

On Some Species of Brentidae in Japan (Coleoptera, Brentidae)

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Abstract Two new species, *Callipareius (Metacidotes) nigripennis* sp. nov. from Miyagi Pref. and *Mesoderes bimaculatus* sp. nov. from Mie, Nara and Ôita Prefs., Japan, are described. In addition, the female of *Cobalcephalus mizobei* MORIMOTO is described for the first time and an extraordinary variation of *Baryrhynchus yaeyamensis* MORIMOTO in elytral markings is reported.

In this paper, two new species are added to the Japanese fauna of the family Brentidae that comprises 32 species at present (MORIMOTO, 2008, 2009). *Callipareius (Metacidotes) nigripennis* sp. nov. is described upon a female from Miyagi Pref., Honshu. *Mesoderes bimaculatus* sp. nov. is upon the nine specimens from Mie and Nara Prefs., Honshu and Ôita Pref., Kyushu. The female of *Cobalcephalus mizobei* MORIMOTO, which has been known by male, is described for the first time. An extraordinary variation of body pattern characteristics is notified in *Baryrhynchus yaeyamensis* MORIMOTO.

Abbreviations used in this paper are as follows: NIAES (Institute for Agro-Environmental Sciences, NARO, Tsukuba), ELKU (Entomological Laboratory of Kyushu University, Fukuoka), KUM (Kyushu University Museum, Fukuoka), KAC (Mr. K. AKITA, private collection, Mie), and KIC (Mr. K. IJIMA, private collection, Kawasaki).

Callipareius (Metacidotes) nigripennis sp. nov.

(Figs. 3–8 & 13)

Description. Reddish brown except for eyes, elytra and venter blackish brown.

Head distinctly constricted behind eyes; neck parallel-sided, impunctate; forehead prominent in a pair of cones over neck at caudal margin, almost flat from a cone to antennal base in dorsal contour when viewed laterally, rather sharply angled and declivitous thence to apex, ocular distance a little narrower than basal width of rostrum, sparsely provided with minute punctures, with a short and fine median sulcus; rostrum weakly narrowed from base to outside of antennal scrobes, parallel-sided thence to apex, 1.6 times as broad at base as long to clypeus, with a median broad sulcus on basal half continued from forehead, punctate as on forehead, but rather densely so along apical margin; scrobes open antero-laterally, with inclinatory narrow peripheries.

Pronotum 1.2 times as long as broad, shallowly hollowed at anterior margin, truncate at base, smooth and bare, sparsely with scattered fine punctures, only weakly punctate-rugose along anterior margin.

Elytra almost cylindrical, faintly narrowed in middle, as broad as and 2.2 times as long as pronotum, 2.9 times as long as broad, striae narrow, well carved, sixth and seventh striae abbreviated at base; intervals much broader than striae, flat, second interval narrowest, of the same breadth throughout, third interval broadest, but narrowed at base and nearly of the same breadth as neighboring intervals, each interval with a row of shallow and broad punctures, with several additional small ones in

basal areas of first to fifth intervals, sutural and lateral margins conjoined along apical margin, forming narrow expansion whose apex is conjointly truncate.

Legs robust, femora edentate; fore tibiae triangularly pointed inwards behind apex, triangularly so ventrally at apex, mid tibiae simple, hind tibiae weakly scooped behind apex; fore tarsi with first segment slightly compressed and a little higher than breadth, second segment subglobular; mid and hind tarsi with first segment compressed, second segment subglobular.

Metasternum and basal two ventrites flattened on sides for receiving femora in repose; metasternum and venter sparsely provided with fine punctures, each of which bears a short fine seta.

Body length: 5.7 mm (including rostrum), 5.5 mm (excluding rostrum); breadth: 1.1 mm (width of pronotum).

Type material. Holotype: ♀ (NIAES; Type Specimen Code No. COL-291), Mizubashou-nomori, Fukuokafukaya, Shiroishi City, Miyagi Pref., 3.VIII.2006, N. SUGIURA leg.

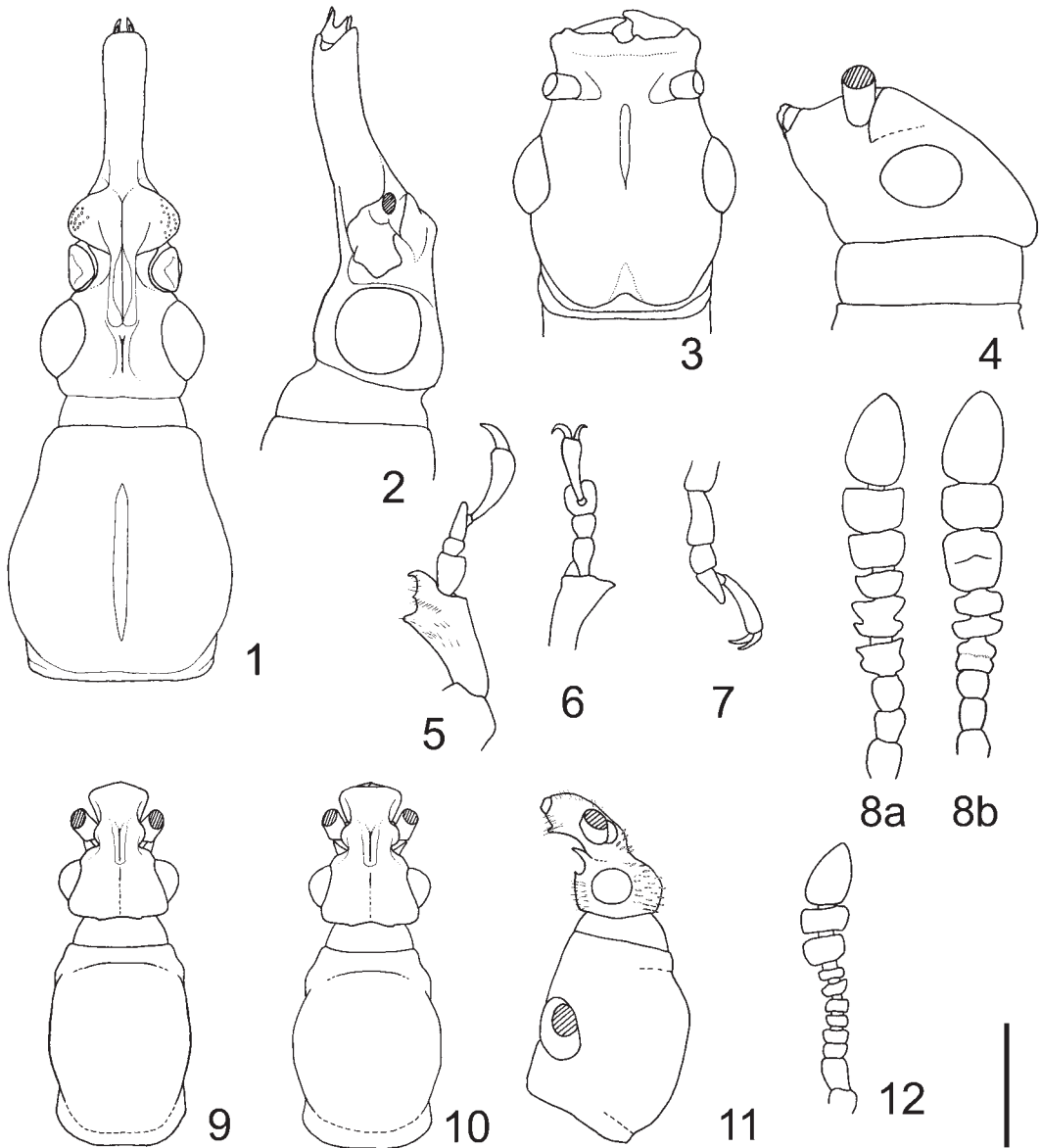
Distribution. Japan (Honshu).

Etymology. Named after the body color.

Notes. A single specimen before us bears abnormal antennae as figured; namely, in the left antenna fourth and fifth, and sixth and seventh segments are conglutinate, respectively, and in the right antenna fourth and fifth, and eighth and ninth segments are also conglutinate, respectively, but second and third and terminal two segments are seemed to be normal because of their conformity in both antennae.

This species is recognized at once by the coloration. The subgenus *Metacidotes* comprises four species at present (SFORZI & BARTOLOZZI, 2004) and the present new species can be distinguished by the characters in the following key (modified after DAMOISEAU (1965) and MORIMOTO (1982)).

- 1 (2) Elytra with second intervals interrupted in the median third. Zaire and Congo.
..... *Callipareius (Metacidotes) pulvifrons* (SCHEDL, 1961)
- 2 (1) Elytra with entire second intervals.
- 3 (8) Tarsi with first and often second segments strongly compressed, dorsal contour off first segment angled near base and rapidly inclined towards base when viewed laterally.
- 4 (5) Fore tibiae triangularly expanded internally behind the middle. Vietnam.
..... *Callipareius (Metacidotes) projectus* DAMOISEAU, 1961
- 5 (4) Fore tibiae triangularly expanded internally at about a third from apex.
- 6 (7) Tarsi with first segment strongly compressed, second segment small, hardly compressed. Violet black. Tonkin.
..... *Callipareius (Metacidotes) ponderosus* (KLEINE, 1941)
- 7 (6) Tarsi with first and second segments strongly compressed, latter much wider than long in latero-ventral view. Brownish black to black. Japan and Taiwan.
..... *Callipareius (Metacidotes) kojimai* MORIMOTO, 1982
- 8 (3) Tarsi with first segment slightly compressed, its dorsal contour rounded in lateral aspect, second segment subglobular. Reddish brown, with concolorously blackish brown elytra and venter. Japan.
..... *Callipareius (Metacidotes) nigripennis* sp. nov.



Figs. 1–12. External structures. — 1 & 2, *Cobalocephalus mizobei* MORIMOTO, ♀. 1, Head and prothorax, dorsal; 2, head and apical part of prothorax, lateral. — 3–8, *Callipareius (Metacidotes) nigripennis* sp. nov., holotype ♀. 3, Head and apical part of prothorax, dorsal; 4, ditto, lateral; 5, fore tibia and tarsi, lateral; 6, apical part of fore tibia and tarsi, dorsal; 7, hind tarsi, lateral; 8, antennae (a: left, b: right). — 9–12, *Mesoderes bimaculatus* sp. nov. 9, Head and prothorax, holotype ♂, dorsal; 10, head and prothorax, paratype ♂ from Nara Pref., dorsal; 11, ditto, lateral; 12, right antenna. Scale bar: 1.0 mm for 1 & 2; 0.5 mm for 3–12.

Mesoderes bimaculatus sp. nov.

(Figs. 9–12, 14 & 15)

Description. Reddish brown, eyes black, elytra with a pair of blackish spots on second to fifth intervals at middle, often brownish in apical area on declivity; scaling grayish yellow, scales oblong on head and metarostrum, finely setaceous on prostrum, antennae and legs, setaceous on pronotum, much longer and suberect on alternate intervals of elytra.

Head shiny, broader than long, strongly constricted a little behind eyes, bulged dorsally, postocular sides roundly narrowed to constriction, half as long as eye in dorsal aspect, vertex on constricted margin weakly prominent subconically on each side at middle, forehead a little narrower than base of rostrum; neck dilated basally, smooth, impunctate; dorsal margin depressed between anterior margin of eyes to side base of rostrum in U-shape; eyes large, hemispherical, convex laterally; rostrum about as long as head, rather strongly bent at middle, metarostrum tapered anteriorly, then dilated roundly in mesorostrum, and dilated to apex in prostrum, meso- and metarostrum with a median sulcus and fairly large punctures; antennae with relative length excepting neck (width) from first segment of funicle to club as 4.4 (4.0) : 3.8 (3.9) : 2.0 (3.8) : 2.0 (4.0) : 2.0 (5.0) : 2.0 (4.8) : 2.0 (5.0) : 4.0 (7.0) : 5.0 (7.9) : 10.0 (7.0), club flattened; underside of head and rostrum with three pairs of spines, basal one below eyes small, median one at base of metarostrum large and sharp, and apical one under prostrum robust, latero-basal corners of hypostomal process tuberculate.

Prothorax matt, barrel-shaped, 1.3–1.4 times as long as broad, about 1.3 times as broad at base as anterior margin, broadest at middle, bulged dorsally, highest at a third from base in lateral aspect, sparsely provided with fine punctures, often with a trace of median fine line behind middle.

Elytra 2.1 times as long as broad, twice as long as and about 1.3 times as broad as pronotum, faintly rounded from humeral angle to a third from apex, broadly sinuate on side margins for receiving hind femora when rested; striae regular; intervals flat, second, fourth and seventh intervals narrow, each with spaced fine punctures, odd-numbered intervals broader, each with a row of setiferous and large punctures.

Legs clavate, fore tibiae weakly scooped behind apex, hind femora reaching apices of elytra, tarsi with first segment 1.5 times on fore legs, 2.0 times on mid and hind legs as long as second.

Underside with prosternum smooth, almost flat, weakly raised on sides along pleuro-sternal sutures, weakly and triangularly tuberculate at hind corners, weakly depressed in middle; mesosternum with scattered small punctures; venter with fine punctures.

Sexual differences slight, rostrum faintly slenderer in female; first and second ventrites shallowly depressed on middle in male, but almost flat in female; fifth ventrite truncate at apex in male, but slightly arcuate caudally in female.

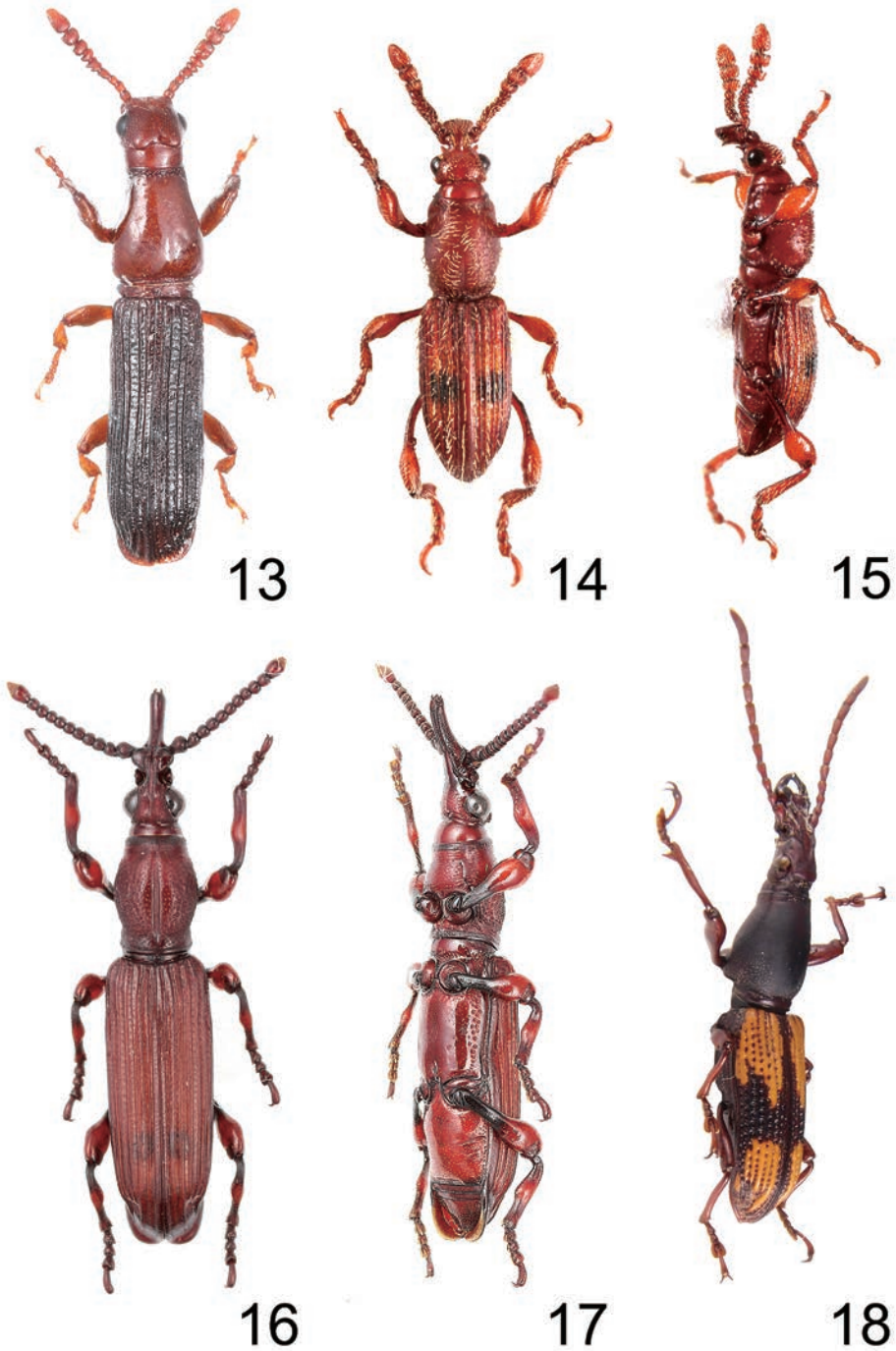
Intraspecific variation: Pronotum of the part of paratypes (Fig. 10; Nara Pref.) more globular than that of the holotype (Fig. 9; Mie Pref.).

Body length: 2.7–2.8 mm (excluding rostrum), breadth: 0.7 mm.

Type material. Holotype: ♂ (ELKU; Type No. 3465), Gochi, Isobe-chô, Shima City, Mie Pref., 1.VI.2013, K. AKITA leg. Paratypes: 1 ♀, same data as the holotype (KUM). 1 ♂ 1 ♀, same data as the holotype (KAC). 1 ♂, Mt. Kasuga-yama primary forest (in Nara-kôen Park: the specimens collected under the permission from Nara-kôen Park Office of Nara Prefecture), Nara City, Nara Pref., 16.VI.2014, Y. OGATA leg. (KUM). 1 ♀, same locality, 24.VI.2014, Y. OGATA leg. (KUM). 2 ♂ 1 ♀, Kitagawa-dam, Ume, Saeki City, Ôita Pref., 11.VI.2012, Y. TSUTSUMIUCHI leg. (KUM).

Distribution. Japan (Honshu, Kyushu).

Etymology. Named after the elytral markings.



Figs. 13–18. Habitus photographs. — 13, *Callipareius (Metacidotes) nigripennis* sp. nov., holotype ♀, dorsal; 14, *Mesoderes bimaculatus* sp. nov., holotype ♂, dorsal; 15, ditto, paratype ♀, lateral; 16, *Cobalocephalus mizobei* MORIMOTO, ♀, dorsal; 17, ditto, latero-ventral; 18, *Baryrhynchus yaeyamensis* MORIMOTO, ♂, dorso-lateral.

Biology. Three weevils were captured by Mr. TSUTSUMIUCHI on dead stem of *Quercus sessilifolia* BLUME (Tsukubane-gashi in Japanese).

Note. The genus *Mesoderes* SENNA, 1898 contains eight species in the world (SFORZI & BARTOLOZZI, 2004), but this new species can be clearly distinguished from most congeners by the following points: 1) Reddish brown with a pair of black spots on elytra; 2) scaling of head oblong on dorsum in contrast to setaceous on underside; 3) head and rostrum with three pairs of spines on underside in both sexes; and 4) elytra with entire second intervals (cf. KLEINE, 1923 a, b; DAMOISEAU, 1967, 1989; MORIMOTO & KOJIMA, 2005; ZIMMERMAN, 1994). On the other hands, this new species is similar to *M. boettcheri* (KLEINE, 1925) from Mindanao Is., the Philippines, in the dorsal markings of the elytra and vestiture of head, but can be distinguished from the latter by the following features: 1) Body length is smaller than 3.0 mm; 2) antennal club is not expanded distally; and 3) pronotum matt, convex dorsally and barrel-shaped.

Cobalocephalus mizobei MORIMOTO, 2009

(Figs. 1, 2, 16 & 17)

Cobalocephalus mizobei MORIMOTO, 2009: 287 (♂; Iriomote-jima Is.); MARUYAMA, 2013: 43 (♂ photo; Iriomote-jima Is.); IJIMA, 2016: 54 (♀ photo; Iriomote-jima Is.).

Description of female. Chocolate brown, swollen parts of femora and median parts of tibiae reddish brown.

Head transverse, side margins behind eyes to constriction about half as long as neck, with a broad and deep median sulcus continuous from mesorostrum to vertex, this sulcus open posteriorly and shortly divergent to constriction, with a trace of transverse depression across sulcus between eyes in middle and obliquely extended anteriorly, dorsum very sparsely provided with fine punctures and minute setae; eyes large, well convex laterally; pronotum cylindrical, upturned, weakly punctured; mesorostrum well expanded laterally, as broad as metarostrum which subparallel-sided in dorsal aspect; underside not compressed, with a pair of sulci from metarostrum to apex, flat between them; antennae with first and second segments asymmetrical, relative length (breadth) excluding neck of every segment from first as 21 (16) : 12 (12) : 10 (12) : 9 (12) : 9 (12) : 8.5 (11) : 8 (11) : 8 (11) : 9 (12) : 9 (12) : 25 (14), club broadest at two-thirds from base.

Pronotum broadest behind middle, barrel-shaped, shallowly constricted in front of base, median sulcus deep, but not reaching basal and apical margins, punctures reticulate on sides, becoming sparser and smaller medially and anteriorly, and very fine on anterior area, very shallow on basal collar.

Elytra as in male, apices separately rounded and expanded, smooth on expanded area except for first, third and seventh intervals which remain as continuous short costae.

Body length: large ♀ 11.9 mm, small ♀ 6.4 mm (including rostrum), large ♀ 10.0 mm, small ♀ 5.2 mm (excluding rostrum); maximum breadth of elytra: large ♀ 2.3 mm, small ♀ 1.2 mm.

Comparison with *C. gyotokui*. The female of *Cobalocephalus mizobei* can be discriminate from *C. gyotokui* (NAKANE, 1963) by the following points (characters of *C. gyotokui* in parentheses): 1) Metarostrum almost parallel-sided on basal half in dorsal aspect (broadest at base), and as broad as mesorostrum (narrower than mesorostrum); 2) tibiae slenderer, bisinuate internally, broadest behind middle in all legs (broader, weakly bisinuate internally, fore tibiae foliaceous, marginate with sulcus); 3) antennae from fourth to eighth segment each 1.3–1.4 times as broad as long excepting neck (twice as broad as long); 4) antennal club broadest at a third from apex (broadest at a third from base).

Specimens examined. 1 ♀, Ohtomi-rindo, Iriomote-jima Is., Okinawa Pref., 5.VI.2016, K. IJIMA leg. (KIC). 1 ♀, Mahreh River, Funaura, Iriomote-jima Is., Okinawa Pref., 31.VII.2003, M. SHOYAMA

leg. (KUM).

Notes. This weevil is apparently one of the rare species and only a few specimens have been captured by light traps on Iriomote-jima Is. in the Ryukyus since the original description upon a male. Female is newly described in detail through the courtesy of Mr. Kazuhiko IJIMA, upon the same specimen who printed the record in 2016 in *Gekkan-Mushi*, a monthly journal of Entomology.

Baryrhynchus yaeyamensis MORIMOTO, 1979

(Fig. 18)

Baryrhynchus yaeyamensis MORIMOTO, 1979: 27 (Ishigaki-jima Is. and Iriomote-jima Is.); MORIMOTO, 1984: 265, pl. 52, fig. 3; SFORZI & BARTOLOZZI, 2004: 178 (cataloged); MORIMOTO, 2008: 14, figs. 56–57.

Variation in dorsal markings. Marking pattern of the weevils in *Baryrhynchus* is fairly stable within a limited range of small variation (KLEINE, 1916, 1920), but an extraordinary variant were found in this species by Mr. R. YAKITA on Ishigaki-jima Is. as described and photographed below:

Normal markings: Elytra blackish brown to black, with yellowish orange to brownish patches, the basal patches on third and fifth intervals, the latter small and an often obsolete; antemedian patches on fourth, fifth to sixth, eighth to ninth and frequently on seventh intervals, the patch on fourth interval often extended over third interval; the postmedian patches on third to sixth intervals and often accompanying small patch on second and seventh intervals; the subapical patches on third and ninth intervals and a small patch at joint of fourth and sixth intervals.

Variant: Elytra with basal and antemedian patches jointed together to form large basal patches from second to ninth intervals, those on second interval shortly distant from base and also on ninth short widely leaving from base, and the patches extended posteriorly on third and fourth intervals to normal position, postmedian and subapical patches also joined to form large patches from third to seventh intervals.

As a consequence, elytra bear two pairs of large patches just like the case in *Baryrhynchus tokarenensis* OHBAYASHI & SATÔ, 1966, which is endemic to Akuseki-jima Is. and Takara-jima Is. in the Tokara Isls. and is very similar to *B. poweri* ROELOFS in every respect but for markings (MORIMOTO, 2008).

Specimen examined. 1 ♂, Nosoko, Ishigaki-jima Is., Okinawa Pref., 18.V.2008, R. YAKITA leg. (KUM).

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要 約

森本 桂・辻 尚道: 日本産ミツギリゾウムシ数種について (鞘翅目ミツギリゾウムシ科)。———日本産ミツギリゾウムシ科に新たに2種を追加した。 *Callipareius (Metacidotes) nigripennis* sp. nov. はその特徴的な色彩から同亜属他種から容易に識別される。 *Mesoderes bimaculatus* sp. nov. は上翅の色彩や頭部表面の特徴

が *M. boettcheri* (KLEINE, 1925) によく似るが、体長の違いや、触角球桿部及び前胸背板の形態により識別できる。また、キバナガオニミツギリゾウムシ *Cobalocephalus mizobei* MORIMOTO, 2009 は♂のみで記載された種であるが、近年♀個体の採集記録が報告され(飯島, 2016)、その個体と追加で採集された個体を基に♀の再記載を行った。近縁のアカオニミツギリゾウムシ *C. gyotokui* (NAKANE, 1963) の♀とは、吻中部、触角第4-8節の各節の長さ、触角球桿部及び脛節の特徴により区別される。また、ヤエヤマミツギリゾウムシ *Baryrhynchus yaeyamensis* MORIMOTO, 1979 の顕著な斑紋変異が確認されたので、併せて報告した。この斑紋変異は、トカラ列島の悪石島と宝島だけに分布が局限されるヨツモンミツギリゾウムシ *B. tokarensis* OHBAYASHI & SATO, 1966 の斑紋と極めてよく類似する。なお、ヨツモンミツギリゾウムシの上翅斑紋以外の特徴は日本周辺に広く分布するミツギリゾウムシ *B. poweri* ROELOFS, 1879 と酷似している。

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