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A New Record of Tiger Beetle *Abroscelis anchoralis anchoralis* (Coleoptera: Cicindelidae) in Taiwan 【Scientific note】

台灣產虎甲蟲之一新記錄亞種【科學短訊】

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Abstract

A hereto unknown subspecies of tiger beetle, *Abroscelis anchoralis anchoralis* (Chevrolat, 1845), has been recorded in Taiwan. This subspecies shows differences with *A. a. punctatissima* in both body size and elytral maculation. Our survey found that its northern Taiwan habitats are restricted to a small range.

摘要

描述台灣產虎甲蟲一新記錄亞種(大錨紋虎甲蟲)。本亞種在體型及斑紋與錨紋虎甲蟲有所差異。調查時發現本亞種的棲地侷限在一小範圍且族群頗受威脅，保育的問題也在文中加以討論。

Key words: *Abroscelis anchoralis anchoralis*, Cicindelidae, Tiger beetle, Taiwan

關鍵詞: 大錨紋虎甲蟲、虎甲蟲科、虎甲蟲、台灣、保育。

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A New Record of Tiger Beetle *Abroscelis anchoralis anchoralis* (Coleoptera: Cicindelidae) in Taiwan

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ABSTRACT

A hereto unknown subspecies of tiger beetle, *Abroscelis anchoralis anchoralis* (Chevrolat, 1845), has been recorded in Taiwan. This subspecies shows differences with *A. a. punctatissima* in both body size and elytral maculation. Our survey found that its northern Taiwan habitats are restricted to a small range.

Key words: *Abroscelis anchoralis anchoralis*, Cicindelidae, Tiger beetle, Taiwan

Introduction

Tiger beetles are small- to medium-sized insects usually with metallic colors. Larvae and adults are carnivorous. The majority of taxa spend their adult life on the soil surface, while a few are arborous. In Taiwan, the habitat of the *Abroscelis* species is commonly located on the seashore. Originally, *Abroscelis anchoralis anchoralis* (Chevrolat, 1845) was reported in Macao, and afterwards it was also recorded by Schaum (1863) in Hong Kong. According to Miwa's (1936) review the tiger beetle recorded in Taiwan is *A. a. punctatissima* (Schaum, 1863) and is not *A. a. anchoralis*. The latter is found on sandy beaches and lagoons along the coast of mainland China from Macao to Peiping (Miwa, 1936; Wiesner 1992). Werner *et al.* (2002) recently reviewed

the tiger beetle fauna of Taiwan and did not record *A. a. anchoralis*, but recorded the subspecies *A. a. punctatissima*, which is widely distributed in Taiwan, Pescador Islands, Amoy, Vietnam, Japan, and Korea.

A survey of the tiger beetle was conducted between 1995 and 2005 on the seashore of Taiwan. During that time a whole series of specimens of tiger beetles similar to *A. a. punctatissima* were collected. The status of the holotype of *A. a. anchoralis* unknown. Therefore the authors compared the tiger beetles vouchers collected from Hainan Island, which are very similar to the type locality, with the nominate subspecies housed in the Taiwan Agricultural Experimental Institute, as well as compared them with illustrations published by Chang and Hsu (1988, p104). Consequently, it was concluded that the specimens from northern Taiwan are

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identical to the nominate subspecies of *A. anchoralis*, and therefore must be considered a new record of tiger beetle of the Taiwanese fauna.

***Abroscelis anchoralis anchoralis* (Chevrolat, 1845)**

(Figs. 1,2,5)

Specimens Examined:

CHINA: Hainan Island, Sama, 8-V-1936, 3♂, collector J. Sonan. (Fig. 5, identified by Miwa)

TAIWAN: Taipei County, Kungliao, 29-VII-2000, 3♂1♀; 29-VIII-2003, 1♂2♀; 17-VII-2005, 1♀, by sweeping, collector Tzong-Jeng Lin.

Remarks:

Subspecies *anchoralis* can be distinguished from subspecies *punctatissima* (Figs. 3-4) by their bold maculation, larger size and third antennomere with five setae (Taiwan only). In addition, subspecies *anchoralis* has broader, fused maculation that does not vary, while subspecies *punctatissima* has finer, separated maculation that varies depending on the location and on average, the third antennomere consists of three-four setae.

Abroscelis anchoralis anchoralis is found only in two localities in northern Taiwan, and with quite a small population. One site is a small creek transecting the seashore and the intertidal zone, and the other site is near the mouth of the Suan-Hsi River. The local population of *Abroscelis a. anchoralis* seems unaffected by human activities. But future habitat changes, e.g. artificial construction, may greatly threaten the survival of this sub species.

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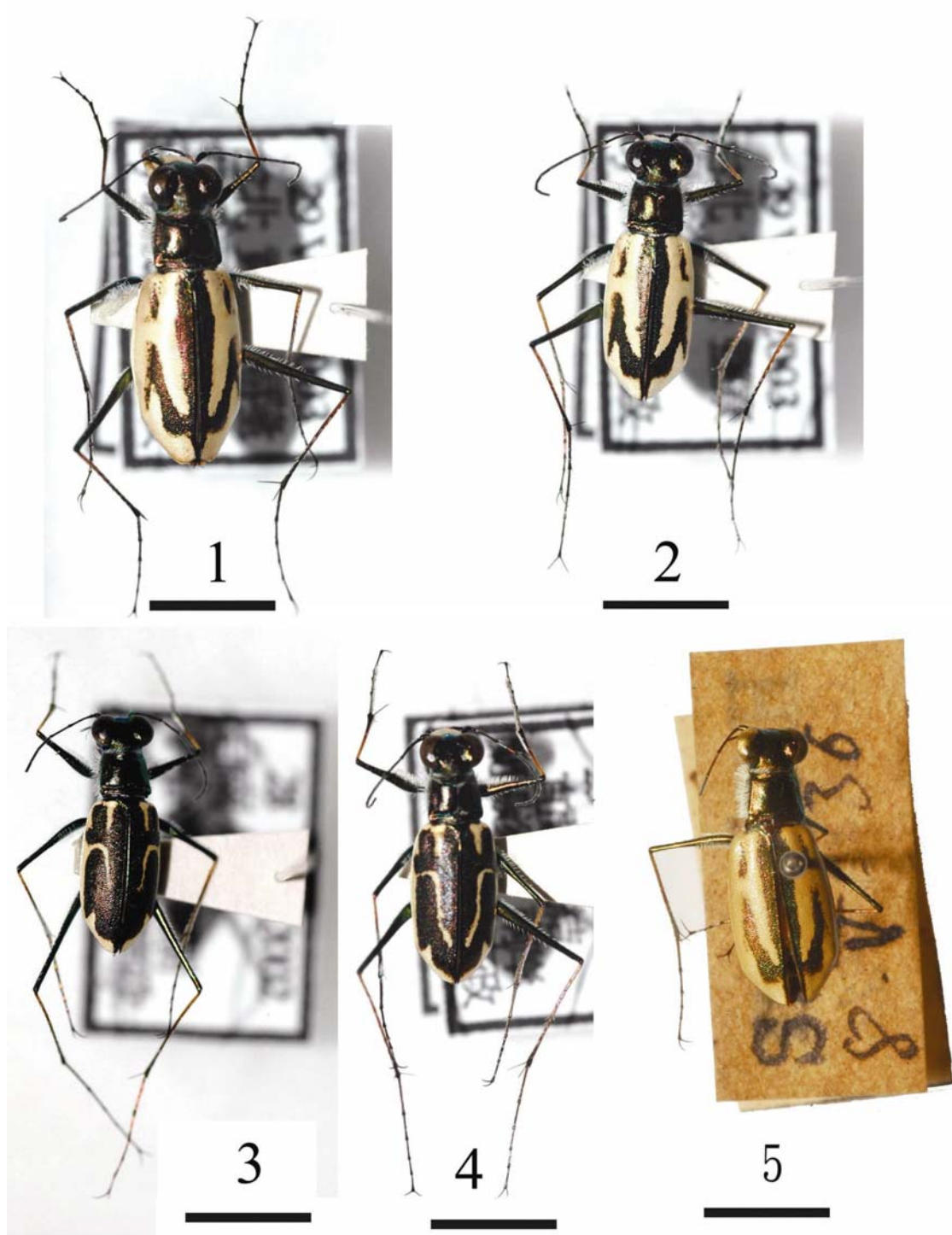
Boulder, and Dr. Fabio Cassola of Rome, Italy, for finding some references. Our thanks to the Taiwan Agricultural Research Institute, Taichung, for allowing the authors to examine and photograph specimens of *Abroscelis anchoralis anchoralis* from Hainan Island. Thanks also to Dr. Chu-Fa Tsai, visiting scholar, and Dr. Ching-Yu Liou at the Taiwan Endemic Species Research Institute for their encouragement and support.

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Figs. 1-5 *Abroscelis anchoralis* subspp. – 1-2, *A. a. anchoralis* (Chevrolat, 1845) male (right) and female (left) from Kungliao, Taipei, northern Taiwan; 3-4, *A. a. punctatissima* (Schaum, 1863) males from southern Taiwan (right), northern Taiwan (left); 5, *A. a. anchoralis* male from Sama, Hainan Island. (All scales = 5 mm)

台灣產虎甲蟲之一新記錄亞種

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摘 要

描述台灣產虎甲蟲一新記錄亞種(大錨紋虎甲蟲)。本亞種在體型及斑紋與錨紋虎甲蟲有所差異。調查時發現本亞種的棲地侷限在一小範圍且族群頗受威脅，保育的問題也在文中加以討論。

關鍵詞：大錨紋虎甲蟲、虎甲蟲科、虎甲蟲、台灣、保育。