

Three New Carabid Beetles from the Ogasawara Islands

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Abstract Three new carabid beetles, *Colpodes yamaguchii* sp. nov., *C. boninensis* sp. nov. and *Chlaenius ikedai* sp. nov., are described from Is. Haha-jima of the Ogasawara Islands, Japan. All of them seem endemic to the island group.

The carabid fauna of the Ogasawara Islands has hitherto been poorly known. In this paper, three new species belonging to the genera *Colpodes* and *Chlaenius* are described from the Island of Haha-jima of that island group. Most examples examined were supplied by Professor Kiyohiko IKEDA of Yamanashi University and Mr. Susumu YAMAGUCHI of Tokyo, to whom I wish to express my sincere thanks. I am grateful to Dr. Shun-Ichi UÉNO of the National Science Museum, Tokyo, for his advice and for affording me facilities to examine the specimens under his care.

The abbreviations used herein are the same as those explained in other papers of mine. The holotype of each new species is preserved in the collection of the Department of Zoology, National Science Museum (Nat. Hist.), Tokyo.

Colpodes yamaguchii sp. nov.

[Japanese name: Hahajima-mori-hiratagomimushi]

(Figs. 1–2)

Description. Male. Length (measured from apex of labrum to apices of elytra) 10.3 mm. Width 4.0 mm. *Synuchus*-like in general appearance, dark reddish brown, shiny, without metallic lustre, head and elytra somewhat darker than pronotum, appendages and venter light brown.

Head moderately convex; eyes convex; temporae oblique, a half as long as eyes; anterior supraorbital setae wanting, posterior ones at the post-eye level; frontal furrows shallow, divergent posteriad; mandibles relatively long; labrum and clypeus almost straight at apices; clypeal suture very fine; surface smooth, microsculpture scarcely visible, isodiametric; mentum tooth simple, though tumid ventrad on each side; terminal segment of maxillary palpus cylindrical, slightly tumid at middle; antennae long, filiform, extending to the middle of elytra, segment 4 the longest.

Pronotum subhexagonal, moderately convex, widest at the middle, 1.4 times as wide as head (PW/HW 1.39), 1.2 times as wide as long (PW/PL 1.19); lateral margins arcuate at the widest level, thence almost straightly convergent both anteriad and posteriad; lateral reflexed margins becoming wider towards base; anterior marginal

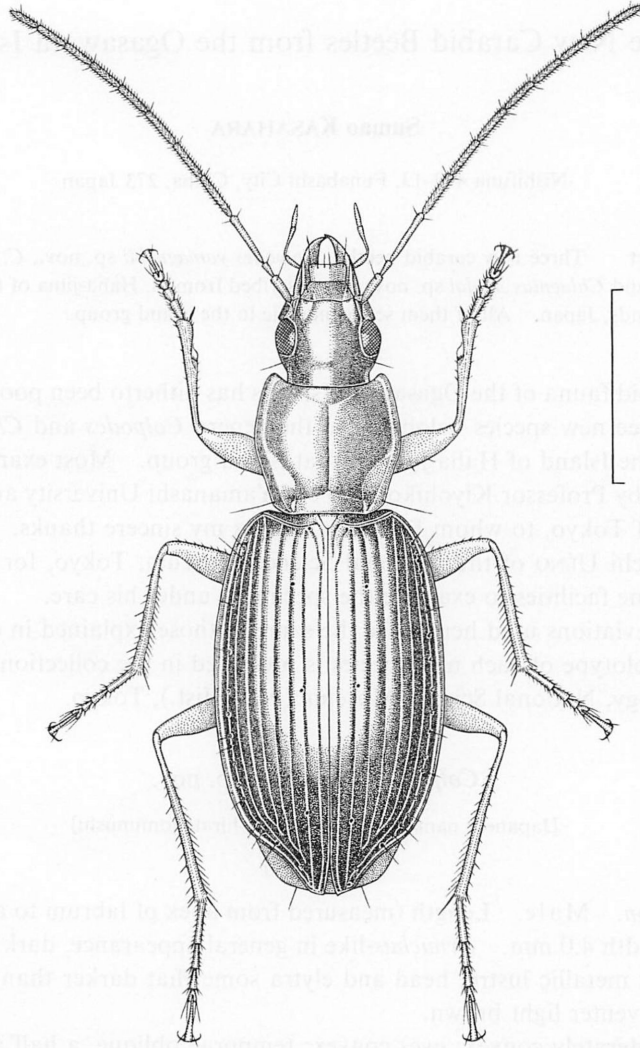


Fig. 1. *Colpodes yamaguchii* sp. nov., ♂, from Is. Haha-jima of the Ogasawara Islands (scale 3 mm).

setae wanting; apical margin gently emarginate, finely bordered, apical angles distinctly produced, though rounded at the tips; basal margin almost as wide as the apical, finely bordered, oblique on each side, basal angles very obtuse and rounded; median line distinct, though rather fine; basal transverse depression more distinct than the apical transverse one; basal foveae deep at base, anterior areas of foveae depressed along marginal reflexions; surface smooth, though transverse wrinkles are slightly visible on the disc; microsculpture visible, formed by fine transverse meshes.

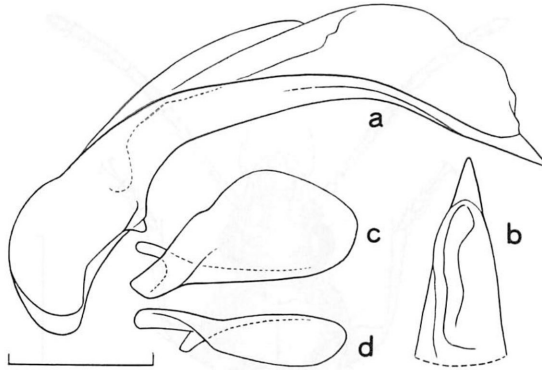


Fig. 2. Male genitalia of *Colpodes yamaguchii* sp. nov., from Is. Haha-jima of the Ogasawara Islands; a, aedeagus in left lateral view; b, apical part of aedeagus in dorsal view; c, left paramere; d, right paramere (scale 0.5 mm).

Elytra oblong-ovate, moderately convex, widest at about middle, 1.6 times as wide as pronotum (EW/PW 1.60), twice as long again as pronotum (EL/PL 3.05), ca. 1.6 times as long as wide (EL/EW 1.58); basal border complete, gently curved, obliquely extending to shoulder, and meeting with the lateral border at an obtuse angle; shoulders rounded, more or less produced anteriorly; lateral margins gently arcuate from behind shoulders to apical fifth, thence roundly and strongly convergent posteriorly, and forming preapical emarginations, apices narrowly and obliquely truncate; sutural angles distinct, minutely dentate; scutellar striole connecting with basal border, lying on interval 1; striae smooth, though weakly notched at the bottoms; intervals almost flat; interval 3 with three dorsal pores, anterior one adjoining stria 3 at basal fifth, remainings adjoining stria 2 at about middle and apical fifth, respectively; microsculpture distinct, formed by transverse meshes. Wings reduced.

Ventral surface smooth except for mesepisterna, which are distinctly but sparsely punctate; prosternal process shallowly furrowed at middle; terminal sternite with a pair of setae at the apex. Legs slender; meso- and metatarsal segments 1–4 distinctly bisulcate; segment 4 deeply emarginate at apex, outer lobe longer than inner one; claw segments glabrous beneath.

Aedeagus arcuate, gently bent downwards at apical third, thence straightly extending to apex in lateral view; apical lobe acute triangular, being pointed at the tip.

Female unknown.

Type specimen. Holotype: ♂, Is. Haha-jima, Ogasawara Islands, 10–VI–1986, S. YAMAGUCHI leg.

Notes. The present new species is peculiar in lacking anterior setae on both the head and pronotum. In general appearance, it resembles some members of the genus *Altagonum* DARLINGTON from New Guinea and Micronesia. They always lack anterior pronotal setae, but the anterior supraorbital one normally exists on the head.

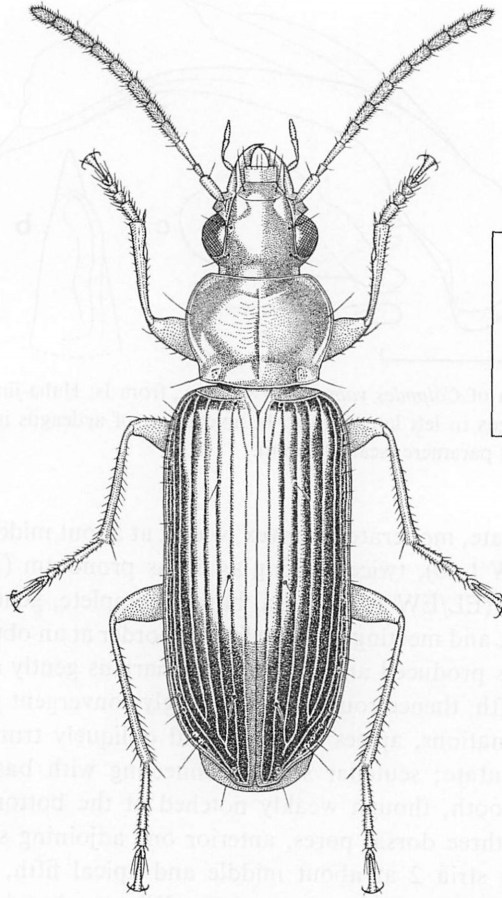


Fig. 3. *Colpodes boninensis* sp. nov., ♂, from Is. Haha-jima of the Ogasawara Islands (scale 3 mm).

The specific name is given after Mr. Susumu YAMAGUCHI, who is one of the best photographers and a good friend of mine.

Colpodes boninensis sp. nov.

[Japanese name: Ogasawara-hoso-mori-hiratagomimushi]

(Figs. 3-4)

Description. Length (measured as in the preceding species) 8.5-9.3 mm. Width 2.7-3.0 mm. Elongate, shiny, head and pronotum reddish brown, elytra dark metallic green except for base, lateral margins and sutural part, which are reddish brown; appendages and venter light brown.

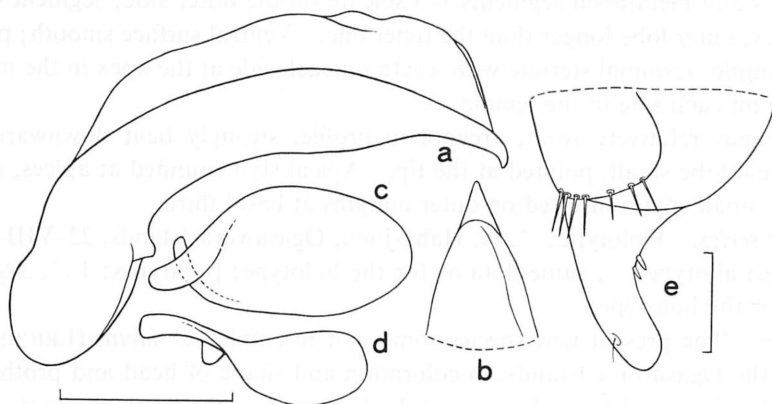


Fig. 4. Genitalia of *Colpodes boninensis* sp. nov., from Is. Haha-jima of the Ogasawara Islands: a, aedeagus in left lateral view; b, apical part of aedeagus in dorsal view; c, left paramere; d, right paramere; e, left apical stylus (scales, a–d 0.5 mm; e, 0.25 mm).

Head convex; eyes large, hemispherical; temporae very short, oblique; labrum slightly emarginate at apex; clypeal suture fine; frontal furrows shallow, divergent posteriorly; surface smooth, microsculpture scarcely visible; mentum tooth simple; terminal segment of maxillary palpus cylindrical, weakly tumid at middle; antennae rather thick, extending to behind shoulders, scape and segment 3 equally the longest.

Pronotum transverse, convex, widest at about middle, ca. 1.2 times as wide as head (PW/HW 1.17–1.25, mean 1.20), ca. 1.3 times as wide as long (PW/PL 1.27–1.33, mean 1.30); lateral margins gently arcuate at the widest part, thence almost straightly convergent anteriorly and posteriorly, slightly sinuate before base; lateral reflexed borders narrow; apical margin almost straight, finely bordered, apical angles rounded; basal margin wider than the apical, finely bordered, sinuate on each side; basal angles obtuse, though distinct; median line distinct but fine; both apical and basal transverse depressions distinct, though the latter often becomes fainter; basal foveae rather deep, roundish; surface smooth, though transverse wrinkles are slightly visible on the disc; microsculpture hardly visible.

Elytra oblong, parallel-sided, convex, ca. 1.4 times as wide as pronotum (EW/PW 1.35–1.40, mean 1.38), ca. 3.5 times as long as pronotum (EL/PL 3.45–3.53, mean 3.48), about twice as long as wide (EL/EW 1.90–1.97, mean 1.95); basal border complete, gently curved, rounded at shoulder; lateral margins slightly incurved before middle; preapical emarginations shallow; apices narrowly truncate, sutural angles rounded; scutellar striole connecting with basal border; striae smooth, though often partially and minutely punctate or notched; intervals almost flat, though intervals 5 and 6 are depressed along stria 6 behind shoulders; interval 3 with three dorsal pores, anterior one adjoining stria 3 at basal fifth, remainings adjoining stria 2 at about middle and apical fifth, respectively; microsculpture formed by transverse meshes. Wings full.

Meso- and metatarsal segments 1–3 sulcate on the outer side; segment 4 bilobed at the apex, outer lobe longer than the inner one. Ventral surface smooth; prosternal process simple; terminal sternite with a seta on each side at the apex in the male, with two setae on each side in the female.

Aedeagus relatively stout, arcuate in profile, strongly bent downwards at the apex; apical lobe small, pointed at the tip. Apical styli rounded at apices, each with two, very small spines inserted on outer margins at basal third.

Type series. Holotype: ♂, Is. Haha-jima, Ogasawara Islands, 22–VIII–1978, K. IKEDA leg.; allotype: ♀, same data as for the holotype; paratypes: 1 ♂, 3 ♀♀, same data as for the holotype.

Notes. The present new species somewhat resembles *C. laetus* (ERICHSON), also found in the Ogasawara Islands, in coloration and shape of head and prothorax, but is easily discriminated from that species by having shorter and thicker antennae, and narrower parallel-sided elytra.

Chlaenius ikedai sp. nov.

[Japanese name: Ogasawara-aogomimushi]

(Figs. 5–6)

Description. Female. Length (measured as in the precedings) 10.3 mm. Width 4.0 mm. Black, head greenish cupreous, pronotum weakly cupreous, labrum, mandibles and lateral margins of pronotum reddish brown, elytral spots and appendages brownish yellow.

Head moderately convex, shiny, densely and irregularly punctate, vertex with transverse wrinkles, supraorbital areas with distinctly impressed longitudinal wrinkles; eyes well convex; temporae very short, oblique; mandibles stout, hooked at apices; labrum almost straight at apex; frontal depressions very shallow, though densely punctate; terminal segment of maxillary palpus simple, truncate at the apex; antennae relatively short, extending to behind shoulders; segment 3 sparsely ciliated.

Pronotum transverse, gently convex, less shiny, widest at the middle, densely covered with large strong punctures, a half wider than head (PW/HW 1.54), ca. 1.4 times as wide as long (PW/PL 1.43); lateral margins evenly well arcuate, though almost straight before base; lateral borders narrow, becoming wider towards base; apical margin slightly emarginate, apical angles rounded; basal margin wider than the apical, slightly emarginate at the median part, oblique on each side, basal angles obtuse, rounded; median line distinct; both apical and basal transverse depressions obsolete; basal foveae shallow.

Elytra oblong, moderately convex, mat, widest at about middle, ca. 1.3 times as wide as pronotum (EW/PW 1.27), about twice as long again as pronotum (EL/PL 2.91), 1.6 times as long as wide (EL/EW 1.60); basal border complete, distinctly curved before the base of interval 5, thence roundly connected with lateral border at shoulder; lateral margins almost parallel at middle, preapical emarginations faint, apices rounded;

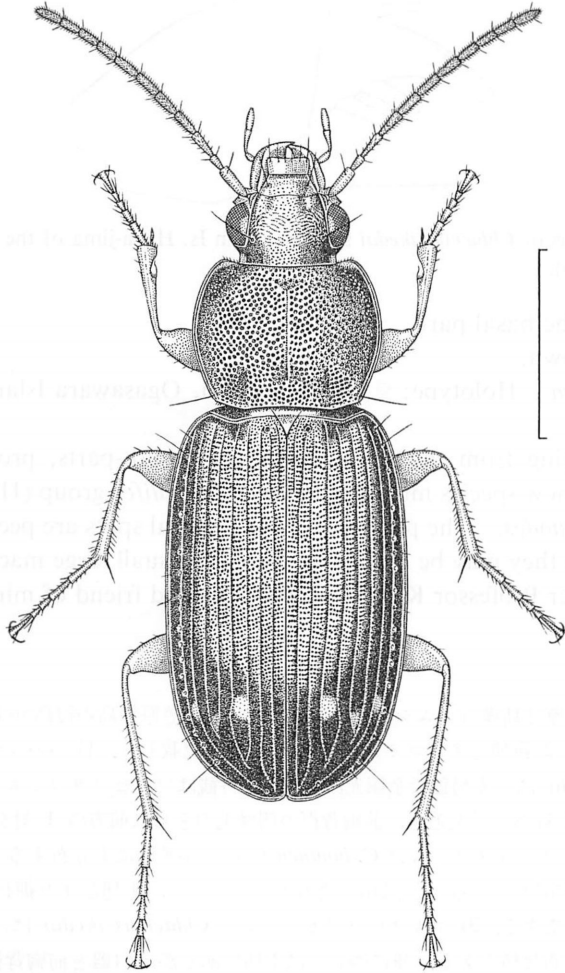


Fig. 5. *Chlaenius ikedai* sp. nov., ♀, from Is. Haha-jima of the Ogasawara Islands (scale 3 mm).

striae clearly impressed throughout, notched at the bottoms; intervals almost flat, densely covered with ciliate punctures, most of which tend to range in transverse or oblique lines; microsculpture distinctly impressed, formed by isodiametric meshes; interval 4 with a small spot at apical fifth, very obscure spots on intervals 6 and 8 at the preapical parts. Wings full.

Ventral surface densely and strongly punctate on fore-body; prosternal process bordered with punctures; sternites sparsely and minutely punctate on the median part, though densely punctate at the apical part of terminal sternite, which is emarginate and bears two setae on each side at the apex. Apical stylus strongly tapered towards apex, with a spine on the inner margin at basal fourth, and with two thick spines on the

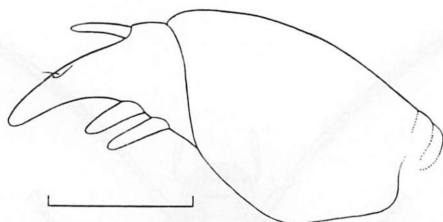


Fig. 6. Left stylus of *Chlaenius ikedai* sp. nov., from Is. Haha-jima of the Ogasawara Islands (scale 0.2 mm).

outer margin at the basal part.

Male unknown.

Type specimen. Holotype: ♀, Is. Haha-jima, Ogasawara Islands, 22-VIII-1978, K. IKEDA leg.

Notes. Judging from the configuration of mouth-parts, prothorax and apical styli, the present new species must belong to the *virgulifer* group (HABU, 1987), that is, subgenus *Pachydinodes*. The presence of small elytral spots are peculiar for a member of this group, but they may be the remnants of the usual large maculae. The specific name is given after Professor Kiyohiko IKEDA, a good friend of mine.

要 約

笠原須磨生：小笠原諸島産ゴミムシ類の3新種。——小笠原諸島の母島から、オサムシ科のモリヒラタゴミムシ属の2新種とアオゴミムシ属の1新種を記載した。1) ハハジマモリヒラタゴミムシ *Colpodes yamaguchii* は、赤褐色で金属光沢を欠き、外観はツヤヒラタゴミムシ属 *Synuchus* の種に似ている。通常は2対ある眼上毛と、前胸背板の側縁毛のともに前方の1対を欠く点で特異である。2) オガサワラホソモリヒラタゴミムシ *C. boninensis* は、小笠原にも分布する *C. laetus* (ERICHSON) に色彩や一部の形態が似ているが、触角がより太くて短かく、上翅がより細長くて側縁が平行状で、両種は一見して識別できる。3) オガサワラアオゴミムシ *Chlaenius ikedai* は、暗銅色で翅端部に小さい斑点をもつ特徴的な種である。雄については不明であるが、口器と前胸背板や雌交尾器の形態的特徴からみて、明らかにアトワアオゴミムシ群 *virgulifer*-group (HABU, 1987)、すなわち *Pachydinodes* 亜属に属するものである。これらの3種は、いずれも島嶼化の進んだ小笠原の固有種と考えられる。

References

- DARLINGTON, JR., P. J., 1952. The carabid beetles of New Guinea, part 2. The Agonini. *Bull. Mus. comp. Zool., Harvard*, **107**: 88-252, pls. 1-4.
- 1970. Coleoptera: Carabidae including Cicindelinae. *In: Insects of Micronesia*. iii+49 pp. B. P. Bishop Museum, Honolulu.
- HABU, A., 1987. Classification of the Callistini of Japan (Coleoptera, Carabidae). *Ent. Rev. Japan, Osaka*, **42**: 1-36.
- LOUWERENS, C. J., 1953. The Oriental species of *Colpodes* MACL. (Col. Carabidae). *Treubia, Bogor*, **22**: 75-151.