

## A New Species of the Genus *Platycerus* GEOFFROY (Coleoptera, Lucanidae) from the Qinling Mountains, Shaanxi Province, China

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**Abstract** A new lucanid species, *Platycerus auriceps* KUBOTA et ZHU, sp. nov., is described from Mt. Taibaishan, Shaanxi Province, China. This species can be distinguished from related species by its wide body, remarkably wrinkled elytral surface, and unique genital morphologies.

Up to this point, five species belonging to the genus *Platycerus* GEOFFROY (Coleoptera, Lucanidae) have been recorded from the Qinling Mountains, Shaanxi Province, China: *Platycerus hongwonpyoi qinlingensis* IMURA, *P. tabanai* TANIKADO et OKUDA, *P. businskyi* IMURA, *P. nagahatai* IMURA, and *P. yingqii* HUANG et CHEN (IMURA, 2010). In 2016, we found an unknown *Platycerus* species on the northern slope of Mt. Taibaishan. This is the sixth species recorded from the Qinling Mountains. Although this species seems to be related to “group of *Platycerus bashanicus*” described by IMURA (2010 & 2012), particularly to *P. nagahatai*, based on genital morphologies, its external morphologies are quite different from those of any known species of that group. In this paper, we describe it as a new species.

Before going further, we wish to express our thanks for the support provided by a Grant-in-Aid (25292082) to K. KUBOTA from the Japan Society for the Promotion of Science, and by the Oversea Study Program of Guangzhou Elite Project (No. SUIJING [2015]4) to X.-J. ZHU. We are also grateful to Dr. Yûki IMURA for giving us some useful information and suggestions on *P. nagahatai*.

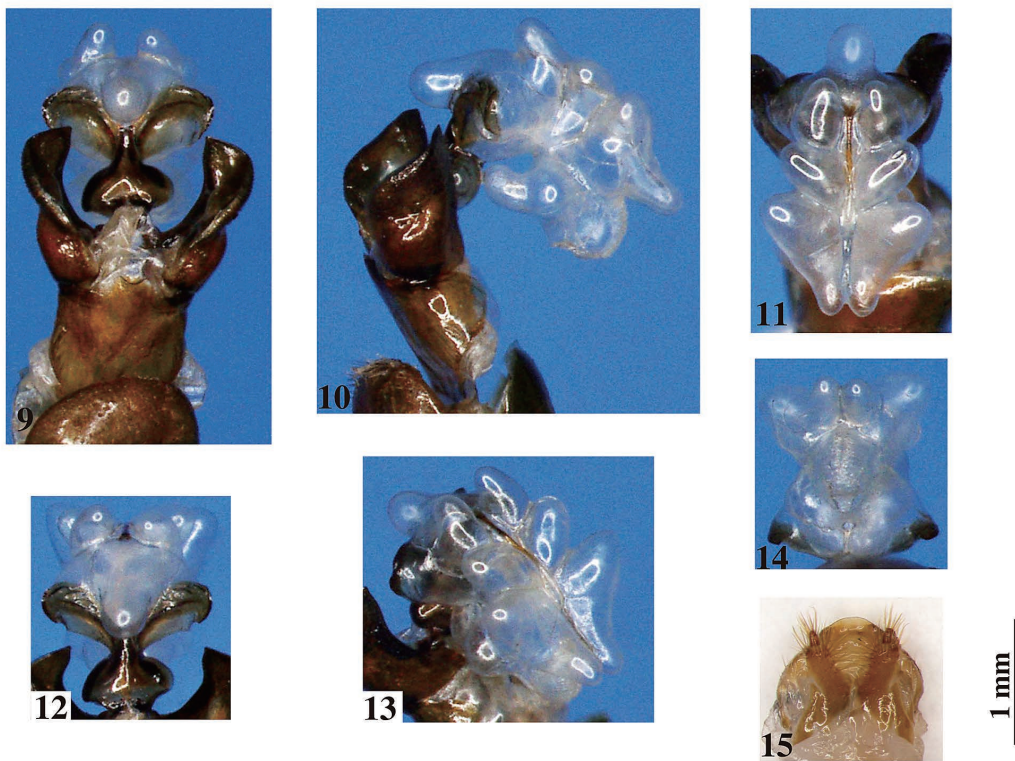
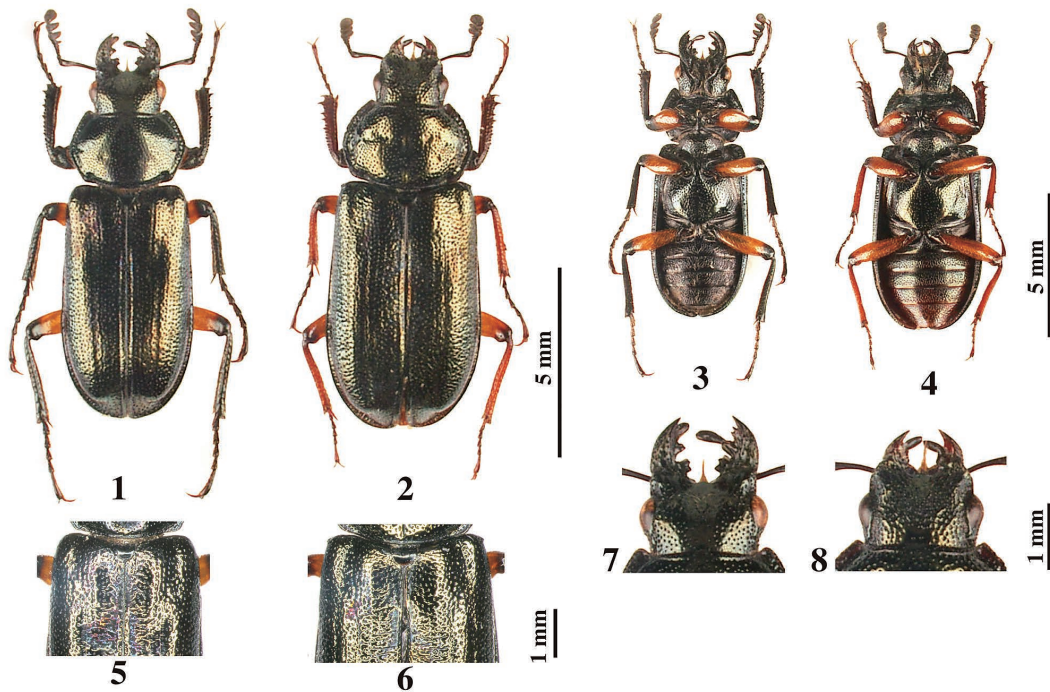
*Platycerus auriceps* KUBOTA et ZHU, sp. nov.

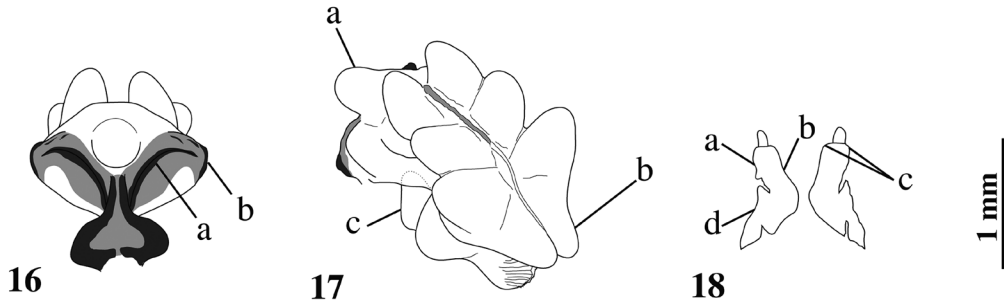
(Chinese name: 金琉璃锹; Japanese name: Kin-iro-ruri-kuwagata)

(Figs. 1–18)

Length (including mandibles): ♂ 10.2–10.3 mm, ♀ 10.5 mm. Medium-sized species.

Male body wider and flatter than in other species of “group of *Platycerus bashanicus*” (Fig. 1; Table 1); dorsal surface of body glossy, goldish with a faint greenish tinge (Fig. 1); venter dark brown, nearly black; femora yellowish brown; knees and tibiae dark brown (Fig. 3). Mandibles medium-sized with apices sharply pointed; outer margins arcuate; inner margins of dorsal wall strongly ridged, bidentate in basal part; inner margins of ventral wall with three or four denticulations (Fig. 7). Pronotum transverse subhexagonal, laterally convex at the middle; antero-lateral corners subtriangularly produced anteriorly; postero-lateral corners ambiguously angulate; disc densely punctured; lateral margins widely depressed. Elytral surface deeply punctured, and remarkably transversely wrinkled (Figs. 1, 5). Male genitalia with lateral lobe; apical margin of lateral piece roundly produced; distal part of aedeagal plate sclerotized and bifurcated, connected by membranous part, similar to that of *P. nagahatai* (Fig. 9; IMURA, 2010: p. 134); each plate arcuate and clearly ridged towards the outside (Figs. 9, 10, 16a & b), sclerotized visor-like at apical part (Figs. 10 & 16b); endophallus exhibiting the nearly





Figs. 16–18. Line drawings of genital organs of *Platycerus auriceps* KUBOTA et ZHU, sp. nov. — 16 & 17, ♂ (holotype); 16, aedeagal plate in ventral view; 17, completely inflated endophallus on aedeagus in right subdorsal view; 18, ♀ (paratype) hemisternites in ventral view. — 16a & b, one of distal plate; 17a, projection between distal parts of the aedeagal plate; 17b, one of the lobes on the subapical part; 17c, one of the paired apical lobes; 18a, apical half; 18b, inner margin; 18c, inner and outer corners; 18d, basal half.

same structure as that of *P. nagahatai* (IMURA, unpublished data), similar to that of *P. consimilis* (Figs. 10–14; IMURA, 2010: p. 138) but projection between distal parts of aedeagal plate smaller (Fig. 17a); lobes on basal to subapical parts slenderer (Fig. 17b); paired apical lobes much shorter (Fig. 17c).

Female: body shape compared to the related species and coloration of dorsal surface as in male (Fig. 2; Table 1); coloration of venter also as in male, but dark reddish brown on abdominal sternites; femora and meso- and metatibiae yellowish brown; protibiae dark reddish brown; knees dark brown (Fig. 4). Head and mandibles as in other species of *Platycerus* (Fig. 8). Pronotum transverse barrel shaped, laterally convex at the middle; corners as in male; punctures on disc larger than in male; lateral margins more widely depressed. Elytral surface also similar to male's, but more deeply punctured, and even more remarkably transversely wrinkled unlike in other species of “group of *Platycerus bashanicus*” (Figs. 2 & 6). Genitalia with hemisternites rather slender and L-shaped (Fig. 15); apical half long bell-shaped (Fig. 18a), concaved at inner margins (Fig. 18b) unlike in *P. nagahatai* (IMURA, 2010: p. 134); inner and outer corners at apical ends not protruded posteriad (Fig. 18c); basal half subconical (Fig. 18d).

*Type series.* Holotype: ♂, Northern slope of Mt. Taibaishan (太白山), 1,980 m alt., Mei-xian (眉县), Baoji City (宝鸡市), Shaanxi Province (陕西省), China, 10.X.2016, K. KUBOTA, X.-J. ZHU<sup>1)</sup>, and T. MA leg. (deposited in South China Agricultural Museum, South China Agricultural University). Paratypes: 1 ♂, 1 ♀, same data as for holotype, (preserved by the authors).

*Distribution.* Shaanxi Province, China.

*Etymology.* The specific name means “golden prince” in Latin. It is derived from the goldish elytral surface of both sexes. For the convenience of future researchers, K. KUBOTA and X.-J. ZHU name this new species on behalf of all of the authors of this study.

Figs. 1–8. *Platycerus auriceps* KUBOTA et ZHU, sp. nov. — 1, 3, 5 & 7, ♂ (holotype); 2, 4, 6 & 8, ♀ (paratype). — 1 & 2, Habitus in dorsal view; 3 & 4, habitus in ventral view; 5 & 6, anterior half of elytra in dorsal view; 7 & 8, head in dorsal view.

Figs. 9–15. Genital organs of *Platycerus auriceps* KUBOTA et ZHU, sp. nov. — 9–14, ♂ (holotype); 9, lateral piece, parameres, and aedeagal plate in ventral view; 10, completely inflated endophallus on aedeagus in right lateral view; 11, ditto in dorsal view; 12, ditto in ventral view; 13, ditto in right subdorsal view; 14, ditto in antero-dorsal view; 15, ♀ hemisternites in ventral view.

Table 1. Body part length ratios of *Platycerus auriceps* KUBOTA et ZHU, sp. nov. and *P. nagahatai* IMURA.

	Species (number examined)	Mean (Range)	
		PW/PL	EW/EL
♂	<i>Platycerus auriceps</i> (2)	1.524 (1.516–1.532)	0.570 (0.570–0.570)
	<i>Platycerus nagahatai</i> (5*)	1.485 (1.406–1.573)	0.556 (0.539–0.567)
♀	<i>Platycerus auriceps</i> (1)	1.513	0.656
	<i>Platycerus nagahatai</i> (4*)	1.405 (1.348–1.472)	0.590 (0.521–0.623)

PW, greatest width of pronotum; PL, length of pronotum along the mid-line; EW, greatest width of left elytron  $\times$  2; EL, greatest length of left elytron; \*, from Imura, unpublished data.

*Notes.* Type specimens of this new species were collected from decaying wood (white rot) on the floor of broad-leaved deciduous forests. We found many oviposition marks made by *Platycerus* on decaying wood in this area, including on standing dead trees.

## 要 約

久保田耕平・朱 雪姣・马 涛・温 秀军：中国陕西省秦岭山脈産ルリクワガタ属 *Platycerus* (鞘翅目クワガタムシ科) の1新種。——中国陕西省秦岭山脈太白山からクワガタムシ科の1新種，キンイロルリクワガタ *Platycerus auriceps* KUBOTA et ZHU, sp. nov. を記載した。この新種は幅広い体形，横皺が広がる鞘翅，特徴的な交尾器の形態によって近縁種から識別できる。

## References

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