

Two New Subspecies of the Genus *Carabus* (s. lat.) (Coleoptera, Carabidae) from Northern Sichuan, China

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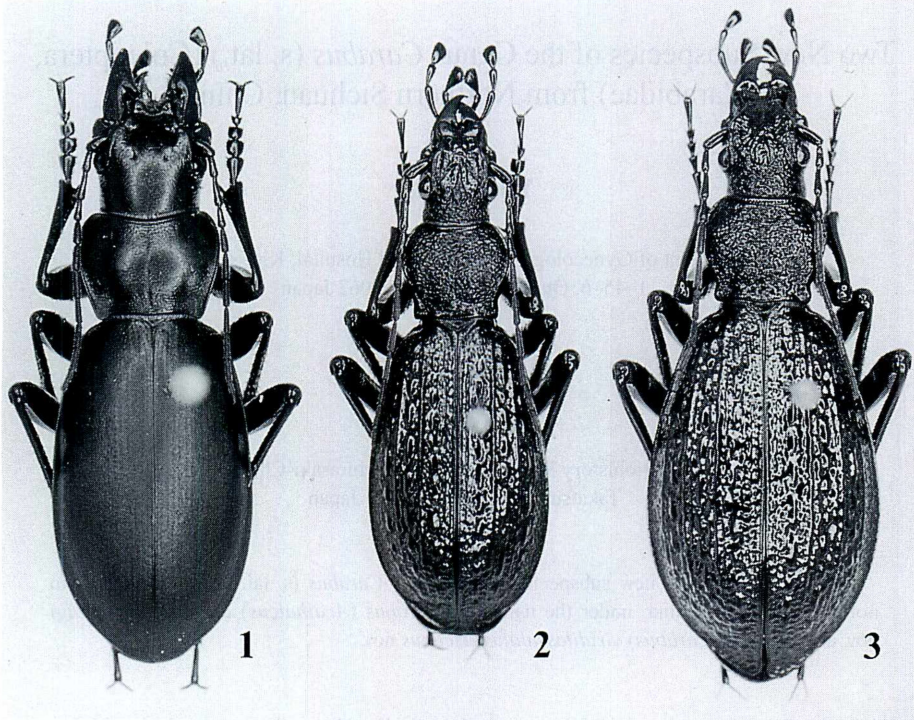
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Abstract Two new subspecies of the genus *Carabus* (s. lat.) are described from northern Sichuan, China, under the names of *Carabus (Acathaicus) alexandrae fantingi* nov. and *C. (Aristocarabus) viridifossulatus rizeanus* nov.

Early in the summer of 1998, we made a collecting trip to northern Sichuan and southern Gansu of Central China, under the cooperation of the Chinese Academy of Science, and succeeded in obtaining a long series of the genera *Cychrus*, *Carabus* (s. lat.), *Campalita* and *Calosoma*. In this trip, we found two strange populations of the genus *Carabus*, both from Jiuzhaigou Xian (=former Nanping Xian) of northern Sichuan. One belongs to *Carabus (Acathaicus) alexandrae* collected from Jiuzhai Zhen near the entrance of the Jiuzhaigou Valley. This area seems to be the western periphery of the distributional range of the same species. The other belongs to *C. (Aristocarabus) viridifossulatus* which was obtained from the upper reaches of the Rizegou, one of the two major branches of the Jiuzhaigou Valley. They are morphologically distinguishable from all the other subspecies hitherto described, and are introduced to science in this paper. The abbreviations used herein are the same as those explained in the previous papers of the first author, Y. IMURA.

Before going further, we wish to express our deep gratitude to Dr. Syozo OSAWA, Dr. Keiko NAKAMURA and Dr. Tokindo OKADA of the JT Biohistory Research Hall, Osaka, for their kind help in various ways. Also we thank Mr. Ting FAN of the Chengdu International Academic Exchange Centre of the Chinese Academy of Science for his kind cooperation. Special thanks are due to Dr. Shun-Ichi UENO of the National Science Museum, Tokyo, for revising the manuscript of this paper.



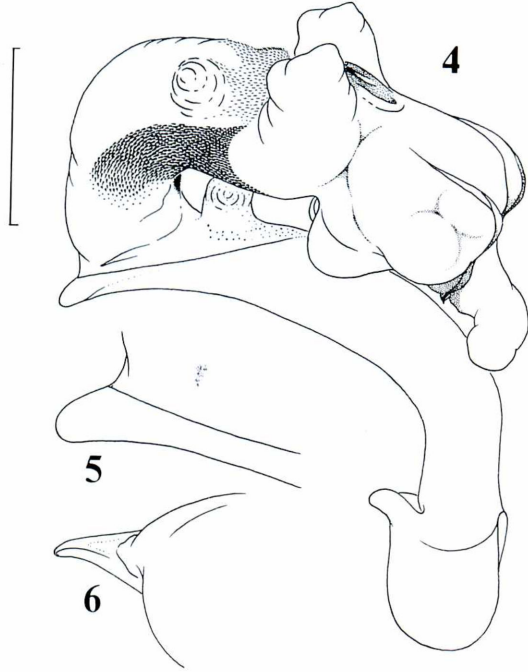
Figs. 1–3. *Carabus* spp. from Jiuzhaigou Xian in northern Sichuan. — 1, *C. (Acathaicus) alexandrae fantingi* subsp. nov., ♂ (holotype); 2–3, *C. (Aristocarabus) viridifossulatus rizeanus* subsp. nov., 2, ♂ (holotype), 3, ♀ (allotype).

1) *Carabus (Acathaicus) alexandrae fantingi* IMURA et SU, subsp. nov.

(Figs. 1, 4–6)

Description. Length: 20.9–28.4 mm (including mandibles). Most closely allied to subsp. *nanpingicus* DEUVE of Jiuzhaigou Xian town (=former Nanping), but distinguishable from it by the following points: 1) a little smaller in size and a little slenderer in proportion; 2) colour entirely black (in *nanpingicus*, marginal areas of pronotum and elytra often bear weak bluish tinge); 3) macrocephalism a little less remarkable; 4) pronotum a little less transverse (PW/PL ca. 1.5 in *fantingi* nov., while it is over 1.6 in *nanpingicus*); 5) striae between elytral intervals far more weakly punctate; 6) aedeagus smaller and slenderer, with the apical lobe a little longer and more sharply pointed; 7) ostium lobe much larger; 8) endophallus with the basal portion (from base to parapraeputal lobes) much shorter, prepraeputal lobes more prominently protuberant and prepraeputal lobes larger.

Holotype: ♂, above Jiuzhai Zhen (九寨沟镇), 2,100–2,200 m alt., on the northern bank of the Riv. Bai He, of Jiuzhaigou Xian (=former Nanping Xian) in northern



Figs. 4–6. Male genital organ of *Carabus (Acathaicus) alexandrae fantingi* subsp. nov., from Jiuzhai Zhen in northern Sichuan. — 4, Aedeagus with fully everted endophallus in right lateral view; 5, apical part of aedeagus in the same view; 6, ditto in dorsal view. Scale: 2 mm for 4, 1 mm for 5–6.

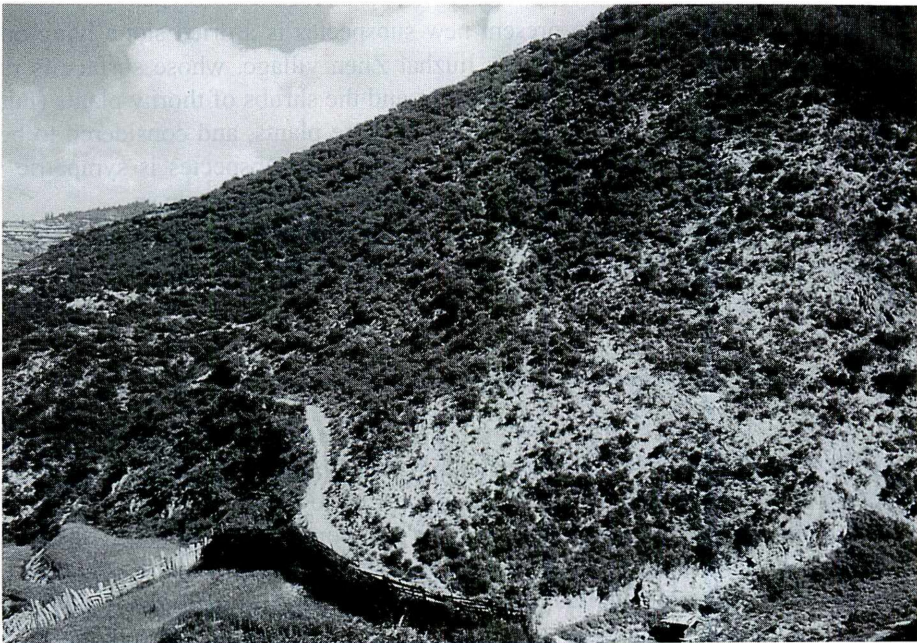


Fig. 7. The habitat of *Carabus (Acathaicus) alexandrae fantingi* subsp. nov., *C. (Titanocarabus) titanus*, *Campalita chinense* and *Calosoma* sp. (near Jiuzhai Zhen of Jiuzhaigou Xian, 2,100–2,200 m in altitude).



Fig. 8. Shells of snails collected from near Jiuzhai Zhen. Most probably the food of *Acathaicus*.

Sichuan, Central China, 10~17-VI-1998, Y. IMURA & Z.-H. SU leg., in coll. NSMT. Paratypes (including allotype): 9 ♂♂, 1 ♀, same data as for the holotype.

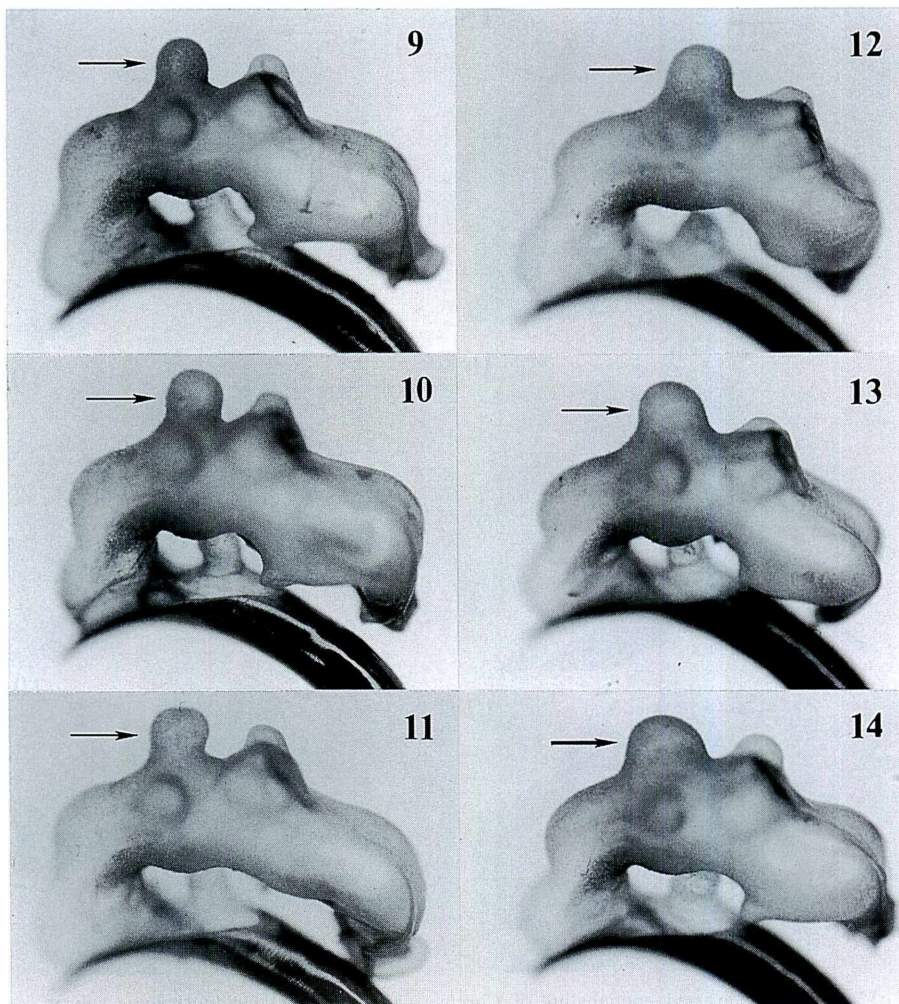
Notes. The habitat of the present new subspecies is a dried slope lying on the northern bank of the Riv. Bai He near Jiuzhai Zhen village, whose surface is rather sporadically covered with grasses, composites and the shrubs of thorny plants (Fig. 7). A large number of small snails were visible on these plants, and considered to be the food of *Acathaicus* carabids (Fig. 8). The present new subspecies is sympatric with *Carabus* (*Titanocarabus*) *titanus*, *Campalita chinense* and *Calosoma* sp.

Derivatio nominis. This new subspecies is named after Mr. Ting FAN of the Chengdu International Academic Exchange Centre of the Chinese Academy of Science.

2) *Carabus* (*Aristocarabus*) *viridifossulatus rizeanus* IMURA et SU, subsp. nov.

(Figs. 2-3, 12-14, 17)

Description. 26.7-30.0 mm (including mandibles). Closely allied to subsp. *lamaorum* DEUVE described from "col sur la route entre Songpan et Nanping, 3,400 m" (=most probably Pass Gongga Ling), and the two populations are hardly distinguishable from each other from the external morphology alone. However, the detailed comparative study of the endophallus under full eversion enables us to discriminate these two races. In the population from the Rizegou, left prepraeputal lobe obviously larger and robuster, and parpraeputal lobes shorter and not curved inwards at the tips. The

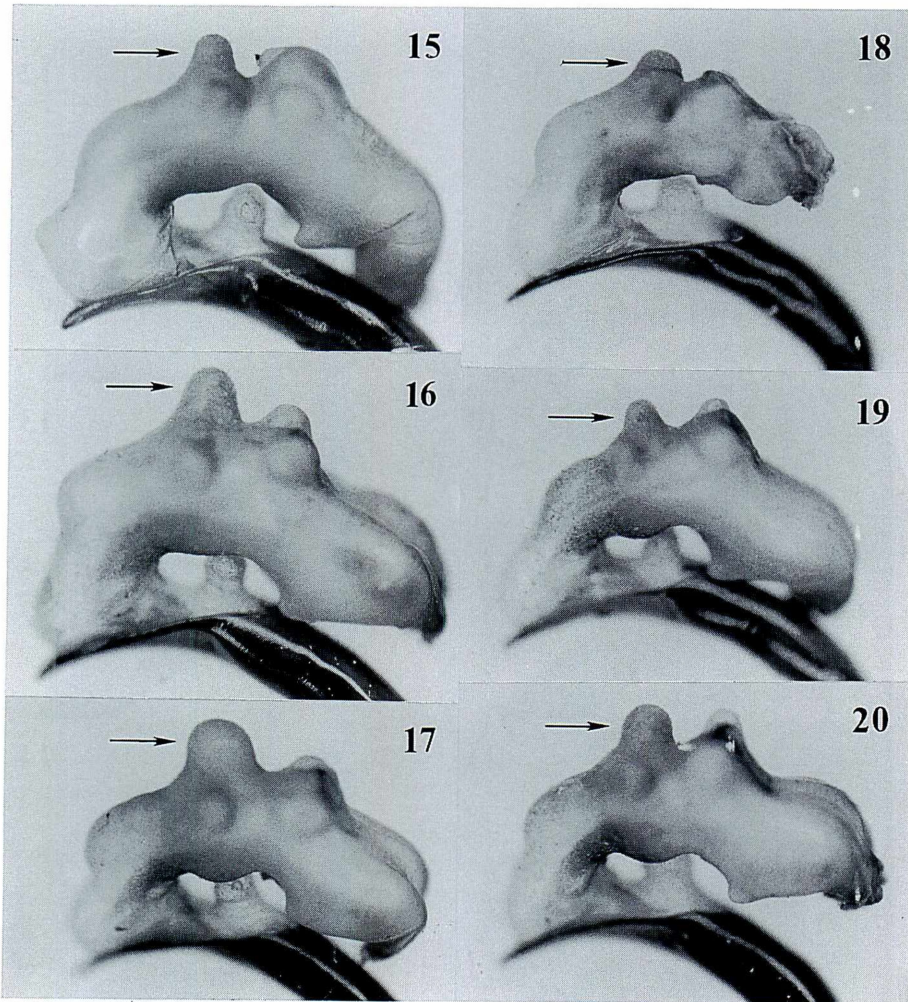


Figs. 9–14. Fully everted endophallus of *Carabus (Aristocarabus) viridifossulatus* subspp.—9–11, Subsp. *lamaorum* from ca. 5 km N of the Pass Gongga Ling on the road between Zhangla and Jiuzhaigou Xian (=former Nanping); 12–14, subsp. *rizeanus* nov. from the Rizegou. Arrows indicate the left prepraeputal lobe.

difference is small but constantly observed in all the male specimens examined.

Holotype: ♂, so-called “Primitive Forest”, ca. 3,100 m alt., in Rizegou (日则沟) in Jiuzhaigou of Jiuzhaigou Xian (=former Nanping Xian) in northern Sichuan, Central China, 11~16-VI-1998, Y. IMURA & Z.-H. SU leg., in coll. NSMT. Paratypes (including allotype): 5 ♂♂, 2 ♀♀, same data as for the holotype.

Notes. This new subspecies is sympatric with *Carabus latro minshanensis*, C.



Figs. 15–20. Fully everted endophallus of *Carabus (Aristocarabus) viridifossulatus* subsp. — 15, Subsp. *viridifossulatus* from Fengtongzhai, C. Sichuan; 16, subsp. *gonggashanensis* from Hailuogou, C. Sichuan; 17, subsp. *rizeanus* nov. from the Rizegou, N. Sichuan; 18, subsp. *romanovi* from Mt. Maoniu Shan, N. Sichuan; 19, subsp. *andreii* from W. of Wudu, S. Gansu; 20, subsp. *businskyorum* from Mt. Dashennongjia, W. Hubei. Arrows indicate the left prepraeputial lobe.

(*Pseudocranion*) *sackeni jiuzhaiensis*, *Cychrus minshanicola* and *Cychrus stoetzeri huangi*.

要 約

井村有希・蘇 智慧：中国四川省北部から発見されたオサムシの2新亜種。——中国科学院の協力下に行われたJT生命誌研究館主宰の1998年度中国調査において得られたオサムシ類の

なかに、マンボウオサムシ *Carabus (Acathaicus) alexandrae* とニシキオサムシ *C. (Aristocarabus) viridifossulatus* の新亜種をみいだしたので、前者に subsp. *fantingi* nov., 後者に subsp. *rizeanus* nov. という名を与えて記載した。

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Exocentrus taniguchii (Coleoptera, Cerambycidae) Newly Recorded from the Japanese Fauna

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Exocentrus taniguchii MAKIHARA was described from Lanhsu Island off southern Taiwan, and has so far been unknown from the main island of Taiwan and the other neighboring areas. I had an opportunity to examine the *Exocentrus* species obtained from Yonaguni-jima Island, the westernmost island of the Yaeyama Island Group of the Ryukyus. Faunal affinity between Lanhsu and Yonaguni-jima is well known. *Exocentrus taniguchii* is another example of this from the zoogeographical viewpoint.

In the following lines, I am going to report the species as being new to the fauna of Japan. I express my sincere gratitude to Mr. Hiraku YOSHITAKE of Tokyo University of Agriculture and Kenichi EMOTO of Sugamo, Tokyo, for their offer of invaluable material.