

## Two New Species of the Genus *Acrolocha* (Coleoptera, Staphylinidae) from Japan

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**Abstract** Two new staphylinid species of the genus *Acrolocha* are described under the names *A. horiguchii* and *A. kanagawana*, and a key is given to the Japanese species. They are obtained in central Honshu, Japan.

The staphylinid genus *Acrolocha* is a relatively small genus in the subfamily Omaliinae and fifteen species have so far been known to be distributed in the Holarctic Region (HERMAN, 2001). One of them has been reported by WATANABE (1990, p. 68) from Hokkaido, North Japan.

Through the courtesy of Mr. T. WATANABE, I had an opportunity to examine a short series of interesting specimens of *Acrolocha* obtained by Messrs. T. HORIGUCHI, K. KUBO and H. WATARI from central Honshu, Japan. As the result of close examination, they were classified into two species, both of which were new to science because of disagreement in external features as well as structure of male genital organ with the previous known species. They will be described in the present paper.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Messrs. Toru HORIGUCHI, Shibukawa-shi, Koichi KUBO, Yokohama-shi, Takashi WATANABE, Fujisawa-shi, and Hiroshi WATARI, Yokohama-shi, for their kindness in supplying me with the specimens used in this study, and Mr. Junnosuke KANTOH, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

### *Acrolocha horiguchii* Y. WATANABE, sp. nov.

[Japanese name: Momobuto-yotsume-hanekakushi]

(Figs. 1–6)

Body length: 2.2–2.4 mm (from front margin of head to anal end); 1.6–1.9 mm (from front margin of head to elytral apices).

Body spindle-shaped and moderately convex. Colour black to blackish brown and moderately shining, with mouth parts, six proximal antennal segments and legs yellow;

elytra dark brown.

**Male.** Head subtriangular and somewhat depressed above, distinctly wider across compound eyes than long (width/length=1.54); postocular part strongly narrowed posteriad and very short, less than one-fifth as long as longitudinal diameter of each eye which is prominent laterad; clypeo-frontal area impunctate and almost glabrous, provided with a shallow longitudinal depression on each side of the middle, anterior margin between antennal tubercles finely bordered, disc moderately closely and coarsely punctured, interspace between the punctures connected by a network of fine lines. Ocelli relatively small, the distance between them somewhat larger than that from the outside of ocellus to the inner margin of each compound eye. Antennae moderately long though not extending beyond the posterior margin of pronotum, and thickened towards the extremities, with six proximal segments polished and the remainings opaque, 1st segment robust, about twice as long as wide, 2nd constricted at the base, distinctly longer than wide (length/width=1.25), but nearly a half as long as and somewhat narrower than (length/width=0.91) 1st, 3rd thin and dilated apicad, much longer than wide (length/width=1.87), a little longer (3rd / 2nd=1.12) but somewhat narrower (3rd / 2nd=0.75) than 2nd, 4th to 6th equal in both length and width, each somewhat longer than wide (length / width=1.33), distinctly shorter (each of 4th to 6th / 3rd=0.71) than though as wide as 3rd, 7th as long as wide, equal in length to though a little wider than 6th (7th / 6th=1.33), 8th to 10th equal in length to one another, 8th slightly transverse (width/length=1.08), somewhat longer (8th / 7th=1.25) and wider (8th / 7th=1.35) than 7th, 9th and 10th equal in both length and width, each transverse (width/length=1.20), equal in length to though slightly wider than 8th (each of 9th to 10th / 8th=1.11), 11th semioval, distinctly longer than wide (length/width=1.33), much longer (11th / 10th=1.60) than though as wide as 10th, narrowly rounded at the apex.

Pronotum gently elevated medially and strongly transverse (width/length=1.46), a little wider than head (pronotum/head=1.35), widest at the middle and more strongly narrowed posteriad than anterior, lateral sides arcuate in anterior two-thirds and straight or slightly emarginate in posterior third, distinctly bordered, the border continuing onto posterior margin which is just feebly arcuate, anterior margin gently emarginate at the middle, anterior angles narrowly rounded, posterior ones nearly rectangular; surface somewhat more closely and much more coarsely punctured than in head, network on interspace between punctures much finer at the middle than in head, provided with a weak longitudinal depression at the middle in anterior two-thirds though sometimes obscure.

Elytra subtrapezoidal and somewhat dilated posteriad, almost as long as wide, twice as long as and apparently wider (elytra/pronotum=1.37) than pronotum, lateral sides almost straight except near broadly rounded posterior angles and narrowly reflexed, posterior margin truncate; surface with coarse punctures which are arranged in six or so impressed longitudinal striae, these striae extending to just before posterior margin, areas between the striae smooth. Hind wings normal. Legs relatively short, metatro-

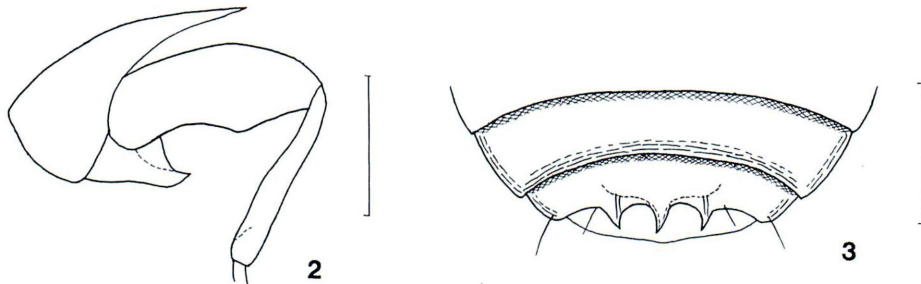


Fig. 1. *Acrolocha horiguchii* sp. nov., ♂, from Nishiyama-rindô, Azuma-mura, Gunma Pref., Japan.  
Scale: 1.0 mm.

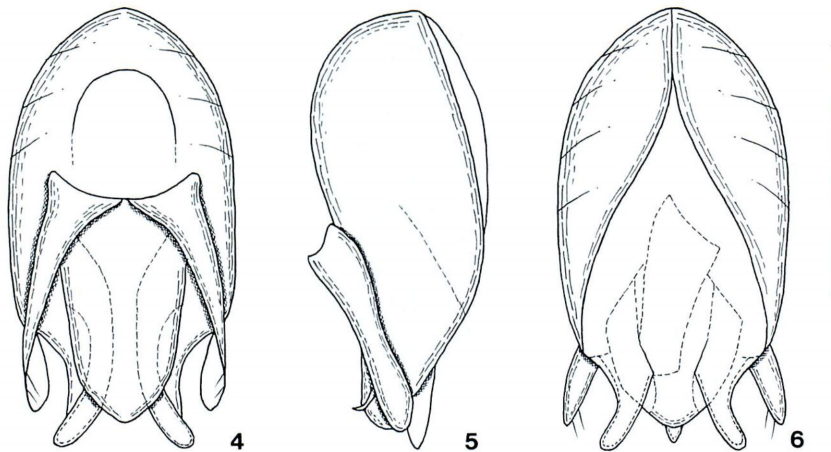
chanter produced posteriad in inner corner of the apex and forming an angulated projection; femur remarkably thickened though strongly excavated near the base on the inner side so that the posterior part of the excavation forms a blunt triangular tooth; 1st to 4th protarsal segments slightly widened, meso- and metatarsi each relatively thin, 4th segment of the latter nearly equal in length to the four preceding segments together.

Abdomen relatively broad, gently narrowed from 3rd to 6th segment, and then abruptly narrowed towards the apical end; surface of each tergite covered with fine alutaceous ground sculpture; 4th tergite provided with a pair of small pruinose spots at the middle; 8th sternite produced into bill at the median part of posterior margin and with a small process at each side of the median process.

Genital organ trilobed and symmetrical. Basal piece remarkably large and elliptical; median lobe linguiform, gradually narrowed apicad in basal two-thirds and then abruptly so towards the bluntly pointed apex as seen from dorsal side, viewed ventrally, provided with a digitiform process at each side of the apex, which is curved outwards;



Figs. 2-3. *Acrolocha horiguchii* sp. nov. — 2. Male hind leg: coxa, trochanter, femur and tibia. — 3. Last three abdominal sternites. Scale: 0.25 mm.



Figs. 4-6. Male genital organ of *Acrolocha horiguchii* sp. nov.; dorsal view (4), lateral view (5), and ventral view (6). Scale: 0.25 mm.

parameres a little shorter than median lobe, each paramere relatively stout and expanded inwards before the apex, the expanded part membraneous and with two minute setae before the apex.

**Female.** Similar in general appearance to male, but different from it in the 8th abdominal sternite subtruncate at the apex; trochanter and femur of hind legs are simple.

**Type series.** Holotype: ♂, allotype: ♀, Nishiyama-rindô, Souri, Azuma-mura, Seta-gun, Gunma Pref., Honshu, Japan, 10-IV-2005, T. HORIGUCHI leg. Paratypes: 3 ♂♂, 3 ♀♀, same data as for the holotype; 1 ♀, Watarasegawa-kasenjiki, Ôhata, Hanawa, Azuma-mura, Seta-gun, Gunma Pref., Honshu, Japan, 24-IV-2005, T. HORIGUCHI leg.

**Type depositories.** The type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, except for one female paratype preserved in the Takashi WATANABE's private collection.

*Distribution.* Japan (central Honshu).

*Remarks.* The present new species is similar in general appearance to *A. minuta* OLIVIER (1795, p. 38), but is distinguishable from it by the following points: head evenly elevated medially, without longitudinal depression in front of each ocellus, surface less closely punctured; pronotum more sparingly, more coarsely punctured and covered with slightly less distinct ground sculpture; elytra more coarsely punctured, the seriated punctures almost extending to posterior margin; median lobe of male genital organ linguiform, gradually narrowed apicad in basal two-thirds.

Similar in configuration of male genital organ to *A. pliginskii* BERNHAUER (1912, p. 259), but differs from it in the following points: pronotum much broader, more than four times as wide as long, elytra with seriate punctures extending to just before posterior margin, and male genital organ with median lobe linguiform, gradually narrowed in basal two-thirds towards the narrowly rounded apex.

*Bionomics.* The type specimens found on Nishiyama-rindô were obtained by using a dog dung trap set in a deciduous broadleaved forest mixed with a small number of coniferous trees at an altitude of 800–900 m. One paratype was also found in a dog dung trap set on sand among reeds growing at the side of the Watarase-gawa.

*Etymology.* The specific epithet of this new species is given after Mr. Toru HORIGUCHI, who collected all the type specimens.

***Acrolocha kanagawana* Y. WATANABE, sp. nov.**

[Japanese name: Kanagawa-momobuto-yotsume-hanekakushi]

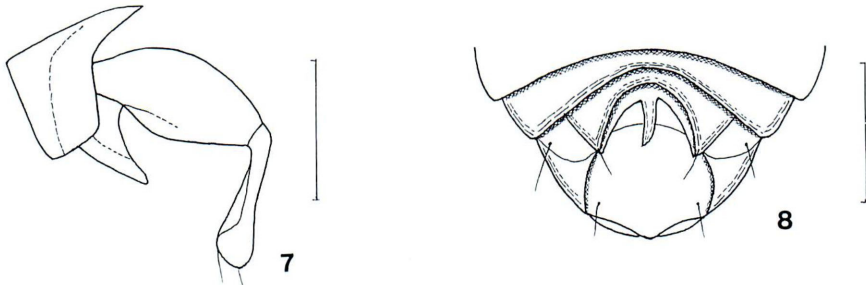
(Figs. 7–11)

*Acrolocha* sp. [Enkaizan-sujibane-hanamuguri-hanekakushi]: IWASE *et al.*, 2000, Kanagawa-chûhô, Odawara, (130): 143.

Body length: 1.8–2.1 mm (from front margin of head to anal end); 1.4–1.6 mm (from front margin of head to elytral apices).

Closely resembles the preceding species in general appearance, but distinguishable by smaller body, somewhat paler colouration, and different structures of secondary sexual character of the 8th abdominal sternite and genital organ in the male.

*Male.* Head similar in configuration to that of the preceding species though less transverse (width/length=1.50), surface slightly more closely and somewhat more coarsely punctured and covered with slightly stronger net-like ground sculpture than in the preceding species, lateral depression on the clypeo-frontal part somewhat shallower than that of the preceding species. Antennae similar in articulation to the preceding species. Pronotum subtrapezoidal and transverse (width/length=1.59), distinctly wider than head (pronotum/head=1.77), widest at anterior third and gently narrowed anteriorly and less strongly narrowed posteriorly than in the preceding species, lateral sides gently arcuate in anterior halves and nearly straight in posterior halves, finely bordered throughout its length, anterior margin shallowly emarginate at the middle, posterior



Figs. 7-8. *Acrolocha kanagawana* sp. nov. — 7. Male hind leg: coxa, trochanter, femur and tibia.  
— 8. Last three abdominal sternites in male. Scale: 0.25 mm.

margin nearly straight and perceptively bordered, surface strongly punctured as in the preceding species though the punctures are slightly closer than those of the preceding species. Elytra nearly as long as wide, remarkably longer (elytra/pronotum = 2.14) and distinctly wider (elytra/pronotum = 1.35) than pronotum, surface seriatly punctured as in the preceding species though the punctures are slightly less coarse than those of the preceding species and disappear in front of posterior margin. Legs relatively short, metatrochanter somewhat similar in configuration to that of the preceding species though narrower and longer than that of the preceding species, metafemur much more thickened at the middle and more remarkably constricted in basal fourth than in the preceding species, metatibia more strongly dilated apicad than in the preceding species and provided with a longitudinal carina outside inner margin.

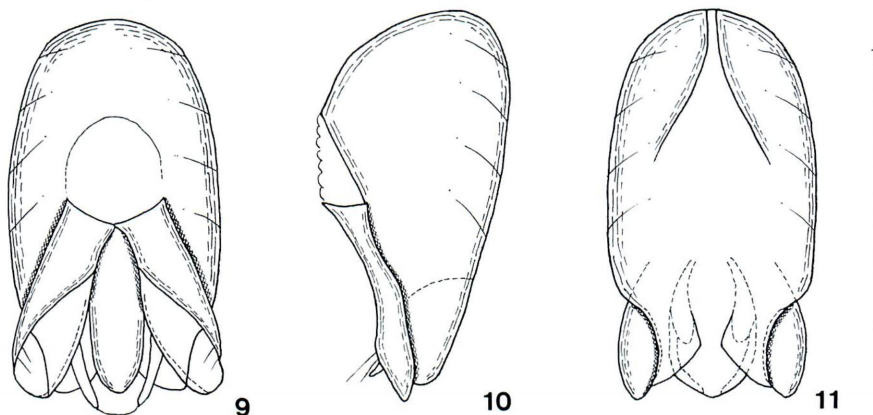
Abdomen covered with similar ground sculpture on each tergite to that of the preceding species, and 4th tergite provided with a pair of small pruinose spots at the middle as in the preceding species, 8th sternite emarginate at the middle of posterior margin and strongly horseshoe-shapedly depressed in front of the emargination, bearing a remarkable process at the middle of the depression.

Genital organ elliptical and trilobed, basal piece large, median lobe narrowed towards the apex which is broadly rounded as seen from dorsal side, strongly curved dorsad and acutely pointed at the apex in profile; parameres symmetrical and nearly as long as median lobe, each relatively broad, membraneous in apical half of inner side and fringed with two fine setae before the apex.

**F e m a l e.** Similar in facies to male, but different from it in the following points: trochanter, femur and tibia of hind leg are not modified, and 8th abdominal sternite narrowed towards the nearly truncated apex.

**Type series.** Holotype: ♂, Sagami, Enkaizan, Yokohama, 9-XII-1986, H. WATARI leg. Allotype: ♀, Togakubo, Enkaizan, Yokohama, Honshu, Japan, 27-XII-1990, H. WATARI leg. Paratypes: 1 ♂, same data as for the allotype; 1 ♂, 5 ♀♀, Ten'en, Kamakuragû-bunki, Kamakura, Kanagawa, Honshu, Japan, 27-XII-1992, K. KUBO leg.

**Type depositories.** The type specimens are deposited in the collection of the



Figs. 9–11. Male genital organ of *Acrolocha kanagawana* sp. nov.; dorsal view (9), lateral view (10), and ventral view (11). Scale: 0.25

Laboratory of Entomology, Tokyo University of Agriculture, except for one male paratype preserved in WATARI's private collection.

*Distribution.* Japan (central Honshu).

*Bionomics.* The type specimens from Enkaizan were obtained from under wet dead leaves accumulated at the end of a dry valley in a deciduous broadleaved forest, mainly consisting of *Cornus controversa*, at an altitude of 84 m. Paratypes from Ten'en were obtained from under wet dead leaves accumulated in a broadleaved forest at the headwater area of a river running into Jūnito at an altitude of 110–130 m.

*Etymology.* The specific epithet of this new species is given after Kanagawa, in which lie the two known type localities.

**Key to the Japanese Species of *Acrolocha***

1. Colour black to brown and moderately shining; head almost flat in vertexal area and not depressed on each side; elytra without ground sculpture.
2. Pronotum evenly elevated medially, widest at the middle and narrowed both anteriorly and posteriorly; elytra dark brown, less than twice as long as pronotum; median lobe of male genital organ linguiform, gradually narrowed in basal two-thirds and abruptly so in apical third towards the bluntly pointed apex and provided with a digitiform process at each side of the apex. Body size: 2.2–2.4 mm. . . . . *A. horiguchii* sp. nov.
- 2'. Pronotum gently elevated medially though more or less flattened in the median area, widest at anterior third and more strongly narrowed posteriorly than anteriorly; elytra yellowish brown, more than twice as long as pronotum; median lobe of male genital organ slightly narrowed towards the broadly rounded apex and without digitiform process at each side of the apex. Body size: 1.8–2.1 mm.

- .....*A. kanagawana* sp. nov.  
 1'. Colour reddish brown to dark reddish brown and subopaque; head well elevated in vertexal area and longitudinally depressed on each side of the elevation; head, pronotum and elytra covered with coriaceous ground sculpture, respectively. Body length: 1.9–2.0 mm. ....*A. miyamorii* Y. WATANABE

### 要 約

渡辺泰明：本州中部から採集されたモモブトヨツメハネカクシ属（甲虫目，ハネカクシ科）の2新種。——*Acrolocha* モモブトヨツメハネカクシ属（新称）は，ヨツメハネカクシ亜科のヨツメハネカクシ族に含まれる比較的小さい属である。これまで全北区に分布していることが知られ，日本からは*A. miyamorii* ただ1種が北海道から報告されていた。最近，私は渡辺 崇氏を通じて堀口 徹，久保浩一および渡 弘氏らによって本州中部から採集された，この属に含まれる一連の個体を検討する機会を得た。この結果，これらは2種に分類され，形態的特徴ならびに雄交尾器の形状によってそれぞれ未記載種と認められたので，*Acrolocha horiguchii* および*A. kanagawana* と命名・記載するとともに日本産種の検索表を示した。

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