

## Two New Species of the Genus *Batrisodes* (Coleoptera, Staphylinidae, Pselaphinae) from Taiwan

Shûhei NOMURA

Department of Zoology, National Science Museum, 3–23–1  
Hyakunin-cho, Shinjuku-ku, Tokyo, 169–0073 Japan  
E-mail: nomura@kahaku.go.jp

**Abstract** Two new species of the genus *Batrisodes*, *B. masatakai* and *B. babaianus* are described from Taiwan. *Batrisodes semipunctatus* described by RAFFRAY (1912) from Taiwan is transferred to the genus *Tribasodites*.

**Key words:** Staphylinidae, Pselaphinae, Batrisini, *Batrisodes*, new species, Taiwan.

### Introduction

The genus *Batrisodes* is a large batrisine genus known from the Holarctic areas. Twelve species of this genus have been known from Japan, four species from Far East Russia, and each one species from China and Korea. RAFFRAY (1912) described *Batrisodes semipunctatus* from Taiwan, though it should be classified in the genus *Tribasodites* as the result of an examination of the specimens identified by RAFFRAY preserved in the Deutsches Entomologisches Institut (DEI).

Two new species of this genus are described from Central Taiwan in the present paper. They are discovered from the same area and are closely allied to each other. This is the first exact record of the genus from Taiwan. These two new species are possibly classified into the subgenus *Excavodes* O. PARK in the current system of the Palearctic and Oriental subgenera by JEANNEL (1958). Since these subgenera were indistinctly defined, they should be revised in the near future.

### Material and Methods

The material for the SEM observations was not metal-coated. It was examined by a scanning electron microscope (SEM: JEOL JSM-6380LV), and was observed under the condition with low accelerating voltage 0.9–2.0 kV, and were digital-micrographed from various angles. Scale bars in all figures are in micrometres. Measurements of the body and the parts were made with a stereo microscope (Leica MZ Apo).

The depositories of the material examined are abbreviated as follows. DEI: Deutsches Entomologisches Institut, Müncheberg, Germany; NSMT: National Science Museum, Tokyo.

*Batrisodes masatakai* sp. nov.

(Figs. 1 A, C, 2 A, C, E, G, 3 A, C, E, G, 4)

*Etymology.* This new species is dedicated to the late Dr. Masataka SATÔ for his great contributions to the faunistic and systematic studies on Taiwanese Coleoptera.

Holotype male, Mei Feng, Nan Tou Hsien, M-Taiwan, 28-VII-1989, K. BABA leg. (NSMT). Paratypes: 1 female, same data as holotype; 1 female, Mei Feng (2,150 m), M-Taiwan, 15-III-1989, K. BABA leg. (NSMT).

*Male* (Fig. 1 A, C). Body length 2.28 mm, width 0.86 mm, elongate, weakly broadened in elytra and abdomen, color reddish brown to dark brown.

Head (Fig. 2 A, C) wider than long; densely covered with coarse punctures on dorsal surface; clypeus broad, transverse, with a pair of short projections on lateral sides; frons broad, weakly concave at the middle, gently convex on both antennal bases, with a short triangular projection at anteromedian part in dorsal view; vertex weakly convex, with a short and strong median longitudinal carina, and a pair of large and round dorsal tentorial pits; postgenae broad, gently rounded, densely covered with long erect setae. Eyes developed, semispherical, each composed of 35 facets. Antennae slender, reaching elytral base, 1.15 mm in length; segment I (Fig. 2 E) thick, nearly subcylindrical, deeply excavated at apex, with a digitiform projection at apical part on ventral side; relative length (width) of each segment to width of segment I: 1.3 (1.0): 0.8 (0.7): 0.7 (0.7): 0.6 (0.7): 0.7 (0.7): 0.6 (0.7): 0.7 (0.7): 0.6 (0.7): 0.8 (1.0): 0.8 (1.0): 2.0 (1.4). Mouthparts normal; labrum transverse, arcuately emarginate on anterior margin; maxillary palpi large, segment IV the largest, fusiform.

Pronotum (Fig. 2 G) about as wide as head, as long as wide, nearly subglobose, rounded on lateral sides, widest near the middle, sparsely covered with minute punctures and short pubescence, with a pair of very large and circular lateral foveae at posterior 1/3 and two pairs of antebasal foveae, with a long median, a pair of short carinae and a pair of lateral sulci; median carina running from posterior end to anterior 1/3, with shallow and very narrow median sulcus in anterior 2/3, with a very small fovea at posterior 1/4 of pronotum; lateral sulci each running from lateral fovea to anterior 1/5. Elytra (Fig. 3 A) wider than long, widest at posterior 1/4, rounded at humeri, gently convex, sparsely covered with minute punctures and short pubescence; each elytron with three basal foveae, adsutural carina and short longitudinal sulcus extending from outer basal fovea to anterior 2/5. Legs long and thick, densely covered with coarse punctures and short setae; mid femora (Fig. 3 E) each thickened near the middle, with a long, sharp spine near basal 2/5 on posterior side; mid tibiae slender, each weakly thickened in apical half, with a short quadrangular denticle at apical 1/3 on inner side.

Abdomen (Fig. 3 G) slightly shorter than elytra, wider than long, rounded posteriorly, sparsely covered with minute punctures and short pubescence; tergite IV the largest, transverse, with a large basimedial, a pair of basilateral foveae and a pair of semicircular basal nodules; paratergites well demarcated by oblique carinae, each elongate and triangular, narrowed posteriorly; V to VII successively shortened and

narrowed posteriorly; VIII (Fig. 4 A) small and transverse, nearly triangular; sternite VIII (Fig. 4 B) semicircular, almost flat, sparsely covered with short setae, with a small, triangular projection at posteromedian part.

Male genitalia (Fig. 4 C-E) weakly sclerotized, nearly symmetrical; median lobe longer than wide, widest near the middle, strongly narrowed toward apex, arcuately curved ventrad in apical part, with very large and rectangular basal foramen and a transverse basal sulcus, broadly membranous on dorsal side; endophallus broad, very weakly sclerotized.

**F e m a l e.** Body length 2.17–2.23 mm, width 0.77–0.81 mm. Similar to male, but different in the following features: clypeus shorter than in male, with a pair of very short lateral projections; frons flattened in anterior part, without triangular projection; antennae slightly shorter than in male, each 1.00–1.02 mm in length; segment I narrower than in male, without projection; mid femora slenderer than in male, without spine; mid tibiae slender, without denticle.

**Distribution.** Central Taiwan (Nantou Hsien).

**Remarks.** This new species is characterized by the frons with a triangular projection, the antennal segment I with a digitiform projection in the male, and the spinulate mid femur and the denticulate mid tibia in the male.

***Batrisodes babaianus* sp. nov.**

(Figs. 1 B, D, 2 B, D, F, H, 3 B, D, F, H, 5)

**Etymology.** The new name of this species is derived from the collector of the type specimens, the late Dr. Kintaro BABA.

Holotype male, Mei Feng, Nan Tou Hsien, M-Taiwan, 28-VII-1989, K. BABA leg. (NSMT). Paratypes: 1 male, same data as holotype (NSMT).

**M a l e** (Fig. 1 B, D). Body length 2.57–2.67 mm, width 0.90–0.92 mm, larger than, but very similar to *masatakai*, but differs in the following character states: clypeus (Fig. 2 D) broad, transverse, with a pair of short and truncate lateral projections in lateral parts; frons (Fig. 2 B) strongly convex anterodorsad at both antennal bases, deeply concave at anteromedian part, with a pair of filaments at the center of concavity; eyes slightly smaller than those of *masatakai*, each composed of about 25 facets; antennae longer than in *masatakai*, 1.25–1.31 mm in length; segment I (Fig. 2 F) larger than in *masatakai*, with elliptical projection in ventroapical part; relative length (width)

Fig. 1 (on p. 79). *Batrisodes* spp. nov. — A, C, *B. masatakai*, holotype male; B, D, *B. babaianus*, holotype male. A, B, Habitus in dorsal view; C, D, ditto in ventral view.

Fig. 2 (on p. 80). *Batrisodes* spp. nov. — A, C, E, G, *B. masatakai*, holotype male; B, D, F, H, *B. babaianus*, holotype male. A, B, Head in dorsal view; C, D, ditto in anterior view; E, F, antennal segment I in lateral view; G, H, pronotum in dorsal view.

Fig. 3 (on p. 81). *Batrisodes* spp. nov. — A, C, E, G, *B. masatakai*, holotype male; B, D, F, H, *B. babaianus*, holotype male. A, B, Elytra in dorsal view; C, D, meso-, metasterna in ventral view; E, F, mid leg in ventral view; G, H, abdomen and hind leg in dorsal view.

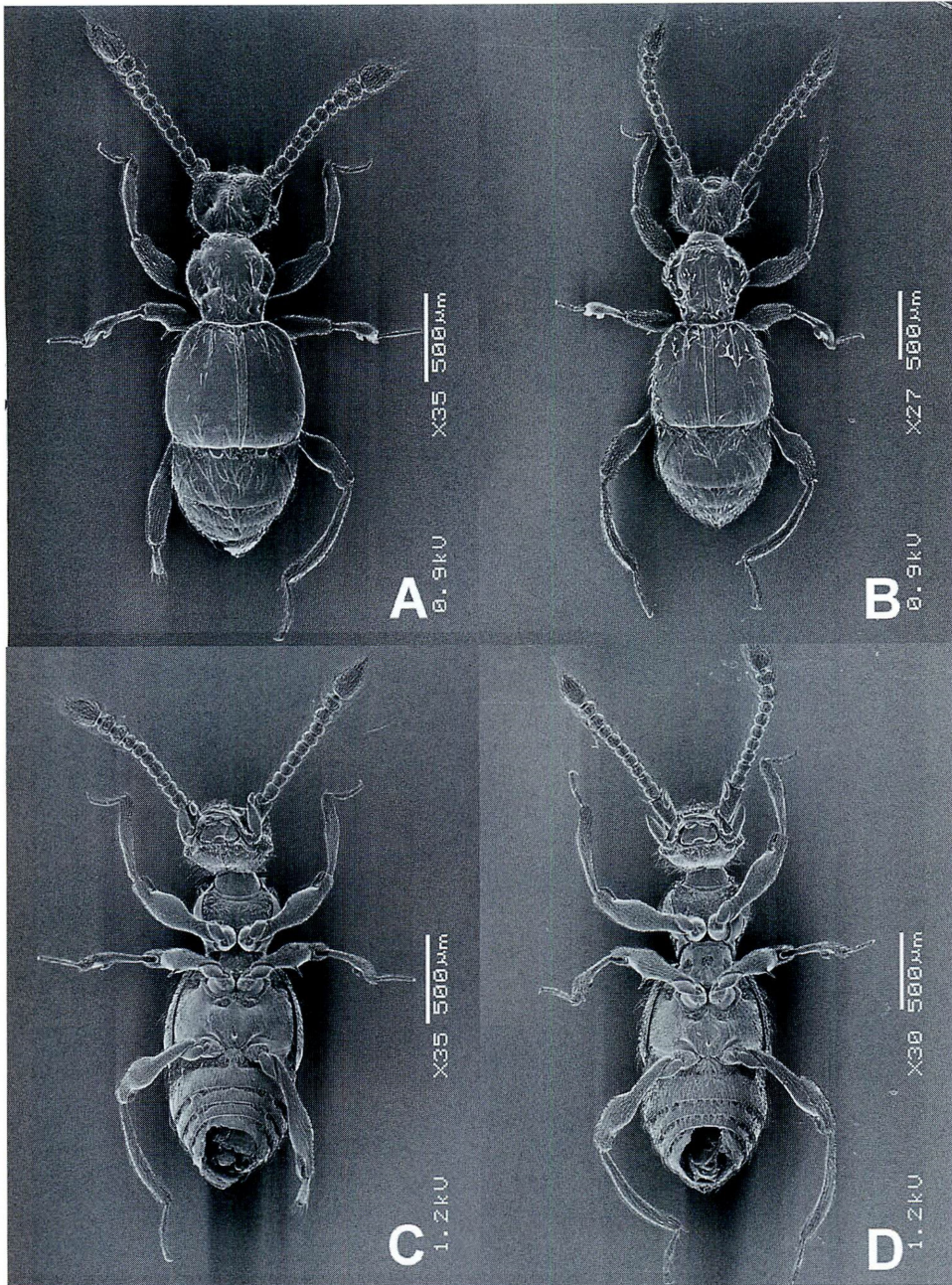


Fig. 1

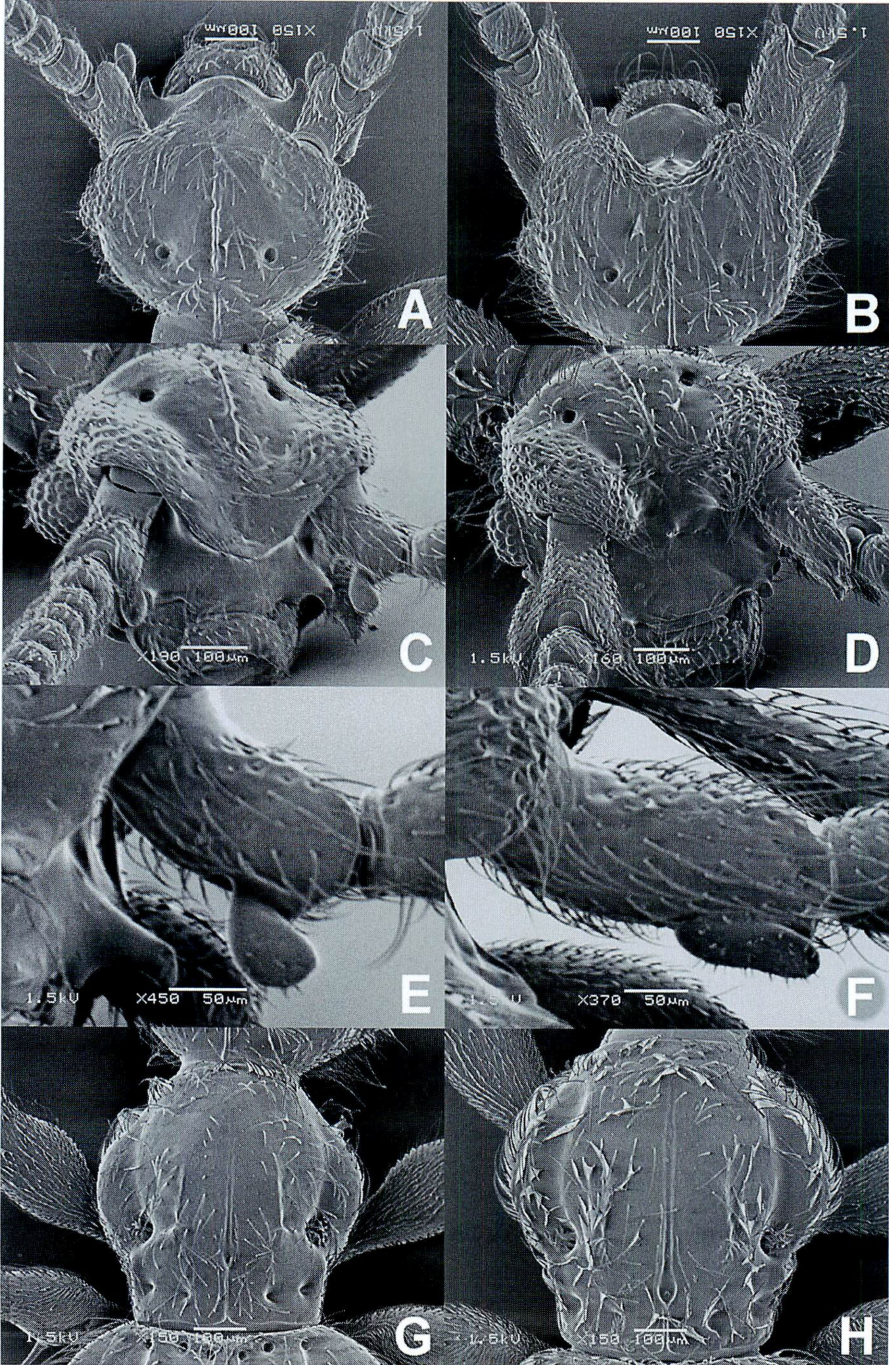


Fig. 2

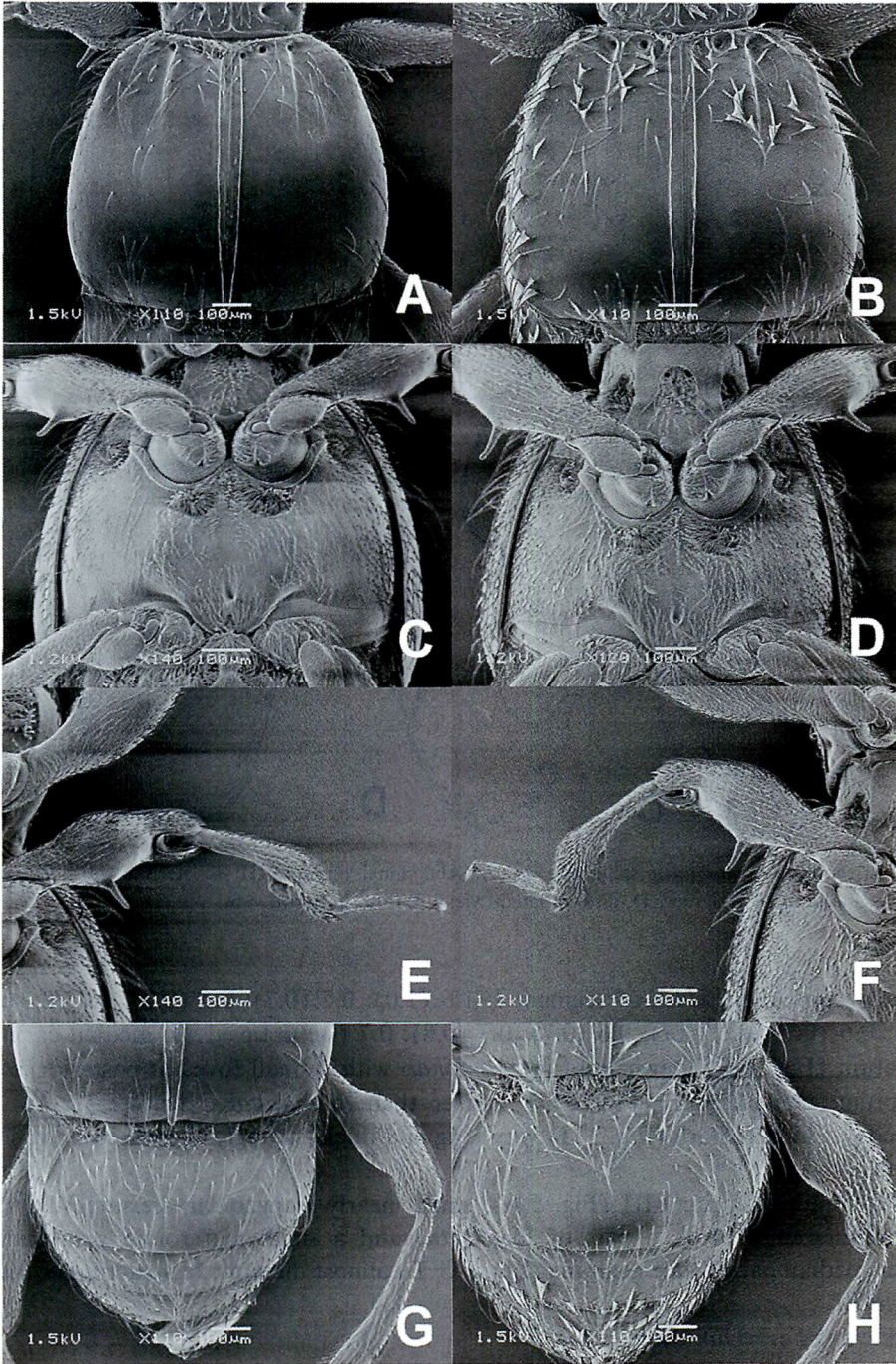


Fig. 3

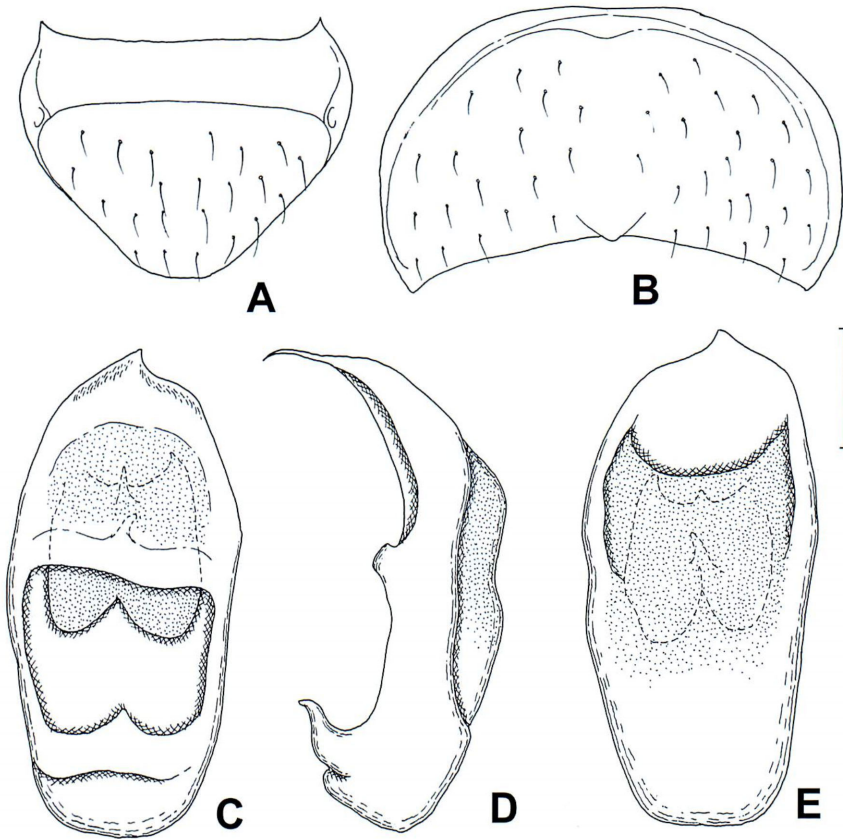


Fig. 4. *Batrisodes masatakai* sp. nov. — A, Abdominal tergite VIII; B, sternite VIII; C, male genitalia in ventral view; D, ditto in lateral view; E, ditto in dorsal view.

of each segment to width of segment I: 1.6 (1.0): 0.7 (0.7): 0.6 (0.7): 0.6 (0.7): 0.6 (0.7): 0.6 (0.7): 0.6 (0.7): 0.6 (0.7): 0.7 (0.8); 0.7 (0.9): 1.6 (1.1); median carina of pronotum (Fig. 2 H) longer than in *masatakai*, with a small fovea at posterior 1/6 of pronotum; metasternum (Fig. 3 D) shorter than in *masatakai* between meso- and metacoxae; hind femora (Fig. 3 H) very long and thick, strongly excavated on basidorsal side.

Abdominal tergite VIII (Fig. 5 A), small, nearly trapezoidal; sternite VIII (Fig. 5 B) semicircular, with a pair of long setae and a small and round projection in posteromedian part. Male genitalia (Fig. 5 C-E) almost the same in structure as that of *masatakai*.

*Female.* Unknown.

*Distribution.* Central Taiwan (Nantou Hsien).

*Remarks.* This new species is similar to *B. masatakai* in general structure, but is

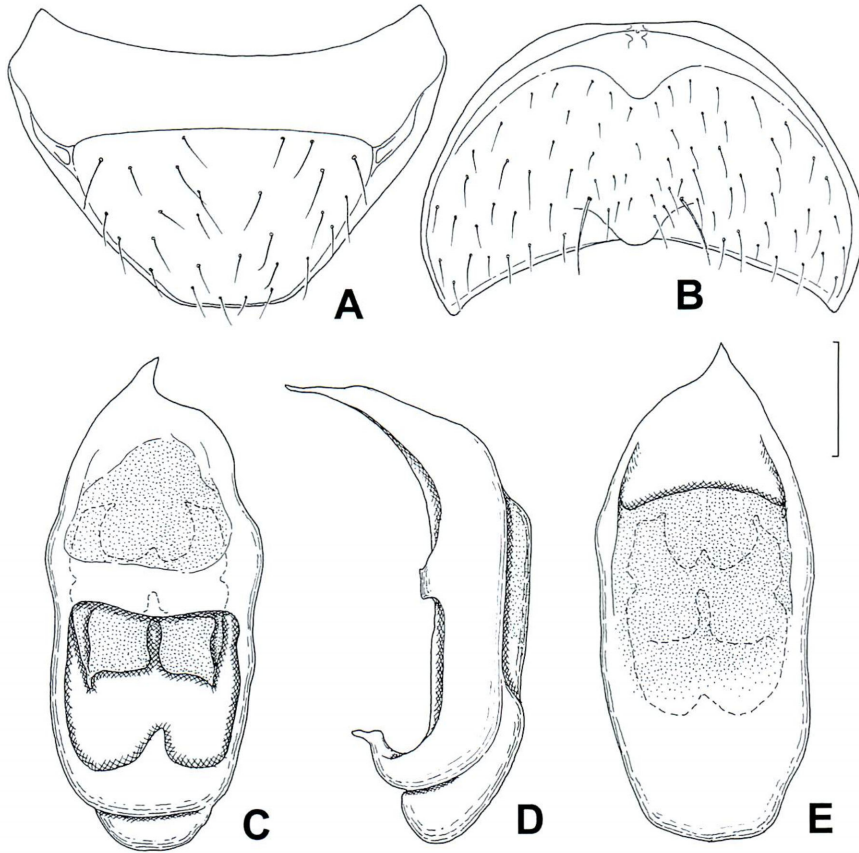


Fig. 5. *Batrisodes babaianus* sp. nov. — A, Abdominal tergite VIII; B, sternite VIII; C, male genitalia in ventral view; D, ditto in lateral view; E, ditto in dorsal view.

separated by some male characters shown above.

*Tribasodites semipunctatus* (RAFFRAY), comb. nov.

*Batrisodes semipunctatus* RAFFRAY, 1912, Ent. Mitt., 1: 104.

*Specimens examined.* 1 male, 1 female, Kosempo, Formosa, H. Sauter 1909/7. VIII/Raffray det./*Batrisodes semipunctatus* Raffray (DEI).

*Distribution.* Taiwan.

*Remarks.* This species was described on the basis of the specimens collected by Hans SAUTER from Takao (Kaohsiung). An identified specimen of this species collected by SAUTER from Kosempo and deposited in DEI with an identification label by RAFFRAY was examined. As the result, it should be classified in the genus *Tribasodites*



by having the laterally denticulate pronotum, the spinulate hind trochanter of the male, and the sexual patch on the frons in the male.

### Acknowledgements

I wish to express my hearty thanks to the late Dr. Masataka SATÔ for his continuous guidance and kind encouragement for my coleopterological studies. I am also indebted to Dr. Shun-Ichi UENO (NSMT) for his critical reading of the manuscript. My special thanks are due to Dr. Lothar ZERCHE (DEI) for giving me an opportunity to examine the pselaphine collection preserved in DEI. My cordial thanks are also due to the late Dr. Kintaro BABA for his kind offer of invaluable materials.

This study is supported in part by the Grant-in-sid No. 18208006 from the Japan Society for the Promotion of Science (JSPS).

### 要 約

野村周平：台湾産トゲアリヅカムシ属の2新種（コウチュウ目ハネカクシ科アリヅカムシ亜科）。——台湾中部山地からトゲアリヅカムシ属の2新種、*Batrisodes masatakai* および *B. baibanus* を記載した。前者の新種名は、台湾における甲虫学の発展に大きく貢献され、また著者の甲虫学研究への多大の援助、激励を惜しまれなかった、故 佐藤正孝博士に献呈された。これら2種はたがいによく似ており、雄交尾器の形状にはほとんど差が見られないが、前頭部にあらわれる雄の二次性徴の違いによって識別できる。両種とも JEANNEL (1958) の体系では *Excavodes* 亜属に分類されるが、アジア産の種の亜属の分類は将来見直されるべきである。なお、台湾からは従来、*Batrisodes semipunctatus* RAFFRAY が知られていたが、ドイツ、ミュンヒベルクの Deutsches Entomologisches Institut (DEI) に所蔵される RAFFRAY の同定標本を検した結果、本種は *Tribasodites* 属に所属するのが妥当であると考えられた。

なお、本研究は、日本学術振興会科学研究費補助金（課題番号 18208006）による助成を受けている。

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