ISSN 1211-8788 *Acta Musei Moraviae, Scientiae biologicae*
106(2): 317–322, 2021

Review of Palaearctic *Autalia* VIII. A new species from Sichuan, China, and additional records (Coleoptera: Staphylinidae: Aleocharinae)

VOLKER ASSING

Gabelsbergerstr. 2, D-30163 Hannover, Germany; e-mail: vassing.hann@t-online.de

ASSING V. 2021: Review of Palaearctic *Autalia* VIII. A new species from Sichuan, China, and additional records (Coleoptera: Staphylinidae: Aleocharinae). *Acta Musei Moraviae, Scientiae biologicae* **106(2):** 317–322. – *Autalia tibetana* sp. nov. (China: Sichuan: Ganzi Tibetian Autonomous Prefecture), a winged species found in marmot burrows at an altitude of 4200 m, is described and illustrated. Additional records of seven species of *Autalia* Leach, 1819 are reported from the Palaearctic region, among them a first record from Georgia and a new province record from China. The genus is now represented in the Palaearctic region by 18 species (plus one nomen dubium).

Keywords. Coleoptera, Staphylinidae, Aleocharinae, Autaliini, *Autalia*, taxonomy, new species, description, taxonomy, China, new records

Introduction

The genus *Autalia* Leach, 1819 was previously represented in the Palaearctic region by 17 species (not counting the nomen dubium *A. puncticollis* Thomson, 1867), four of them confined to the West Palaearctic, eleven to the East Palaearctic region, and two species having a trans-Palaearctic distribution (ASSING 2005, 2008). Eight species have been recorded from mainland China. Four of them, *A. schuelkei* Assing, 1998 (Sichuan: Daxue Shan), *A. limata* Assing, 2001 (Sichuan: Xilingxueshan), *A. imbecilla* Assing, 2003 (S-Shaanxi: Daba Shan), and *A. yunnanica* Assing, 2005 (Yunnan) belong to the *A. schuelkei* group. This group is characterised by a similar external morphology, particularly small eyes, short elytra and reduced hind wings, and by a similar general morphology of the sexual characters. Unlike the majority of *Autalia* species, which live in mushrooms and other decaying matter, also at lower altitudes, the species of the *A. schuelkei* group apparently inhabit the leaf litter of forests at relatively high elevations (1600–3900 m). The remaining four species are winged and include *A. cornigera* Assing, 2008 (previously known only from Yunnan), *A. smetanai* Pace, 1981 (Nepal; China: Yunnan), *A. schillhammeri* Assing, 2003 (China: Guizhou), and the widespread *A. rivularis* (Gravenhorst, 1802) (distribution trans-Palaearctic; adventive in North America) (ASSING 1997, 1998, 2001, 2003, 2005, 2008).

Recently collected material made available to me by Aleš Smetana (Ottawa) included 115 *Autalia* specimens, almost all of them belonging to the *A. schuelkei* group. This material was collected in Emei Shan (Sichuan) and Cang Shan (Yunnan). Moreover, in material of unidentified Aleocharinae from China forwarded to me by Andreas Pütz (Eisenhüttenstadt), four *Autalia* males found in marmot burrows were discovered. An examination of the genitalia eventually revealed that they represented an undescribed species.

Material and methods

The material examined in the course of the present study is deposited in the following public and private collections:

CNC . . . . . Canadian National Collection of Insects, Arachnids and Nematodes (A. Brunke, A. Smetana)
MNB . . . . . Museum für Naturkunde Berlin, coll. Schülke (M. Schülke)
NMP . . . . . National Museum of Natural History, Praha (J. Hájek)
SNSD . . . . . Senckenberg Naturhistorische Sammlungen Dresden (O. Jäger)
cAss . . . . . author´s private collection
cPüt . . . . . private collection Andreas Pütz, Eisenhüttenstadt

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 apex of the abdomen, 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 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.

Results

Autalia kabyliana Fagel, 1959

Material examined. Spain: 1 ex., Andalucía, Granada, Hueneja, Rio Nacimiento, 20.V.2006, leg. Baena (cAss).

The distribution of this species is confined to Spain and Northwest Africa (Assing 1997).

Autalia inopinata Assing, 2003

Material examined. Georgia: 21♂♂, 24♀♀, 57 exs., Adjara, Meskheti Range, NNW Khulo, 41°47′19″N, 42°17′25″E, 2010 m, mixed beech and spruce forest, forest margin, beech litter, mushrooms, and debris in ditch with *Tussilago* sifted, 14.VII.2019, leg. Assing & Schülke (cAss, MNB); 1♀, 1 ex., Adjara, Meskheti Range, NNW Khulo, 41°47′00″N, 42°17′22″E, 1840 m, stream valley in beech forest, beech litter near stream sifted, 14.VII.2019, leg. Assing & Schülke (cAss, MNB).

Autalia inopinata was previously known only from the type locality in Artvin province, Northeast Anatolia (Assing 2003). The above material represents the first records since the original description and from Georgia.

Autalia smetanai Pace, 1991

Material examined. Nepal: 4 exs., W-Manaslu Himal, Bhara Pokhari Lekh, above Bhachok, 28°15′N, 84°26′E, 1800 m, 31.IV.2005, leg. Jäger (SNSD, cAss).

This species has been recorded from Nepal and the Chinese province Yunnan (Assing 1997, 2001, 2005).

Autalia cornigera Assing, 2008

Material examined. China: Sichuan: 4 exs. [1 ex. teneral], Emei Shan, 29°34′N, 103°21′E, 1950 m, sifted, 15.VI.2010, leg. Grebennikov (CNC, cAss); 1 ex., Emei Shan, 29°37′N, 103°21′E, 1800–2400 m, sifted, 27.VI.–5.VII.2009, leg. Grebennikov (cAss).

The original description is based on two type specimens from the Gaoligong Shan in Yunnan (Assing 2008). The above records suggest that this winged species is probably widespread, though not very common, in China. One of the specimens collected in June is teneral.

Autalia schuelkei Assing, 1998

Material examined. China: Sichuan: 3 exs., Moxi env., Hailuogou valley, above cable car station, 29°34′N, 101°59′E, 3140 m, mixed forest, litter sifted, 18–21.VI.2014, leg. Hájek & Růžička (NMP, cAss).

This species was previously known only from the type locality in Gongga Shan, Sichuan.

Autalia limata Assing, 2001

Material examined. China: Sichuan: 9 exs., Emei Shan, 29°31′N, 103°20′E, 3050 m, 14.VI.2010, leg. Grebennikov (CNC, cAss); 4 exs., same data, but 29°32′N, 103°20′E, 15.VI.2010, 2930 m, sifted; 1 ex., same data, but 29°31N′, 103°20′E, 14.VI.2010; 14 exs., Emei Shan, 29°34′N, 103°21′, 1800–2400 m, sifted, 27.VI.–5.VII.2009, leg. Grebennikov (CNC, cAss); 1♂, 2♀♀, Emei Shan, Jieyingdian Temple, 29°32′N, 103°20′E, 2480 m, bamboo and mixed forest, sifted, 7.VI.2014, leg. Hájek & Růžička (NMP, cAss); 7.VI.2014, leg. Hájek & Růžička (NMP, cAss); 4 exs., Emei Shan, Taiziping Temple, 29°32′N, 103°20′E, 2820 m, mixed forest with fir and bamboo undergrowth, sifted, 8.VI.2014, leg. Hájek & Růžička (NMP, cAss); 1♂, 37 km N Baoxing, Qiao Qi village, Jiajin Shan Nat. Forest Park, 30°41′N, 102°42′E, 2800 m, mixed forest, rotting wood and around fallen trunks sifted, 15.VI.2014, leg. Hájek & Růžička (cAss).

The specimens from Emei Shan are distinguished from the type material of *A. limata* from Xiling Shan (Sichuan) by slightly larger size of the aedeagus and a slightly less pronounced crista apicalis of the aedeagus, but since no other characters were found suggesting that the population in Emei Shan represents a distinct species, the observed differences are interpreted as intra- rather than interspecific variation. The aedeagus is rather variable even in the material from Emei Shan.

Autalia yunnanica Assing, 2005

Material examined. China: Yunnan: 21 exs., Dali env., Cangshan, E-slope, 25°40′N, 100°06′E, 3815 m, sifted [19], 19.V.2010, leg. Grebennikov; 48 exs., same data, but 3800 m, sifted [15], 17.V.2010; 4 exs., same

data, but 3830 m, sifted [16], 17.V.2010; 6 exs., same data, but 3890 m, sifted [18], 19.V.2010; 1 ex., same data, but 25°40′N, 100°08′E, 2730 m, sifted [08], 13.V.2010; 1 ex., same data, but 25°40′N, 100°06′E, 3990 m, 15.V.2010, sifted [14] (material in CNC, cAss).

The original description is based on twelve specimens from several localities near Zhongdian in northern Yunnan (Assing 2005). The above material is distinguished from the type material by the presence of a narrow rudiment of a palisade fringe at the posterior margin of the male tergite VII, as well as by a slightly larger crista apicalis of the aedeagus, but since no additional evidence was found suggesting that the population from the Cang Shan should represent a distinct species, the observed differences are attributed to intra- rather than interspecific variation.

Cang Shan is situated some 200 km south of the previously known distribution, suggesting that the species may be rather widespread in Yunnan, despite the fact that it was collected in high altitude habitats and despite its reduced hind wings.

Autalia tibetana sp. nov. (Figs 1–6)

Type material examined. Holotype ♂: "CHINA, Prov. Sichuan, Ganzi Tibetian Auton. Pref. Litang Co., Shaluli [recte: Shalui] Shan, *Marmota*-sift, 15 km NW Litang, route 318, km 3186, 4200 m, 3.VII.1999, leg. A. Pütz / Holotypus ♂ *Autalia tibetana* sp. n., det. V. Assing 2020" (cPüt). Paratypes: 3♂♂: same data as holotype (cPüt, cAss).

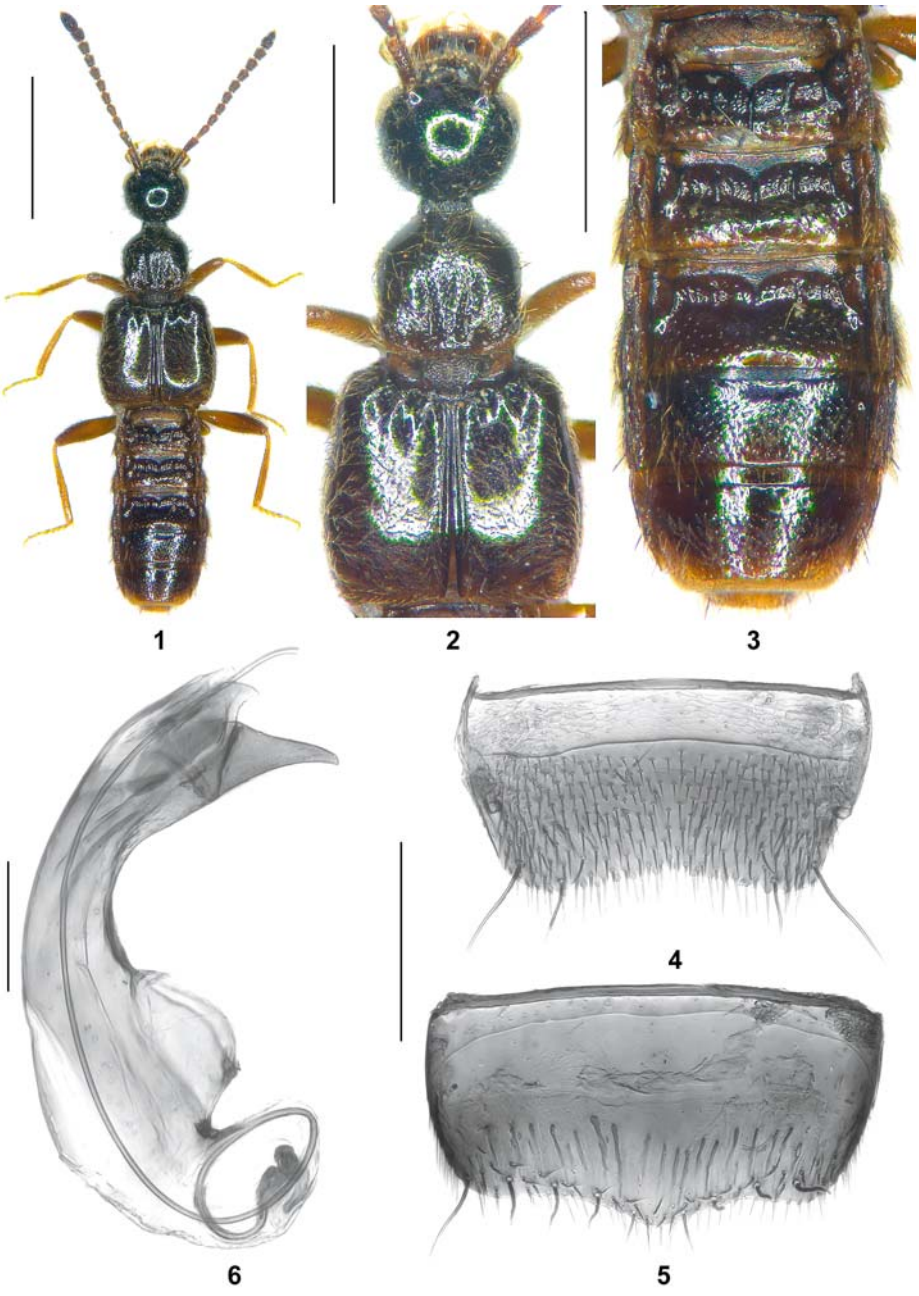
Description. Body length 3.0–3.5 mm; length of forebody 1.6–1.9 mm. Habitus as in Fig. 1. Colouration: body blackish; legs with the femora blackish-brown, the tibiae dark-brown, the the tarsi yellowish-brown; antennae blackish.

Head (Fig. 2) approximately as long as broad; punctation extremely fine and moderately dense; interstices without microsculpture. Eyes of moderate size, approximately 0.7 times as long as distance from posterior margin of eye to posterior constriction of head in dorsal view. Antenna 1.1–1.3 mm long; antennomeres IVweakly oblong, V weakly oblong or as long as broad, VI as long as broad or weakly transverse, and VII–X weakly transverse.

Pronotum (Fig. 2) approximately as long as broad and as broad as head; midline with very shallow and indistinct median sulcus anteriorly; punctation dense and distinct in posterior portion, very shallow and fine in anterior and antero-lateral portions; interstices without microsculpture.

Elytra (Fig. 2) large in relation to pronotum and 1.3–1.4 times as long as pronotum; punctation extremely fine and moderately dense; interstices without microsculpture. Hind wings fully developed. Metatarsomere I slightly longer than metatarsomere II, but shorter than the combined length of metatarsomeres II and III.

Abdomen (Fig. 3) broadest at tergites V–VI; anterior impressions of tergites III–V with three distinct carinae, those on tergite III most pronounced and those on tergite V least pronounced, median carinae longer and more distinct than lateral ones, median carina on tergite III extending to posterior margin of tergite; anterior impressions of tergites III and IV with dense punctation (somewhat resembling coarse microsculpture), that of tergite III denser than that of tergite IV; anterior impression of tergite V with rather sparse punctation; posterior portions of tergites III and IV with dense and rather coarse



Figs 1–6. *Autalia tibetana* sp. nov. 1 – habitus; 2 – forebody; 3 – abdomen; 4 – male tergite VIII; 5 – male sternite VIII; 6 – median lobe of aedeagus in lateral view. Scale bars: 1: 1.0 mm; 2–3: 0.5 mm; 4–5: 0.2 mm; 6: 0.1 mm.

punctation, discs of tergite V–VII with fine and dense punctation; interstices without microsculpture; posterior margin of tergite VII with palisade fringe.

♂: tergite VIII (Fig. 4) strongly transverse and with broadly concave posterior margin; sternite VIII (Fig. 5) strongly transverse, posterior margin with angular projection in the middle; median lobe of aedeagus (Fig. 6) approximately 0.4 mm long; flagellum of moderate length, basally with one coil.

♀: unknown.

Comparative notes. This species is characterized by relatively large size, dark colouration, the modifications of the anterior impressions of abdominal tergite III–V, and by the male primary and secondary sexual characters. It is immediately distinguished from all other species recorded from China by larger size alone, and from all these species, except *A. rivularis*, additionally by darker colouration. For illustrations of other species recorded from China see Assing (1997, 1998, 2001, 2003, 2005, 2008).

Distribution and natural history. The type locality is situated in Ganzi Tibetian Autonomous Prefecture (China: Sichuan). The specimens were sifted from dung and debris in the burrows of *Marmota himalayana* together with numerous other Staphylinidae at an altitude of 4200 m.

Etymology. The specific epithet (adjective) is derived from Tibet, the region where this species was discovered.

Acknowledgements

I am indebted to the colleagues listed in the material section for the loan of material. The comments and suggestions of two anonymous reviewers are appreciated.

References

Assing V. 1997: Review of the Palaearctic species of *Autalia* Leach in Samouelle, 1819 (Coleoptera, Staphylinidae, Aleocharinae). *Entomologische Blätter* **93 (1):** 69–85.

Assing V. 1998: A new species of *Autalia* Leach in Samouelle from China (Insecta: Coleoptera: Staphylinidae: Aleocharinae). *Reichenbachia* **32 (31)**: 209–212.

Assing V. 2001: Review of Palaearctic *Autalia* Leach in Samouelle, 1819. IV. New species and additional records (Coleoptera, Staphylinidae, Aleocharinae). *Revue Suisse de Zoologie* **108 (4):** 911–917.

Assing V. 2003: Review of Palaearctic *Autalia*. V. New species, additional records, and a key to species (Coleoptera, Staphylinidae, Aleocharinae). *Entomological Problems* **33 (1–2):** 45–50.

Assing V. 2005: Review of Palaearctic *Autalia* VI. A new species and a first record from China (Coleoptera: Staphylinidae, Aleocharinae). *Entomological Problems* **35 (2):** 147–150.

Assing V. 2008: Review of Palaearctic *Autalia* VII. A new species from Yunnan, China (Coleoptera: Staphylinidae, Aleocharinae). *Linzer Biologische Beiträge* **40 (1):** 247–250.