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# Notes on the Bembidiinae (Coleoptera, Carabidae) of Japan
## XX. A New Species of the Genus *Armatocillenus*

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**Abstract** A new bembidiine species belonging to the genus *Armatocillenus* is described from the Island of Okinawa-hontô, Southwest Japan, under the name of *A. okinawanus* MORITA, sp. nov.

What will be dealt with in this part is the result of my study on a species of the genus *Armatocillenus*, obtained on the Island of Okinawa-hontô, in Southwest Japan. The specimens were submitted to me for my study through the courtesy of Mr. Hanmei HIRASAWA.

The abbreviations used herein are as follows: L–body length, measured from apical margin of clypeus to apices of elytra; HW–greatest width of head; PW–greatest width of pronotum; PL–length of pronotum, measured along the mid-line; PA–width of pronotal apex; PB–width of pronotal base; EW– greatest width of elytra; EL–greatest length of elytra; FL–length of metafemur; ML–length of metatrochanter; M–arithmetic mean; NSMT–National Museum of Nature and Science, Tokyo.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Museum of Nature and Science, Tokyo, for critically reading the original manuscript of this paper. Hearty thanks are also due to Mr. Hanmei HIRASAWA for his supplying me important material for this study, and to Messrs. Ichiro OSHIO and Yuichi OTA for their kind help.

### *Armatocillenus* (*Desarmatocillenus*) *okinawanus* MORITA, sp. nov.

[Japanese name: Okinawa-kibanaga-mizugiwa-gomimushi]

(Figs. 1–3, 5)

*Diagnosis*. Body small; elytra with a pair of spots at basal fourth of elytra; apical part of left mandible without tooth; hind wings developed; metatrochanter normal (ML/FL 0.39–0.48); aedeagal apical lobe rather wide in lateral view.

*Description*. L: 3.07–3.71 mm (M 3.29 mm). Body small. Head, pronotum and clypeus black with greenish lustre on dorsal sides and not polished; elytra black with greenish lustre, but the sides and spots are pale yellowish brown; apical parts of elytra rarely pale yellowish brown and vaguely defined; a pair of spots situated at about basal

fourth of elytra and usually occupying interval V and side margin on each side, rarely interval III and side margin, or almost lacking; ventral side dark brown; mouth parts, antennal segments I–III, and basal half of segment IV, legs and trochanters pale yellowish brown; mandibles brown; labrum darker than mandibles.

Head weakly convex; eyes moderately convex; PW/HW 1.06–1.10 (M 1.09) in ♂, 1.06–1.12 (M 1.10) in ♀; frontal furrows very wide, shallow, parallel to each other and reaching the mid-eye level or a little before the post-eye level; anterior supraorbital pore variable in position, usually situated at the mid-eye level or a little before that level, rarely a little behind that level; posterior ones situated at the post-eye level; microsculpture strongly impressed, composed of isodiametric meshes; neck wide; genae invisible; apical part of left mandible without tooth; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI ≒ 1 : 0.71 : 0.87 : 0.79 : 0.89 : 0.87 : 1.10.

Pronotum transverse and moderately convex; PW/PL 1.31–1.40 (M 1.35) in ♂, 1.30–1.37 (M 1.33) in ♀; apex almost straight or very weakly emarginate; PW/PA 1.11–1.15 (M 1.13) in ♂, 1.12–1.16 (M 1.14) in ♀; sides weakly and widely arcuate in front, weakly sinuate at about 1/4 from base, and then almost parallel to each other or very weakly convergent towards hind angles; marginal gutters shallow; anterior marginal seta situated at apical 1/7; PW/PB 1.32–1.40 (M 1.36) in ♂, 1.31–1.40 (M 1.37) in ♀; PA/PB 1.18–1.31 (M 1.22) in ♂, 1.16–1.25 (M 1.20) in ♀; median line weakly impressed between anterior and posterior transverse impressions; base weakly arcuate at median part, rarely with short and transverse line at median part (briefly bordered), and oblique at the sides; apical angles rather strongly produced and rather obtuse at the tips; hind angles obtuse and with a seta near the tip on each side; basal foveae rather shallow and narrow; anterior transverse impression vanished; posterior transverse impression deep, transverse and laterally merging into basal foveae; microsculpture composed of isodiametric meshes, but very weakly impressed on apical part of median area, or rarely vanished.

Elytra elongate with rounded shoulders; EW/PW 1.27–1.32 (M 1.30) in ♂, 1.26–1.37 (M 1.30) in ♀; EL/EW 1.65–1.74 (M 1.68) in ♂, 1.66–1.78 (M 1.72) in ♀; sides very weakly arcuate; preapical emargination shallow; apical parts rather narrowly separated from each other with rounded apices; intervals very weakly convex and impunctate; striae rather deep and impunctate; striae 6 and 7 disappearing at basal 3/4 of elytra; two dorsal pores situated on interval III, and usually very close to stria 3 or on the interval; anterior dorsal pore situated between basal 1/3–2/5 of elytra and posterior one at 3/4–4/5, respectively; microsculpture coarsely impressed, consisting of isodiametric meshes. Hind wings developed.

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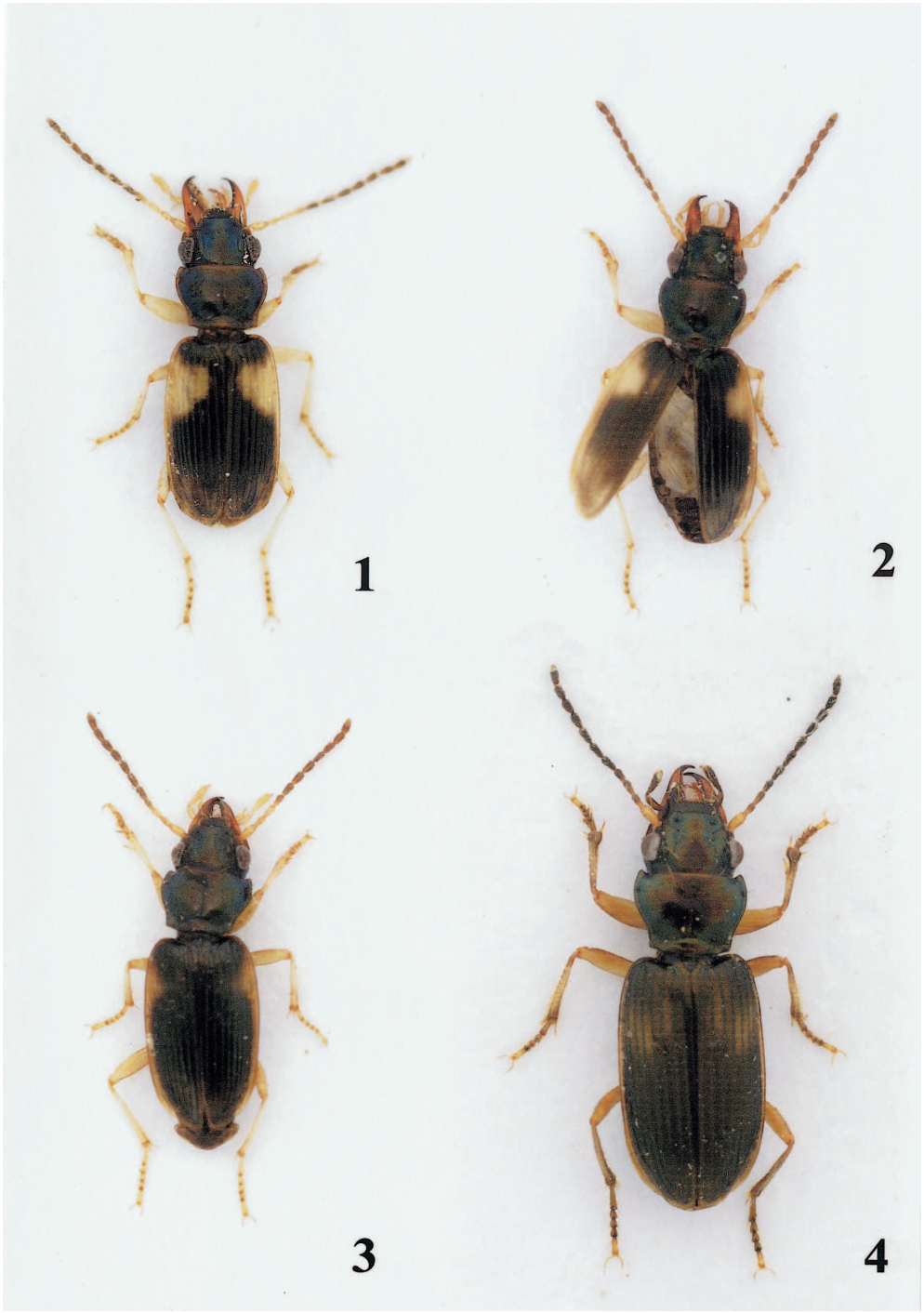
Figs. 1–4. *Armatocillenus* (*Desarmatocillenus*) spp. —— 1–3, *A.* (*D.*) *okinawanus* MORITA, sp. nov., from Riv. Hiji-gawa, showing variation of elytral spots; 4, *A.* (*D.*) *yokohamae* (BATES) from Numazu-shi, Shizuoka Prefecture.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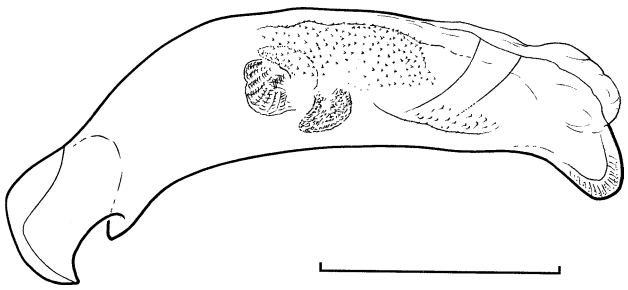

Fig. 5. Aedeagus of *Armatocillenus* (*Desarmatocillenus*) *okinawanus* MORITA, sp. nov., from Riv. Hiji-gawa, left lateral view. Scale: 0.3 mm.

Metatrochanter normal; ML/FL 0.39–0.48 (M 0.45) in ♂, 0.39–0.47 (M 0.43) in ♀.

Aedeagus elongate, hardly arcuate at middle in lateral view; apical lobe rather elongate and simply rounded at the tip in lateral view; inner sac armed mainly with two patches of scales. Styles each bearing a long seta at the apex.

*Type series*. Holotype: ♂, allotype: ♀, estuary of Riv. Hiji-gawa, 25–V–2009, Y. OTA leg. (NSMT). Paratypes: 1 ♂, Aha, 18–X–1987, T. UENO leg.; 1 ♂, 3 ♀♀, Yona, Riv. Yona-gawa, 2–V–2009, Y. OTA leg.; 1 ♀, same locality, 25–V–2009, Y. OTA leg.; 15 ♂♂, 31 ♀♀, estuary of Riv. Hiji-gawa, 25–V–2009, Y. OTA leg.

*Localities*. Estuary of Riv. Hiji-gawa (type Locality!); Yona, Riv. Yona-gawa; Aha, Kunigami-son, the Island of Okinawa-hontô, Okinawa Prefecture, Southwest Japan.

*Notes.* This new species is closely allied to *Armatocillenus* (*Desarmatocillenus*) *yokohamae* (BATES) (1883, p. 268). It is, however, distinguished from the latter by the body size and coloration of dorsal surface.

The standard ratios of body parts shown in the descriptive part are those of six males and eleven females.

## 要　　約

森田誠司：日本産ミズギワゴミムシ類の知見．XX．沖縄産キバナガミズギワゴミムシ *Armatocillenus* の 1 新種．—— 沖縄から発見されたキバナガミズギワゴミムシ属 *Armatocillenus* の 1 新種を記載し，これに *A.* (*Desarmatocillenus*) *okinawanus* MORITA という新名を与えた．この種は，小型で，通常，上翅に明瞭な紋を有することにより，容易にほかの種と識別される．

## References

BATES, H. W., 1883. Supplement to the geodephagous Coleoptera of Japan, chiefly from the collection of Mr. George LEWIS, made during his second visit, from February, 1880, to September, 1881. *Trans. ent. Soc. London*, **1883**: 205–290, pl. 13.

LINDROTH, C. H., 1980. A revisional study of the taxon *Cillenus* SAMOUELLE, 1819 and related forms (Coeloptera [sic]: Carabidae, Bembidiini). *Ent. Scand.*, **11**: 179–205.

SASAKAWA, K., 2007. Taxonomic studies on the *Bembidion* (‘*Cillenus*’) complex (Coleoptera: Carabidae): A revision of the subgeneric taxonomy and description of a new species from Japan. *Zootaxa*, (1575): 35–45.

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# Notes on the Bembidiinae (Coleoptera, Carabidae) of Japan
## XXI. New Records of *Bembidion kamikochii* JEDLIČKA from Shikoku and Kyushu

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Up to present, *Bembidion kamikochii* JEDLIČKA (1965, p.143) has been known from Hokkaido and Honshu, Japan. I collected this species from Kagoshima Prefecture, Southwest Japan. Besides, I had an opportunity to examine the following specimen of this species from Shikoku through the courtesy of Mr. YOSHIDA. I would like to record them as below.

### *Bembidion kamikochii* JEDLIČKA

[Japanese name: Kamikôchi-mizugiwa-gomimushi]

*Specimens examined*. 1 ♂, Kamiakui, Riv. Akui-gawa, Tokushima Pref., Shikoku, 20–XII–1964, M. YOSHIDA leg.; 1 ♂, Maruo, Kirishima Mts., Kagoshima Pref., Kyushu, 10–VI–1993, S. MORITA leg.; 1 ♂, 2 ♀♀, same locality, 18–IV–2008, S. MORITA leg.

I thank Mr. Masataka YOSHIDA who kindly submitted the specimen to me for my study.

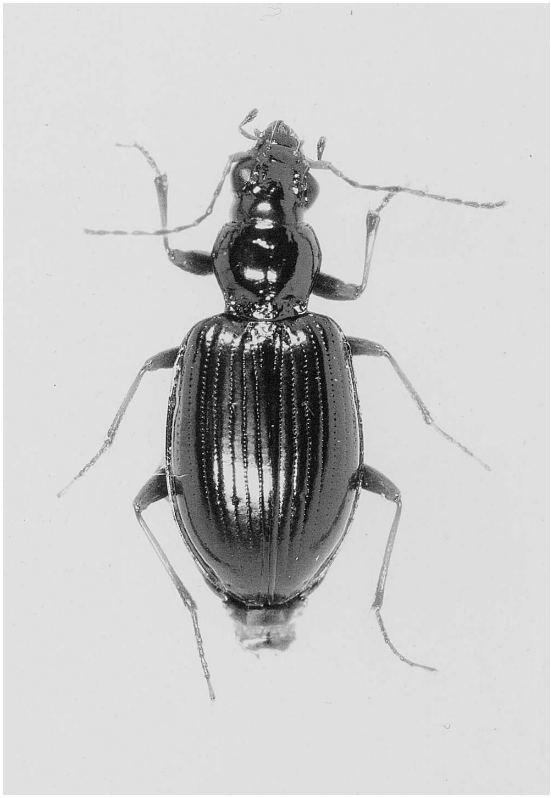

Fig. 1. *Bembidion kamikochii* JEDLIČKA from Maruo.

## References

JEDLIČKA, A., 1965. Monographie des Tribus Bembidiini aus Ostasien (Coleoptera, Carabidae). *Ent. Abh. Mus. Tierk. Dresden*, **32**: 79–198, 1 col. pl.

MORITA, S., 1994. Notes on the Bembidiinae (Carabidae) of Japan. VIII. *Ocydromus kamikochii* (JEDLIČKA). *Elytra, Tokyo*, **15**: 221–225.

TOLEDANO, L., 2000. Systematic notes on the Palaearctic Bembidiini with particular reference of the fauna of China (Coleoptera, Carabidae). *Mem. Soc. ent. it*., **78**: 5–70.