

A Revision of the Clavigerine Genus *Triartiger* KUBOTA  
(Coleoptera, Staphylinidae, Pselaphinae)  
from Taiwan and Japan

**Shûhei NOMURA**

Department of Zoology, National Science Museum (Nat. Hist.),  
3–23–1 Hyakunin-chô, Shinjuku, Tokyo, 169 Japan

**Abstract** The genus *Triartiger* KUBOTA is redefined and the type species, *T. urceus* KUBOTA is redescribed. Two new species, *klapperichorum* from Taiwan and *reductus* from the Tsushima Is., Japan is described.

Key words: Staphylinidae, Pselaphinae, *Triartiger* KUBOTA, new species, Taiwan, Japan

**Introduction**

The genus *Triartiger* was described by KUBOTA (1944) on the basis of only one female of the type species from Rimogan, Northern Taiwan. It is similar to the genus *Diartiger* SHARP in habitus, but is clearly different in the antennal structure. In this study, *Triartiger* KUBOTA is redefined and the type species, *T. urceus* KUBOTA is re-described together with a description of the male characters. Two more species of this genus, *T. klapperichorum* from Taiwan and *T. reductus* from the Tsushima Is. Japan are also newly described.

Genus *Triartiger* KUBOTA

[Japanese name: Mifushi-higebuto-arizukamushi Zoku]

*Triartiger* KUBOTA, 1944, Trans. Kansai ent. Soc., **14** (1): 10. — NEWTON & CHANDLER, 1989, Fieldiana, Zool., (N. S.), (53): 66. Type species: *Triartiger urceus* KUBOTA, by original designation.

Body broadened posteriorly, narrowed in head and pronotum.

Head longer than wide, nearly subcylindrical, clypeus short, more or less broadened laterally, frons strongly convex, vertex almost flat in lateral view, with a pair of dorsal tentorial pits just behind eyes, postgenae broad, subparallel-sided and angulate in front of occipital constriction. Eyes well developed. Antennae 3-segmented, 1st to 2nd segments each short, 3rd the largest and elongate, narrowed at base.

Pronotum subglobose, with a shallow basi-median and a pair of basi-lateral depressions. Elytra wider than long, narrowed anteriorly, convex and weakly depressed

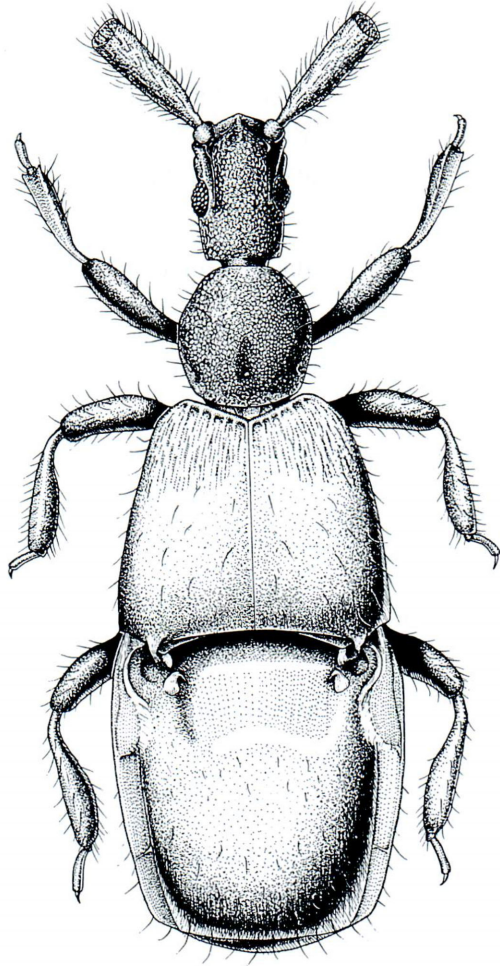


Fig. 1. *Triartiger reductus* sp. nov., female, habitus.

along median line, with a small trichome in postero-lateral part. Legs short, trochanters elongate, narrowed basally, femora short and thick, each weakly swollen medially, with two carinae on inner side, tibiae slender, broadened distally, tarsi 3-segmented, 1st and 2nd segments each very short, 3rd the largest, weakly sinuate, with a simple tarsal claw. Metasternum very large and transverse, convex in median part.

Abdomen very large, rounded anteriorly, with a large, deep and transverse concavity at base, composite tergum formed by 4th to 6th tergites large and ovoid, convex medially, smooth and shiny on dorsal surface, with a pair of deep and large basi-lateral foveae, and with a pair of basi-lateral trichomes just inside the basi-lateral foveae, 4th paratergites each elongate and subparallel-sided, with a large longitudinal trichome in basal part, and with a small glabrous part (paratergal disc) in apical part, 5th each elongate, subparallel-sided, 6th each elongate, narrowed distally, 7th tergite short and

transverse, 8th small, narrowed posteriorly, 3rd sternite very short, 4th and 5th very large, each transverse, 6th and 7th each short and transverse, 8th small, arcuately emarginate on posterior margin.

Aedeagus well sclerotized, parameres indistinct; median lobe large and divided into basal bulb and apical lobe by narrow membranous part or constriction, basal bulb thick and rounded basally, with a well projected basal nodule containing basal foramen, and with an ovoid membranous part on dorsal side, apical lobe narrowed distally, with a large and ovoid membranous part containing apical orifice on dorsal side; endophallus armed with a few sclerites.

*Remarks.* The genus *Triartiger* is similar to *Articerus* DALMAN and *Fustiger* LECONTE in having three-segmented antennae. The latter two genera are devoid of elytral trichome according to BESUCHET (1986), though *Triartiger* has elytral trichomes. The three-segmented antennae of this genus are considered to have become evolved from fusion of the third and fourth antennal segments in four-segmented antennae. Therefore, the former state is regarded as a derived character as compared with the latter state observed in *Diartiger*.

### *Triartiger urceus* KUBOTA

[Japanese name: Mifushi-higebuto-arizukamushi]

(Figs. 2 A, 3 A–B, 4 A–B, 5 A, 6)

*Triartiger urceus* KUBOTA, 1944, Trans. Kansai ent. Soc., **14** (1): 11.

Male (Fig. 2 A). Length 2.43–2.54 mm. Width 0.98–1.05 mm. Body reddish brown to dark brown, large and narrowed anteriorly.

Head nearly subcylindrical, slightly broadened anteriorly, densely covered with coarse reticulation, clypeus short and broad, arcuate on anterior margin, frons strongly convex, narrowed and carinate between bases of antennae, subparallel-sided behind bases of antennae, vertex gently convex, with a pair of dorsal tentorial pits behind eyes, sparsely with bifurcate and bold hairs, postgenae subparallel-sided and angulate in front of occipital constriction. Eyes large and ovoid, each composed of about 25 facets. Antennae (Fig. 3 A) large and thick, each longer than head, 0.70–0.77 mm in length, 0.14–0.15 mm in width, 1st segment semi-globose, almost invisible in dorsal view, 2nd short and subglobose, 3rd very large, elongate, about 5 times as long as wide, weakly swollen near the middle, gently narrowed basad, slightly narrowed apicad and truncate at apex, covered with long and bold hairs on lateral side, densely with short setae at apex.

Pronotum slightly shorter than head, about as long as wide, subglobose, with a shallow basi-median and a pair of shallow basi-lateral depressions, densely covered with coarse reticulation, and sparsely with bifurcate bold hairs on dorsal surface. Elytra (Fig. 5 A) wider than long, trapezoidal and shallowly emarginate on anterior and posterior margins, weakly concave along median line and broadly depressed in pos-



tero-median part, sparsely covered with bifurcate large hairs on dorsal surface, each elytron with 4 to 5 irregular longitudinal sulci at base, elytral trichome small and spine-like. Legs short and robust, mid femora (Fig. 4 A) very thick, each with a longitudinal carina on postero-ventral side, and a large and outcurved spine at basal 1/4 on posterior side, mid tibiae thick, each broadened distally, with a short and robust spine at apical 1/3 on inner side.

Abdomen broad, about as long as wide, round-sided, composite tergum (Fig. 5 A) almost glabrous and shiny, broadly concave in antero-median part, gently convex in posterior part, basi-lateral trichomes each narrow at base, sharply projected posteriad, paratergal trichome broad and thick, paratergal disc semicircular, with a short fringe on its inner side, 7th tergite transverse and trapezoidal, 8th triangular, 3rd+4th sternites very large and transverse, 5th to 7th successively shortened, 8th semicircular, well projected ventrally at apex.

Aedeagus (Fig. 6) very thick, median lobe bulbous in basal part, with a well projected and broadened basal nodule, 2 pairs of longitudinal carinae each running from basal nodule to basi-lateral side of apical lobe, and a large and ovoid membranous part

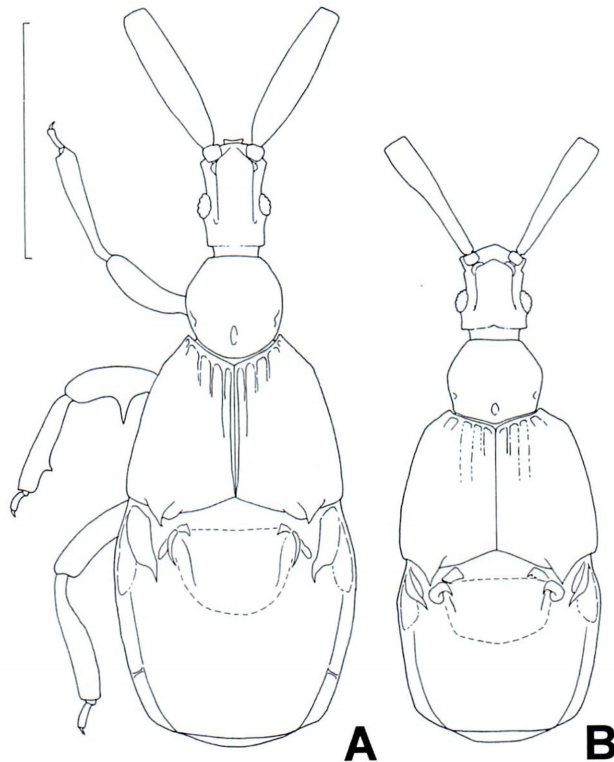


Fig. 2. Simplified dorsal aspects of *Triartiger urceus* KUBOTA, male (A) and *T. klapperichorum* sp. nov., female (B) (scale: 1 mm).



on dorsal side, apical lobe flattened, narrowed distally and projected ventrally, with an ovoid membranous part on dorsal side; endophallus composed of broad and weakly sclerotized plate and a branched small sclerite.

Female. Length 2.54–2.75 mm. Width 0.99–1.06 mm. Very similar to male, but antennae (Fig. 3 B) slightly narrower than in male, 0.78–0.81 mm in length, 0.13 mm in width, 3rd segment scarcely swollen near the middle, weakly narrowed basad in its basal part; mid femora (Fig. 4 B) narrower than in male, without spine, mid tibiae without spine; 8th abdominal sternite less projected ventrally than in male.

*Specimens examined.* 2 ♀, Alishan, 2,400 m, Taiwan, 10–VI–1977, J. & S. KLAPPERICH leg.; 1 ♂, Mt. Tayulin, 2,500 m, Nantou Hsien, M-Taiwan, 28–V–1989, K. BABA leg.; 1 ♀, Chuton, Shinchu Hsien, N-Taiwan, 28–VII–1989, K. BABA leg.; 1 ♂, Meifeng, Nantou Hsien, M-Taiwan, 28–VII–1989, K. BABA leg.; 1 ♂, Kuaiku Hut, 2,425 m, Peitawushan, Pingtung Hsien, Taiwan, 27–IV–1992, A. SMETANA leg.

*Distribution.* Taiwan.

*Remarks.* The male of this species is newly described in the present study. This species is characterized by the large body, the elongate and subcylindrical head, the medially swollen third antennal segment in the male, and the broad paratergal trichome.

***Triartiger klapperichorum* sp. nov.**

[Japanese name: Ko-mifushi-higebuto-arizukamushi]

(Figs. 2 B, 3 C, 4 C, 5 B)

Male. Unknown.

Female (Fig. 2 B). Length 2.10 mm. Width 0.86 mm. Body reddish brown, head and pronotum dark brown, medium-sized, broadened in elytra and abdomen.

Head longer than wide, nearly quadrangular in dorsal view, covered with coarse reticulation and sparsely with spatulate hairs, clypeus well broadened antero-laterally, weakly trisinate on anterior margin, separated from gena by a pair of short, deep and transverse grooves, frons strongly convex, narrowed and carinate in anterior part, subparallel-sided behind bases of antennae, vertex narrow, with a pair of large dorsal tentorial pits just behind eyes, postgena narrowed and angulate at postero-lateral corners. Eyes large and reniform, each composed of about 25 facets. Antennae (Fig. 3 C) elongate and slender, reaching base of pronotum, 0.59 mm in length, 0.10 mm in width, 1st segment very short and subcylindrical, 2nd about as wide as 1st, slightly transverse and subglobose, 3rd the largest, about 5 times as long as wide, simply thickened distad, slightly sinuate dorsad, sparsely covered with long and erect hairs in basal half, with short hairs in apical half.

Pronotum about as long as head, slightly wider than long, subglobose, with a shallow basi-median and a pair of basi-lateral depressions, densely covered with coarse reticulation, sparsely with short and spatulate hairs on dorsal surface. Elytra (Fig. 5 B) wider than long, trapezoidal, shallowly emarginate on anterior and posterior margins,

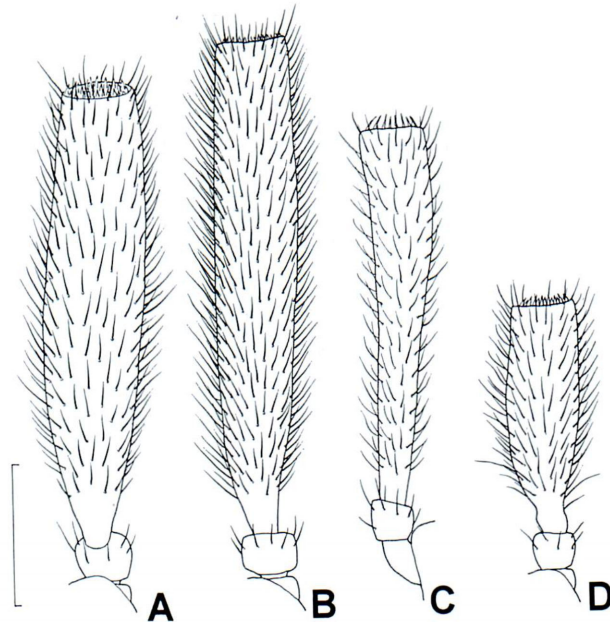


Fig. 3. Antennae of *Triartiger urceus* KUBOTA, male (A) and female (B), *T. klapperichorum* sp. nov., female (C) and *T. reductus* sp. nov., female (D) (scale: 0.2 mm).

humeri weakly expanded, weakly depressed along median line, shallowly concave in postero-median part, each elytron with irregular longitudinal sulci, sparsely covered with long and bold hairs, with a conical trichome at postero-lateral corner. Legs (Fig. 4C) short, trochanters large, each strongly narrowed basad, femora thick, each gently swollen in median part, tibiae slender, weakly broadened distad. Metasternum broad and transverse, strongly convex in median part, longitudinally rugose on both lateral sides.

Abdomen slightly larger than elytra, wider than long, widest at basal 1/6, then slightly narrowed posteriad, rounded at apex, with a large, deep and transverse concavity at base, composite tergum (Fig. 5B) smooth, glabrous and shiny, basi-lateral trichome well developed, paratergal trichome narrow, paratergal disc nearly triangular, with small trichome on its inner margin, 7th tergite short, transverse and trapezoidal, sparsely with short hairs, 8th small and semicircular, with a few long and erect hairs, 4th sternite large, transverse and smooth, 5th slightly shorter than 4th, longitudinally rugose in lateral part, 6th and 7th each short, irregularly rugose in lateral part.

Holotype ♀ (preserved in Muséum d'Histoire Naturelle, Genève), Fenchihu, 1,400 m, Taiwan, IV~VI-1977, J. & S. KLAPPERICH leg.

*Distribution.* Taiwan.

*Remarks.* This new species is easily distinguished from *T. urceus* by the small body and short head. It is characterized by the longitudinally sculptured elytra and the

well developed elytral and abdominal trichomes.

The species name is given in honour of the collectors of the holotype, J. & S. KLAPPERICH.

***Triartiger reductus* sp. nov.**

[Japanese name: Tsushima-mifushi-higebuto-arizukamushi]

(Figs. 1, 3 D, 4 D, 5 C)

Male. Unknown.

Female (Fig. 1). Length 1.94 mm. Width 0.73 mm. Body small-sized, broadened in elytra and abdomen, reddish brown, slightly darker in head, antenna and pronotum.

Head longer than wide, nearly quadrangular, densely covered with coarse reticulation, sparsely with short and erect hairs on dorsal surface, clypeus broadened anterolaterally, gently angulate on anterior margin, genae constricted in front of eyes, frons strongly convex, narrowed and carinate in anterior part, parallel-sided behind bases of antennae, vertex roundly convex, with a pair of small dorsal tentorial pits just behind eyes, postgenae broad, angulate at postero-lateral corners. Eyes large and ovoid, each composed of about 20 facets. Antennae (Fig. 3 D) slightly longer than head, short and thick, 0.41 mm in length, 0.10 mm in width, 1st segment very short, semispherical, 2nd short and subglobose, slightly wider than long, 3rd the largest, about 4 times as long as

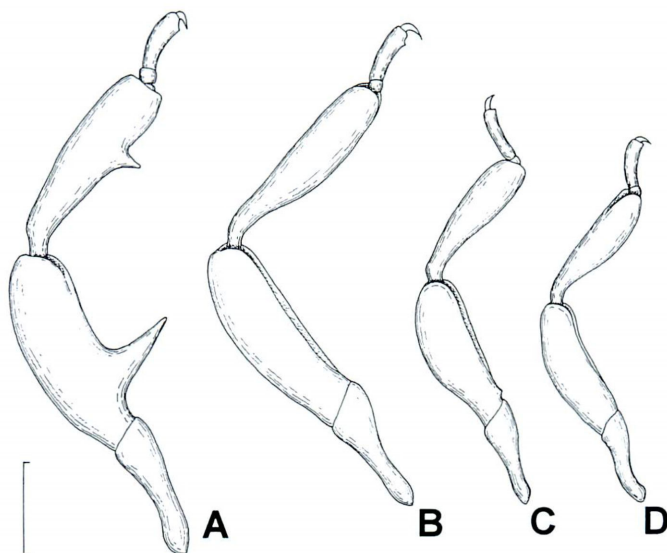


Fig. 4. Mid legs of *Triartiger urceus* KUBOTA, male (A) and female (B), *T. klapperichorum* sp. nov., female (C) and *T. reductus* sp. nov., female (D) (scale: 0.2 mm).



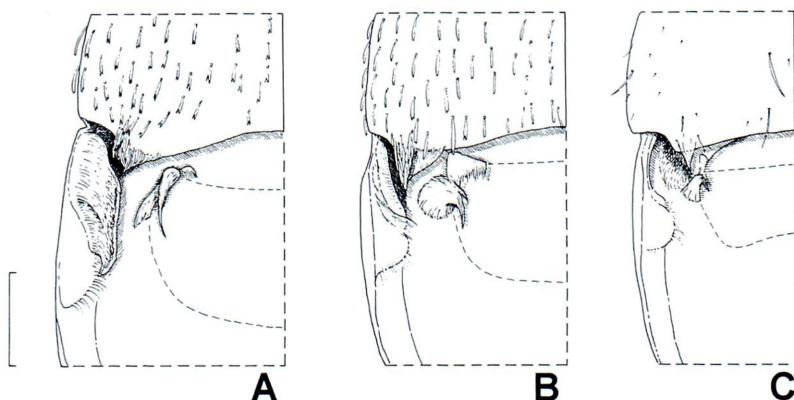


Fig. 5. Elytral and abdominal structures of *Triartiger urceus* KUBOTA, male (A), *T. klapperichorum* sp. nov., female (B) and *T. reductus* sp. nov., female (C) (scale: 0.2 mm).

wide, narrowed basally in basal 1/3, then subcylindrical in apical 2/3, densely covered with long hairs on lateral side, densely with short setae at apex.

Pronotum slightly longer than wide, expanded laterally near the middle, with a shallow basi-median and a pair of basi-lateral depressions, densely covered with coarse reticulation, sparsely with long and erect hairs on dorsal and lateral surfaces. Elytra (Fig. 5 C) wider than long, trapezoidal, shallowly emarginate on anterior and posterior margins, humeri slightly expanded, very weakly depressed along median line, each elytron densely covered with shallow and longitudinal linear sculpture on dorsal surface, sparsely with long and erect hairs on lateral side, elytral trichome very small and spine-like. Legs (Fig. 4 D) short, tibiae elongate, each swollen in apical part. Metasternum large and transverse, strongly convex in median part, densely with shallow and longitudinal linear sculpture in lateral part, with dense hairs along median line.

Abdomen very large, about as long as wide, round-sided, with a large, deep and transverse concavity at base, composite tergum (Fig. 5 C) convex and smooth, sparsely with short and erect hairs in posterior part, basi-lateral trichomes very small, each unciniate, paratergal trichomes each very narrow and sinuate, paratergal discs each semi-circular and shallowly concave, margined with a short fringe on its inner side, 7th tergite short and transverse, sparsely with short and erect hairs, 8th small and semicircular, with a few long and erect hairs, 3rd+4th sternites large and transverse, smooth on ventral surface, sparsely covered with minute hairs, 5th slightly smaller than 4th, densely covered with shallow and longitudinal linear sculpture in lateral part, 6th and 7th each short, covered with irregular sculpture on both lateral sides, 8th short and small, U-shaped in posterior view.

Holotype ♀ (preserved in National Science Museum, Tokyo), Mt. Mitake, Tsushima Is., Nagasaki Pref., Japan, 31-V-1988, S. NOMURA leg.

*Distribution.* Japan (Tsushima Is.).

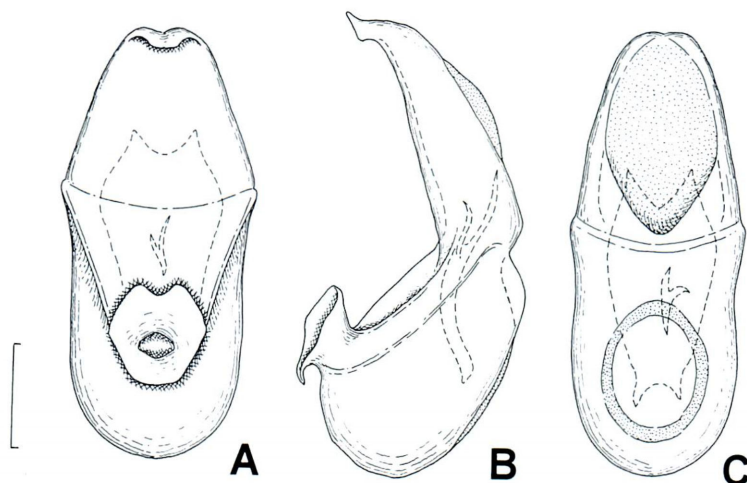


Fig. 6. Aedeagus of *Triartiger urceus* KUBOTA; A, ventral view; B, lateral view; C, dorsal view (scale: 0.1 mm).

*Remarks.* This new species is very distinct in having the small-sized body, the short and thick antenna, and the reduced elytral and abdominal trichomes.

The species name *reductus* meaning “reduced” is derived from the small-sized body and the reduced elytral and abdominal trichomes of this species.

#### Key to the Species of the Genus *Triartiger* from Japan and Taiwan

1. Body small (1.9 mm); antennae short and thick, 3rd segment about 4 times as long as wide; elytra covered with suberect slender hairs, each with a very small, uncinuate trichome; abdomen with reduced trichomes . . . . . *T. reductus* sp. nov.
- Body medium- to large-sized (2.1–2.5 mm); antennae elongate; elytra covered with bold or spatulate hairs, each elytron with a conical trichome; abdomen with well developed trichomes . . . . . 2.
2. Body large-sized (2.4–2.5 mm); head elongate, 1.6 times as long as wide, without transverse groove in front of eyes; elytra sparsely covered with bifurcate bold hairs . . . . . *T. urceus* KUBOTA.
- Body medium-sized (2.1 mm); head short, 1.3 times as long as wide, with a pair of short and deep grooves in front of eyes; elytra sparsely covered with spatulate bold hairs. . . . . *T. klapperichorum* sp. nov.

#### Acknowledgement

I wish to express my sincere thanks to Dr. Shun-Ichi UÉNO for his continuous guidance and critical reading of the manuscript. My special thanks are due to Mr.

Masao KUBOTA for his kind assistance and encouragement extended to my study. I am also much indebted to Dr. Iwan LÖBL (Muséum d'Histoire Naturelle, Genève) and the late Dr. Kintaro BABA for their kind offer or loan of the invaluable materials.

### 要 約

野村周平：台湾および日本産 *Triartiger* 属（コウチュウ目ハネカクシ科アリヅカムシ亜科）の分類学的再検討。——台湾および日本（対馬）に産する *Triartiger* 属の再定義を行ない、2新種を含む3種を記録した。本属は触角が3節である点で、*Articerus* 属や *Fustiger* 属に似ているが、上翅末端に毛房を備える点で区別される。本論文では、台湾中部に産する基準種、*T. urceus* KUBOTA を再記載し、雄の特徴を初めて記録した。また、同じく台湾中部から新種 *T. klapperichorum* を記載した。さらに対馬から新種 *T. reductus* を記載した。これは日本における本属の初記録となる。

### References

- BESUCHET, C., 1986. Synonymes et homonyme nouveaux de quelques genres de Psélaphides (Coleoptera). *Revue suisse Zool.*, **93**: 257–264.
- KUBOTA, M., 1944. New and little known Pselaphidae from Japan. *Trans. Kansai ent. Soc.*, **14** (1): 6–11.
- NEWTON, A. F., & D. S. CHANDLER, 1989. World catalog of the genera of Pselaphidae (Coleoptera). *Fieldiana, Zool.*, (N. S.), (53): 1–93.