

Three New Species of the Genus *Callistethus* (Coleoptera, Scarabaeidae, Rutelinae) from Palawan and Borneo

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Abstract Three new species of the genus *Callistethus* from Palawan Island of the Philippines and Borneo are described. They are named *C. palawanensis*, *C. nakanei* and *C. dechambrei*.

Seventeen years ago, I obtained a remarkable species of the genus *Callistethus* from Palawan Island of the Philippines, and recently, I received two Bornean species of the same genus. On the other hand, I had opportunities of visiting several natural history museums in Europe from 1993 to 1995, where I was able to reexamine the type specimens of the genus *Callistethus*.

The Asian members of this genus have been classified into 11 species-groups by MACHATSCHKE (1972). After a detailed study, I have concluded that the species mentioned above are new to science, and that they belong to the *Callistethus excellens* group. This species-group is characterized by the elongated mesosternal process, which is strongly compressed in ventral view, and bent downward, broadly triangular or broadly horn-shaped in lateral view. Though MACHATSCHKE included *C. lubricus* OHAUS, 1915 and *C. riedeli* LANSBERGE, 1880 in the *excellens* group, I prefer to exclude them from the group for the reason of differently shaped mesosternal process.

In this article, I am going to describe three new species of the genus *Callistethus* under the names *C. palawanensis*, *C. dechambrei* and *C. nakanei*.

Before going further, I wish to express my sincere gratitude to Dr. Manfred UHLIG and Mr. Joachim SCHULZE of the Museum für Naturkunde der Humboldt Universität zu Berlin, Dr. Roger-Paul DECHAMBRE of the Muséum National d'Histoire Naturelle, Paris, Dr. J. KRIKKEN of the Nationaal Natuurhistorisch Museum, Leiden, Dr. Martin BAEHR of the Zoologische Staatssammlung, München, Dr. Lothar ZERCHE of the Deutsches Entomologisches Institut, Eberswalde, and Dr. Ottó MERKL of the Magyar Természettudományi Múzeum, Budapest, for the loan of materials under their care. Deep indebtedness should be expressed to Mr. Malcolm D. KERLEY of the Natural History Museum, London, and also to Dr. C. O'TOOL of the Hope Entomological Collections of the University Museum, Oxford, for giving me the opportunities of examining the collections of the genus *Callistethus*. I express my deepest appreciation to Dr. Kimio MASUMOTO of Otsuma Women's University, Tokyo, for his constant guidance of

my entomological study. Finally, my hearty thanks are due to Mr. Takeshi ITO for his kind help in materials. The holotypes of the new species will be preserved in the collection of the Kanagawa Prefectural Museum of Natural History, Odawara, Japan.

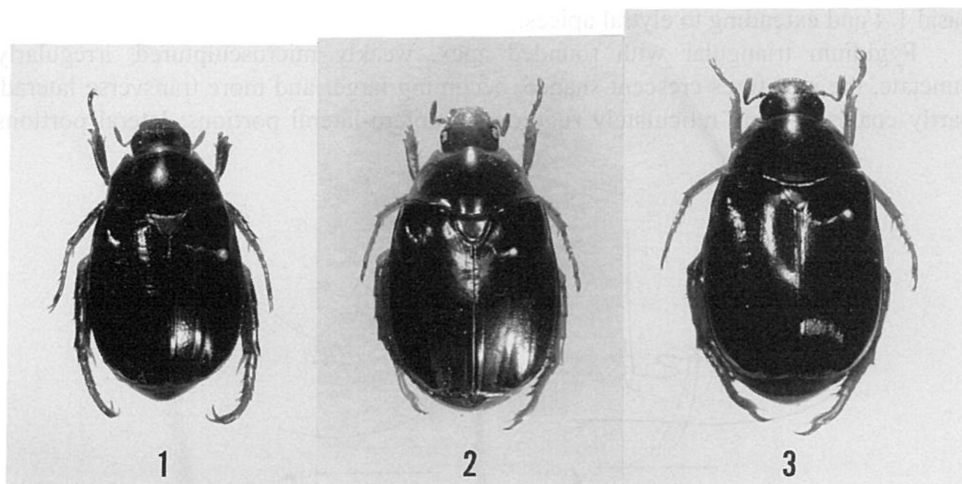
Key to the Species of the *Callistethus excellens* Group

- 1 (4) Middle and hind tibiae closely and distinctly punctate.
- 2 (3) Mesosternal process horizontally projected (Fig. 4); head, pronotum and scutellum dark purplish red, elytra deep green; Palawan Is. *C. palawanensis* sp. nov.
- 3 (2) Mesosternal process projected slightly downwards (Fig. 9); head, pronotum and scutellum deep orange, elytra dark grayish blue; Borneo, Sumatra, Nias Is., Malay Peninsula, Indochina *C. excellens* NONFRIED.
- 4 (1) Middle and hind tibiae sparsely punctate or impunctate.
- 5 (8) Upper branch of inner claw of fore leg almost straight; dorsal surface almost of the same coloration, chestnut brown to dark brown.
- 6 (7) Inner claw of fore leg slender, upper branch of inner claw of fore leg of the same width as the lower one; mesosternal process roundly projected, with blunt apex (Fig. 7); Java *C. drescheri* OHAUS.
- 7 (8) Inner claw of fore leg not slender, the upper branch of inner claw of fore leg slenderer than the lower one; mesosternal process projected and angulate, with acute apex (Fig. 8); Malay Peninsula *C. malayus* OHAUS.
- 8 (5) Upper branch of inner claw of fore leg curved downwards; dorsal surface various in coloration.
- 9 (10) Mesosternal process horizontally projected and angulate, with sharply pointed apex (Fig. 5); head, pronotum and scutellum dark red to dark greenish red; elytra dark purplish red, tarsi and tergum dark red to dark greenish red; Borneo *C. nakanei* sp. nov.
- 10 (9) Mesosternal process projected upwards.
- 11 (12) Mesosternal process with feebly rounded apex (Fig. 6); head, pronotum, scutellum and elytra dark reddish brown, with strong greenish metallic lustre, pronotum with reddish yellow band in marginal portions; Borneo *C. dechambrei* sp. nov.
- 12 (11) Mesosternal process with moderately pointed apex (Fig. 10); head, pronotum and scutellum deep greenish yellow; elytra dark grayish brown; tarsi deep green to blue, tergum deep grayish brown; Borneo *C. moultoni* OHAUS.

Callistethus palawanensis sp. nov.

(Figs. 1, 4)

Body length: 17.9–19.4 mm, width: 9.3–10.9 mm.



Figs. 1-3. Habitus of *Callistethus* spp. — 1. *C. palawanensis* sp. nov., holotype, ♂. — 2. *C. nakanei* sp. nov., holotype, ♂. — 3. *C. dechambrei* sp. nov., holotype, ♂.

Head, pronotum and scutellum reddish brown; frons with a vague dark reddish brown patch at the middle, pronotum with a pair of large vague, dark reddish brown patches medially, which are sometimes widened; elytra deep green; propygidium, pygidium, and abdominal sternites dark reddish brown; metasternum and legs reddish brown to dark reddish brown; dorsal surface with metallic lustre, ventral surface with vitreous lustre.

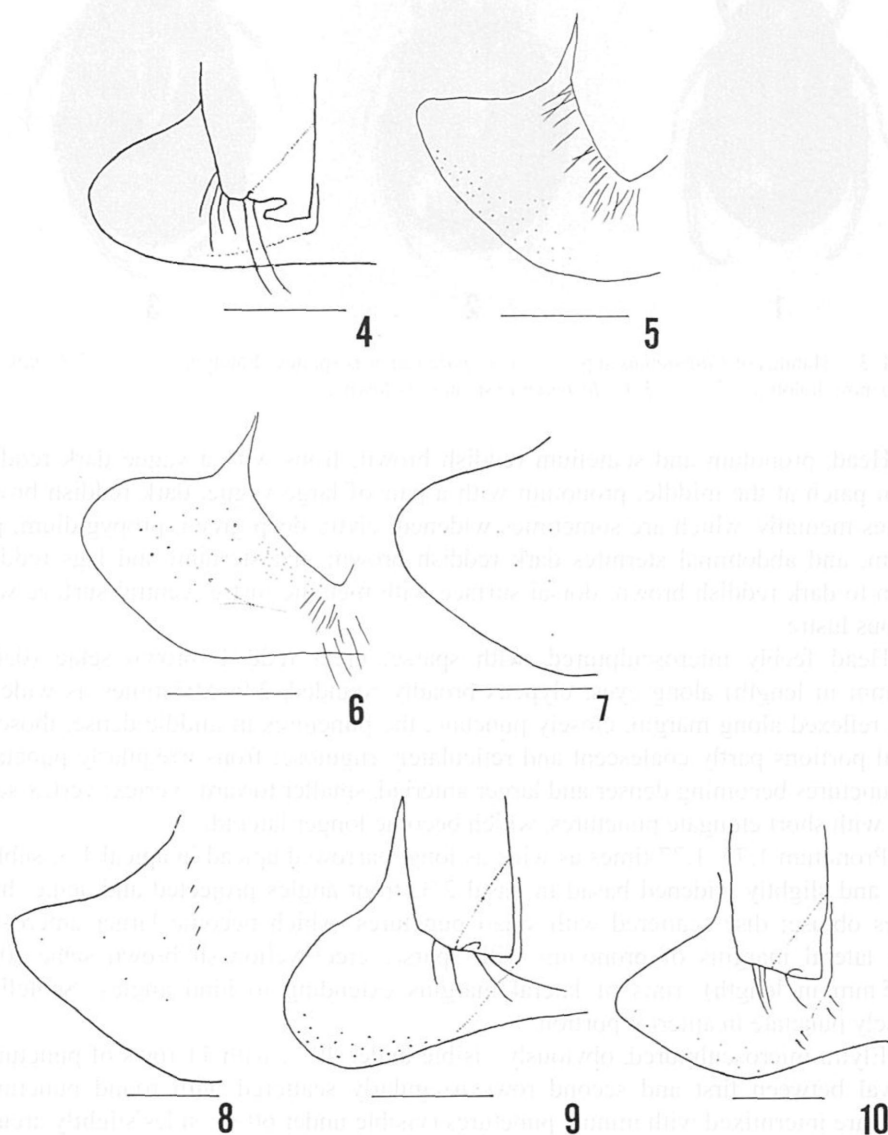
Head feebly microsculptured, with sparse, erect reddish brown setae (0.42–0.48 mm in length) along eyes; clypeus broadly rounded, 2.0–2.05 times as wide as long, reflexed along margin, closely punctate, the punctures in middle dense, those in lateral portions partly coalescent and reticulately rugulose; frons irregularly punctate, the punctures becoming denser and larger anteriorly, smaller towards vertex; vertex scattered with short elongate punctures, which become longer laterally.

Pronotum 1.75–1.77 times as wide as long, narrowed apically in apical 1/3, sublinearly and slightly widened basally in basal 2/3; front angles projected and acute, hind angles obtuse; disc scattered with small punctures, which become larger antero-laterally; lateral margins of pronotum with sparse, erect yellowish brown setae (0.5–0.625 mm in length); rims of lateral margins extending to hind angles. Scutellum sparsely punctate in anterior portion.

Elytra microsculptured, obviously visible under 40 \times , with 11 rows of punctures; interval between first and second rows irregularly scattered with round punctures, which are intermixed with minute punctures (visible under 60 \times); sides slightly arcuate laterally, slightly sinuous in anterior 1/3, widened in middle, then narrowed posteriorly; distal margins rounded; rims of lateral margins thickened in basal 1/3, becoming thinner in apical 2/3, and disappearing at hind corners; marginal membrane thin, starting at

basal 1/4 and extending to elytral apices.

Pygidium triangular with rounded apex, weakly microsculptured, irregularly punctate, the punctures crescent-shaped, becoming larger and more transverse laterad, partly coalescent and reticulately rugulose in antero-lateral portions; lateral portions



Figs. 4-10. Mesosternal process in lateral view (scale: 1 mm). — 4, *Callistethus palawanensis* sp. nov.; 5, *C. nakanei* sp. nov.; 6, *C. dechambrei* sp. nov.; 7, *C. drescheri* OHAUS, 1915; 8, *C. malayus* OHAUS, 1932; 9, *C. excellens* NONFRIED, 1894; 10, *C. moultoni* OHAUS, 1910.

and apical margin with several erect yellowish brown setae; rims of outer margins nearly straight.

Mesosternal process moderately projected, compressed from sides, extending before the level of procoxae, with broadly rounded apex (Fig. 4); metasternum with a median groove, punctate sparsely and minutely in middle, becoming larger and denser laterad, partly coalescent in lateral portions, each puncture with an erect yellowish brown seta (0.55–0.75 mm in length).

Abdominal sternites with a transverse row of appressed reddish brown setae (0.175–0.25 mm in length) at basal 1/4, distinctly punctate, the punctures in middle small and crescent-shaped, becoming larger and denser laterad.

Protibia bidentate; apico-external denticle acute in male, rectangular and feebly rounded at inner corner in female; inner claw of fore leg and outer claw of middle leg incised apically, forming two branches, the upper branch of fore leg about 3/5 times the width of the lower one at the base, the lower branch slightly longer than the upper one; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Bindoyan, Palawan Is., Philippines, 19–IV–1979, leg. F. DACASIN. Allotype: ♀, same data as for the holotype. Paratypes: ♀, same data as for the holotype; 2 ♂♂, same locality as for the holotype, 2–IX–1984, native collector.

Callistethus nakanei sp. nov.

(Figs. 2, 5)

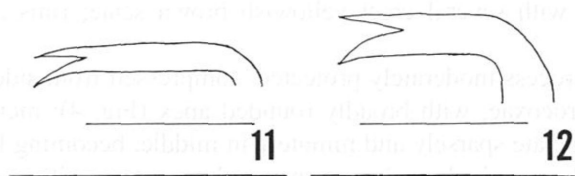
Body length: 16.6–19.3 mm, width: 9.5–10.6 mm.

Head, pronotum, scutellum, propygidium, pygidium, legs and ventral surface dark red to dark greenish red; elytra dark purplish red; dorsal surface with vitreous lustre, ventral surface rather weakly with vitreous lustre.

Head microsculptured, with sparse, erect reddish brown setae (0.37–0.4 mm in length) along eyes; clypeus broadly rounded, 2.11–2.29 times as wide as long, reflexed along margin, densely punctate, the punctures large and elliptical, partly coalescent; frons sparsely punctate in middle, the punctures round, becoming smaller laterad, finer and sparser towards vertex.

Pronotum 1.62–1.88 times as wide as long, narrowed apicad in apical 2/5, slightly widened basad in basal 3/5; front angles projected and acute, hind angles almost rectangular and weakly rounded at apices; disc scattered with small punctures, which become larger and denser laterad; marginal portions with sparse, erect reddish brown setae (0.55–0.625 mm in length); lateral margins with rims, the rims extending baso-laterad. Scutellum sparsely punctate.

Elytra microsculptured, clearly visible under 40×, with 11 rows of small punctures; intervals irregularly scattered with minute punctures, which are visible under 60×; sides slightly arcuate laterad, slightly sinuous in anterior 2/5, weakly widened in middle, then narrowed posteriad; distal margins rounded; lateral margins with rims thickened in basal 2/5, becoming thinner in apical 3/5, and disappearing at hind cor-



Figs. 11–12. Inner claw of fore leg (scale: 1 mm). — 11, *Callistethus drescheri* OHAUS, 1915, holotype, ♂; 12, *C. malayus* OHAUS, 1932, holotype, ♂.

ners; marginal membrane thin, starting at basal 1/4 and extending to elytral apices.

Propygidium weakly microsculptured, sparsely punctate in middle, the punctures crescent-shaped, becoming larger laterad.

Pygidium weakly microsculptured, shallowly grooved in anterior portion, with two pairs of shallow depressions near base and at the middle, irregularly punctate in middle in a crescent-shape, becoming larger laterad, those in lateral portions elliptical, and those in antero-lateral angles and apical portion sparse; lateral portions and apical margin with sparse, suberect reddish brown setae; rims of outer margins nearly straight laterad, rounded at apex.

Mesosternal process horizontally projected and angulate, strongly compressed, extending to the level of procoxae, with sharply pointed apex (Fig. 5); metasternum with a median groove, irregularly punctate, the punctures sparse and minute in middle, those in lateral portions large and setiferous, each with an erect reddish brown seta (0.23–0.55 mm in length).

Abdominal sternites concentratively punctate in anterior and posterior portions, the punctures crescent-shaped, becoming larger laterad, those in lateral portions irregularly punctate; lateral portions with sparse decumbent reddish brown setae (0.4–0.48 mm in length).

Protibia bidentate, apico-external denticle acute in male, rectangular, rounded at inner corner and acute at outer corner in female; inner claw of fore leg and outer claw of middle leg incised apically, forming two branches, the upper branch of fore leg about half the width of the lower one at the base in male, almost equal in female, the lower branch slightly longer than the upper one in male, the lower branch shorter than the upper one in female; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Mt. Bawang, West Kalimantan, Borneo, IV–1990, native collector. Allotype: ♀, same data as for the holotype. Paratypes: 8 ♂♂, 3 ♀♀, same data as for the holotype; 2 ♂♂, same locality as for the holotype, X–1990, native collector; ♀, near Keningau, alt. 800 m, Sabah, Borneo, 16–III–1989, leg. Masao ITO; ♀, Crocker Range, Sabah, Borneo, 10–VI–1996, native collector; ♂, Trus Madi, Sabah, Borneo, VIII–1996, native collector.

Callistethus dechambrei sp. nov.

(Figs. 3, 6)

Body length: 18.8 mm, width: 10.9 mm.

Head, pronotum, scutellum and elytra dark reddish brown; pronotum with broad reddish yellow band in lateral portions; propygidium, pygidium, and abdominal sternites reddish brown; metasternum and legs reddish yellow; dorsal surface with strong greenish metallic lustre, ventral surface with coppery lustre.

Head feebly microsculptured, with sparse, erect reddish brown setae (0.42–0.55 mm in length) along eyes; clypeus broadly rounded, 1.95 times as wide as long, weakly reflexed along margin, distinctly punctate, the punctures elliptical in lateral portions, partly coalescent in anterior portion; frons irregularly punctate, the punctures being intermixed with minute punctures, the larger ones sparse and round in middle, becoming denser and larger antero-laterad.

Pronotum 1.85 times as wide as long, weakly arcuate-sided, rounded in apical half, then linearly and slightly narrowed basad in basal half; front angles strongly projected and acute, hind angles rectangular with slightly rounded corners; disc scattered with small punctures, which are intermixed with minute punctures (visible under 60×), the former becoming slightly larger antero-laterad; marginal portions of disc with sparse, erect yellow setae (0.475–0.825 mm in length); lateral margins with rims extending to baso-lateral portions. Scutellum triangular, sparsely scattered with minute punctures.

Elytra with 11 rows of punctures, which are intermixed with extremely minute punctures (visible under 60×); interval between first and second rows irregularly scattered with round punctures; sides slightly arcuate laterad; lateral margins slightly sinuous in anterior 1/4, weakly widened in middle, then narrowed posteriad; distal margins almost straight; rims of lateral margins thickened in basal 2/5, becoming thinner in apical 3/5 and disappearing at hind corners; marginal membrane thin, starting at apical 3/10 and extending to elytral apices.

Pygidium feebly microsculptured, sparsely punctate, the punctures small and intermixed with minute punctures, the former becoming larger anteriorly, partly coalescent and reticulately rugulose in anterior portion; lateral and apical margins of pygidium with sparse erect reddish brown setae; outer margins with rims nearly straight; apex rounded.

Mesosternal process projected slightly upwards, strongly compressed, extending to the level of procoxae, with feebly rounded apex (Fig. 6); metasternum with a median groove, irregularly punctate, the punctures in middle sparse and small, becoming larger and denser laterad, each with an erect reddish yellow seta (0.52–0.8 mm in length).

Abdominal sternites sparsely punctate in middle, the punctures small, becoming larger and denser laterad, with a transverse row of suberect reddish brown setae (0.3–0.4 mm in length) in the middle except for median portions.

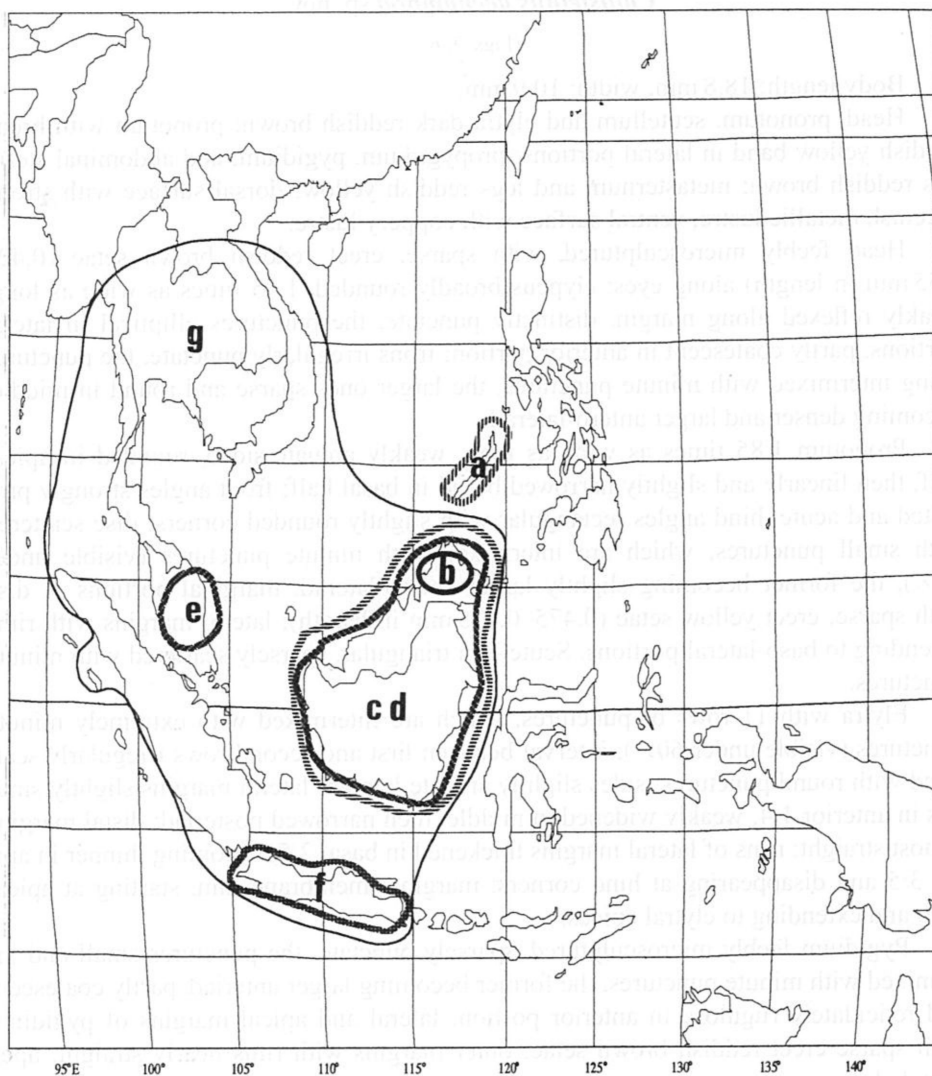


Fig. 13. Approximate distribution of the *Callistethus excellens* Group. — a, *C. palawanensis* sp. nov.; b, *C. dechambrei* sp. nov.; c, *C. nakanei* sp. nov.; d, *C. moultoni* OHAUS, 1910; e, *C. malayus* OHAUS, 1932; f, *C. drescheri* OHAUS, 1915; g, *C. excellens* NONFRIED, 1894.

Protibia with two teeth; apico-external tooth acute with feebly rounded apex in both sexes; inner claw of fore leg and outer claw of middle leg apically incised, forming two branches, the upper branch of fore leg about $\frac{3}{4}$ times the width of the lower one at the base, the lower branch slightly shorter than the upper one; outer claw of fore leg, inner claws of middle and hind legs simple and acuminate.

Holotype: ♂, Crocker Range, Sabah, Borneo, 8-VI-1996, native collector.

要 約

和田 薫：パラワン島およびボルネオから発見された *Callistethus* 属コガネムシの3新種。—— *Callistethus* 属に属するコガネムシ，*C. palawanensis* をパラワン島から，また *C. nakanei* および *C. dechambrei* をボルネオから記載した。これらの種はいずれも *excellens* 群に属するが，その特徴的な色彩および中胸突起の形状から同グループの他種とは容易に区別できる。

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A Record of *Diantiger fossulatus dentipes* NOMURA et LEE (Staphylinidae, Pselaphinae) from Shikoku, Japan

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Diantiger fossulatus dentipes NOMURA et LEE is a subspecies of *D. fossulatus* SHARP belonging to the tribe Clavigerini, which has been known only from South Korea. In this report, this subspecies is recorded from Shikoku, which is new to the Japanese fauna.

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