Elytra, *Tokyo*, **37**(1): 1–6, May 29, 2009

Three New Taxa of the Carabina (Coleoptera, Carabidae) from Zhejiang and Fujian, Southeast China

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Abstract Two new species and a new subspecies of the subtribe Carabina are described from Zhejiang and Fujian Provinces of Southeast China under the names *Apotomopterus* (s. str.) *candidiequus*, *A.* (s. str.) *flavihervosus* and *Isiocarabus daiyunshan caementibos*.

In this paper, I am going to describe two new species of the genus *Apotomopterus* and a new subspecies of *Isiocarabus daiyunshan* from southeastern part of China. For the higher classification of the subtribe Carabina, I follow the system proposed by myself (IMURA, 2002).

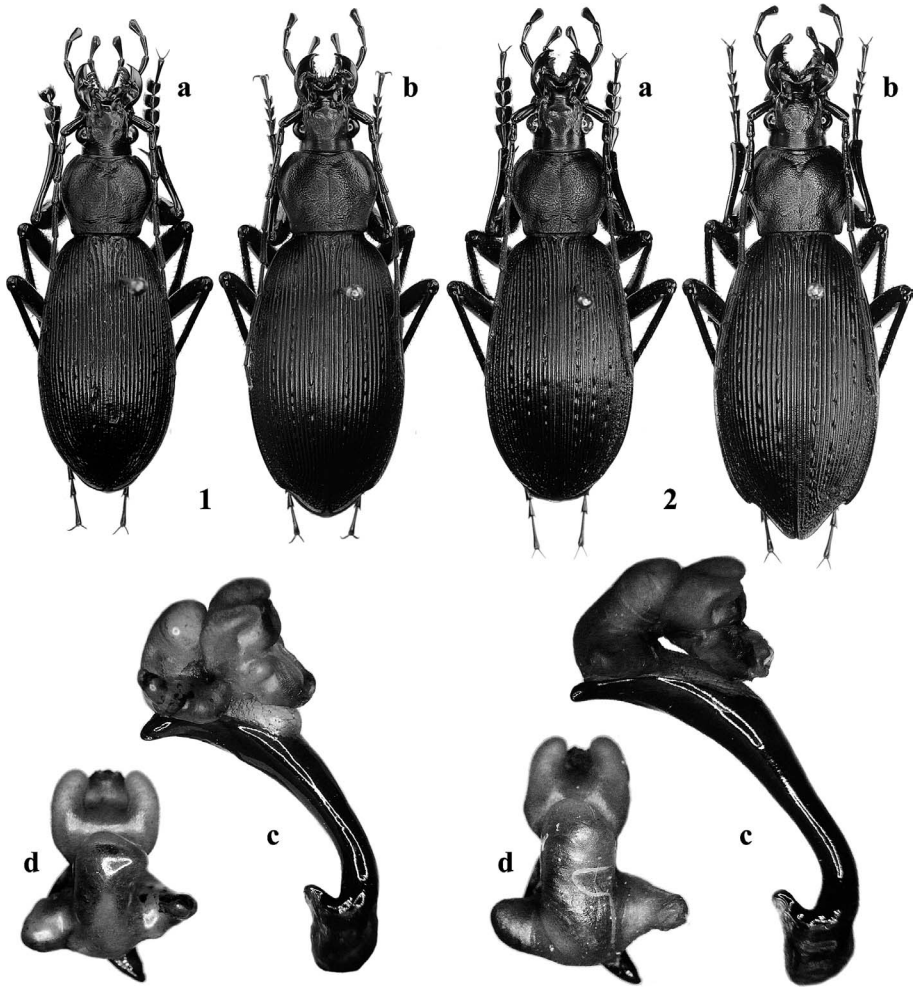
I wish to express my cordial thanks to Mr. Jaroslav TURNA (Czech Republic) for his kind help in various ways. Hearty thanks are also due to Dr. Frank KLEINFELD (Fürth, Germany) for kindly allowing me to examine the type specimen of *I. daiyunshan* in his collection and Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for revising the manuscript of this paper.

1. ***Apotomopterus*** (s. str.) ***candidiequus*** IMURA, sp. nov.

(Figs. 1, 4)

Length (including mandibles): 28.0–33.5 mm. Allied to *A. luschanensis* (HAUSER, 1919, p. 25) of northern Jiangxi, but definitely discriminated from that species in differently featured male genitalia and preapical emargination of female elytra as shown in Figs. 3 and 4. The new species differs from HAUSER's species mainly in the following respects: 1) preapical emargination of female elytra much shallower and not remarkably angulate near the outer margin as in *A. luschanensis* (Figs. 3 a & 4 a); apical lobe of aedeagus shorter, robuster and a little more acutely bent ventrad in lateral view, with the right lateral wall along apical margin rather remarkably compressed; 3) spinula different in shape as shown in Figs. 3 (d, e) and 4 (d, e), more strongly narrowed towards apex in dorsal view, robuster from basal to median portion and more remarkably bent ventrad towards apex in lateral view; 4) endophallus almost as in *A. luschanensis*, though the right basal lateral lobe is smaller and more sharply pointed towards the distal end.

Type series. Holotype: ♂, Mt. Baima Shan [白马山], 1,270–1,520 m in altitude,

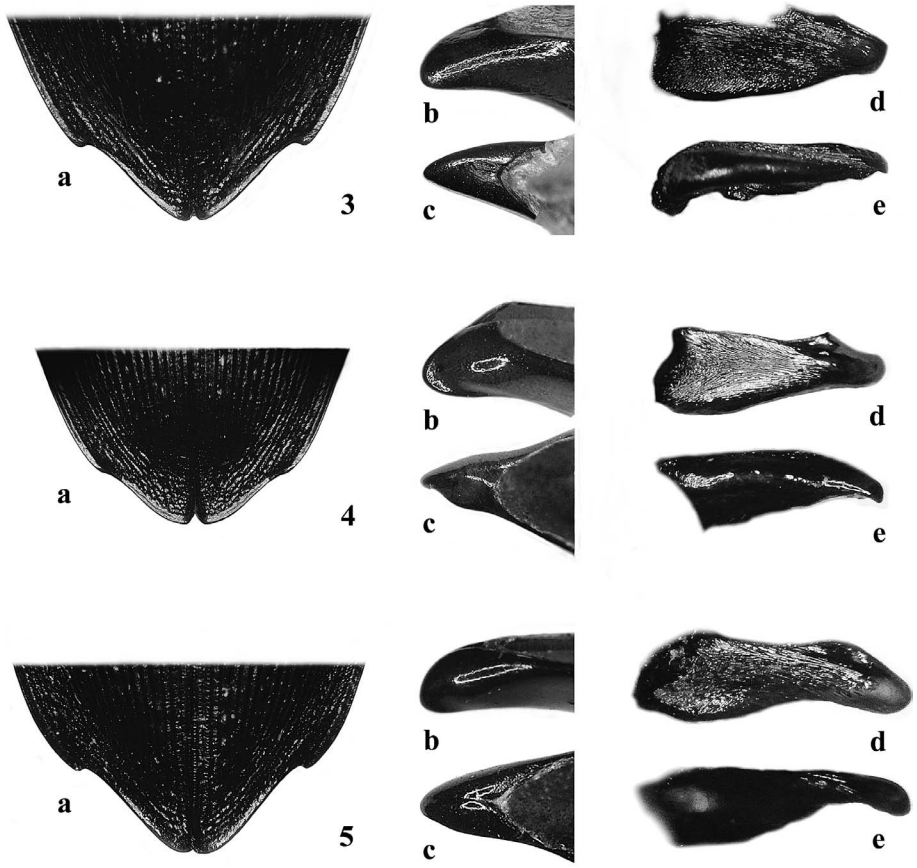


Figs. 1–2. *Apotomopterus* spp. from southwestern Zhejian, Southeast China. —— 1, *A. candidiequus* from Mt. Baima Shan in Suichang Xian of Lishui Shi; 2, *A. flavihervosus* from Fengyang Shan on the Huangmaojian Massif in Longquan Shi. —— a, ♂, holotype; b, ♀, paratype; c, aedeagus with fully everted endophallus in right lateral view; d, ditto in view from aedeagal apex.

28°37′N / 119°09′E, in Suichang Xian［遂昌县］, of Lishui Shi［丽水市］, southwestern Zhejiang, Southeast China, 7～17–VI–2008, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 2♀♀, same data as for the holotype, preserved in the collection of Y. IMURA and J. TURNA.

Notes. The present new species was found together with such races as *Isiocarabus kiukiangensis orphniopterus* and *Coptolabrus lafossei lungtschuanensis.*

Etymology. The new specific name comes from its locality, Baima Shan, which



Figs. 3–5. Apical part of female elytra and male genitalia of *Apotomopterus* spp. —— 3, *A. luschanensis* from Mt. Lu Shan of northern Jiangxi; 4, *A. candidiequus* (a, parataype; b-e, holotype); 5, *A. flavihervosus* (a, parataype; b-e, holotype). —— a, apical part of female elytra showing preapical emargination; b, apical lobe of aedeagus in right lateral view; c, ditto in dorsal view; d, spinula in dorsal view; e, ditto in lateral view.

means "mountain of white horse" in Chinese.

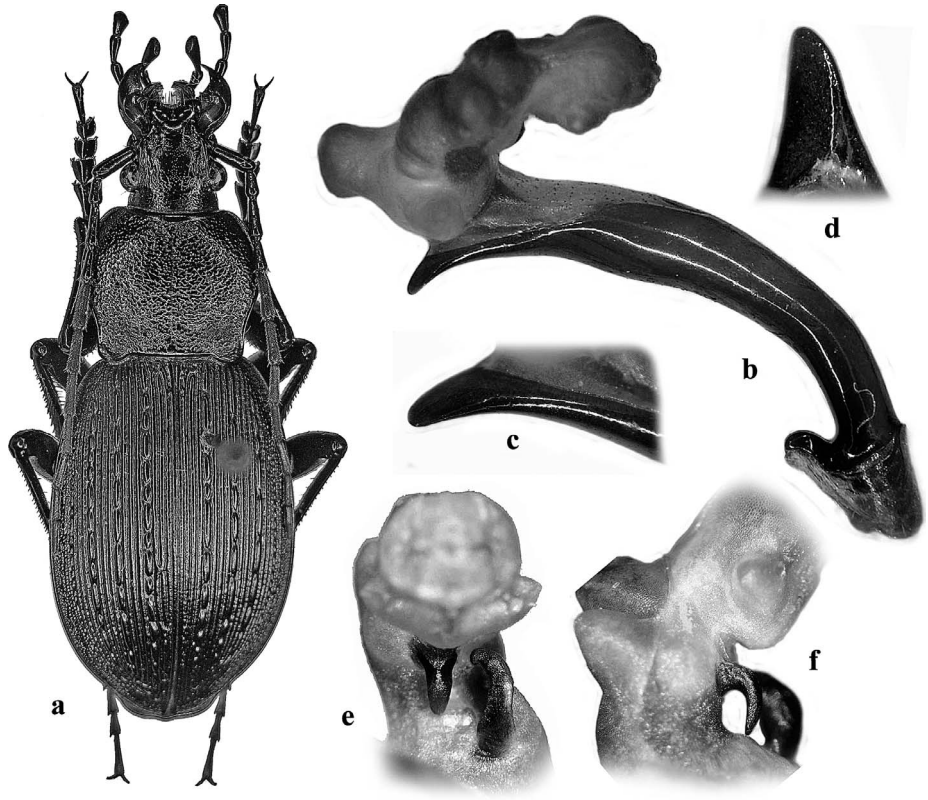
2. ***Apotomopterus*** (s. str.) ***flavihervosus*** IMURA, sp. nov.

(Fig. 2, 5)

Length (including mandibles): 32.5–36.0 mm. Allied to *P. luschanensis* and *P. candidiequus*, but decisively different from them in the male genitalic features. Preapical emargination of female elytra similar to that of *A. luschanensis*, but much more deeply emarginate than in *A. candidiequus.* Aedeagus much longer and slenderer than in the two allied species, above all in basal and median portions, with the ventral margin

neither tuberculate nor protruded at apical third, apical portion more gently bent ventrad. Apical lobe of aedeagus slenderer, much less acutely narrowed towards apices whose apical end is not remarkably compressed as in *A. candidiequus*. Spinula much larger, longer and slenderer, different in shape from those of two allied species as shown in Figs. 5 d and 5 e, with the apex not sharply pointed but obtusely rounded in lateral view. Endophallus similar in general appearance to that of *A. candidiequus*, but the right basal lateral lobe is smaller, less remarkably protruded towards the distal end.

Type series. Holotype: ♂, Fengyang Shan［凤阳山］Nature Reserve, 1,500–1,850 m in altitude, 27°53′N / 119°11′E, on the Huangmaojian［黄茅尖］Massif, in Longquan Shi［龙泉市］, southwestern Zhejiang, Southeast China, 12–V～5–VI–2008, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 1♂, 18♀♀, same data as for the holotype, preserved in the collection of Y.



Figs. 6. *Isiocarabus daiyunshan caementibos* from Mt. Shiniu Shan in east-cental Fujian, Southeast China. —— a, male (holotype); b, aedeagus with fully everted endophallus in right lateral view; c, apical part of aedeagus in the same view; d, ditto in dorsal view; e, digitulus (copulatory piece) in dorsal view; f, ditto in right lateral view.

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Notes. At the type locality, the new species occurs sympatrically with *Apotomopterus sauteri* and *Isiocarabus kiukiangensis orphniopterus.*

Etymology. The name of this new species comes from its locality, Huangmaojian, which means "mountain peak covered with yellow grass" in Chinese.

3. ***Isiocarabus daiyunshan caementibos*** IMURA, subsp. nov.

(Fig. 6)

Description. Length (including mandibles): 26.0–30.0 mm. Allied to the nominotypical subspecies described from "China, Fujian, Daiyun-Shan, (25.41 / 118.12), 1,500 m, Dehua" (KLEINFELD, 1998, p. 30), but distinguished from it by the following points: 1) body much shorter and robuster, above all in elytra (1.5 times as long as wide in the new subspecies, while the ratio is 1.7 in the nominotypical subspecies); 2) pronotum narrower and less prominently arcuate around the widest part, with the disc less strongly rugoso-punctate; 3) elevated parts of elytral intervals wider, and striae between intervals more vaguely punctate; 4) aedeagus as in the nominotypical subspecies, though the apical lobe is a little slenderer in both lateral and dorsal views; 5) digitulus (copulatory piece) different in shape, shorter, robuster and apparently dilated towards the base in dorsal view, thicker and more roundly arcuate at the basal third in lateral view.

Type series. Holotype: ♂, Mt. Shiniu Shan［石牛山］, 1,600–1,700 m in altitude, 25°38′ N / 118°28′ E, in Dehua Xian［德化县］, of east-central Fujian, Southeast China, 24–VI～15–VII–2007, to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 3♀♀, same data as for the holotype; 3♀♀, same locality, 1～28–V–2008; 5♂♂, 14♀♀, same area, 1,350 m in altitude, 25°38′N / 118°30′E, 2～28–V–2008, preserved in the collections of Y. IMURA & J. TURNA.

Notes. On Mt. Shiniu Shan, the new subspecies inhabits sympatrically with *Apotomopterus sauteri* (allied to subsp. *fujianensis*), *Isiocarabus gressittianus* and *Coptolabrus ignimitella.*

Etymology. The new subspecific name comes from the type locality, Shiniu Shan, which means "mountain of stone cow" in Chinese.

要　　約

井村有希: 中国浙江省と福建省から発見されたオサムシ亜族の 3 新分類単位. —— 中国浙江省南西部の白马山と黄茅尖からトゲオサムシ属の 2 新種を，また福建省中東部の石牛山からタイリクオオオサムシ属の 1 新亜種を記載し，それぞれに *Apotomopterus* (s. str.) *candidiequus*, *A.* (s. str.) *flavihervosus*, *Isiocarabus daiyunshan caementibos* という新名を与えた.

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Elytra, *Tokyo*, **37**(1): 6, May 29, 2009

New Record of *Coelostoma stultum* (Coleoptera, Hydrophilidae) from the Daitô Islands, far off Southwest Japan

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A hydrophilid beetle *Coelostoma stultum* (WALKER, 1858) has been known from throughout Japan excluding Hokkaido (HAYASHI, 2008), however, has not been record from the Daitô Islands. I collected two individuals of this species from the Kita-daitô Islands of the Island group. In this short paper, I record it for the first time from the Daitô Islands.

Specimens examined. 2 males, Minami, Kita-daitô Is., 25°56.315′ N, 131°18.352′ E, 15–XII–2005, Y. MINOSHIMA leg. Deposited in the Systematic Entomology, Hokkaido University.

I would like to express my cordial thanks to Kazuaki HIGASHI (visitors' center "Minami-daitô Shima-marugoto-kan") for his kind support during my field work.

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