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Taxonomic Study on the Subgenus *Anaglyptus* (*Akajimatora*) Kusama & Takakuwa, 1984 (Coleoptera, Cerambycidae) from China

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Abstract *Anaglyptus* (*Akajimatora*) *lizhigangi* sp. nov. is described from northern Zhejiang, China. *Anaglyptus* (*Akajimatora*) *bellus isolatus* Gressitt, 1951 is upgraded to species level. Illustrations of the habitus, genitalia including the endophallus in inflated and everted condition, and diagnostic features are provided.
Keywords Taxonomy, new species, new status, *Akajimatora*, Anaglyptini, China. Introduction

Introduction

The subgenus *Anaglyptus* (*Akajimatora*) Kusama & Takakuwa, 1984 was first established as an independent genus based on *Anaglyptus bellus* Matsumura & Matsushita, 1933 from Japan, and it was characterized by the robust body with dense reddish pubescence, short stout antennae and legs, and flattened outer sides of femora with weak marginal carinae. Later, Niisato (1992) regarded it as a subgenus of *Anaglyptus* Mulsant, 1839. Presently, the subgenus comprises only two species with one subspecies, viz. *A. bellus bellus* Matsumura & Matsushita, 1933 from Japan, *A. bellus isolatus* Gressitt, 1951 from Sichuan and *A. meridionalis* Matsushita, 1933 from Taiwan. In this study, we are going to describe one new species, and propose one new status for a member of the subgenus from China. Consequently, a total of four species are recognized in the subgenus *Akajimatora*.

Materials and Methods

The studied materials belong to the following institutions or private collections, of which abbreviations are shown in parentheses: Sun Yat-sen University, Guangzhou, China (SYSU), Collection of Wen-Xuan Bi, Shanghai, China (CBWX), Collection of Chang-Chin Chen, Tianjin, China (CCCC), Collection of Zhi-Gang Li, Shanghai, China (CLZG), and Collection of Tatsuya Niisato, Tokyo, Japan (CNT).

The holotype of new species is housed in CBWX temporarily, and will eventually be deposited in the Insect Collection of Shanghai Normal University, Shanghai, China (SNUC).

Taxonomy

Anaglyptus (*Akajimatora*) *lizhigangi* Bi & Niisato, sp. nov.

(Figs. 1–4)

Type materials. Holotype: male, "CHINA. Zhejiang, Anji / Longwangshan (龙王山) / 1050m 2016. VIII.22 / leg. Zhi-Gang Li" (SNUC). Paratypes: 1 female, same data as the holotype (CBWX); 1 male

and 1 female, same data as the holotype (CLZG).

Description. M a l e (Figs. 1, 3 & 4). Body length 15.6–16.0 mm, width between elytral humeri 4.1–4.4 mm. Body black except reddish-ochraceous elytra. Head, most part of pronotum, elytra except humeri clothed with scarlet pubescence; ventral surface predominantly with scarlet pubescence except gula and prosternum which are sparsely with pale to reddish pubescence; meso- and metasterna, first and last abdominal ventrites with pale pubescence forming broad stripes along mid-line. Antennae with 3rd to 9th antennomeres annulated with whitish pubescence at each base, the pubescence is relatively vague on 3rd, 4th and 9th. Pronotum provided with two small spots of black pubescence at sides. Scutellum densely clothed with pink pubescence. Legs with coxae and trochanters clothed with dense whitish pubescence with reddish tinge; femora and tibiae with sparse whitish pubescence, the pubescence becomes denser on dorsum near femoral apices; 1st to 3rd tarsomeres moderately with whitish pubescence.

Head slightly narrower than the basal width of pronotum, finely punctured; frons inverted trapezoid, slightly longer than the basal width; lower eye lobes ca. 1.3 times as long as wide, ca. 0.7 times as long as genae; antennal tubercles reduced. Antennae thick, ca. 0.7 times as long as body; 3rd antennomere distinctly longer than 4th or scape, slightly longer than 5th; 3rd to 5th antennomeres provided with an acute apical spine on each inner side, the spine is most developed on 3rd, gradually reduced on 4th to 5th; relative lengths of antennomeres = 0.6 : 0.2 : 1.0 : 0.7 : 0.8 : 0.7 : 0.6 : 0.5 : 0.5 : 0.4 : 0.5. Pronotum slightly longer than the basal width, feebly arcuate at sides, disk distinctly convex, highest at basal third, then convexly declivous posteriorly in lateral view, provided with dense and coarse reticulate punctures. Scutellum rounded triangular. Elytra long, 2.6 times as long as the humeral width, gradually narrowed posteriorly, densely punctured; basal swellings elongate, feebly raised near scutellum; apices transversely truncate, with an external spine moderately long and acute apically. Prosternum provided with distinct rugose punctures on apical third. Abdomen gradually narrowed apically, provided with sparse and fine punctures; last ventrite trapezoidal, with gently arcuate apical margin. Legs stout and moderately long; femora claviform, with hind pair reaching apical fourth of elytra; 1st hind tarsomere subequal to the two succeedings combined.

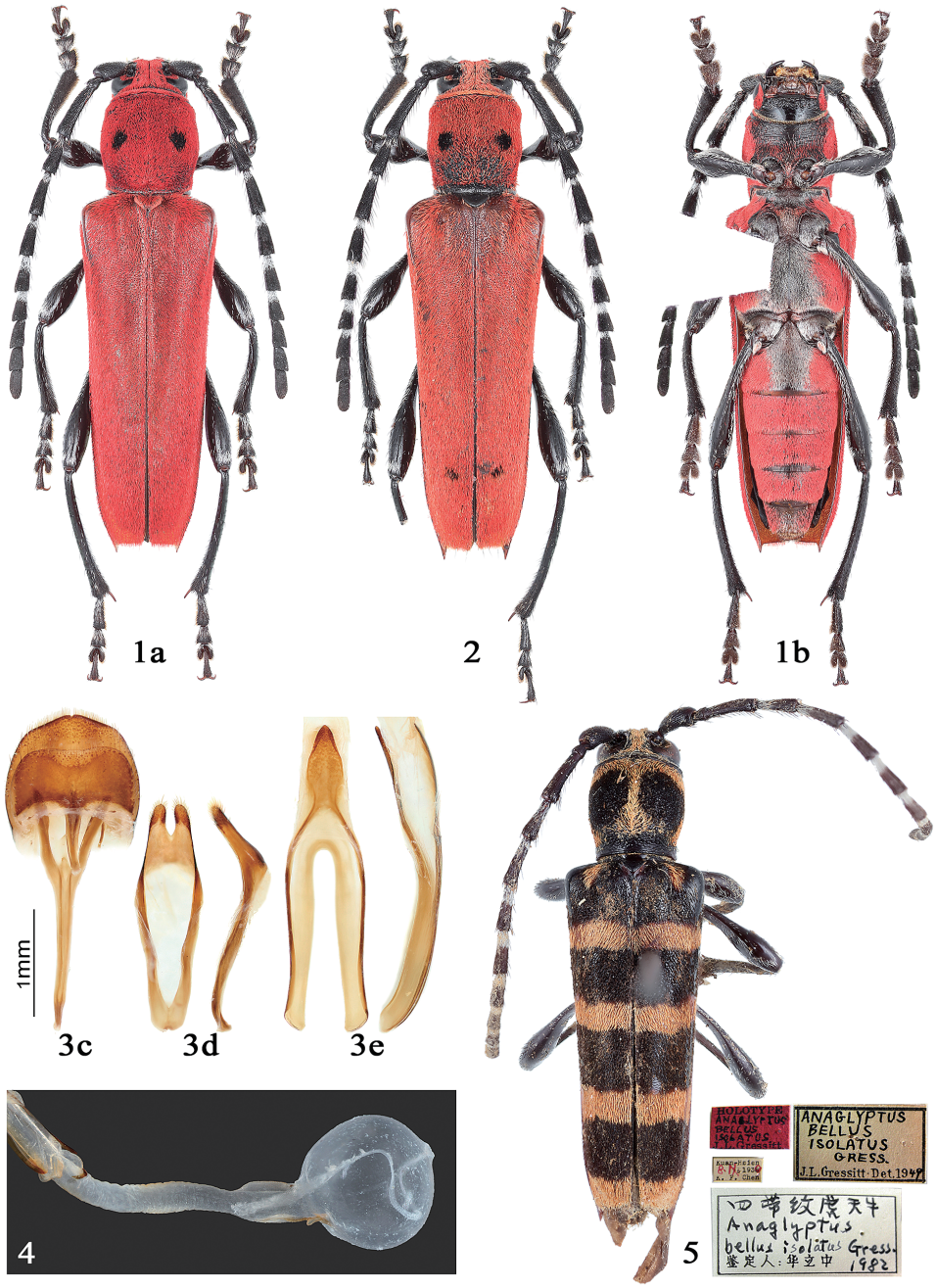
Male genitalia. Tergite VIII (Fig. 3c) slightly shorter than the basal width, arcuate at sides, with gently acute apex. Tegmen (Fig. 3d) with lateral lobes rather short and thick, 0.2 times as long as the whole length of tegmen, strongly curved at apical third. Median lobe (Fig. 3e) 1.4 times as long as tegmen, curved near middle; ventral plate moderately pointed at apex; median struts shorter than half of the whole length of median lobe. Endophallus (Fig. 4) ca. 1.6 times as long as median lobe, slender in basal two-thirds, then strongly swollen anteriorly, slightly constricted at middle, with a small tubercle at dorsal side of apical third, which is slightly pointed posteriorly.

F e m a l e (Fig. 2). Body length 13.5–16.5 mm, width between elytral humeri 3.7–4.5 mm. Almost identical to male in general appearance. Third to 5th antennomeres with apical spine more developed. In one paratype, elytra provided with a pair of small vague black pubescent spots at apical fifth near suture.

Etymology. The new species is named after Zhi-Gang Li (Shanghai, China) who kindly provided his collection for this study.

Distribution. China: Zhejiang (Anji County).

Remarks. This new species is clearly distinguishable from other members of the subgenus by the slenderer body and unicolored scarlet pubescence on the elytra without remarkable black markings. This new species is similar in the endophallic structures to *Anaglyptus* spp. illustrated in Miroshnikov (2014), but is distinctive enough in having the more developed swollen apical part based on our preliminary observation.



Figs. 1–5. Habitus and terminalia of *Anaglyptus* (*Akajimatora*) spp. —— 1–4, *Anaglyptus* (*Akajimatora*) *lizhigangi* sp. nov.; 5, *Anaglyptus* (*Akajimatora*) *isolatus* GRESSITT, 1951, holotype with labels. —— 1, Male; 2, female; 3, male genitalia (scale: 1.0 mm); 4, endophallus in inflated and everted condition in lateral view (no scale). —— a, Dorsal view; b. ventral view; c. tergite VIII, sternites VIII and IX in dorsal view; d, tegmen in ventral and lateral view; e, median lobe in ventral and lateral view.

Anaglyptus (*Akajimatora*) *isolatus* Gressitt, 1951

(Fig. 5)

Anaglyptus (s. str.) *bellus isolatus* Gressitt, 1951: 304, pl. 13, fig. 4.
Anaglyptus bellus isolatus: Hua, 2002: 192; Hua *et al*., 2009: 150, pl. 23, fig. 254♀H.
Anaglyptus (*Akajimatora*) *bellus isolatus*: Löbl & Smetana, 2010: 143; Viktora & Tichý, 2015: 8.

Type material examined. Holotype: female, "Kuan-Heien / 8.IX.1939 / K. F. Chen","ANAGLYPTUS / BELLUS / ISOLATUS / GRESS. / J.L.Gressitt Det.1949", "HOLOTYPE / ANAGLYPTUS / BELLUS / ISOLATUS / J.L.Gressitt [red label]", "Anaglyptus / bellus isolatus Gress. / detector: Hua Li-Zhong 1982" (SYSU).

Comparative materials examined. *Anaglyptus* (*Akajimatora*) *bellus bellus* Matsumura & Matsushita, 1933: 1 female, Japan, Niigata Pref., Itoigawa City, Hiraiwa, 5–10.VIII.1983 (emerged out), T. Niisato leg.; 1 female, Nagano Pref., Matsumoto City, Asama-Onsen, 14.IX.1980, Y. Furihata leg.; 3 males and 4 females, Nagano Pref., Kamiina County, Nosoko, 20.VIII.1983 (emerged out), T. Niisato leg.; 1 male and 1 female, Yamanashi Pref., Hokuto City, Egusa, 1.IX.1981, K. Ikeda leg.; 2 females, Hokuto City, Mt. Kayagatake, 15.IX.1984 (emerged out), T. Niisato leg.; 1 female, Hokuto City, Masutomi-Kôsen, 15.VII.1991 (emerged out); 1 male, Hokuto City, Negoya, 5.VII.1997 (emerged out); 1 male, Ibaraki Pref., Hitachi-Ômiya City, Mt. Gozenyama, VIII.1982 (emerged out), A. Nishiyama leg. (all in CNT). *Anaglyptus* (*Akajimatora*) *meridionalis* Matsushita, 1933: 1 male and 2 females, Taiwan, Taichung, Lishan, 1,900 m, 16.VIII.1978, T. Niisato leg. (CNT); 2 males, Pingdong, Wutaixiang, Xiaoguihulindao, 1,200 m, 8.IX.1998, W.-I Chou leg. (CCCC).

Distribution. China: Sichuan and Hubei.

Remarks. Gressitt (1951) noted the differences between *Anaglyptus bellus isolatus* and *A*. *bellus bellus* as follows in the original description: "the antennae much less strongly toothed, the basal swelling of each elytron longer, the red elytral bands narrower, the metepisternum more extensively glabrous and the red pubescence of the body paler". However, Gressitt (1951) did not show any obvious evidence that supported his new taxon belonging to the subspecies under *A*. *bellus*. According to the comparison of the holotype of *A*. *bellus isolatus* with that of *A*. *bellus bellus*, some additional differences not discussed by Gressitt (1951) were revealed: 1) elytra each provided with a somewhat oblique, basal pink pubescent spot which is isolated from the first same colored transverse band, while in *A*. *bellus bellus*, elytra without such isolated spot or with a short stripe running from the middle of apical margin of first transverse band; 2) 2nd to 4th transverse black bands completely reaching elytral suture, while in *A*. *bellus bellus*, these bands internally closed due to narrow pink pubescent stripes along suture; 3) pronotum more elongate, with sides less arcuate; 4) 4th antennomere slightly shorter than 5th, 0.86 times as long as 5th, while in *A*. *bellus bellus* less than 0.80 times as long as 5th. Furthermore, *A*. *bellus isolatus* is very unique among the subgenus by the last two antennomeres annulate with whitish pubescence, instead of entirely black pubescence at each base. In the tribe Anaglyptini, the color and arrangement of pubescence such as the antennal annulation and elytral maculation are usually useful diagnostic character for species identification as well as the features of male genitalia. With this justification, *Anaglyptus* (*Akajimatora*) *bellus isolatus* is upgraded to an independent species, even though only the holotype female was available for this study.

The deposition of the holotype of *Anaglyptus bellus isolatus* was originally designated to the Nanking University, but is actually deposited in the Sun Yat-sen University, Guangzhou, China at the present.

Acknowledgments

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要　　約

毕　文烜・新里達也：中国産アカジマトラカミキリ亜属（鞘翅目カミキリムシ科）の分類学的研究．——アカジマトラカミキリ亜属 *Akajimatora* Kusama & Takakuwa, 1984 は，2 種 1 亜種が知られるだけのトガリバアカネトラカミキリ属 *Anaglyptus* Mulsant, 1839 の一亜属である．本論文では中国産の本亜属を検討して，浙江省北部から *Anaglyptus* (*Akajimatora*) *lizhigangi* sp. nov. を命名記載するとともに，これまでアカジマトラカミキリ *A.* (*A.*) *bellus* Matsumura & Matsushita, 1933 の亜種として扱われてきた *A.* (*A.*) *bellus isolatus* Gressitt, 1951 を独立種に昇格させた．これにより本亜属は，中国と日本に分布する 4 種から構成されることになった．

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