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A New Species of the Genus *Oncostylus* Habu (Coleoptera, Carabidae, Platynini) from Okinawa Island, Japan

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Abstract A new platynine carabid beetle, *Oncostylus kurosai* Terada et Morita, sp. nov., is described from Okinawa Island, Japan.

Oncostylus was originally described by Habu (1978) as a subgenus of *Agonum*. The taxonomic status was retained by Bousquet (2003) but later upgraded to an independent genus by Schmidt (2017). This genus includes only two species from Japan. Diagnostic characters of the genus are as follows: metacoxa with three setae; metafemur with two setae; aedeagus without depression on ventral side; gonocoxite 2 (gonocoxal apical segment) with a wide base, three or four lateral ensiform setae, and one dorsal ensiform seta.

We have been studying carabid beetles of Japan for many years and in the course of the study, we found an interesting platynine carabid species in our collections, which had been collected by several naturalists in the northern part of Okinawa. Later we identified it as a new species of *Oncostylus* and describe it herein.

Terms used for structural characters basically follow Lawrence and Britton (1994), Liebherr and Zimmerman (2000), and Habu (1978). Images of habitus, body-details and genitalia were captured using a Leica MZ 125 stereoscopic microscope with a Nikon DS-Fi 1 digital camera controlled by Nikon DS U2. Measurements were also made using the same apparatus.

Abbreviations used for various measurements are as follows: HW — width of head (maximum transverse length including eyes); FW — width of frontal region at mid-eye level; PL — length of pronotum along mid line; PW — maximum width of pronotum; PAW — width of pronotum between apical (anterior) angles; PBW — width of pronotum between basal (posterior) angles; ML — length of metepisternum; MW — width of metepisternum; EL — length of elytra from basal border (ridge) to apex; EW — maximum width of elytra. Roman numerals (I, II, III, etc.) are used for indicating antennomeres, tarsomeres, ventral sternites, and elytral intervals. The total body length was measured from the mandibular apex to the elytral apex.

Oncostylus kurosai Terada et Morita, sp. nov.

[Japanese name: Okinawa-mori-hirata-gomimushi]

(Figs. 1 & 2)

Diagnosis. This new species is distinguished from other species of *Oncostylus* by subquadrate pronotum, long and parallel-sided elytra with more clearly punctured striae, aedeagus with less downcurved and slightly shorter apex, and gonocoxite 2 with four lateral ensiform setae.

Description. Length 9.33–10.72 mm. Width 3.17–3.72 mm. Integument more or less glossy; head black; pronotum dark brown (base and sides lighter); elytra dark metallic green or aeneous; ventral side of head and prothorax dark reddish brown; mandibles, palpi, antennae, and legs brown; venter light brown to light reddish brown. Microsculpture absent on head and pronotum, forming strong-

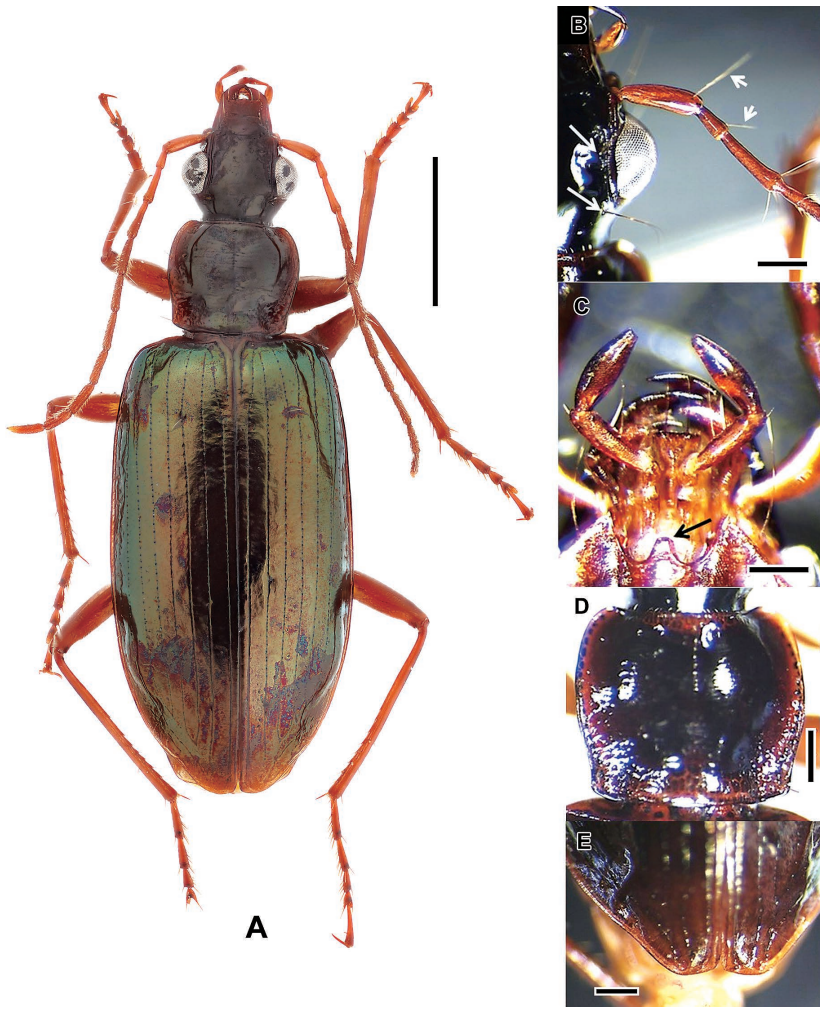

Fig. 1. *Oncostylus kurosai* TERADA et MORITA, sp. nov. —— A, Habitus, ♂ (holotype) from Okinawa Is.; B, head with antenna (two short arrows on the right indicate fixted setae on antennomeres I and II; two long arrows on the left indicate position of supraorbital setae); C, mouth part showing mentum tooth (arrow); D, pronotum; E, elytra, showing subtruncate apex of each elytron. Scale bar: 2.00 mm for A; 0.40 mm for B, D & E; 0.20 mm for C.

ly-transverse meshes on elytra.

Head wide (PW/HW 1.10–1.15), impunctate; frontal impressions not markedly extending behind anterior supraorbital setae; supraorbital setae near each eye (Fig. 1 B): anterior seta slightly before mid-eye level and posterior seta slightly after than posterior margin of eye; eyes large and convex (HW/FW 1.83–1.93); antennae relatively long, reaching basal 1/3 of elytra, antennomeres I and II with fixed setae near apex (Fig. 1 B), relative length of each antennomere from I to XI 1.00 : 0.44–0.47 : 0.90–0.96 : 0.90–0.98 : 0.86–0.96 : 0.83–0.90 : 0.83–0.91 : 0.80–0.89 : 0.75–0.86 : 0.71–0.81 : 0.90–0.98; labial palpi glabrous except penultimate segments which have two inner setae and a very short apical seta; mentum tooth subtruncate at apex (neither bifid nor pointed) (Fig. 1 C); tempora straight (not tumid laterally), shorter than eye diameter.

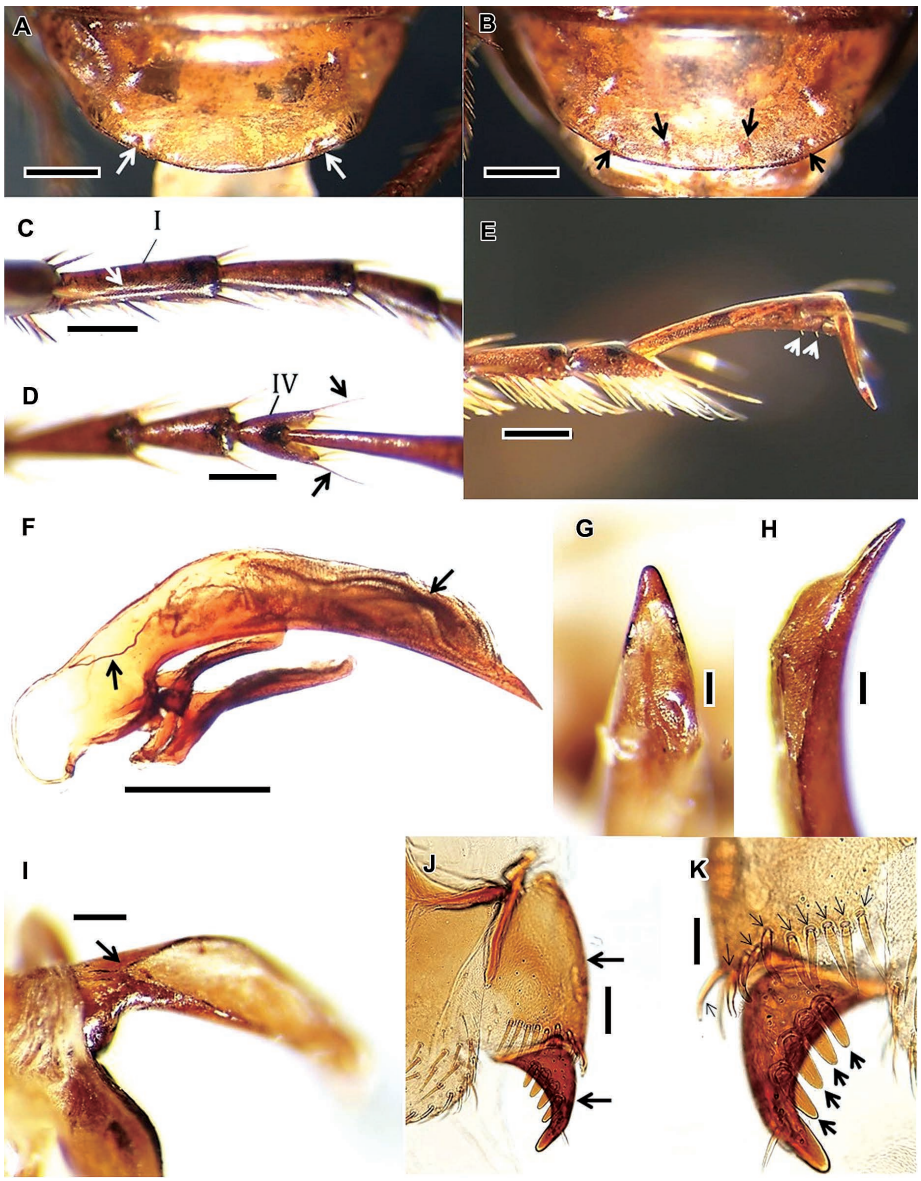

Fig. 2. *Oncostylus kurosai* Terada et Morita, sp. nov. —— A, Venter, ♂, showing ventrite VII with two setiferous pores (arrows); B, venter, ♀, showing ventrite VII with four setiferous pores (arrows); C, hind tarsus, showing outer sulcus (arrow) on tarsomere I; D, hind tarsus showing tarsomere IV with subequal lobes (arrows indicate dorso-apical setae of tarsomere IV); E, hind tarsus showing tarsomere V with microsetae (arrows) on ventral side; F, aedeagus in left lateral aspect (right arrow indicates a dark part of microtrichial membrane; left arrow indicates a long fibrous thing not related to the aedeagus component); G, apical part of aedeagus in dorsal aspect; H, apical part of aedeagus in left lateral aspect; I, aedeagus in dorsal (slightly lateral) aspect, showing end of dorsal membranous part (arrow); J, right gonocoxa in ventral aspect, showing gonocoxite 1 (upper arrow) and gonocoxite 2 (lower arrow); K, left gonocoxa in ventral aspect, showing apical fringe setae (upper fine arrows) of gonocoxite 1 and lateral ensiform setae (lower arrows) of gonocoxite 2. Scale bar: 0.50 mm for F; 0.40 mm for A & B; 0.20 mm for C, D, E & I; 0.10 mm for G, H & J; 0.05 mm for K.

Pronotum subquadrate (PW/PL 1.12–1.24; PW/PBW 1.14–1.19; PBW/PAW 1.25–1.36) (Fig. 1 D), moderately convex and finely wrinkled on disk, coarsely punctate on sides and base; apex shallowly emarginate, bordered; apical angles rounded, slightly protruding; sides not bordered, less arcuate, slightly sinuate before basal angles; explanate-reflexed part relatively narrow, with two lateral setae on each side: anterior seta at widest part and posterior seta near tip of basal angle; base bordered at middle, laterally unbordered and reflexed; basal angles obtuse, slightly angulate but not pointed at tip; basal foveae deep and roundish, coarsely punctate; anterior and posterior transverse impressions faintly or moderately impressed; median line finely impressed.

Elytra elongate and parallel-sided (EL/EW 1.78–1.87) (Fig. 1 A), slightly convex on disk; base bordered, gently sinuate, with gently-rounded humerus; apex subtruncate (Fig. 1 E), without tooth, with a very shallow subapical sinuation; scutellar striole long, distinctly impressed and punctate; striae entire, distinctly impressed and punctate; intervals flat, impunctate; interval III with three dorsal setiferous pores: anterior pore adjoining stria III, remaining two adjoining stria II; basal setiferous pore present; marginal series consisting of about 18 setiferous umbilicate pores.

Ventral surface smooth; prosternal process X-shaped on posterior side; metepisternum long, about twice longer than wide (ML/MW 2.11–2.18); ventrite VII with two (in ♂; Fig. 2 A) or four (in ♀; Fig. 2 B) setiferous pores along hind margin which is more gently rounded in ♀ than in ♂.

Legs moderately long; metacoxae tri-setose; metafemora bi-setose; mesotarsi and metatarsi sulcate externally, not sulcate internally (sulcus clearly visible on tarsomere I as shown in Fig. 2 C); metatarsi 1.2–1.3 times as long as head; metatarsomere IV simple (lobes less developed); outer and inner lobes of metatarsomere IV subequal in length (outer lobe very slightly longer than inner one), with dorso-apical setae (Fig. 2 D); tarsomere V slightly longer than tarsomere I, with microscopic setae on ventral side (Fig. 2 E).

Male genitalia: Aedeagus (median lobe) gently arcuate (Fig. 2 F), evenly narrowed to bluntly pointed apex in dorsal view (Fig. 2 G), without depression on ventral side; apex down-curved in right-lateral view (Fig. 2 H); dorsal membranous part reaching near basal constriction (Fig. 2 I); sagittal crest on basal bulb moderately developed; endophallus microtrichial (Fig. 2 F, right arrow), without large spines; apex of left paramere reaching apical 1/3 of median lobe in lateral view.

Female genitalia: Gonocoxite 1 subtriangular (Fig. 2 J), with 9–11 apical fringe setae (Fig. 2 K, upper fine arrows) which are sometimes curled at apex. Gonocoxite 2 strongly arcuate, wide at base, attenuate at apex (Fig. 2 J), with four lateral ensiform setae (Fig. 2 K, lower arrows) and 1 dorsal ensiform seta.

Etymology. This species is named after the late Dr. Kazuyoshi KUROSA.

Type series. Holotype: ♂, Okuma, near entrance of the Yonaha-dake mountain trail, Kunigami, Okinawa Pref., 28.III.2008. K. TERADA leg. Paratypes: 2 ♂♂, 3 ♀♀, same data as the holotype; 1 ♀, same locality as the holotype, 24.IV.2010. H. YOSHITAKE leg.; 2 ♂♂, 1 ♀, Nisime-dake, Kunigami, Okinawa Pref., 30.VIII.1994. M. KIMURA leg.; 1 ♂, 1 ♀, Benoki, Kunigami, Okinawa Pref., 20. III.2010. K. KURIHARA leg. The holotype will be deposited in the Institute for Agro-Environmental Sciences, NARO, Tsukuba. The paratypes are deposited in the private collections of K. TERADA and S. MORITA.

Remarks. *Eucolpodes maruokai* (HABU, 1973) resembles the present new species in some morphological features such as the body color, size and shape. It is thought that *E. maruokai* is possibly a member of the genus *Oncostylus*. The styli of female genitalia are clearly different between the two genera, but the female specimens of *E. maruokai* are yet undiscovered. If finding female specimens, the true generic status of *E. maruokai* must be clarified.

Acknowledgements

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要　　約

寺田勝幸・森田誠司：沖縄本島で発見された *Oncostylus* 属（鞘翅目オサムシ科ヒラタゴミムシ族）の新種について．――――沖縄本島北部の林道で採集されたヒラタゴミムシを新種と認め，*Oncostylus kurosai* TERADA et MORITA と命名・記載した．なお，本新種名は長くダニおよび昆虫の研究に勤しまれ，その発展に寄与された故黒佐和義博士に因んだものである．

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