

Taxonomic Notes on the Subfamily Coloninae (Coleoptera, Leiodidae) from Honshu, Japan

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Abstract. Two new species, *Colon (Colon) toyoshimai* HOSHINA, sp. nov. and *C. (Myloechus) hanbei* HOSHINA, sp. nov., are described from Honshu, Japan. *C. (C.) toyoshimai* HOSHINA, sp. nov. is a second species of the subgenus *Colon* in East Asia. *C. (Tricolon) enomotoi* HOSHINA, 2009 is recorded for the first time from Honshu. As a result of this study, the number of Japanese species of Coloninae becomes seventeen.

Introduction

The subfamily Coloninae of the family Leiodidae is composed of two genera, *Colon* HERBST, 1797 and *Colonellus* SZYMCZAKOWSKI, 1964, and includes about 140 species worldwide (SZYMCZAKOWSKI, 1964; PECK & STEPHAN, 1996; PECK, 1997; NEWTON, 1998). In Japan, HISAMATSU (1970) was first to record Coloninae, with a description of a new species, *Colon (Myloechus) japonicum*. Later, NAKANE (1982), HISAMATSU (1985), NISHIKAWA (1988), HOSHINA (2003), and PARK *et al.* (2005) added a total of seven species of the subgenus *Myloechus* of the genus *Colon* to the Japanese fauna. After that, HOSHINA (2009) revised all species of Japanese and Taiwanese Coloninae and gave a key to species. Furthermore, HOSHINA and FUKUZAWA (2010) described two new Japanese species. As a result of those works, fifteen species of *Colon* have been known to occur in Japan.

Recently, I had an opportunity to examine six specimens of Coloninae collected from Gifu Pref., Honshu, Japan. After my careful examinations, it has become clear that those specimens include two new species and one known species, *C. (Tricolon) enomotoi* HOSHINA, 2009, which has been hitherto recorded from only Hokkaido. In this paper, I describe two new species and record *C. (Tricolon) enomotoi* for the first time from Honshu.

The holotypes designated in this study are deposited in the collections of the Museum of Nature and Human Activities, Hyōgo (MNHAH). Paratypes are preserved in the collection of Fukui University (FU). Before going further, I wish to express my cordial thanks to Mr. Kentarō TOYOSHIMA (Gifu Pref.) for his kind offer of valuable specimens.

Taxonomy

Genus *Colon* HERBST, 1797

Subgenus *Tricolon* PECK et STEPHAN, 1996

Colon (Tricolon) enomotoi HOSHINA, 2009

[Japanese name: Enomoto-higebuto-chibishide-mushi]

Colon (Tricolon) enomotoi HOSHINA, 2009, 249; HOSHINA & FUKUZAWA, 2010, 5.

Specimen examined. 1 ♂, Kurumishima, Asahi-chô, Takayama City, Gifu Pref., Honshu, Japan, 19–VII–2008, K. TOYOSHIMA leg. (FU).

Distribution. Japan: Hokkaido and Honshu (Gifu Pref.). New to Honshu.

Note. *C. (T.) enomotoi* HOSHINA, 2009 is recorded for the first time from Honshu in this study.

Subgenus *Colon* HERBST, 1797

Colon (Colon) toyoshimai HOSHINA, sp. nov.

[Japanese name: Hida-higebuto-chibishide-mushi]

(Figs. 2, 5, 7, 9, 11, 13, 16, 19–21)

Type series. Holotype, ♂, Kurumishima, Asahi-chô, Takayama City, Gifu Pref., Honshu, Japan, 19–VII–2008, K. TOYOSHIMA leg. (MNHAH).

Diagnosis. Body length 3.3 mm. Dorsum blackish. Dorsum almost smooth. Pronotum bearing setal socket punctures dense, shallow, and often connected to each other. Protarsi slender as those of other species of the subgenus *Colon*. Metafemora triangularly protuberant at about apical 1/5 of hind margin, and bearing very tiny humps at hind margins. Metatibiae feebly curved and distinctly and triangularly protuberant at about basal 1/5 of inner margin. Parameres of male genitalia bearing dense and long hairs on dorsal sides.

Measurement of holotype. Body length 3.3 mm; head 0.41 mm in length (from front margin of clypeus to base) and 0.66 mm in width; pronotum 1.0 mm in length and 1.4 mm in width; elytra 2.2 mm in length and 1.5 mm in width.

Male. Coloration. head black; labrum brown; pronotum and elytra blackish brown; legs dark reddish brown with brown tarsi; dorsal pubescence yellowish brown; mesoventrite, metaventrite, and abdominal ventrites dark brown.

Head smooth; setal socket punctures dense and minute; mentum smooth, sparsely pubescent, shallowly concave in parts, and weakly curved inwardly at apical margins (Fig. 5); antennae of holotype missing; neck minutely punctate and microreticulate.

Pronotum widest at about basal 1/4, almost smooth, and simply rounded at both basal corners (Fig. 2); setal socket punctures dense, shallow, and often connected to each other (Fig. 7).

Elytra widest at about basal 2/5 (Fig. 2) and smooth; setal socket punctures as those of pronotum.

Mesoventrite rough and almost glabrous; median carinae bearing fine and sparse pubescence, moderately elevated in lateral view (Fig. 9), and gradually divergent from base towards apex (Fig. 11); mesepisternum microreticulate and very sparsely pubescent; mesepimeron microreticulate and almost glabrous; metaventrite smooth and moderately pubescent; setal socket punctures of metaventrite

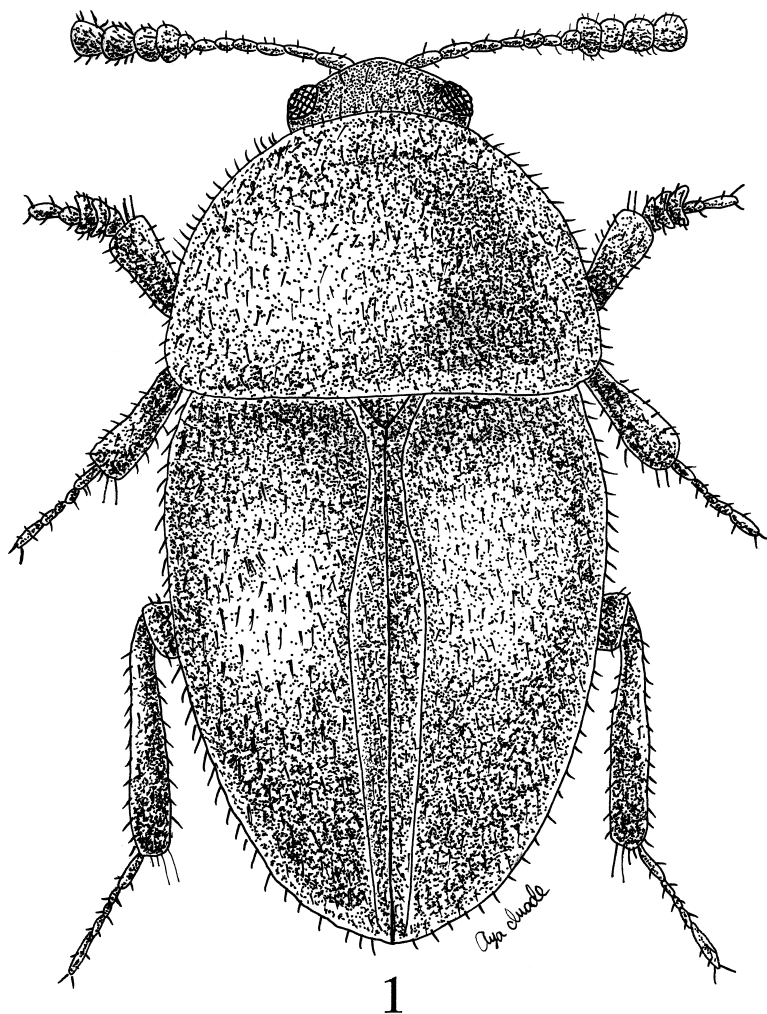
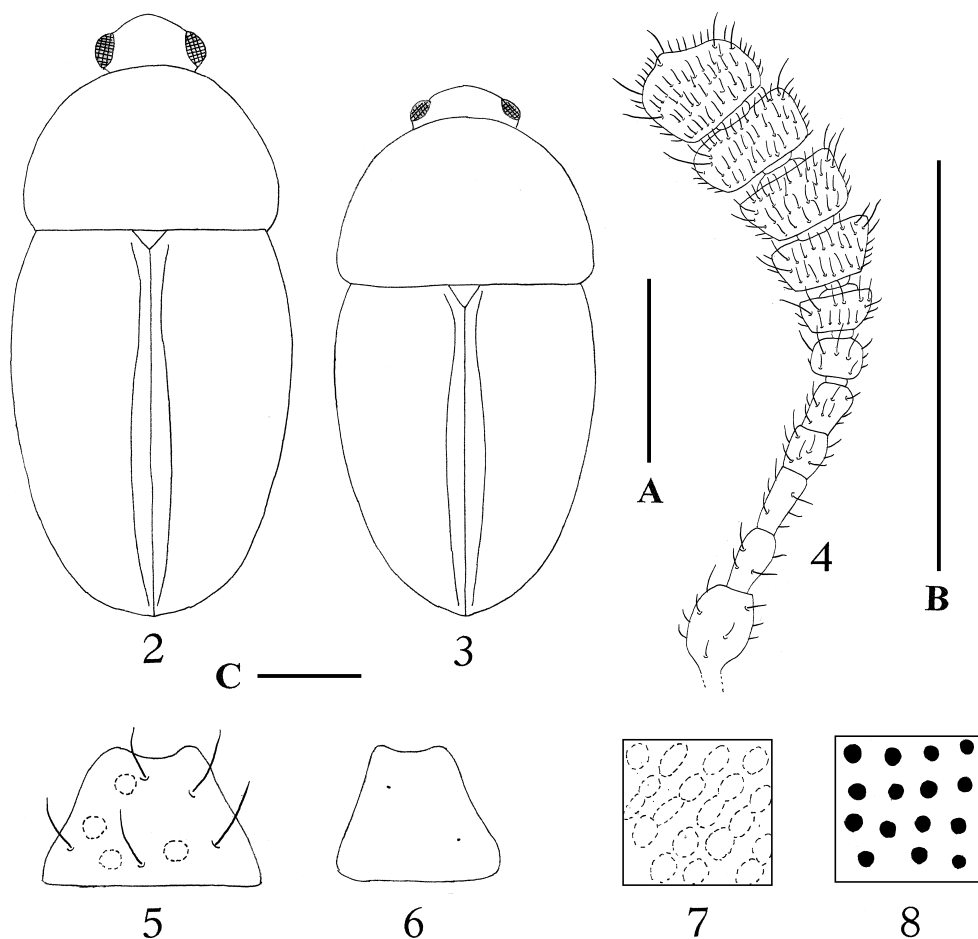


Fig. 1. Habitus of *Colon (Myloechus) hanbei* HOSHINA, sp. nov. Scale: 1 mm.

distinct (Fig. 11); pentagonal middle portion wider than long, almost smooth, flat, moderately pubescent, and with minute normal punctures and distinct setal socket punctures (Fig. 11); metepisternum smooth, moderately pubescent, and bearing minute setal socket punctures (Fig. 11).

Profemora slender and about 2.5 times as long as wide (Fig. 13); protibiae straight in general, narrowed from about basal 1/4 towards base at inner margin, and bearing minute spines at external margins (Fig. 13); protarsi slender as those of other species of the subgenus *Colon*; metafemora relatively slender, triangularly protuberant at about apical 1/5 of hind margin, and bearing very tiny humps at hind margins (Fig. 16); metatibiae feebly curved and distinctly and triangularly protuberant at about basal 1/5 of inner margin (Fig. 13).

Male genitalia relatively robust in ventral and dorsal views (Figs. 19 & 20); median lobe about 1.6 times as long as wide in ventral and dorsal views and possessing lateral stick-like sclerites less than half of length of median lobe (Figs. 19–21); parameres lacking in internal blades, bearing dense and long hairs on dorsal side (Fig. 20), about 0.60 times as long as median lobe, simply straight, and



Figs. 2, 5, 7, *Colon (Colon) toyoshimai* HOSHINA, sp. nov.; 3, 4, 6, 8, *C. (Myloechus) hanbei* HOSHINA, sp. nov.
 — 2, 3, Body; 4, antenna; 5, 6, mentum; 7, 8, punctures of pronotum. Scale A: 1 mm for Figs. 2 & 3. Scale B: 0.5 mm for Fig. 4. Scale C: 0.1 mm for Figs. 5 & 6.

rounded at apex in ventral and dorsal views, moderately curved at dorsal margins in lateral view (Fig. 21).

F e m a l e. Unknown.

Distribution. Japan: Honshu (Gifu Pref.).

Note. *Colon (Colon) toyoshimai* HOSHINA, sp. nov. is a second species of the subgenus *Colon* in East Asia. The present new species is similar to *C. (C.) yoshidai* HOSHINA, 2009, but can be separated from it by having male metafemora triangularly protuberant at about apical 1/5 of hind margin (Fig. 16) and parameres densely pubescent on dorsal sides (Fig. 20). In contrast, *C. (C.) yoshidai* has male metafemora with a lunate toothed projection at hind margins and parameres sparsely pubescent on dorsal sides.

Etymology. The specific name is dedicated to Mr. Kentarô TOYOSHIMA who provided me an opportunity to examine specimens used in this paper.

Subgenus *Myloechus* LATREILLE, 1807*Colon hachisukai* species group*Colon (Myloechus) hanbei* HOSHINA, sp. nov.

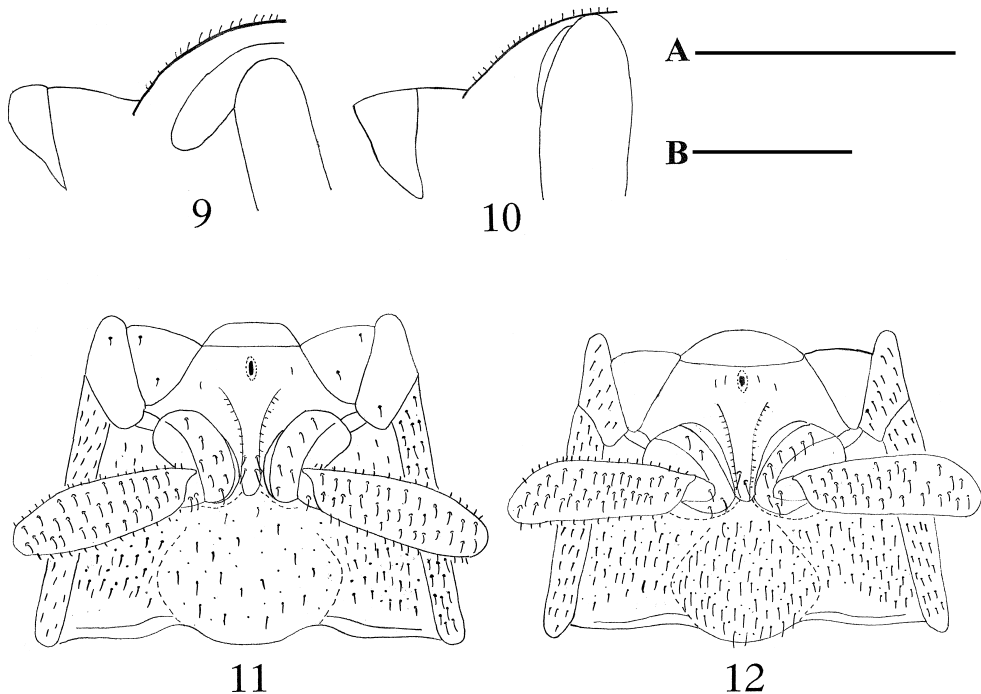
[Japanese name: Hanbê-higebuto-chibishide-mushi]

(Figs. 1, 3, 4, 6, 8, 10, 12, 14, 15, 17, 18, 22–24)

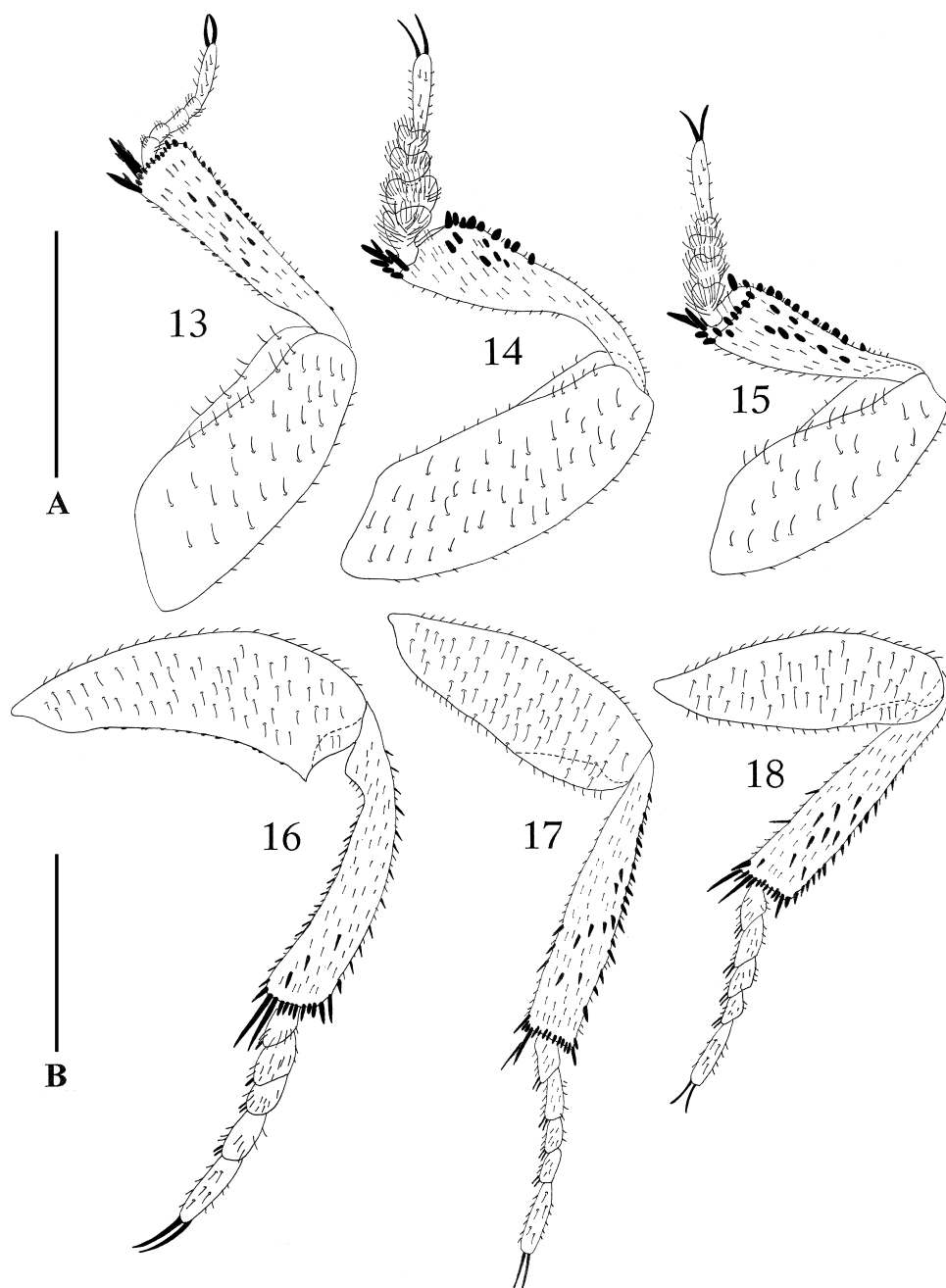
Type series. Holotype, ♂, Kurumishima, Asahi-chô, Takayama City, Gifu Pref., Honshu, Japan, 1–VIII–2010, K. TOYOSHIMA leg. (MNHAH). Paratypes, 1 ♀, 8–VII–2007, same data as the holotype except for the collecting date (FU); 1 ♀, 28–VII–2007, same data as the holotype except for the collecting date (FU); 1 ♀, 19–VII–2008, same data as the holotype except for the collecting date (FU).

Diagnosis. Body length 2.9–3.2 mm. Dorsum dark brownish. Antenna with antennomere 11 about twice as long as antennomere 10. Pronotum rounded at hind corners, relatively large, almost as wide as elytra, and strongly microreticulate. Male protibiae strongly curved at about basal 1/3 of inner margins. Male protarsi very broadly expanded at basal three tarsomeres. Female protarsi moderately broadly expanded at basal three tarsomeres. Male genitalia slender. Parameres gradually narrowed from about half towards apex in ventral and dorsal views.

Measurement of holotype. Body length 3.2 mm; head 0.36 mm in length (from front margin of clypeus to base) and 0.60 mm in width; pronotum 1.0 mm in length and 1.5 mm in width; elytra 1.9



Figs. 9, 11, *Colon (Colon) toyoshimai* HOSHINA, sp. nov.; 10, 12, *C. (Myloechus) hanbei* HOSHINA, sp. nov. — 9, 10, Mesoventrite, lateral view; 11, 12, meso- and meta-ventrites, ventral view. Scale A: 0.5 mm for Figs. 9 & 10. Scale B: 0.5 mm for Figs. 11 & 12.



Figs. 13, 16, *Colon (Colon) toyoshimai* HOSHINA, sp. nov.; 14, 15, 17, 18, *C. (Myloechus) hanbei* HOSHINA, sp. nov.
 — 13, 14, Male fore legs; 15, female fore leg; 16, 17, male hind legs; 18, female hind leg. Scale A: 0.5 mm for Figs. 13–15. Scale B: 0.5 mm for Figs. 16–18.

mm in length and 1.5 mm in width.

Male and female. Coloration. Dorsum dark brown or dark reddish brown; labrum brown; antennae brown; legs brownish; coxae, trochanters, and femora dark reddish brown; tibiae brown; tarsi light brown; dorsal pubescence golden yellowish brown; mesoventrite and metaventrite dark reddish brown; abdominal ventrites brown.

Body 2.9–3.2 mm in length and about 2.1 times as long as wide (Fig. 1).

Head about 1.7 times as wide as long, almost smooth, and about 0.36 times as long and about 0.44 times as wide as pronotum; setal socket punctures dense and larger than those of pronotum and elytra; mentum smooth, almost glabrous, very sparsely and minutely punctate, and feebly curved inwardly at apical margins (Fig. 6); antennomeres 1–5 longer than wide; remaining antennomeres wider than long; antennomere 11 robust (Fig. 4); relative lengths from antennomere 2 to 11 as follows: 1.9: 2.0: 1.3: 1.5: 1.2: 1.0: 1.5: 1.8: 1.7: 2.6; neck minutely and sparsely punctate and microreticulate.

Pronotum about 1.5 times as wide as long, widest at near base, microreticulate, not showing sexual dimorphism, rounded at hind corners (Fig. 3), and about 0.53 times as long as and almost as wide as elytra; setal socket punctures dense and minute (Fig. 8).

Elytra about 1.2 times as long as wide, widest at basal 1/4 (Fig. 3), and smooth; setal socket punctures as those of pronotum.

Mesoventrite microreticulate and very sparsely pubescent; median carinae of mesoventrite bearing fine and sparse pubescence, moderately elevated in lateral view (Fig. 10), and gradually divergent from base towards apex (Fig. 12); mesepisternum microreticulate and almost glabrous; mesepimeron finely pubescent, and with setal socket punctures very minute; metaventrite not showing clear sexual dimorphism, distinctly microreticulate, and moderately pubescent; setal socket punctures of metaventrite minute (Fig. 12); pentagonal middle portion a little wider than long, microreticulate, almost flat, densely pubescent, and with minute normal punctures and setal socket punctures (Fig. 12); metepisternum weakly microreticulate, moderately pubescent, and bearing minute setal socket punctures (Fig. 12).

Legs showing sexual dimorphism on protibiae and protarsi (Figs. 14 & 15); profemora slender and about 2.6 times as long as wide (Figs. 14 & 15); protibiae bearing minute spines at external margins (Figs. 14 & 15); metafemora almost straight at hind margins (Figs. 17 & 18); metatibiae simply slender (Figs. 17 & 18).

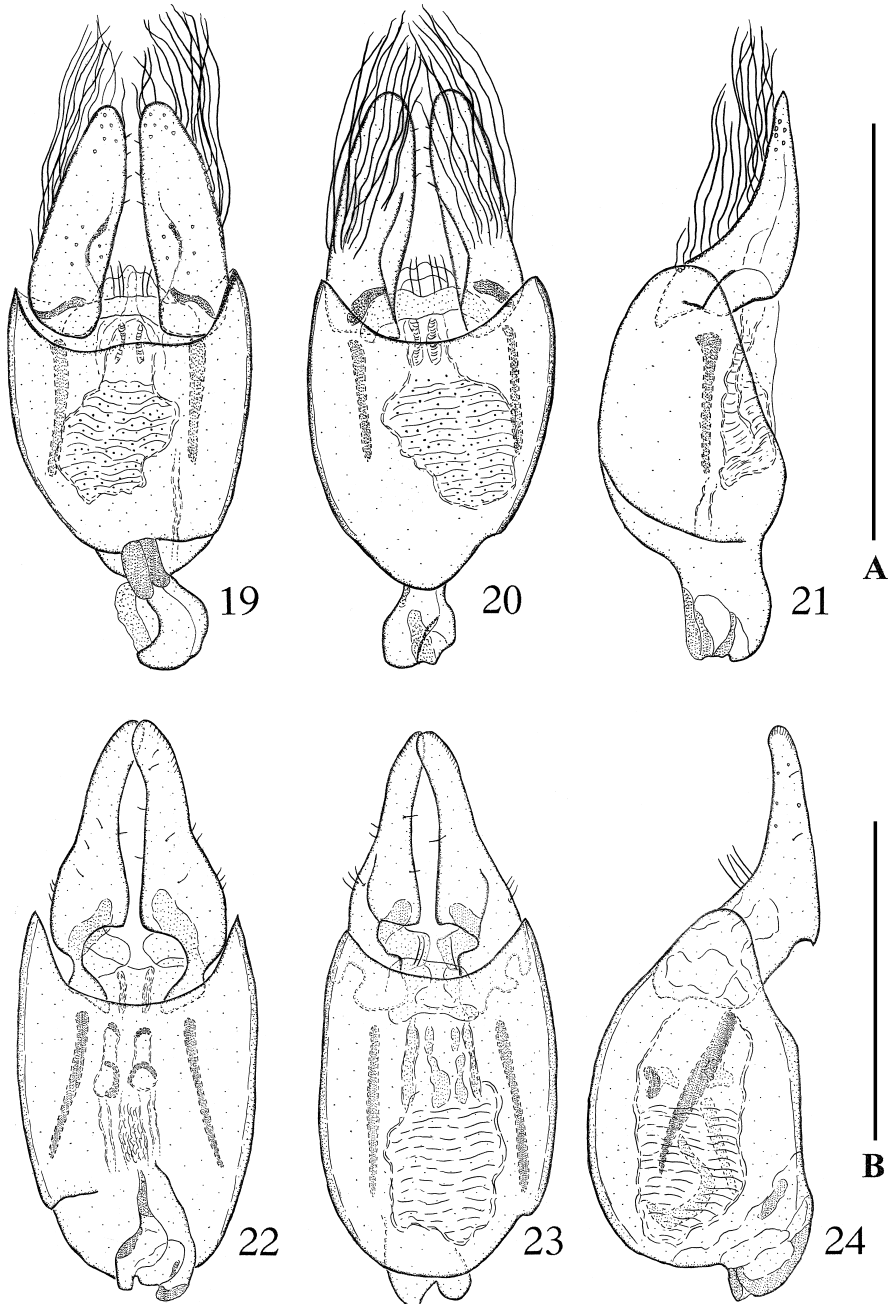
Male. Protibiae strongly curved at about basal 1/3 of inner margins and broadening from about basal 1/3 towards apex (Fig. 14); protarsi very broadly expanded at basal three tarsomeres (Fig. 14); male genitalia relatively slender (Figs. 22 & 23); median lobe about 1.6 times as long as wide in ventral and dorsal views and possessing lateral stick-like sclerites less than half of length of median lobe (Figs. 22 & 23); parameres about 0.75 times as long as median lobe, bearing sparse hairs, lacking in internal blades, and gradually narrowed from about half towards apex in ventral and dorsal views (Figs. 22 & 23), distinctly curved at dorsal margin, and rounded at apex in lateral view (Fig. 24).

Female. Protibiae gradually broadening from base to apex (Fig. 15); protarsi moderately expanded at basal three tarsomeres (Fig. 15).

Distribution. Japan: Honshu (Gifu Pref.).

Remarks. *Colon hachisukai* species group is defined by the following combination of characters: pronotum relatively large and almost as wide as elytra; female protarsi moderately expanded at basal three tarsomeres. *C. (M.) hanbei* HOSHINA, sp. nov. belongs to the species group.

The present new species is similar to *Colon (Myloechus) hachisukai* HOSHINA, 2009, but can be separated from it by having relatively slender parameres in ventral and dorsal views (Figs. 22 & 23). In contrast, *C. (M.) hachisukai* has parameres relatively robust.



Figs. 19–21, *Colon (Colon) toyoshimai* HOSHINA, sp. nov.; 22–24, *C. (Myloechus) hanbei* HOSHINA, sp. nov. —
 19, 22, Male genitalia, ventral view; 20, 23, ditto, dorsal view; 21, 24, ditto, lateral view. Scale A: 0.5 mm for
 Figs. 19–21. Scale B: 0.5 mm for Figs. 22–24.

Etymology. The specific name is dedicated to a popular strategist, Hanbê TAKENAKA (1544–1579), who was born in Gifu Pref.

要 約

保科英人：本州産タマキノコムシ科ヒゲブトチビシデムシ亜科の分類学的知見。——岐阜県からヒゲブトチビシデムシ亜科 *Colon* 属の2新種が発見され、本稿にて、それぞれ *Colon (Colon) toyoshimai* HOSHINA, sp. nov. (和名：ヒダヒゲブトチビシデムシ), *C. (Myloechus) hanbei* HOSHINA, sp. nov. (和名：ハンベエヒゲブトチビシデムシ) と命名記載された。ヒダヒゲブトチビシデムシは、東アジア産 *Colon* 亜属としては、2番目の種である。また、今まで、北海道からしか記録がなかった *C. (Tricolon) enomotoi* HOSHINA, 2009 (和名：エノモトヒゲブトチビシデムシ) を本州より初記録した。今回の2新種の記載により、日本産ヒゲブトチビシデムシ亜科は、17種となった。

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