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## 【Research report】

### 臺灣產金背鰓金龜屬(鞘翅目：鰓金龜科)昆蟲【研究報告】

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## Abstract

### 摘要

金背鰓金龜屬 *Taiwanotrichia* 在1990設立，係一臺灣特產屬，當時發表僅根據一隻雄性標本，作者經過比對，確認除模式種金背鰓金龜 *T. longicornis* Kobayashi 外，尚有兩新種細毛金背鰓金龜 *T. dorsopilosa* sp. nov. 及鞍馬山金背鰓金龜 *T. similis* sp. nov.；本文除描述、圖繪其外部形態及外生殖器，文附檢索表，並首次記載本屬之雌性個體。

### Key words:

**關鍵詞:** 臺灣、鰓金龜科、金背鰓金龜屬、新種。

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# On the Genus *Taiwanotrichia* from Taiwan (Coleoptera : Melolonthidae)

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## ABSTRACT

The endemic genus *Taiwanotrichia* was first proposed in 1990. Two additional new species, *T. dorsopilosa* and *T. similis*, are here described and illustrated. A key to the genus with the type species *T. longicornis* is given. The description of the female of *T. similis*, of the first recording female to this genus is also provided.

**Key words:** Taiwan, Melolonthidae, *Taiwanotrichia*, new species.

## 臺灣產金背鰓金龜屬 (鞘翅目：鰓金龜科)昆蟲

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## 摘 要

金背鰓金龜屬 *Taiwanotrichia* 在1990設立，係一臺灣特產屬，當時發表僅根據一隻

雄性標本，作者經過比對，確認除模式種金背鰓金龜 *T. longicornis* Kobayashi 外，尚有兩新種細毛金背鰓金龜 *T. dorsopilosa* sp. nov. 及鞍馬山金背鰓金龜 *T. similis* sp. nov.；本文除描述、圖繪其外部形態及外生殖器，文附檢索表，並首次記載本屬之雌性個體。

**關鍵詞：**臺灣，鰓金龜科，金背鰓金龜屬，新種。

## Introduction

The genus *Taiwanotrichia* with the type species *T. longicornis*, is the latest new endemic genus to the Taiwanese melolonthid-beetles. This genus differs from *Hilyotrogus* Fairmaire in bearing strong vertical tooth on each claw; and from *Toxospatinus* Fairmaire by having a terminal spur on fore-tibia (Kobayashi, 1990).

Dealing with the genus *Taiwanotrichia* only one male specimen was examined by Kobayashi (1990) and preserved in the collection of the designator, and no female specimen was collected. Some specimens of this genus from the central and the eastern montane areas of Taiwan have been collected and acquired by the authors in the past year, including two new species, *T. similis* and *T. dorsopilosa* and the type species, *T. longicornis*.

## Materials and Methods

Beetles of *Taiwanotrichia* occur in the warm-temperate rain forest zone of Taiwanese montane area, but are very locally distributed. All the specimens in this paper were captured by light. Male genitalia were saturated with 75% KOH solution for 2–3 days and dissected in 80% ethanol for observation. After microscopic examination, the genitalia were preserved in a covered vial with glycerol.

The type specimens are deposited in

NTUIM (Insect Museum of Department of Plant Pathology and Entomology, National Taiwan University, R.O.C.), IM-DAZTARI (Insect Museum of Department of Applied Zoology, Taiwan Agricultural Research Institute, Taichung, Taiwan, R.O.C.), NSMNHT (National Science Museum, Natural History, Tokyo, Japan), and BMNH (British Museum Natural History, London, U.K.).

### Genus *Taiwanotrichia* Kobayashi, 1990

*Taiwanotrichia* Kobayashi, 1990. *Elytra*, Tokyo, 18(1): 76. Type species: *Taiwanotrichia longicornis* Kobayashi, 1990

The generic morphological characters outlined by Kobayashi (1990) are modified as follows:

**Male**—Body oblong to elongate; clypeus semicircular, anterior margin not sinuate; eye large and protuberant. Antennae 10-segmented with club composed of 7 lamellae, more than 3 times as long as footstalk in male, strongly sinuous of the club at middle.

Pronotum broader than its length, broadest at the middle, in front of lateral margins weakly carinated. Legs slender, anterior tibiae tridentate, each with a terminal spur; claws curved near apices, nearly straight at middle, each with a strong vertical tooth beneath. Male genitalia encapsulated.

Female—similar to male form, but antennal club shorter than footstalk; body more or less broader than male, also

deeper in coloration.

**Key to the species of *Taiwanotrichia*  
(For male only)**

- 1.Brilliance of elytra unnoticeable, dorsal surface bearing fine and sparse hairs.....  
..... *T. dorsopilosa*.
- Elytra with conspicuous brilliance, dorsal surface without hair.....2
- 2.Body reddish-brown, femora and tibiae with dark margins, but unnoticeable; pronotum with inconspicuous or microscopic hairs..... *T. lonaicornis*.
- Body pale yellowish-brown, femora and tibiae dark brown to blackish brown; hairs on pronotum longer..... *T. similis*.

***Taiwanotrichia dorsopilosa* Li et Yang, sp. nov.** (Figs. 1, 5, 6)

**Male** (Fig. 1) Length of body: 13.0 mm. General color reddish brown; clypeus and legs deep brown; pygidium and ventral surface with rather stronger brilliance (including femoral surface) than dorsal surface; frons on the sides compound eyes same color as pronotum, with a blackish brown elliptic dot; margins of scutellum blackish brown; two vertically connected bands with same color within the anterior margin of elytron, other one along with lateral margin at basal half; antennae lightly reddish brown but lacking luster.

**Head:** Labrum subcircular, anterior margin noticeably carinated; clypeus anterior margin smoothly ring-shaped, three times as broad as its length, surface slightly sunken, coarsely and densely punctuated, covered with fine hairs on disk; frons slightly convex, with larger and dense punctures and, bearing punctated sparse hairs; eyes large and prominent; antennae 10-segmented, with antennal club with 7-segments, about three times as long as footstalk, but strongly curved at middle and outwards from apex to base.

**Thorax:** Pronotum two times as

broad as its length, widest at middle, sparsely punctuated on the surface, front-lateral margin being in inconspicuous carinated, anterior margin and lateral ones bearing long hairs, with relatively short and sparse hairs on disk, anterior and posterior angles obvious; scutellum with slightly punctuated and with hairs. Elytra each with two feeble costae, surface densely punctuated each with a minute hair, lateral sides normally with longer hairs. Mesosternum and metasternum bearing long fawn hairs, which rather densely recumbent on the surface.

**Abdomen:** Pygidium scattered with fine punctures, each puncture with a short hair, weakly convex in male. Each abdominal sternite sparsely punctuated more dense towards lateral margins, each puncture with a hair, but hairs at the middle shorter than the lateral ones.

**Male genitalia** (Figs. 5, 6): Aedeagus rod-like, parameres apically separated and moderately curved from lateral view. Basal pieces with a membrane-like sclerite linking the basally connected parameres.

**Female:** unknown.

**Etymology:** Named in reference to the body covering of short hairs in dorsal view.

**Specimen examined:** Holotype ♂ Hsin-Bai-Yang(新白楊), Hualien Hsien, June 1988, C.J.Lo leg.(NTUIM-9101)

***Taiwanotrichia longicornis* Kobayashi, 1990** (Figs. 2, 7, 8)

*Taiwanotrichia longicornis* Kobayashi, 1990: 76-77.

This species formerly recognized only from a male holotype (of personal collection). One male has been obtained by the authors from central Taiwan.

**Male** (Fig. 2) Length of body: 12.5 mm. Body shining reddish to yellowish brown except antennae, two linked patches on the apex of frons blackish brown; legs reddish brown, with margins of femora and tibiae blackish brown;



1



2



3



4

Fig. 1-4. 1. Male holotype *Taiwanotrichia dorsopilosa* sp. nov. (NTUIM-9101). 2. Male individual *T. longicornis* Kobayashi from author's collection. 3. Male holotype *T. similis* sp. nov. (NTUIM-9102). 4. Ditto, female paratype (NTUIM-9103).

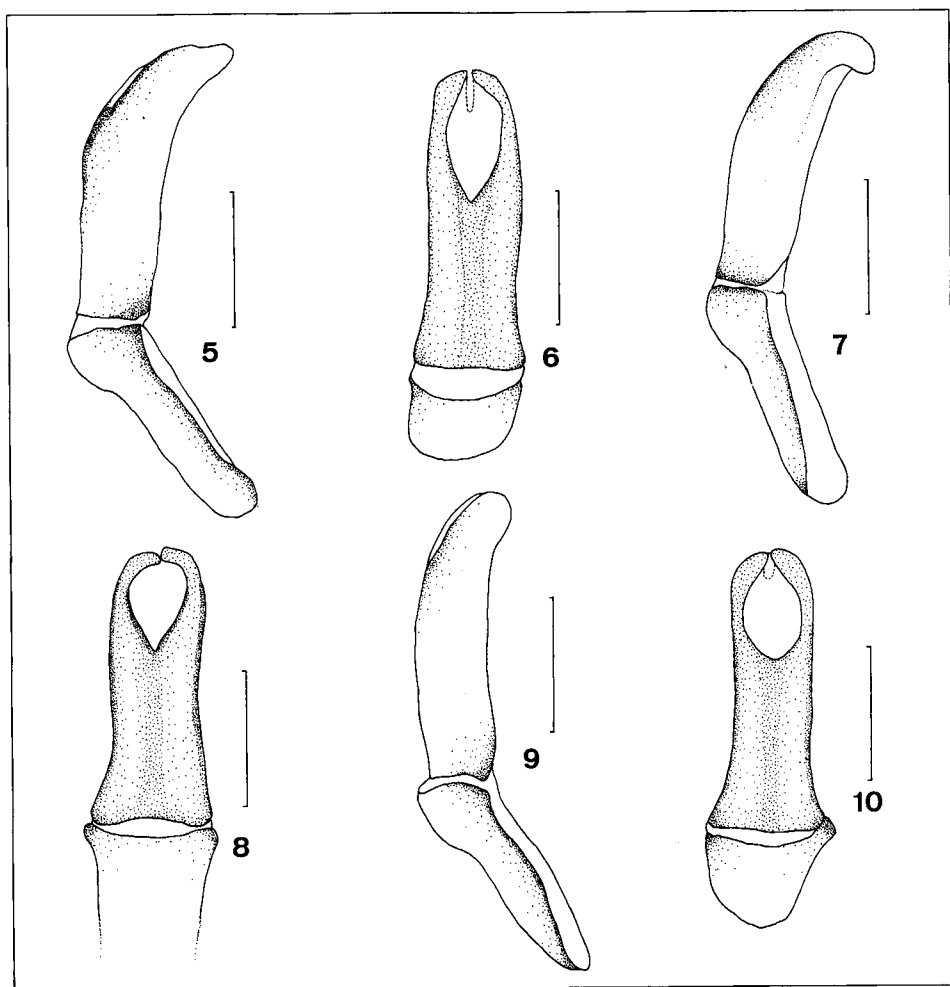


Fig. 5-10. Male genitalia: 5. *Taiwanotrichia dorsopilosa* sp. nov. in dorsal view. 6. Ditto, lateral view. 7. *T. similis* sp. nov. in dorsal view. 8. Ditto, lateral view. 9. *T. longicornis* Kobayashi in dorsal view. 10. Ditto, lateral view. Scale line=1.0 mm.

junctions of abdominal sternites blackish brown.

**Head:** Frons slightly convexed, moderately densely punctuated, with fine hair on each puncture.

**Thorax:** Pronotum 1.8 times as broad as its length, less dense punctures on disk; lateral margins moderately emarginated, with sparse long hairs; elytral surface punctures fine and hairless except the marginal ones. Mesosternum and metasternum bearing long fawn hairs.

**Abdomen:** Pygidium in lateral view, weakly convexed in male; sparsely punctuated and each with one very short hair. Abdominal sternites with punctures more dense towards lateral margins, each one with one hair.

**Male genitalia** (Figs. 7, 8): Parameres strongly curved much more than *T. dorsopilosa* and *T. similis*.

**Female:** unknown.

**Specimen examined:** 1 ♂ Pilu(碧綠), Hualien Hsien, July to August, 1988.

C.J. Lo leg. (Author's collection)

***Taiwanotrichia similis* Li et Yang, sp. nov.** (Figs. 3, 4, 9, 10)

**Male** (Fig. 3): Length of body: 11.5–13.5 mm. This species is very similar to *longicornis* but differs by the following characteristics: 1) the body color yellowish brown but head and legs blackish, 2) width of clypeus narrower, 3) the hairs on pronotum noticeable and long, 4) the blackish brown striae on lateral margin of elytron is usually unnoticeable small plot and / or even absent.

**Male genitalia** (Figs. 9, 10): Closely allied to *T. dorsopilosa* sp. n., but its parameres slightly curved at apex in lateral view.

**Female** (Figs. 4): Length of body: 13.5 mm. Antennal club subequal to footstalk in length; head bearing short hairs; the punctures on the disk of pronotum smaller than male, and hairless on its surface.

**Variation:** the color of antennae from blackish brown to yellowish brown; legs blackish, in dorsal view, but sometimes with rufous around broadly blackish margin of tibiae.

**Etymology:** Named in reference to the resemblance of *longicornis*.

**Specimens examined:** Holotype ♂ An-Ma Mt. (鞍馬山), Taichung-Hsien, 2 June 1991 (NTUIM-9102), C. L. Li leg.

**Paratypes:** 4 ♂♂ 1 ♀ same locality

as the holotype, 25 July 1990, S. W. Yu leg. (3 ♂♂ 1 ♀ deposited in NUTUIM 9103–9105, 1 ♂ deposited in IMDAZ-TARI). 2 ♂♂ same data as the holotype (1 ♂ deposited in NSMNHT, 1 ♂ deposited in BMNH).

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