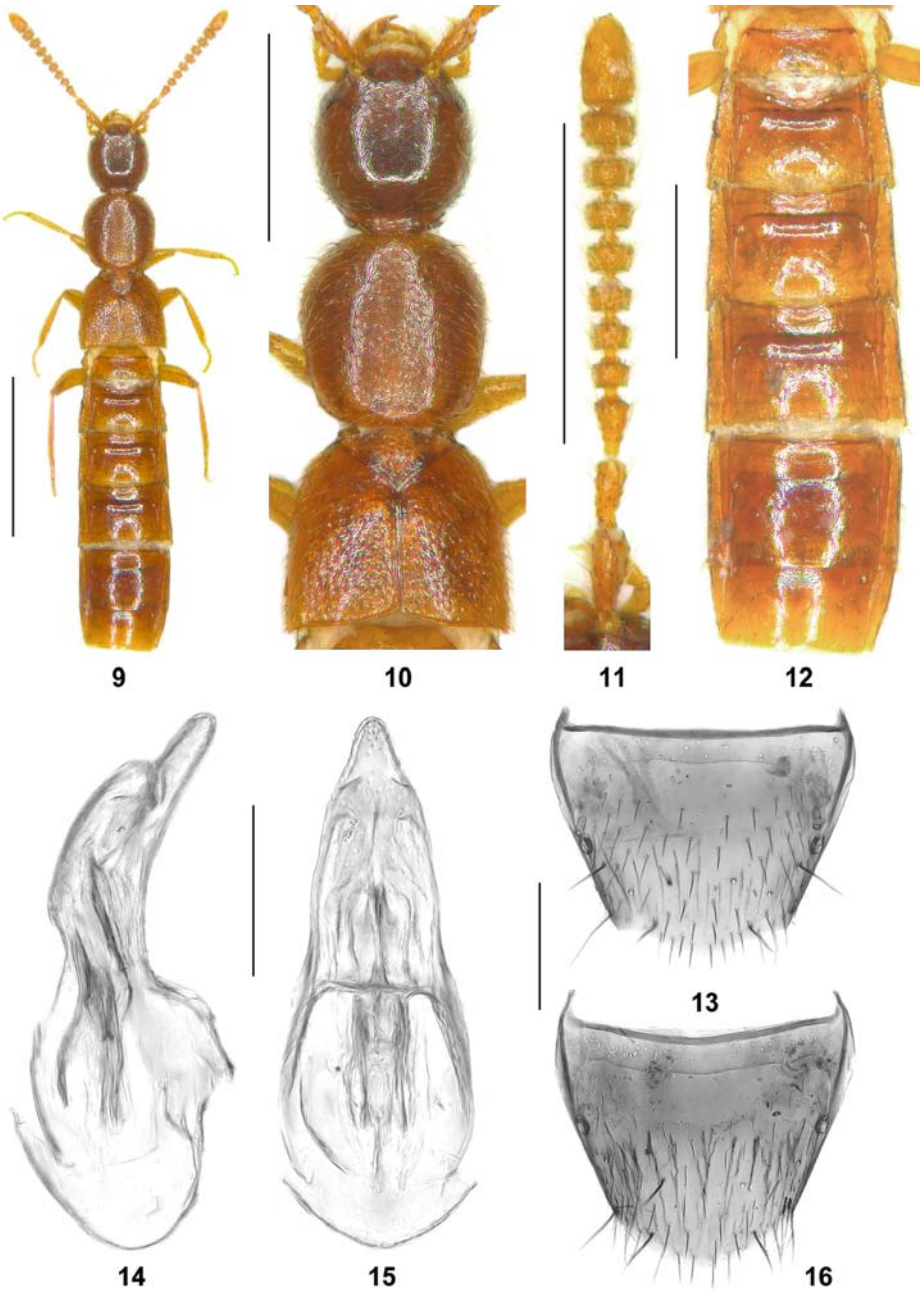
Comparative notes. Among the *Alevonota* species known from China, this species is characterized particularly by the shape of the aedeagus. It is distinguished from *A. foedicornis*, whose male sexual characters are unknown, by smaller body size, paler coloration of the elytra (*A. foedicornis*: elytra dark-brown), and the absence of a median sulcus on the pronotum.

Distribution and natural history. The type locality is situated in Erlang Shan, West Sichuan, at an altitude of 2600 m.

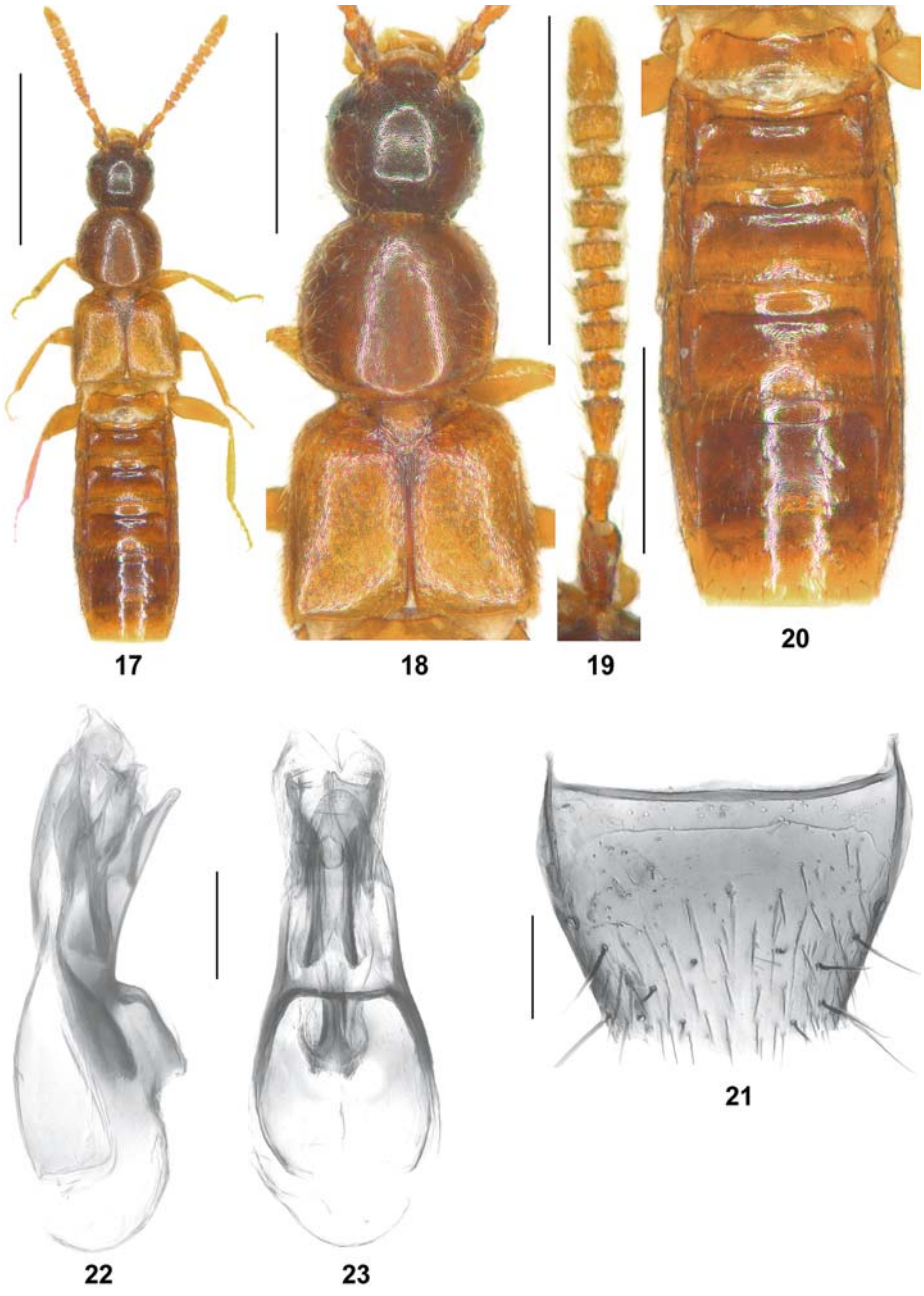
Etymology. The specific epithet (Latin, adjective) alludes to the narrow apex of the ventral process of the aedeagus in lateral view.



Figs 1–8. *Alevonota pliciventris* sp. nov. 1 – habitus; 2 – forebody; 3 – antenna; 4 – abdomen; 5 – male tergite VIII; 6–7 – median lobe of aedeagus in lateral and in ventral view; 8 – spermatheca. Scale bars: 1: 1.0 mm; 2–4: 0.5 mm; 5: 0.2 mm; 6–8: 0.1 mm.



Figs 9–16. *Alevonota ambulans* sp. nov. (**9–15**) and *A. pliciventris* sp. nov. (**16**). 9 – habitus; 10 – forebody; 11 – antenna; 12 – abdomen; 13 – male tergite VIII; 14–15 – median lobe of aedeagus in lateral and in ventral view; 16 – female tergite VIII. Scale bars: 9: 1.0 mm; 10–12: 0.5 mm; 13, 16: 0.2 mm; 14–15: 0.1 mm.



Figs 17–23. *Alevonota tenuilobata*. 17 – habitus; 18 – forebody; 19 – antenna; 20 – abdomen; 21 – male tergite VIII; 22–23 – median lobe of aedeagus in lateral and in ventral view. Scale bars: 17: 1.0 mm; 18–20: 0.5 mm; 21–23: 0.1 mm.

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