

A New *Oreocarabus* (Coleoptera, Carabidae) from the Qinling Mountains in Shaanxi Province, Central China

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Abstract A new species belonging to the subgenus *Oreocarabus* of the genus *Carabus* (s. lat.) is described from the Qinling Mountains under the name of *Carabus (Oreocarabus) kitawakianus* sp. nov.

After the completion of my previous paper on the Carabid Beetles of the Qinling Mountains (IMURA, 1993, *Elytra*, Tokyo, 21 : 363–377), I was able to examine some additional materials from the same mountain range through the courtesy of Mr. Wakô KITAWAKI. The collection contains a remarkable new species of the subgenus *Oreocarabus*, and I am going to describe it in the following lines. The abbreviations used herein are the same as those explained in my previous papers.

Before going further, I wish to express my gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for reading the manuscript of this paper. Special thanks are due to Mr. Wakô KITAWAKI, Osaka, who kindly submitted the specimens to me for study.

Carabus (Oreocarabus) kitawakianus IMURA, sp. nov.

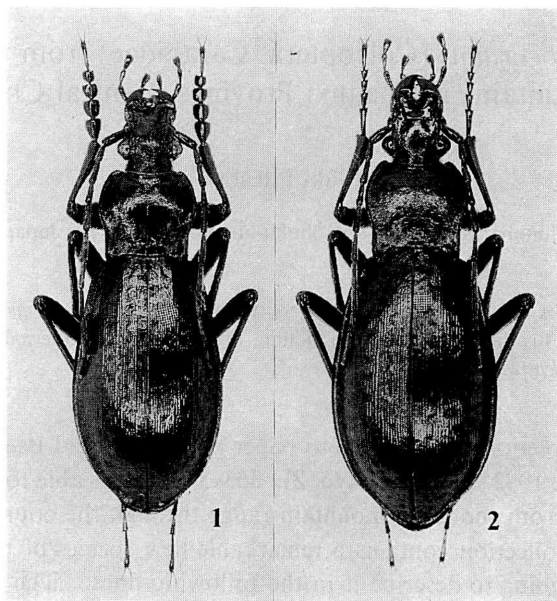
(Figs. 1–6)

Length: 24.6–29.2 mm (from apical margin of clypeus to apices of elytra).

Fairly large species with external features similar to those of *C. (O.) reitterianus* BREUNING, but markedly different from it in the structure of male genitalia.

Black with faint coppery lustre. Marginal areas of elytra sometimes with faint purplish lustre. Appendages black except for palpi and antennae which are a little reddish.

Head as in *C. reitterianus*, but the antennae are somewhat longer, always extending to the middle of elytra in male; hairless ventral depressions of male antennae recognised from segment 5 to 9, while they are recognised from segment 5 to 8 in *C. reitterianus*; median tooth of mentum longer and more sharply pointed at the apex than in *C. reitterianus*. Pronotum also as in *C. reitterianus*, but the basal foveae are usually more deeply concave though very small, and the hind angles are usually more sharply pointed; number of pronotal marginal setae is constantly two on each side, one near the widest part and the other slightly before hind angles; PW/HW 1.41–1.56 (M 1.47), PW/PL 1.19–1.34 (M 1.27), PW/PAW 1.38–1.55 (M 1.44), PW/PBW 1.19–

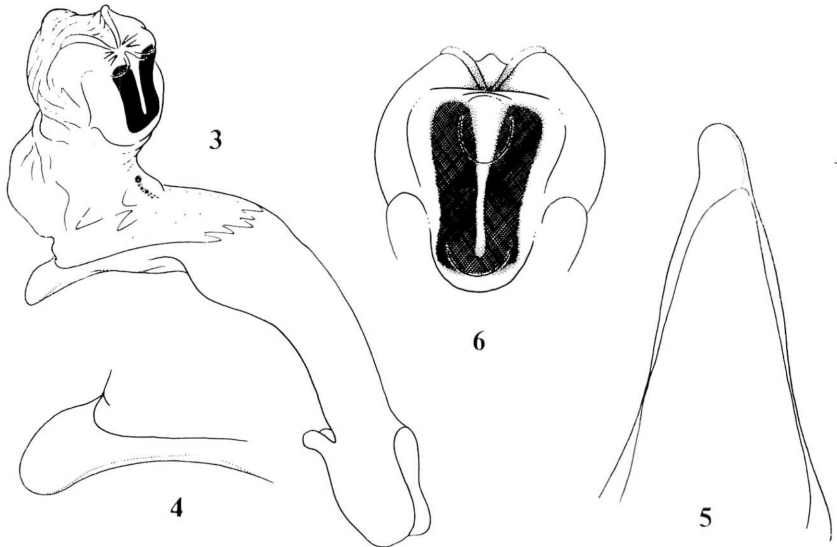


Figs. 1-2. *Carabus (Oreocarabus) kitawakianus* IMURA, sp. nov., from Zhouzhi Xian, Shaanxi Province, Central China; 1, ♂ (holotype); 2, ♀ (allotype).

1.34 (M 1.27), PBW/PAW 1.08–1.26 (M 1.14). Elytra slenderer, less strongly convex above, with the widest part situated a little more backwards (at about apical third), and with shoulders more effaced in comparison with *C. reitterianus*; EW/PW 1.43–1.65 (M 1.55), EL/EW 1.63–1.78 (M 1.72); sculpture very finely impressed though obviously recognised to be heptaploid homodyname, with each interval much more weakly raised than in *C. reitterianus*. Metacoxa trisetose. Sternal sulci completely and prominently carved. Legs a little longer than in *C. reitterianus*.

Male genital organ basically similar to that of *C. reitterianus*, but considerably different from the latter in details. Aedeagus rather small, about four-tenths as long as elytra, short, thick, and strongly arcuate at middle, with the right lateral margin strongly convex laterad at about the middle and rather strongly concave therefrom to apex in subdorsal view; apical lobe short, robust, and gently hooked ventrad with broadly rounded tip which is strongly depressed dorso-laterad; ostium lobe absent; ligula, or basal sclerite, a little larger than in *C. reitterianus*, forming a well developed patch of pigmented granules; aggonoporus strikingly different from that of *C. reitterianus*, being strongly pigmented and sclerotized to form a pair of terminal plates, each of which is oblong in shape. Female genitalia less specialised, with outer plate of vaginal apophysis narrow and almost transparent except for the longitudinal mid-line which is pigmented and a little sclerotized, inner plate vestigial, not remarkably different from those of *C. reitterianus*.

Type series. Holotype: ♂, near Houzhenzi at the southwestern part of Zhouzhi



Figs. 3–6. Male genital organ of *Carabus (Oreocarabus) kitawakianus* IMURA, sp. nov., from Zhouzhi Xian, Shaanxi Province, Central China; 3, aedeagus with fully everted endophallus (right lateral view); 4, apical part of aedeagus (right lateral view); 5, ditto (dorsal view); 6, apical part of endophallus. Scale: 2 mm for 3, 1 mm for 4–5.

Xian, Shaanxi Province, Central China, V~VII–1993 (NSMT). Paratypes (including allotype): 6 ♂♂, 28 ♀♀, same data as for the holotype, in coll. Y. IMURA, K. MIZUSAWA, and W. KITAWAKI.

Notes. As was shown in the preceding lines, this new species is considered to be closely allied to *Carabus (Oreocarabus) reitterianus* hitherto known from Sichuan and Gansu. However, the latter has also been recorded from the Qinling Mountains very recently. The two female specimens known, which were considered to belong to the nominotypical subspecies from the external features, were obtained from rather high altitudinal area (ca. 2,000 m in height) of Baoji Xian, which is about 60 km distant to the north by west from the type locality of *C. kitawakianus* nov. Further investigation is needed to prove if these two species occur sympatrically or are segregated on the same mountain range.

Another species belonging presumably to the same species-group, namely, *C. (O.) ohshimaianus* DEUVE has been known from Hubei (Shennongjia, situated at the western part of the province near the Sichuan borders) and the present new species must be compared with it. Although I know the Hubei species only from literature, these species appear readily discriminated from each other by much differently shaped aedeagal apex. In addition, such characters as position of the hairless depressions on the ventral surface of male antennae (recognised from segment 5 to 8 in *C. ohshimaianus*, 5 to 9 in *C. kitawakianus*), number of marginal setae of pronotum (two or three medio-anteriorly in *C. ohshimaianus*, constantly one in *C. kitawakianus*), and sculptural condi-

tion of elytra (triploid! according to the original description in *C. ohshimaianus*, heptaploid in *C. kitawakianus*) seem to be diagnostic.

This new species was obtained, together with *Carabus titanus* BREUNING, by using bait traps.

要 約

井村有希: 秦岭山脈から発見されたミヤマオサムシ亜属の1新種。——中国陝西省南部の秦岭山脈から得られたミヤマオサムシ亜属 *Oreocarabus* の1種を新種と認め、*Carabus (Oreocarabus) kitawakianus* IMURA, sp. nov. と命名して記載した。四川省と甘肅省から知られている *C. (O.) reitterianus* BREUNING に近いが、やや大型で細長く、触角がより長く、上翅間室の隆起がはるかに弱いほか、陰茎の形態が大きく異なり、さらに内袋先端部の射精孔縁膜に強い硬化と色素沈着がみられ頂板を形成する、といった形態的相違を有するので識別は容易である。*C. reitterianus* のほうも最近になって宝鸡県の秦岭山脈高所から記録されているので、同山脈に近縁の2種が生息していることになる。本種はまた、湖北省神农架から記載されている *C. (O.) ohshimaianus* DEUVE にも近いと思われるが、両者は陰茎先端の形態において大きく異なり、♂触角腹面にある無毛凹陷部の位置や前胸背板側縁の剛毛数、さらに上翅彫刻の形態にも違いがみられる。本新種は、同亜属中の最大種、*C. (O.) titanus* BREUNING とともに、周至県南西部から得られたものである。

References

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