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## 【Scientific note】

### 臺灣長腳花金龜屬 (Gnorimus) 之註釋【科學短訊】

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## Abstract

### 摘要

本文敘述臺灣產長腳花金龜(長腳花潛)屬之一新種Gnorimus sumizome。由於該種體呈黑色，故其種小名 (specific name) 取自墨染之日語。經詳查其雄蟲中足脛節形態，佑其近緣種為Trichius miwai，兩者皆應屬Gnorimus之種類，如此在臺灣該屬之種類已增為三種，其檢索表如下：臺灣產長腳花金龜屬之種檢索表 1.前胸背板綠色或暗綠色，翅散佈白色斑.....2 - 前胸背皮黑色，欠光澤，前翅黑，近末端隆起處呈暗橙色。前翅在自末端起約三分之一處具兩對小黃白色斑點.....G. sumizome sp. nov. (墨翅長腳花金龜) 2.前胸背皮綠色具光澤，近前緣角及後緣角處具白色斑紋。前翅黑色，並有個體除側緣及兩翅會合之翅鞘縫外為紅色，散佈若干小型、白色斑紋；腹面底色深綠色。胸部及各腹節兩側被蓋黃白色粉末，尾節皮除中央部外為黃白色。前足脛節具兩外刺。雄者細長，雌者粗壯。....G. tibialis Chujo (綠胸長腳花金龜) 1.前胸背皮綠色欠光澤，前翅散佈小白斑紋，腹面暗綠色或銅綠色，具金綠色光澤。尾節皮銅綠色具金屬光澤。雄前足脛節細長，端刺伸長，雌者具兩外刺。後跗節黃褐色，內側密生金黃色刺毛.....G. miwai (Chujo)(vom. nov.) (三輪長花金龜)。

### Key words:

**關鍵詞:** 長腳花金龜新種、墨翅長腳花金龜。

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# Notes on Genus *Gnorimus* from Taiwan (Coleoptera: Scarabaeidae)

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## ABSTRACT

A new trichiid species *Gnorimus sumizome* in Taiwan is described. The key to the Taiwanese species of this genus is provided.

**Key words:** New trichiid species, *Gnorimus sumizome*.

## 臺灣產長腳花金龜屬(*Gnorimus*)之註釋

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## 摘      要

本文敘述臺灣產長腳花金龜(長腳花潛)屬之一新種 *Gnorimus sumizome*。由於該種體呈黑色,故其種小名(specific name)取自墨染之日語。經詳查其雄蟲中足脛節形態,知其近緣種為 *Trichius miwai*,兩者皆應屬 *Gnorimus* 之種類,如此在臺灣該屬之種類已增為三種,其檢索表如下:

# 臺灣產長腳花金龜屬之種檢索表

1. 前胸背板綠色或暗綠色，翅散佈白色斑紋.....2  
 — 前胸背板黑色，欠光澤，前翅黑色，近末端隆起處呈暗橙色。前翅在自末端起約三分之一處具兩對小黃白色斑點.....*G. sumizome* sp. nov. (墨翅長腳花金龜)
2. 前胸背板綠色具光澤，近前緣角及後緣角處具白色斑紋。前翅黑色，並有個體除側緣及兩翅會合之翅鞘縫外為紅色，散佈若干小型、白色斑紋；腹面底色深綠色，胸部及各腹節兩側被蓋黃白色粉末，尾節板除中央部外為黃白色。前足脛節具兩外刺。雄者細長，雌者粗壯。.....*G. tibialis* Chûjô (綠胸長腳花金龜)  
 — 前胸背板綠色欠光澤，前翅散佈小白斑紋，腹面暗綠色或銅綠色，具金綠色光澤。尾節板銅綠色具金屬光澤。雄者前足脛節細長，端刺伸長，雌者具兩外刺。後跗節黃褐色，內側密生金黃色刺毛.....*G. miwai* (Chûjô) (com. nov.) (三輪長腳花金龜)

關鍵詞：長腳花金龜新種，墨翅長腳花金龜。

## Introduction

Genus *Gnorimus* was established by Serville in 1825 based on *Scarabaeus nobilis* Linne, 1758, and related to genus *Trichius* Fabricius, 1792. By having distorted middle tibiae in the male of *Gnorimus*, it can be discriminated from *Trichius*. Three species including one new species of genus *Gnorimus* are known in Taiwan. They are distinguished by the following key:

1. Pronotum green or dark green. Elytra with several whitish maculations.....2  
 — Pronotum entirely black and opaque. Elytra black, each with two small whitish-yellow maculations at apical two-thirds; dark orange color appeared near apical callus. Pygidium black, with a somewhat elongate whitish-yellow maculation near the base of lateral margin.....*sumizome* sp. nov.
2. Pronotum green, with whitish-yellow maculations near apical and posterior angles. Elytra black, sometimes with reddish color except lateral margins and sutural area, with several small white maculations. Ventral surface

deep green, thorax and sides of each abdominal sternite covered with whitish yellow bloom. Pygidium whitish-yellow except at the middle. Anterior tibia bidentate, rather slender in male, stout in female.....*tibialis* Chûjô

- Dorsal surface green and opaque, with several whitish maculations on elytra. Ventral surface dark green or cuprous green, shining, with golden green luster in certain light. Pygidium cuprous green, shining strongly. Anterior tibia slender, apical tooth prolonged in male, bidentate in female. Posterior tarsi yellowish-brown, densely with golden yellow setae beneath.....*miwai* (Chûjô)

## Description

***Gnorimus sumizome* sp. nov.** (墨翅長腳花金龜 = 墨翅長腳花潛)  
 (Figs. 1-A, 2-A, 3-A, 4-A)

**Male:** Body (elongate-oval), almost entirely black, except near the apical calli of elytra dark orange color, with two small whitish-yellow maculations at apical two-thirds of each elytron, with a

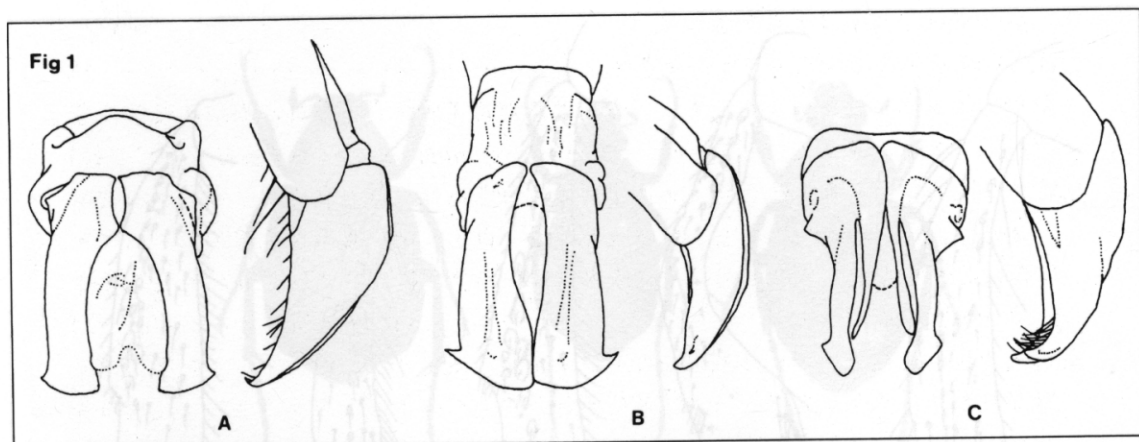


Fig. 1. Male genitalia--A, *Gnorimus sumizome* sp. nov.; B, *Gnorimus tibialis* Chûjô; C, *Gnorimus miwai* (Chûjô); left, dorsal view; right, lateral view.

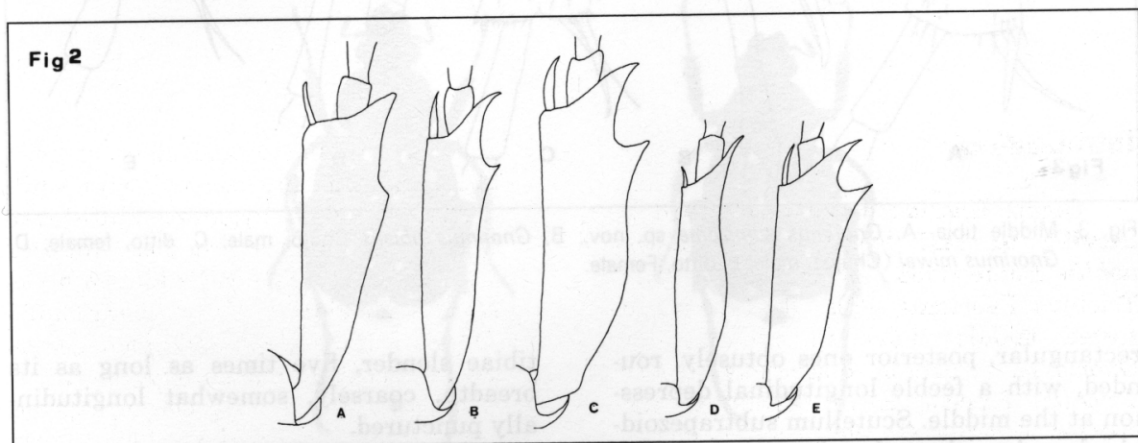


Fig. 2. Anterior tibia--A, *Gnorimus sumizome* sp. nov.; B, *Gnorimus tibialis* Chûjô, male; C, ditto, female; D, *Gnorimus miwai* (Chûjô), male; E, ditto, female.

somewhat elongate whitish-yellow maculation near the base of the lateral margin of pygidium. Ventral surface of body, anterior half of clypeus, antennae, pygidium and legs shining, dorsal surface of body opaque. Ventral surface of thorax densely covered with long tawny brownish-yellow pubescences, femora scattered with rather long hairs (basal parts of anterior and middle ones very densely).

Clypeus subsquare, bilobate, with anterior margin rounded, deeply emarginate, rather finely, densely punctuate, with a feebly longitudinal line at anterior

half, fronto-clypeal suture indistinct at the middle. Frons coarse near eyes, sparse in other parts, with several erect hairs near eyes. Eyes rather small, somewhat protruded, less than one-fourth as broad as frons. Antennae ten-segmented, with club just longer than footstalk.

Pronotum, sparsely punctuate, fringed with sparse rather long or short semierect hairs on sides of anterior margin and along lateral ones, lateral margins broadest at the base, slightly curved at the middle, gradually convergent to the front, anterior angles sub-

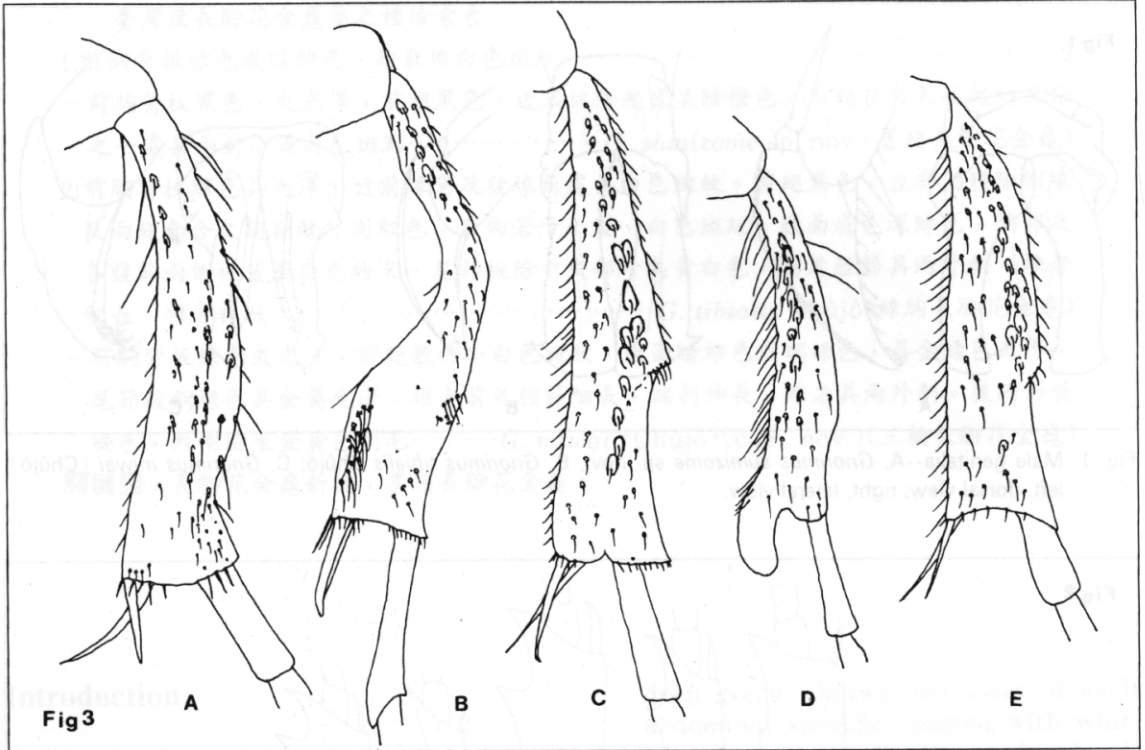


Fig. 3. Middle tibia--A, *Gnorimus sumizome* sp. nov.; B, *Gnorimus tibialis* Chûjô, male; C, ditto, female; D, *Gnorimus miwai* (Chûjô), male; E, ditto, Female.

rectangular, posterior ones obtusely, rounded, with a feeble longitudinal depression at the middle. Scutellum subtrapezoidal, broader than its length, sparsely punctured, with a longitudinal median line. Each elytron with sutural and first costa, broad, rather convex, second one fine and weakly convex, almost unpunctate, intervals shallowly, inconspicuously punctured. Pygidium triangulate, broad, feebly convex, coarsely, coriaceous, bearing semierect rather long hairs, of which those situated at anterior and lateral margins are longer.

Abdominal sternites coarsely, rather densely punctate; each sternite bearing scattered semierect, dense hairs. Anterior tibia stout, bidentate, outer tooth small but distinct. Middle tibia gently incurved, abruptly expanded at apical one-fourth, finely and sparsely punctured. Posterior

tibiae slender, five times as long as its breadth, coarsely, somewhat longitudinally punctured.

**Female:** Unknown.

**Length:** 18.0 mm; breadth: 10.0 mm.

**Holotype:** Wanndah, Nantou Hsien, 14-VII-1988, C. K. Yu leg.

(In Muh Sheng Museum of Entomology collection).

**Distribution:** Taiwan.

***Gnorimus tibialis* Chûjô, 1938**(綠胸長腳花金龜=青胸長腳花潛)

(Figs. 1-B, 2-B, C, 3-B, C, 4-D, E, F)

*Gnorimus tibialis* Chûjô, 1938: 444.

*Gnorimus tibialis*: Kobayashi, 1980: 30.

**Locality:** TAOYUAN: Lalashan (VI-VII), Sulin (VI-VII); NANTOU: Jiuyuehtan (V); PINGTUNG: Kenting (V-VI).

**Distribution:** Taiwan.





Fig. 4. --A, *Gnorimus sumizome* sp. nov.--B, *Gnorimus miwai* (Chûjô), male; C, ditto, female.--D, *Gnorimus tibialis* Chûjô, male, normal type; E, ditto, male, reddish type; F, ditto, female, normal type; G, ditto, female, reddish type.

***Gnorimus miwai* (Chûjô, 1941) comb. nov.**(三輪長腳花金龜=三輪長腳青花潛)

(Figs. 1-C, 2-D, E, 3-D, E, 4-B, C)

*Trichius miwai* Chûjô, 1941: 37.

*Trichius miwai*: Kobayashi, 1980: 32.

This species was described by Chûjô in 1941 for *Trichius*, and also treated as the same genus by Kobayashi in 1980. This species has feebly incurved middle tibia in male, showing that to be a key diagnostic of *Gnorimus*; in this work we transferred *miwai* to genus *Gnorimus*.

**Locality:** TAORYUAN: Lalashan (VI); HUALIEN: Tienhsiang (VI), Bihluh-Shenmuh (VI); NANTOU; Yushih (VI-VII), Jiuyuehtan (V), Sungkang (VI), Herwangshan (VI-VII), Meifeng (VI); CHIAI: Fenchihu (VII); KAOHSIUNG: Chuyunshan (V), Shinanshan (VI).

**Distribution:** Taiwan.

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