

## A Description of the Female of *Stenothemus owadai* (Coleoptera: Cantharidae)

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### ABSTRACT

The female of *Stenothemus owadai* Okushima et M. Satô, 1997 is described and the eighth abdominal sternite is illustrated.

**Key words:** *Stenothemus owadai*, female morphology, eighth abdominal sternite, biological notes

The family Cantharidae is a group of soft-bodied, often colorful and terrestrial beetles. A total of 165 species and 3 subspecies have been recorded from Taiwan.

It is however, sometimes difficult to identify the female considering the similar coloration of some species. The shape of the eighth abdominal sternite is an important diagnostic characteristic although a few taxonomists also use the characteristics of the genitalia. The characteristics of the eighth abdominal sternite of a species is a useful and important tool for identifying the family.

To date, four species of the genus *Stenothemus* from Taiwan have been described (Okushima and Satô, 1997, 1999). Nevertheless, except for *S. wittmeri* Okushima and Satô, 1999 the females of these species remain unknown. Recently the author collected some females of *S. owadai*.

The abdomen was removed and kept

in 30% KOH for 10 hours, and then preserved in 75% ethyl alcohol. The cleaned eighth abdominal sternite was then mounted on a microscope slide and observed using an Olympus BX50 compound microscope. The author then made a line drawing of the eighth abdominal sternite. Habitus photos were taken using a Nikon COOLPIX P310 digital camera. Body length was measured from the anterior margin of the clypeus to the apices of the elytra and the width was measured at the widest part of conjoint elytra.

**Material examined.** NANTOU: Jen-ai, Meifeng 2, 100m: 20 ♂ 4 ♀, 23-XI-2013, Y. Hsiao. NANTOU: Jen-ai, Tsuifeng 2, 400m: 3 ♂, 24-XI-2013, Y. Hsiao. NANTOU: Jen-ai, Meifeng: 13 ♂, 15-19-XI-2001, C. S. Lin & W. T. Yang (NMNS).

**Notes.** A couple of specimens and the eighth sternite mounted on a microscope slide will be deposited in the National Museum of Natural Science (NMNS) in

Taichung.

***Stenothemus owadai* Okushima et M. Satô, 1997**

*Stenothemus owadai* Okushima et M. Satô, 1997, *Elytra*, Tokyo, 25 (1): 85. Figs. 1-4; 1999, *Elytra*, Tokyo, 27 (1): 132. Fig. 1.

**Male** (Fig. 1-a). Eyes, antennae, maxillary and labial palpi, the head except for the central area, femora, tibiae, tarsi, meso- and metasterna, and abdominal sternites dark brown to black; mandibles, coxae, trochanters, claws and prosternum yellowish to reddish brown; the central area of the head dark reddish brown; pronotum orange yellow but blackish in the central area; elytra yellowish brown. Body closely covered with fine yellowish pubescence. Head as long as wide. Eyes large, globular and prominent. Antennae attaining apical third of elytra. Pronotum subquadrate. Sides of elytra subparallel. (See Okushima & Satô, 1997 in detail).

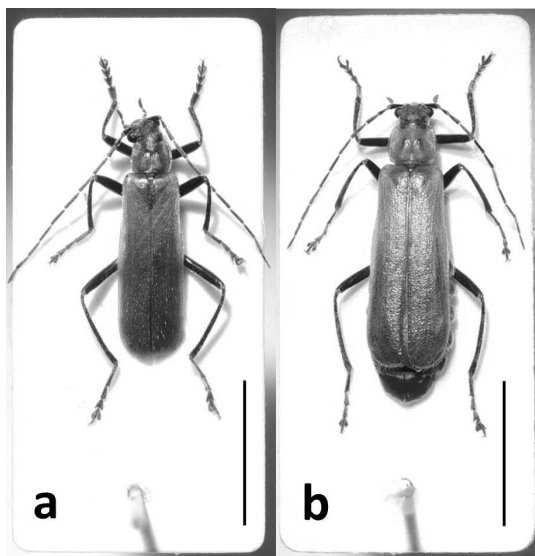


Fig. 1. Habitus of *Stenothemus owadai* Okushima et M. Satô. a. male. b. female. Scale = 5.0 mm.

**Female** (Fig. 1-b). Color and pubescence resemble male. Body clearly wider than in

male. Eyes smaller than in male, ratio of an eye diameter to interocular space 1 : 3.25. Antennae obviously shorter than in male, attaining at most to one half of the elytra. Ratio of the lengths of antennomeres from base to apex as follows: 12 : 8 : 9 : 14 : 14 : 14.5 : 14.5 : 14.5 : 13 : 12 : 12.5. Head as long as wide. Pronotum subquadrate, 1.21 times as wide as head, 1.22 times as long as wide. Elytra conjointly 1.70 times as wide as pronotum, 2.41 times as long as wide, the side subparallel in basal fifth and gradually widening to the apex. Claws simple.

**Body length:** 10.78 mm; body width: 3.39 mm.

**Eighth abdominal sternite** (Fig. 2). An inversely subtriangular spot in the terminal part of disc. Median to terminal part of disc densely punctate. Lateral margins moderately pubescent. Lateral margins sinuate; both sides of terminal margin subtruncated and sinuate; middle lobe roundly concave in middle.

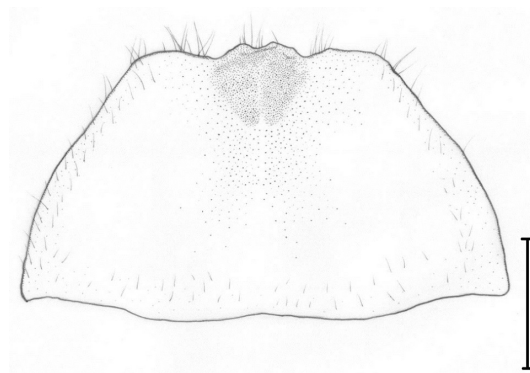


Fig. 2. Eighth abdominal sternite in female. Scale = 0.5 mm.

**Diagnosis.** The shape of the eighth sternite of a female *S. owadai* differs from that of *S. wittmeri* by the presence of a middle lobe and an inversely subtriangular spot in the terminal margin.

**Biological Notes.** Most members of the genus *Stenothemus* described in the literature are from the Himalayan district.

They appear mainly in late summer to late autumn, and some species from Taiwan were also collected in the winter. It seems that the *Stenothemus* species prefer colder weather, but that remains unclear.

The species, *Stenothemus owadai* is distributed in central Taiwan, at an altitude between 2100 to 2400 meters. This species appears mainly in November. They exhibit obvious phototaxis at night and are readily attracted by the light of a mercury lamp. The number of females collected by a light trap is obviously smaller than that of males. Copulation can be observed when placing adults of both sex in the same container (Fig. 3).



Fig. 3. Copulation of *Stenothemus owadai*. Showing two males and one female (at bottom).

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# 雌性大和田氏狹胸菊虎之形態描述 (鞘翅目：菊虎科)

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## 摘 要

雌性大和田氏狹胸菊虎 (*Stenothemus owadai* Okushima et M. Satô, 1997) 之發現並描述形態和繪製其第八腹板。

**關鍵詞：**大和田氏狹胸菊虎、雌性形態、第八腹板、生物學記述。