

**Two new species of *Phymatura* from China
(Coleoptera: Staphylinidae: Aleocharinae)**

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ASSING V. 2021: Two new species of *Phymatura* from China (Coleoptera: Staphylinidae: Aleocharinae). *Acta Musei Moraviae, Scientiae biologicae* **106(2)**: 329–334. – *Phymatura angulata* sp. nov. (China: Yunnan) and *P. russa* sp. nov. (China: Shaanxi) are described and illustrated. *Phymatura cooteri* Assing, 2005 is reported from Japan and Russia for the first time. Including the new species, *Phymatura* J. Sahlberg, 1876 is represented in the Palaearctic region by 14 species, at least one of them of doubtful generic assignment.

Keywords. Coleoptera, Staphylinidae, Aleocharinae, Homalotini, *Phymatura*, taxonomy, new species, description, taxonomy, East Palaearctic region, China, Japan, new record

Introduction

The genus *Phymatura* J. Sahlberg, 1876 was previously represented in the Palaearctic region by twelve species, eleven of them confined to the East Palaearctic region and one with a trans-Palaearctic distribution. Six species, five of them exclusive, have been reported from China, with four species known only from Sichuan, one from Heilongjiang and Jilin, and one widespread species recorded also from Heilongjiang (ASSING 2005, PACE 1998, 2004, 2010, SCHÜLKE & SMETANA 2015). However, based the habitus photos provided by PACE (2010), the generic assignment of at least one of the Chinese species, *P. sinica* Pace, 2010, is most likely erroneous.

The present paper is based on material from China forwarded to me by Michael Schülke (Berlin) and some specimens from South Japan male available by Tomáš Lackner (currently München).

Material and methods

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

MNB Museum für Naturkunde, Berlin (coll. 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 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

Phymatura cooteri Assing, 2005

Material examined. **Japan:** 2♂♂, 2♀♀, Kagoshima-ken, Amami, Oshima isl., Yamato, Yuwan-dake, primary forest, sifted, 18.III.2010, leg. Lackner (cAss). **Russia:** 13 exs. [identified by Michael Schülke], Primorskiy Kray, Askhold Island, 25 km SE Vladivostok, 10–25.VI.2005, leg. A. Plutenko (MNB).

This species was previously known only from Jilin and Heilongjiang provinces, China (ASSING 2005). The above specimens represent the first records from Japan and Russia.

Phymatura angulata sp. nov.

(Figs 1–4)

Type material. Holotype ♂: “CHINA: Yunnan [CH07-14], Baoshan Pref., Gaoligong Shan, 33 km SE Tengchong, 2100–2200 m, 24°51'22"N, 98°45'36"E, decid. forest, litter, wood, fungi sifted, 31.V.2007, M. Schülke / Holotypus ♂ *Phymatura angulata* sp. n., det. V. Assing 2020” (MNB). Paratypes: 1♂, 1♀: same data as holotype (MNB, cAss).

Description. Body length 2.2–2.5 mm; length of forebody 1.2–1.3 mm. Habitus as in Fig. 1. Colouration: head blackish-brown; pronotum and elytra reddish-brown to dark-brown; abdomen reddish to reddish-brown; legs yellow; antennae brown with antennomeres I–III and XI reddish.

Head transverse; punctation dense and fine; interstices without microreticulation. Eyes large, more than twice as long as postocular region in dorsal view. Antenna incrassate, antennomeres IV as long as broad, V–X of increasing width and increasingly transverse, and X approximately twice as broad as long. Labium as in Fig. 2.

Pronotum 1.4–1.5 times as broad as long and approximately 1.35 times as broad as head, with obtusely marked posterior angles; punctation fine, denser than that of head; interstices without microsculpture.

Elytra slightly longer than pronotum; punctation very dense, more distinct than that of pronotum; 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: punctation dense and rather coarse on tergites III–VI, fine and sparse on tergite VII; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII broadly and weakly concave, smooth; posterior margin of sternite VIII produced in the middle; median lobe of aedeagus (Fig. 3) 0.35 mm long and of distinctive morphology.

♀: spermatheca shaped as in Fig. 4.

Comparative notes. *Phymatura angulata* is distinguished from all other species recorded from China by the shapes of both the aedeagus and the spermatheca. For illustrations of the genitalia of *P. chinensis* Pace, 1998 (Sichuan), *P. cooteri* (China: Heilongjiang, Jilin; South Japan), *P. sichuanensis* Pace, 2004, *P. sinica* Pace, 2010 (Sichuan), and *P. smetanai* Pace, 1998 (Sichuan) see PACE (1998, 2004, 2010) and ASSING (2005).

Distribution and natural history. The type locality is situated in Gaoligong Shan, West Yunnan. The specimens were collected by sifting litter, wood, and mushrooms in a deciduous forest at an altitude of 2100–2200 m.

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

***Phymatura russa* sp. nov.**

(Figs 5–11)

Type material. Holotype ♂: “CHINA: S-Shaanxi (Qinling Shan), pass on rd. Zhouzhi – Foping, 105 km SW Xi’an, N-slope, 1990 m, 33°44’N, 107°59’E, leg. M. Schülke [C01-01] / 2./4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms (sifted) [C01-01] / Holotypus ♂ *Phymatura russa* sp. n., det. V. Assing 2019” (MNB). Paratypes: 8 exs.: same data as holotype (MNB, cAss).

Description. Body length 2.4–2.9 mm; length of forebody 1.3–1.4 mm. Habitus as in Fig. 5. Colouration: body reddish with abdominal tergite VI and the anterior half of tergite VII infusate; legs dark-yellow to pale-reddish; antennae reddish.

Head (Fig. 6) approximately as long as broad; punctation dense and very fine, barely noticeable in the pronounced microreticulation. Eyes slightly longer than postocular region in dorsal view. Antenna approximately 0.8 mm long and strongly incrassate apically; antennomeres IV distinctly transverse, V–X gradually increasing in width, X approximately twice as broad as long, and approximately as long as the combined length of IX and X.

Pronotum (Fig. 6) approximately 1.3 times as broad as long and 1.4 times as broad as head, broadest in posterior half; punctation dense and fine, barely noticeable in the pronounced microreticulation.

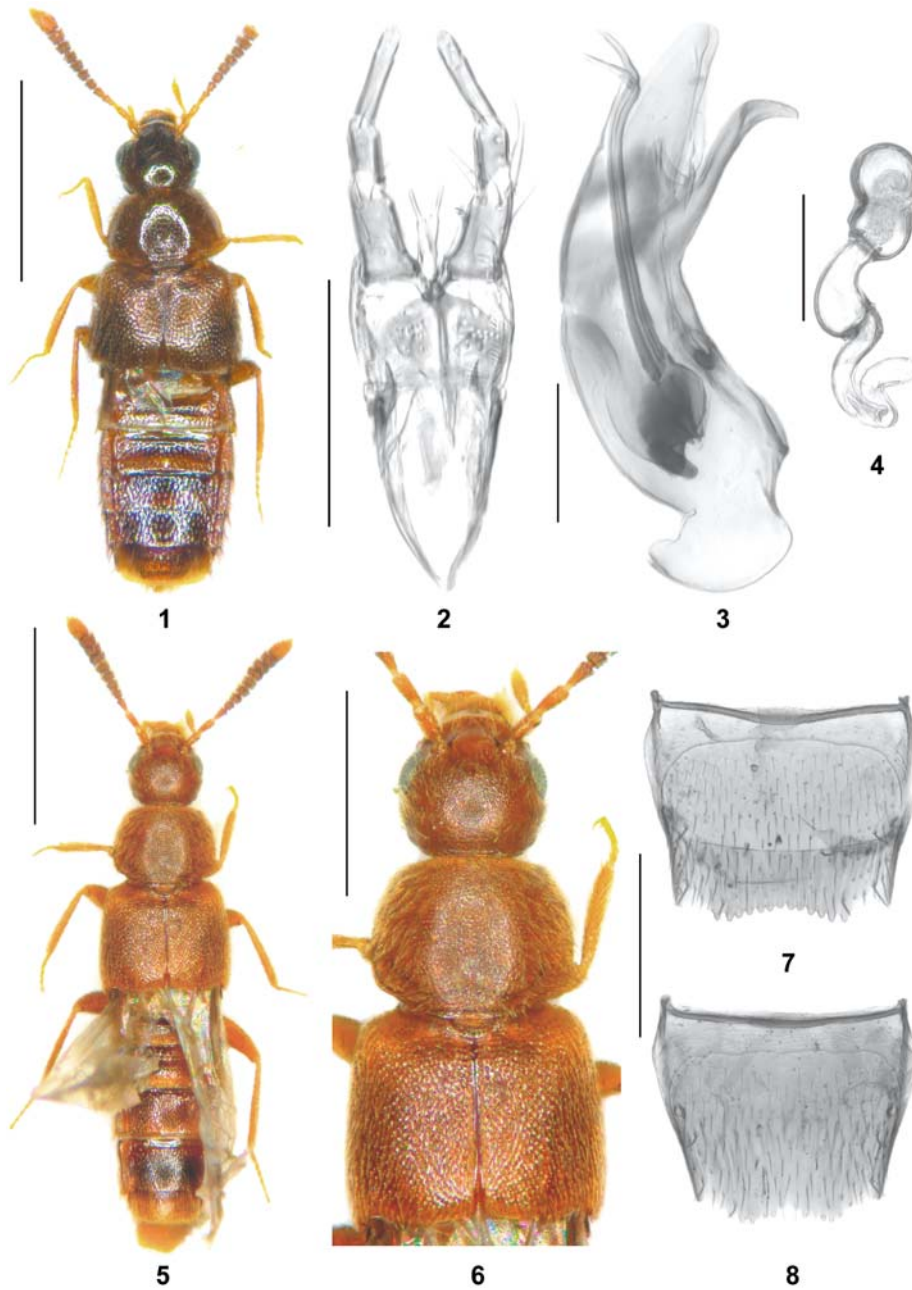
Elytra (Fig. 6) slightly longer than pronotum; punctation very dense and fine, but significantly more distinct than that of head and pronotum. Hind wings fully developed. Metatarsomere I nearly as long as the combined length of metatarsomeres II and III.

Abdominal tergites III and IV with, tergite V without shallow anterior impressions; punctation distinct and very dense; interstices without microsculpture.

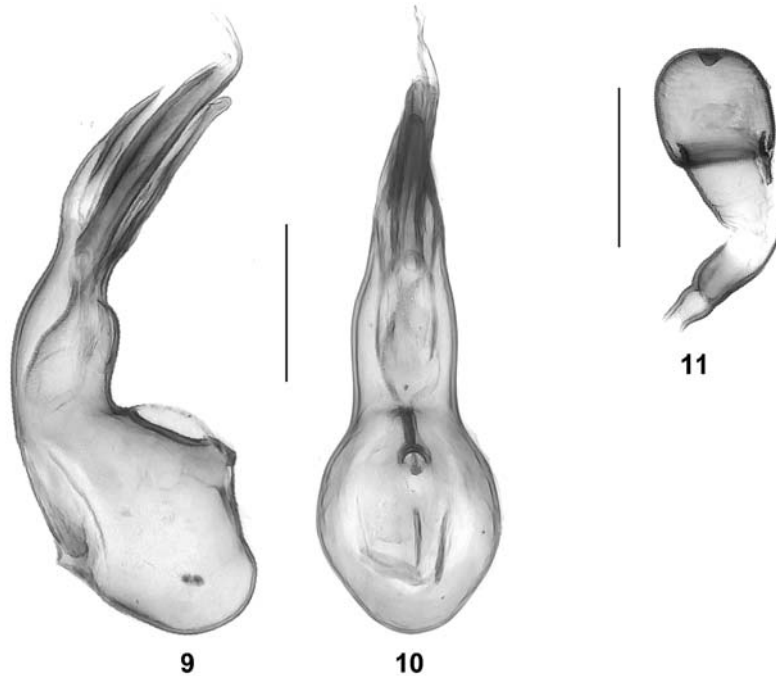
♂: tergite VIII (Fig. 7) with weakly concave and finely serrate posterior margin; posterior margin of sternite VIII obtusely pointed in the middle; median lobe of aedeagus (Figs 9–10) 0.35 mm long and of distinctive shape.

♀: posterior margin of tergite VIII weakly concave and weakly serrate in the middle (Fig. 8); sternite VIII of similar shape as in male, but posterior margin not distinctly pointed in the middle; spermatheca as in Fig. 11.

Comparative notes. Among the congeners recorded from China, this species is characterized particularly by its nearly uniformly reddish colouration, strongly incrassate



Figs 1–8. *Phymatura angulata* sp. nov. (1–4) and *P. russa* sp. nov. (5–8). 1, 5 – habitus; 2 – labium; 3 – median lobe of aedeagus in lateral view; 4 – spermatheca; 6 – forebody; 7 – male tergite VIII; 8 – female tergite VIII. Scale bars: 1, 5: 1.0 mm; 6: 0.5 mm; 7–8: 0.2 mm; 2, 4: 0.1 mm.



Figs 9–11. *Phymatura russa* sp. nov. 9–10 – median lobe of aedeagus in lateral and in ventral view; 11 – spermatheca. Scale bars: 0.1 mm.

antennae, the absence of an anterior impression on the abdominal tergite V, the shapes of the male and female tergite VIII, and by the shapes of the median lobe of the aedeagus and the spermatheca. For illustrations of other *Phymatura* species recorded from China see PACE (1998, 2004, 2010) and ASSING (2005).

Distribution and natural history. The type locality is situated in the Qinling Shan, South Shaanxi, China. The specimens were sifted from dead wood or mushrooms in a mixed deciduous forest at an altitude of nearly 2000 m.

Etymology. The specific epithet (Latin, adjective) alludes to the reddish colouration.

Acknowledgements

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