

Description of a New Species of the Genus *Psalitrus* (Coleoptera,  
Hydrophilidae) from the Ryukyus, Japan,  
with a Key to Japanese Species

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**Abstract** *Psalitrus masatakai* sp. nov. is described from Amami-Ōshima Is., the Ryukyus, Japan. As the result, three species of *Psalitrus* have been known to occur in Japan. *Psalitrus sauteri* D'ORCHYMONT, 1929 is recorded for the first time from Amami-Ōshima Is. and Iriomote Is., the Ryukyus. A key to the Japanese species of *Psalitrus* is given.

The genus *Psalitrus* was established by D'ORCHYMONT (1919), belongs to the tribe Omicrini of the subfamily Sphaeridiinae (HANSEN, 1991), and comprises 28 species worldwide (BAMEUL, 1991, 1992, 2003; HANSEN, 1991, 1999; HOSHINA & SATÔ, 2005). In Japan, HOSHINA & SATÔ (2005) described a new species, *P. yamatensis*, from Kyushu, and firstly recorded *P. sauteri* D'ORCHYMONT, 1929, from Okinawa Is., the Ryukyus. At present, only two species are known from Japan.

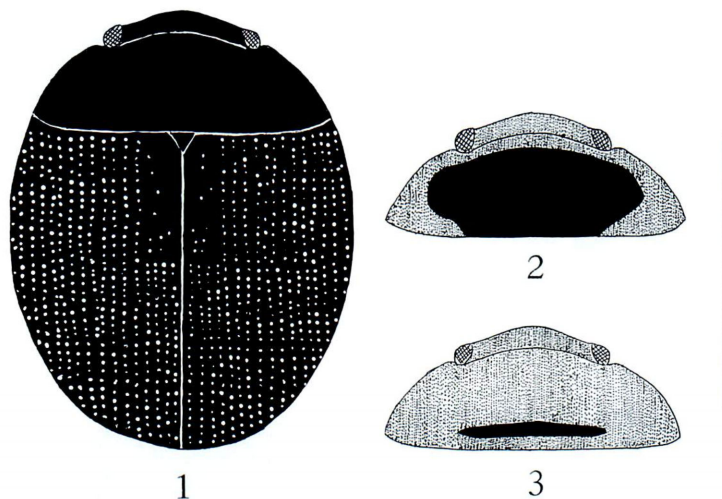
In 2006, 30 specimens of an unnamed species of *Psalitrus* were collected by the author in Amami-Ōshima Is., the Ryukyus. In this paper, I will describe the new species of *Psalitrus* based on above-mentioned specimens, under the name *P. masatakai* sp. nov., with a key to the Japanese species. The holotype designated in this study is deposited in the collection of the Museum of Nature and Human Activities, Hyôgo (MNHA). Two of the paratypes are preserved in the collection of the Hokkaido University Museum, Sapporo, and the others in the author's collection. I wish to express my sincere gratitude to Dr. Patrick GROOTAERT (Institut royal des Sciences naturelles de Belgique, Bruxelles) who lent me the type specimen. The present paper is dedicated to the memory of the late Dr. Masataka SATÔ who had supported my taxonomic study of the family Hydrophilidae in any way possible.

*Psalitrus masatakai* sp. nov.

[Japanese name: Tsuya-mangetsu-gamushi]

(Figs. 1–11)

**Diagnosis.** Body length less than 2 mm. Dorsum shining and almost smooth. Head and pronotum almost impunctate. Elytra clearly bicolorous and densely punctate.



Figs. 1-3. *Psalitrus masatakai* sp. nov. — 1, Punctures of dorsum; 2 & 3, coloristic variation of pronotum. Scale 1 mm.

Hind wings absent. Easily separated from two known Japanese species based on the elytral color.

*Description.* Measurement of holotype:— Body 1.7 mm in length; head 0.32 mm in length (from clypeus to base) and 0.55 mm in width; pronotum 0.40 mm in length and 1.1 mm in width; elytra 1.2 mm in length and 1.3 mm in width.

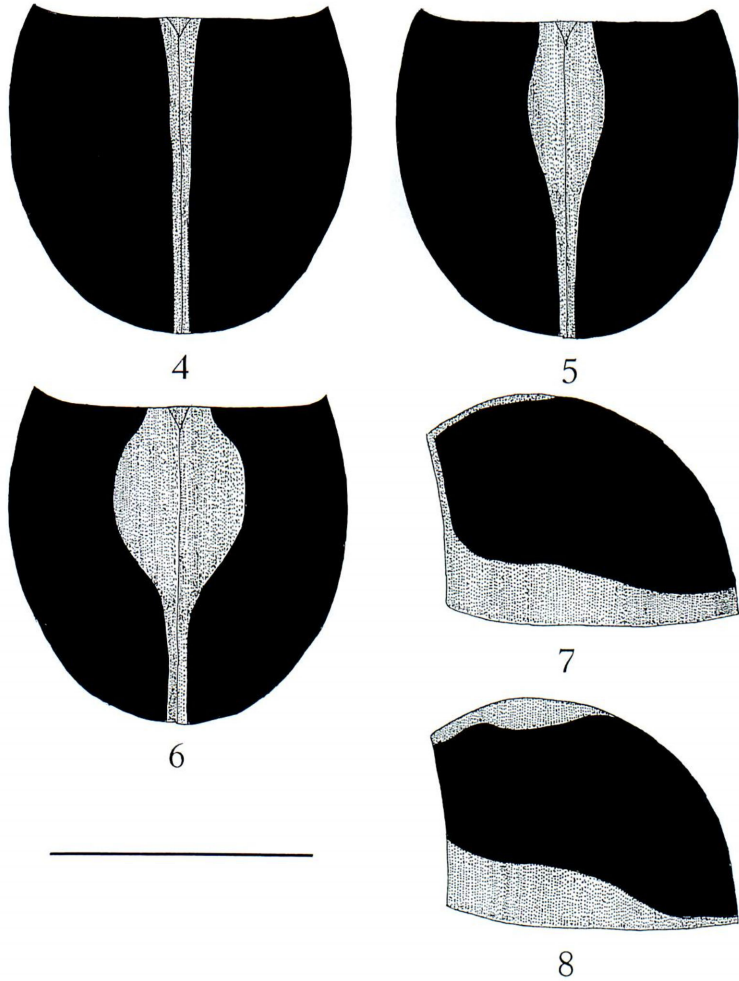
*Coloration:*— Dorsum shining; head brownish in general; frons and vertex brown; clypeus light brown; labrum, maxillary palpi, and antennae whitish light brown; pronotum dark brown with brown margins (Fig. 2), but rarely almost concolorous, brown (Fig. 3); elytra bicolorous and showing variations (Figs. 4-8), dark brown except for the brown area near elytral suture in dorsal view and lateral margins in lateral view; legs light brown; mesoventrite, metaventrite, and abdominal ventrite light brown, but margins of prepisternal elevation of mesothorax black (Fig. 9).

Body 1.4-1.7 mm in length, about 1.3 times as long as wide (Fig. 1) and glabrous on dorsum in general.

Head about 1.7 times as wide as long, usually sucked down and hardly visible; frons and vertex smooth, and superficially and sparsely punctate; length and width of head about 0.88 times as long as and about 0.53 times as wide as those of pronotum, respectively; clypeus smooth and impunctate; eyes about 0.46 times as long as length of head.

Pronotum about 2.9 times as wide as long, widest at base, almost smooth and sparsely and very minutely punctate; length and width of pronotum about 0.31 times as long as and about 0.86 times as wide as those of elytra, respectively; lateral margins simply curved and narrowing from base towards front margins.

Scutellum smooth and impunctate.

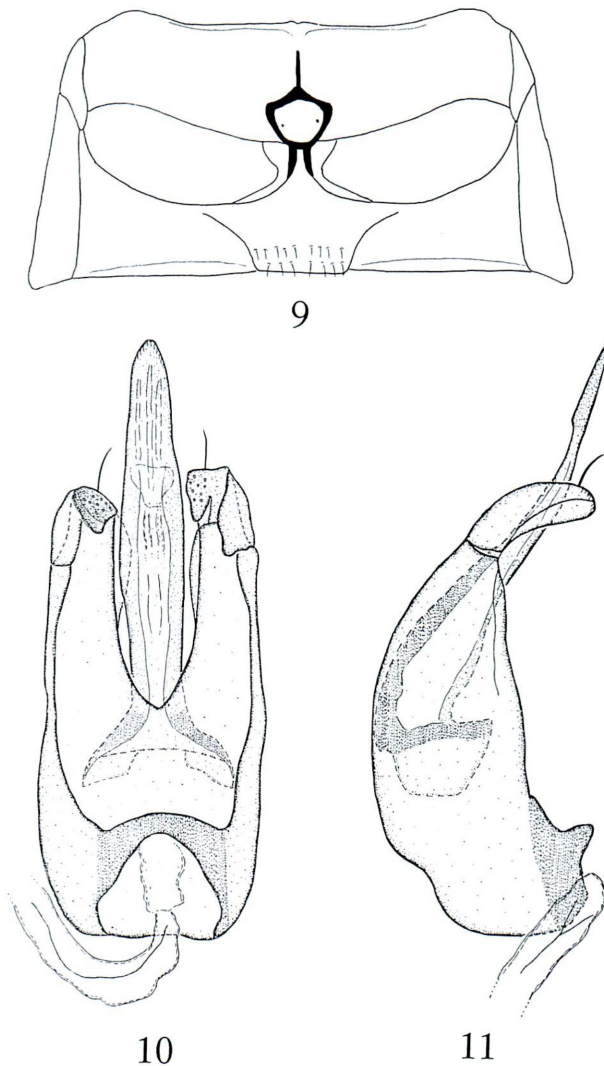


Figs. 4-8. *Psalitrus masatakai* sp. nov. — 4-6, Coloristic variation of elytra, dorsal view. — 7 & 8, Ditto, lateral view. Scale: 1 mm.

Elytra almost as long as wide, widest approximately at about basal  $1/3$  or  $1/4$  of lateral margins, smooth, and densely punctate, but more sparsely and weakly punctate near scutellum (Fig. 1); lateral margins simply and moderately curved; sutural striae absent.

Hind wings absent.

Prosternum a little shining, glabrous, impunctate, and almost smooth, with a distinct median carina; mesoventrite less shining, glabrous, impunctate, and strongly microreticulate except for prepisternal elevation of mesothorax; prepisternal elevation of mesothorax pentagonal (Fig. 9), shining, glabrous, smooth, and minutely and very



Figs. 9-11. *Psalitrus masatakai* sp. nov. — 9, Mesoventrite and metaventrite. — 10 & 11, Male genitalia, ventral and lateral views, respectively. Scale: 0.5 mm.

sparsely punctate; metaventrite less shining, glabrous, impunctate, and strongly microreticulate except for pentagonal middle portion; pentagonal middle portion shining and smooth only in central area, impunctate, and finely pubescent along hind margins (Fig. 9); abdominal ventrite less shining, very finely and sparsely pubescent, impunctate, and strongly microreticulate.

**Male.** Male genitalia about 1.1 mm in length and 0.40 mm in width in ventral

view (Fig. 10); median lobe 0.79 mm in length, simply sticky, and bluntly and apically pointed in ventral view (Fig. 10), feebly curved and apically pointed in lateral view (Fig. 11); each paramere thick in general, strongly bent ventrally at apex in ventral view, and bearing an apical seta.

*Distribution.* Japan: Ryukyus (Amami-Ôshima Is.).

*Type series* Holotype, ♂, Materia-no-taki, Amami-Ôshima Is., Ryukyus, 27-III-2006, H. HOSHINA leg. (preserved in MNHA). Paratypes, 7 specimens, same data as holotype; 22 specimens, Santarô-tôge, Amami-Ôshima Is., Ryukyus, 25-III-2006, H. HOSHINA leg. (2 paratypes are preserved in Hokkaido University Museum, Sapporo). All the type series were collected by sifting litters.

*Remarks.* *Psalitrus masatakai* sp. nov. can be distinguished from two known Japanese species, *P. sauteri* D'ORCHYMONT, 1929 and *P. yamatensis* HOSHINA et M. SATÔ, 2005, by having bicolorous and shining elytra (Figs. 4-8). In contrast, *P. sauteri* and *P. yamatensis* have concolorously brownish and less shining elytra. Moreover, the present new species is similar to *P. decoratus* BAMEUL, 1992, but can be separated from it by having relatively slender median lobe of male genitalia (Figs. 10-11). In contrast, the median lobe of *P. decoratus* is relatively thick.

*Etymology.* The specific name is dedicated to the late Dr. Masataka SATÔ (1937-2006), who left his impress in the taxonomy of the family Hydrophilidae.

### *Psalitrus sauteri* D'ORCHYMONT, 1929

[Japanese name: Taiwan-mangetsu-gamushi]

*Psalitrus sauteri* D'ORCHYMONT, 1929, 92 (type locality: Taiwan). — BALFOUR-BROWNE, 1948, 386. — BAMEUL, 1991, 93. — HANSEN, 1999, 264. — HOSHINA & SATÔ, 2005, 18; 2006, 13.

*Distribution.* Japan: Ryukyus (Iriomote Is., Miyako Is., Okinawa Is., and Amami-Ôshima Is.) and Taiwan.

*Specimens examined.* Cotype of *Psalitrus sauteri* D'ORCHYMONT, 1929, 1♂, Kosempo, Formosa (Taiwan), VIII-1909 (preserved in Institut royal des Sciences naturelles de Belgique, Bruxelles); 25 specimens, Komi, Iriomote Is., Ryukyus, 17-III-2006, H. HOSHINA leg.; 2♂♂, Seishônen-shizen-no-mori, Miyako Is., Ryukyus, 6-III-2003, H. HOSHINA leg.; 9 specimens, Yona-Field of Ryukyu University, Yona, Okinawa Is., Ryukyus, 10-IV-2000, H. HOSHINA leg.; 44 specimens, Santarô-tôge, Amami-Ôshima Is., Ryukyus, 25-III-2006, H. HOSHINA leg.; 73 specimens, Materia-no-taki, Amami-Ôshima Is., Ryukyus, 27-III-2006, H. HOSHINA leg. All the specimens except for a cotype were collected by sifting litters.

*Note.* *Psalitrus sauteri* is recorded for the first time from Iriomote Is. and Amami-Ôshima Is.

### A Key to the Japanese Species of the Genus *Psalitrus*

1. Dorsum shining; elytra clearly bicolorous (Figs. 4–8) ..... *P. masatakai* sp. nov.
- Dorsum less shining; elytra concolorously, brown ..... 2.
2. Median lobe of male genitalia thick and a little protuberant apically in ventral view; parameres angulate at upper dorsal corner in lateral view (see figs. in HOSHINA & SATÔ, 2005); distribution: Kyushu ..... *P. yamatensis* HOSHINA et M. SATÔ.
- Median lobe slender with the round apex in ventral view and parameres simply curved at dorsal margins in lateral view; distribution: Ryukyus and Taiwan ..... *P. sauteri* D'ORCHYMONT.

### 要 約

保科英人：日本産ガムシ科マンゲツガムシ属の1新種の記載と日本産種への検索表。——奄美大島からマンゲツガムシ属の1未記載種が採集された。著者は、本稿にて *Psalitrus masatakai* sp. nov. (和名：ツヤマンゲツガムシ) と命名して記載した。ツヤマンゲツガムシは、日本産既知2種とは、明瞭な斑紋があり、かつ光沢が強い上翅をもつことで、形態的に区別できる。また、*P. sauteri* D'ORCHYMONT, 1929 (和名：タイワンマンゲツガムシ) は、従来、基準産地の台湾のほか、沖縄本島と宮古島から分布が知られていた。本稿で、タイワンマンゲツガムシの分布地として、西表島と奄美大島を新たに追加した。さらに、ツヤマンゲツガムシを含む日本産3種への検索表を文末に付した。

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