

## Descriptions of a New Species of *Ariotus* (Coleoptera, Aderidae) and a New Genus and Species of Aderidae from Honshu, Central Japan, with a Key to the Genera of Japanese Aderidae

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**Abstract** *Shigaderus nakagawayui* M. SAITÔ et YOUNG, gen. et sp. nov., and *Ariotus takedai* M. SAITÔ & YOUNG, sp. nov., are described from Honshu, Central Japan. An updated key to the genera of Japanese Aderidae is also provided.

Aderidae WINKLER, 1927 (Coleoptera, Tenebrionoidea) is composed of 899 species in 47 genera in the world, amongst which 105 species in 14 genera are from the Palaearctic Subregion (NARDI, 2008; Wikipedia, 2011). In Japan, SAKAI (1985) presented a key to twelve species in seven genera, and NARDI (2008) listed 25 species (including two subspecies) in ten genera, out of which 19 species and one genus have only been recorded from Japan. However, nearly half of the species have not yet been collected since the original descriptions. The senior author recently had an opportunity to examine unidentified aderid materials collected from Honshu, Central Japan, leading to the description of two new species in the present paper. The first new species is attributed to a new genus related to *Aderus* or *Mixaderus* and the second belongs to *Ariotus*, a genus previously unknown from Japan. With the addition of these two genera new to Japan, we also provide a revised key to the aderid genera of Japan.

The entomological collection codes for each specimen depository are noted below and elsewhere in the text:

National Museum of Nature and Science, Tsukuba, Japan (NSMT);  
Lake Biwa Museum, Shiga, Japan (LBM);  
Wisconsin Insect Research Collection, USA (WIRC);  
Zoological Museum of Moscow University, Russia (ZMMU);  
Natural History Museum, London (BMNH);  
Collection of M. SAITÔ, Fukui, Japan (MSC).

Morphological abbreviations used herein are as follows: L — body length (length from apical margin of clypeus to elytral apices); W — body width (across elytral humeri); FW — width across frons (distance between eyes); ED — compound eye diameter; AnW — distance between antennal insertions; CL — clypeal length; CW — clypeal width; PL — pronotal length; PW — pronotal width; HW — head width; EW — elytral width; EL — elytral length; MtiL — length of metathoracic tibia; Mta1stL — length of 1st metathoracic tarsomere; AL — aedeagal length; BpL — basal piece length; BpW — basal piece width; PmL — length of parameres; PmW — width of parameres. The average values in measurement are given in parenthesis after the range.

### Systematic Account

Family **Aderidae** WINKLER, 1927

Tribe **Aderini** WINKLER, 1927

Subtribe **Aderina** WINKLER, 1927

Genus ***Shigaderus*** M. SAITÔ & YOUNG, gen. nov.

[Japanese name: Shiga-nisekubibosomushi-zoku]

Type species: *Shigaderus nakagawayui* M. SAITÔ & YOUNG, sp. nov.

*Description.* Body subovate, weakly convex dorsally, dorsal surface (Fig. 1) with double pubescence: recumbent setae emerging from punctures and interspersed very short silvery pruinosity; ventral surface setose. Head (Fig. 5) completely exposed with short cranial “neck”; surface punctulate and setose; compound eyes large, egg-shaped, obliquely placed and produced laterally in dorsal view, distinctly emarginate at the antennal insertions, semicircular in lateral view; temples narrow behind eyes in dorsal view. Plane of clypeus inferior to that of frons, frontoclypeal furrow complete. Terminal maxillary palpomere (Figs. 3–4) widely triangular. Antennae (Fig. 6) moderate in length, inserted in ocular emarginations; two basal antennomeres ovate, 3rd to 10th subrectangular; 1st larger than 2nd, 3rd as long as 1st, slightly longer than 2nd and about as long as 4th; 11th subconical. Pronotum subquadrate, narrower than the width of head and elytral humeri, apex slightly narrower than the base, sides angulate anteriorly in dorsal view; disc weakly, evenly convex, a pair of mesal basal indentations virtually lacking, surface setose, punctate. Scutellum small. Elytra weakly convex, surface setose, punctate, epipleura complete, with inner edges costate. Legs short, 1st tarsomere of each prothoracic leg sexually dimorphic (Figs. 7–8). Prothoracic coxal cavities partially separated by very narrow prosternal process, widely open behind externally; mesothoracic coxal cavities separated by mesosternal process, open laterally. Metendosternite (Fig. 10) with laminae at the base of arms. Aedeagus (Figs. 12–14) with a paired appendages emerging laterally from each paramere; lateral appendages each with a few, conspicuous, apical sensory setae.

*Notes.* *Shigaderus* is thought to be closely related to the genera *Aderus* STEPHENS, 1829 (BAGUENA, 1962; GOMPEL & BARRAU, 2002; PIC, 1905) or *Mixaderus* COLLADO & ALONSO-ZARAZAGA, 1996 (GOMPEL, 2012). It can be distinguished from *Aderus* by the following characteristics in male: 1) 1st prothoracic tarsomeres with sexually dimorphism (without sexual dimorphism in *Aderus*); 2) aedeagus with paired, lateral appendages (without appendages in *Aderus*); and 3) 3rd antennomere longer than 2nd, almost as long as 4th (3rd usually shorter than or subequal to 2nd and 4th in *Aderus*). *Shigaderus* differs from *Mixaderus* by the following characteristics in male: 1) 2nd antennomere ovate (subquadrate in *Mixaderus*); 2) antennae inserted in emarginations of eyes (inserted outside margins of compound eyes in *Mixaderus*); and 3) pronotal disc without a pair of basal, mesal impressions (basal impressions usually conspicuous in *Mixaderus*). *Shigaderus* is provisionally placed between the latter two genera.

*Etymology.* The new generic name *Shigaderus* was composed of two parts described as follows: “Shiga”, the type locality of the generic type species, *S. nakagawayui* sp. nov., and “derus”, meaning “neck” in Latin. Gender: masculine.

*Shigaderus nakagawayui* M. SAITÔ & YOUNG, sp. nov.

[Japanese name: Yotsumon-shiga-nisekubibosomushi]

(Figs. 1–14)

**M a l e.** Body subovate, L/W 2.65–2.88 (2.74, n = 5), moderately convex dorsally, rather shining with weakly silky luster due to double pubescence; legs densely covered with fine pubescence, antennae clothed with dark setae. Dorsal surface (Fig. 1) entirely brownish-black; mouthparts yellowish-brown; legs dark brown except for yellowish-brown proximal tibiae and tarsi; antennae yellowish-brown. Ventral surface entirely brownish-black, densely covered with fine white pubescence. Elytra with two pairs large, yellowish-orange to orange, ovate markings (Fig. 2), each separated from lateral edges and suture, anterior maculae sometimes reaching suture and posterior maculae obsolete, rarely all maculae reduced to lacking.

Head oblong-oval in dorsal view, sparsely punctate. Frons (Fig. 5) flat, FW/ED 0.94–1.00 (0.98, n = 5), AnW/FW 0.95–1.06 (1.01, n = 5). Vertex to occiput smooth and flat. Eyes ovate and protruding. Clypeus subquadrate, CL/CW 0.43–0.57 (0.53, n = 5), coarsely punctate; anterior margin straight. Terminal maxillary palpomere (Fig. 3) broadly triangular; adoral margin about 1.3 times as long as (n = 1) aboral margin; apical margin straight, about 1.3 times as long as (n = 1) aboral margin; adoral and aboral angles slightly rounded. Antennae (Fig. 6) stout, filiform, extending beyond the basal angles of pronotum by the length of the apical three antennomeres; inner distal angle of 4th to 10th antennomeres projecting, broadly acuminate; distal half of 11th spindle-shaped, apex tapered, obtusely rounded; relative lengths of each antennomere from base to apex (n = 1): 1.05, 0.64, 1.00, 1.19, 1.29, 1.14, 1.14, 1.05, 0.95, 0.90, 1.95; relative length to width of each antennomere from base to apex (n = 1): 1.16, 1.00, 1.40, 1.56, 1.69, 1.33, 1.26, 1.16, 1.11, 0.91, 1.78.

Pronotum, PW/PL 1.10–1.18 (1.14, n = 5), PW/HW 0.81–0.87 (0.85, n = 5), PW/W 0.66–0.71 (0.69, n = 5), widest at anterior angle, thence becoming straightly narrower towards the anterior margin and slightly straight or parallel towards the base from the widest point, lacking lateral margins; anterior angles slanted; basal angles rounded; basal margin weakly rounded in whole; disc weakly convex, densely punctate, punctures becoming increasingly dense anteriorly. Scutellum trapezoidal, rounded apically, coarsely punctulate.

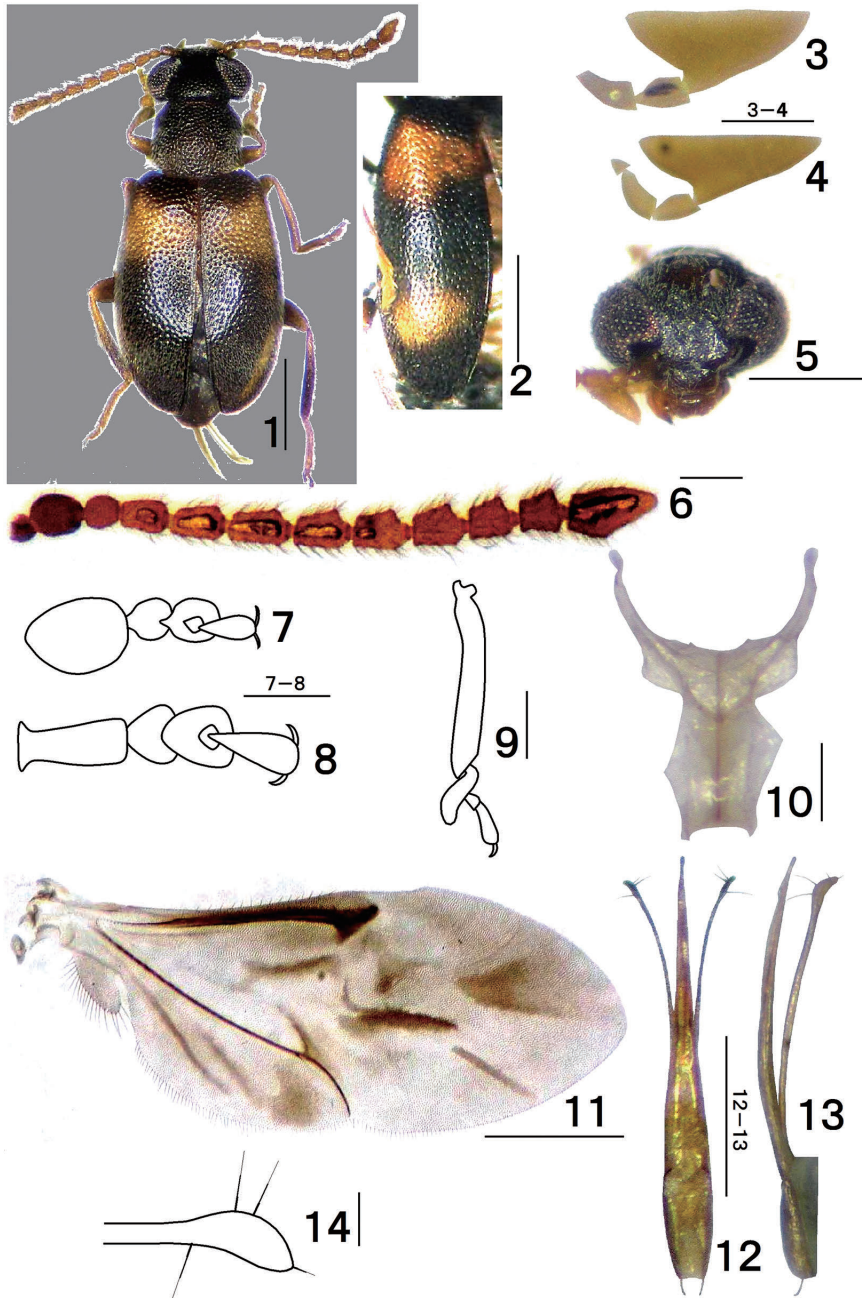
Elytra ovate with lateral margins weakly rounded, widest behind the middle, apices broadly rounded to suture; EL/EW 1.53–1.67 (1.58, n = 5); base distinctly wider than that of pronotum; disc smooth between punctures which are evenly and densely set, sutural striate clearly visible except for basal 5th.

Metathoracic wings (Fig. 11) macropterous, about 2.4 times as long as width (n = 1), about 1.5 times as long as EL (n = 1); length from folding line (at the widest, contacting point of RP and r3) to the apex about 68.2 % (n = 1) entire length, extent of apical field about 64.4 % (n = 1); extent of anal field about 0.3 % (n = 1) of whole.

Ventral surface of thorax coarsely punctate except for posterior half of mesosternum. First abdominal sternite and base of 2nd coarsely punctate; 5th sternite with apical margin straight.

Legs relatively slender and short. MtiL/EL 0.36–0.38 (0.37, n = 5) and MtiL/EW 0.55–0.63 (0.58, n = 5). Mta1stL/MtiL 0.50–0.55 (0.54, n = 5), relative lengths of each metathoracic tarsomere from base to apex (n = 1): 1.00, 0.12, 0.06, 0.27; 1st to 3rd prothoracic tarsomeres (Fig. 7) flat, subannulate, 1st distinctly broader than the following tarsomeres; 1st metathoracic tarsomere (Fig. 9) proximally sinuate in lateral view.

Aedeagus (Figs. 12–13) oblong spindle-shaped, pointed apically, AL/EL about 0.6 (n = 1), AL/AW about 8.3 (n = 1). Basal piece with sides narrowed proximally, widest before apex in dorsal view,



Figs. 1–14. *Shigaderus nakagawayui* M. SAITÔ & YOUNG, gen. et sp. nov. — 1, Habitus (holotype), dorsal view; 2, elytral color pattern (variation); 3, maxillary palpus, male; 4, ditto, female; 5, head, frontal view, male; 6, antenna, male; 7, prothoracic tarsus, dorsal view, male; 8, ditto, female; 9, metathoracic tarsus, lateral view, male; 10, metendosternite, female; 11, metathoracic wing, male; 12–14, aedeagus (12, dorsal view; 13, lateral view; 14, apex of lateral parameral appendage). Scale: 0.5 mm for 1, 2, 11; 0.1 mm for 3, 4, 6–10; 0.3 mm for 12, 13; 0.05 mm for 14.

convex proximally in lateral view; BpL/BpW about 2.3 ( $n = 1$ ). Parameres spindle-shaped, pointed distally in dorsal view, gradually curved as a whole in lateral view; PmL/PmW about 7.0 ( $n = 1$ ); PmL/BpL about 2.8 ( $n = 1$ ). Paired parameral appendages very narrow, somewhat shorter than aedeagus, abruptly widened, spatulate apically (Figs. 13–14), with one short and three longer sensory setae: one short seta apically, one along outer face, and two on inner face.

**F e m a l e.** Similar to male, but 1st prothoracic tarsomere (Fig. 8) nearly as wide as the width of following tarsomeres; L/W 2.68–2.86 (3.02,  $n = 5$ ); EL/EW 1.53–1.62 (1.59,  $n = 5$ ); FW/ED 1.22–1.47 (1.34,  $n = 5$ ); AnW/FW 1.00–1.10 (1.05,  $n = 5$ ); PW/HW 0.87–0.90 (0.88,  $n = 5$ ); PW/W 0.68–0.72 (0.70,  $n = 5$ ). Relative lengths of each antennomere from base to apex ( $n = 1$ ): 1.15, 0.95, 1.00, 1.05, 1.20, 1.05, 1.05, 1.00, 0.65, 0.90, 2.05; relative length to width of each antennomere from base to apex ( $n = 1$ ): 1.25, 1.12, 1.54, 1.62, 1.60, 1.62, 1.11, 1.00, 0.62, 1.33, 1.54. Fifth sternite widely rounded apically. Mta1stL/MtiL 0.52–0.54 (0.52  $n = 5$ ), relative lengths of each metathoracic tarsomere from base to apex ( $n = 1$ ): 1.00, 0.12, 0.07, 0.27.

**Measurements** ( $n = 5$  ♂♂, 5 ♀♀ in mm). L: ♂ 1.63–1.93 (1.83), ♀ 1.80–2.00 (1.89); W: ♂ 0.60–0.72 (0.67), ♀ 0.67–0.70 (0.68).

**Type series.** Holotype (Fig. 1; NSMT): ♂, Onjyô-ji, alt. 109 m, Ôtsu-shi, Shiga Pref., 23.VI.2013, S. NAKAGAWA leg. Paratypes: 3 ♂♂ (LBM, MSC, ZMMU), 4 ♀♀ (MSC, NSMT, WIRC, ZMMU), same data as the holotype; 1 ♂ (Figs. 3, 5–7, 9, 11–14; MSC), 1 ♂ (BMNH), 1 ♀ (LBM), 4 ♀♀ (Figs. 4, 8; MSC), same locality and collector as the holotype, 8.VII.2012; 1 ♀ (Fig. 10; MSC), same locality and collector as the holotype, 2.VI.2013; 1 ♂ (WIRC), Ômi-jingû, alt. 109 m, Ôtsu-shi, Shiga Pref., 23.VI.2013, S. NAKAGAWA leg.; 1 ♂ (MSC), 3 ♀♀ (Fig. 2; MSC), 1 ♀ (BMNH), ditto, 23.VI.2013, S. NAKAGAWA leg.

**Etymology.** The specific name is given in honor of Mr. Suguru NAKAGAWA who collected the type series.

**Notes.** Being relative to other Aderidae of Japan, the present new species has the following diagnostic characteristics: 1) body black with two pairs of yellowish-orange to orange elytral maculae; 2) 1st to 3rd prothoracic tarsomeres flat and subannulate, 1st tarsomere distinctly broader than subsequent tarsomeres in male; and 3) aedeagus with paired lateral parameral appendages, parameral appendages each with four sensory setae at the spatulate apex.

This new species inhabits the laurel forest. It flies actively in flight, appearing as floating in the air similarly to some of the small Diptera species.

### Subtribe **Syzetoninina** BEGUENA, 1948

#### Genus **Ariotus** CASEY, 1895

[Japanese name: Naga-nisekubibosomushi-zoku]

Type species: *Xylophilus quercicola* SCHWARZ.

**Generic Diagnosis:** 1) eyes moderately emarginate; 2) 3rd antennomere elongate; 3) temples broad and prominent; 4) pronotal width subequal to that of head; 5) 1st metathoracic tarsomere longer than the combined length of following tarsomeres; 6) metathoracic femora sexually dimorphic along inferior edge in male; 7) parameres of aedeagus without paired lateral appendages.

This small genus includes several species from North and Central America and one presumed (but unconfirmed) from Turkestan, hence unlisted in the Catalogue of Palaearctic Coleoptera (NARDI, 2008).



*Ariotus takedai* M. SAITÔ & YOUNG, sp. nov.

[Japanese name: Kibane-naga-nisekubibosomushi]

(Figs. 15–25)

**Male.** Body elongate, subparallel-sided, L/W 3.16–3.35 (3.21, n = 5), moderately convex dorsally, rather shining with weak silky luster due to double pubescence; legs and antennae densely covered with fine pubescence. Dorsal surface (Fig. 15) entirely brownish-black, with mouthparts and legs yellowish-brown except metathoracic femora dark brown; antennae brownish-black except basal two antennomeres dark yellowish-brown. Ventral surface (Fig. 18) entirely brownish-black, densely covered with fine yellowish-white pubescence, setal tufts as follows: one on either side of the center of metasternum, one on each metathoracic trochanter, and linear tufts along the meson of the 1st and 2nd sternites. Elytra yellowish-brown, sometimes darkened on apical half portions.

Head oblong-ovate in dorsal view, densely punctate. Frons smooth, weakly swollen at the antennal insertions, FW/ED 1.00–1.38 (1.22, n = 5), AnW/FW 0.86–1.38 (1.10, n = 5); frontclypeal furrow complete. Vertex to occiput smooth and protruding. Eyes ovate, slightly protruding. Clypeus rectangular, CL/CW 0.42–0.63 (0.52, n = 5), coarsely punctate; anterior margin straight; frontclypeal furrow complete, slightly curved inwardly. Terminal maxillary palpomere (Fig. 16) triangular; aboral margin about 2.0 times as long as (n = 1) adoral margin; apical margin about 1.2 times as long as (n = 1) aboral margin, apical margin slightly excurved; inner and the outer angles truncate. Antennae (Fig. 19) stout, filiform, extending beyond the basal angles of pronotum by the length of the apical three antennomeres; inner distal angles of 3rd to 10th projecting, broadly acuminate; distal half of 11th spindle-shaped, apex acuminate; relative lengths of each antennomere from base to apex (n = 1): 0.64, 1.20, 1.00, 1.04, 1.04, 1.08, 1.12, 1.00, 1.00, 0.96, 1.64; relative length to width of each antennomere from base to apex (n = 1): 1.45, 1.14, 1.56, 1.53, 1.53, 1.50, 1.56, 1.39, 1.25, 1.20, 1.78.

Pronotum hexagonal, PW/PL 0.98–1.03 (1.00, n = 5), PW/HW 0.90–1.00 (0.94, n = 5), PW/W 0.63–0.69 (0.66, n = 5), widest at the anterior angle, distinctly, straightly narrowing toward the anterior margin and slightly narrowed or parallel anteriorly from the widest point, lacking lateral margins; anterior angles weakly gibbous; basal angles rounded; basal margin straight in whole; disc densely with a pair of slight elevations at the center of the basal margin. Scutellum trapezoid, truncate apically, coarsely punctulate.

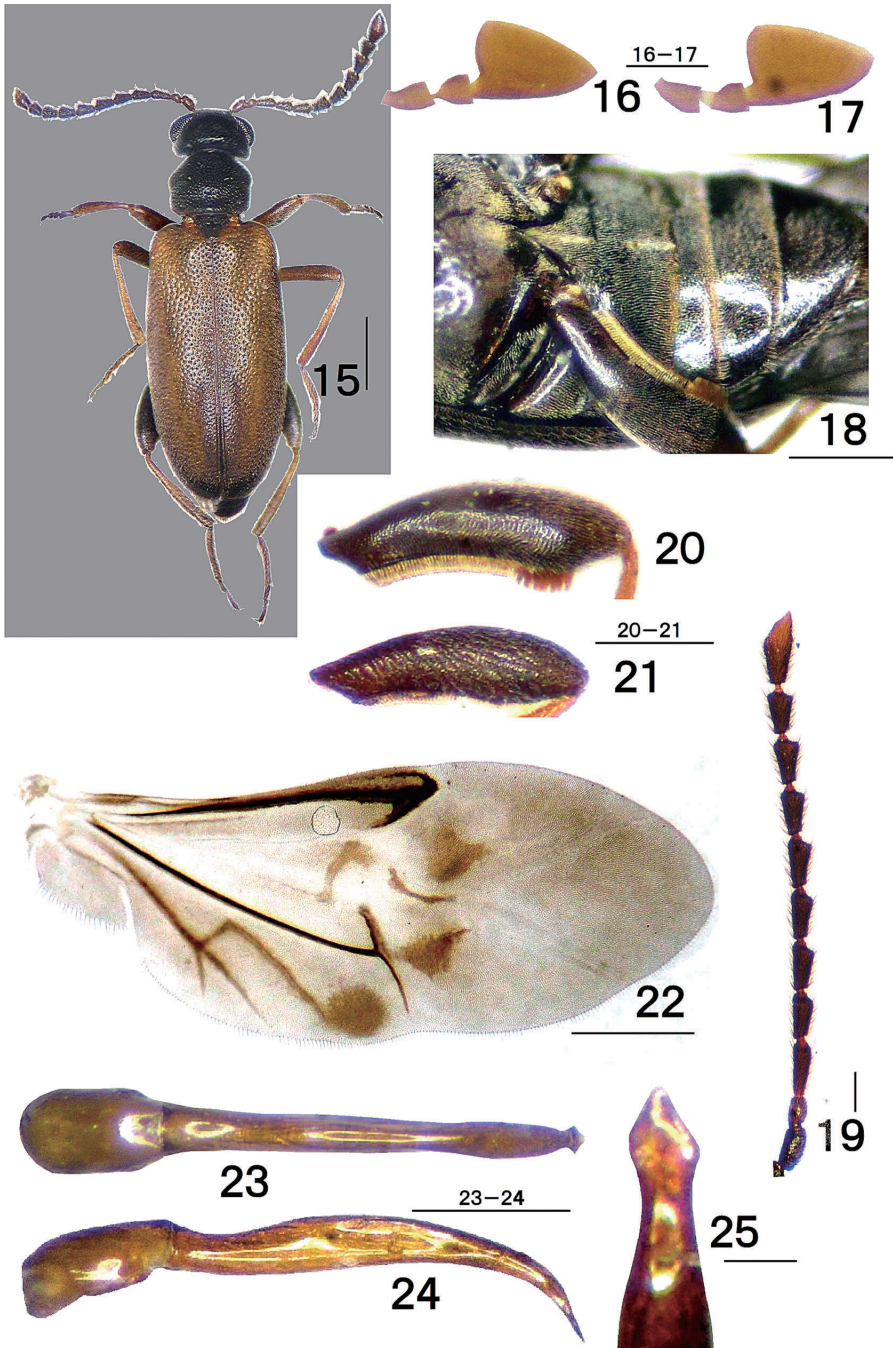
Elytra elongate, with lateral margins weakly rounded to subparallel, widest behind the middle, broadly rounded apically to suture; EL/EW 1.85–2.06 (1.95, n = 5); elytral base distinctly wider than that of pronotum; disc densely punctate with weak angled depressions from humeri towards suture and weakly oblong-ovate convex behind middle along the suture.

Metathoracic wings (Fig. 22) macropterous, length about 2.5 times as long as width (n = 1), about 1.5 times as long as EL (n = 1); the length from folding line (at the widest, contacting point of RP and r3 in LAWRENCE *et al.*, 2011) to the apex about 57.7 % (n = 1) entire length, extent of apical field about 54.7 % (n = 1), that of anal field about 3.4 % (n = 1) entire extent.

Ventral surface of thorax coarsely punctate except for posterior half of the mesosternum. Abdominal sternites shallowly punctulate; 5th sternite flattened mesially, rounded apically.

Legs slender, relatively long. MtiL/EL 0.34–0.37 (0.35, n = 5) and MtiL/EW 0.65–0.70 (0.68, n = 5). Mta1stL/MtiL 0.46–0.53 (0.51, n = 5), relative lengths of each metathoracic tarsomere from base to apex (n = 1): 1.00, 0.28, 0.11, 0.39; inferior edge of each metathoracic femur (Fig. 20) with a brush of long stout yellowish-orange setae along the apical third, and a row of short pubescence along the inside of the brush toward the base.

Aedeagus (Figs. 23–24) elongate, AL/EL about 0.6 (n = 1), AL/AW about 7.2 (n = 1). Basal



Figs. 15–25. *Ariotus takedai* M. SAITÔ & YOUNG, sp. nov. — 15, Habitus (holotype), dorsal view; 16, maxillary palpus, male; 17, ditto, female; 18, ventral surface, male; 19, antenna, male; 20, metathoracic femur, male; 21, ditto, female; 22, metathoracic wing, male; 23–25, aedeagus (23, dorsal view; 24, lateral view; 25, apex). Scale: 0.5 mm for 15, 22; 0.1 mm for 16, 17, 19; 0.3 mm for 18, 20, 21, 23, 24; 0.05 mm for 25.

piece short ovate, parallel-sided in dorsal view; BpL/BpW about 2.0 ( $n = 1$ ). Parameres elongate, weakly widened along apical third and subrhombic at apex (Fig. 25) in dorsal view, weakly sinuate, narrowed before base and thin toward the apex, downwardly curved apically in lateral view; PmL/PmW about 8.8 ( $n = 1$ ); PmL/BpL about 2.6 ( $n = 1$ ).

**F e m a l e.** Similar to male, but inferior edge of each metathoracic femur (Fig. 21) without brush along the apical third, and ventral surface without patches of pubescence; L/W 3.08–3.28 (3.16,  $n = 5$ ); EL/EW 1.78–1.93 (1.86,  $n = 5$ ); FW/ED 1.44–1.75 (1.56,  $n = 5$ ); AnW/FW 1.08–1.33 (1.20,  $n = 5$ ); PW/HW 0.98–1.01 (0.99,  $n = 5$ ); PW/W 0.67–0.73 (0.71,  $n = 5$ ). Relative lengths of each antennomere from base to apex ( $n = 1$ ): 1.10, 0.60, 1.00, 0.67, 0.77, 0.67, 0.73, 0.63, 0.63, 0.67, 1.33; relative length to width of each antennomere ( $n = 1$ ): 1.94, 1.20, 2.50, 1.54, 1.35, 1.18, 1.10, 0.95, 0.90, 0.91, 1.60. Fifth sternite widely rounded apically. Mta1stL/MtiL 0.47–0.48 (0.48,  $n = 5$ ), relative lengths of each metathoracic tarsomere from base to apex ( $n = 1$ ): 1.00, 0.29, 0.15, 0.46.

**Measurements** ( $n = 10$  ♂♂, 10 ♀♀ in mm). L: ♂ 2.30–2.90 (2.59), ♀ 2.05–2.80 (2.58); W: ♂ 0.73–0.92 (0.81), ♀ 0.68–0.90 (0.83).

**Type series.** Holotype (Fig. 15; NSMT): ♂, Onjyô-ji, alt. 109 m, Ôtsu-shi, Shiga Pref., 23.VI.2013, S. NAKAGAWA leg. Paratypes: 1 ♀ (MSC), Ôokayama, alt. 35 m, Meguro-ku, Tokyo, 24.VI.2012, E. UEDA leg.; 1 ♀ (MSC), Komaba, alt. 32 m, Meguro-ku, Tokyo, 16.VI.2013, ditto; 1 ♀ (MSC), ditto (Tokyo University campus, fit trap), 6.VII.2013, ditto; 1 ♀ (MSC), ditto (Komabano park, fit trap), 20.VII.2013, ditto; 1 ♀ (MSC), 27.VII.2013, ditto; 1 ♀ (Figs. 17, 21; MSC), 8.VII.2012, same locality and collector as the holotype; 1 ♂, 1 ♀ (LBM), 1 ♂, 1 ♀ (WIRC), 1 ♀ (NSMT), 1 ♂, 1 ♀ (ZMMU), 1 ♂, 1 ♀ (BMNH), 19 ♂♂, 39 ♀♀ (MSC), Ônjo-ji, alt. 109 m, Ôtsu-shi, Shiga Pref., 2.VI.2013, S. NAKAGAWA leg.

**Notes.** This species is distinguished from other members of *Ariotus* (cf. CASEY, 1895; SCHWARZ, 1878; WERNER, 1990; excluding *A. pruinosus* CASEY, 1895 from Turkestan) as follows: 1) elytra unicolor yellowish-brown, without maculation (maculate in *A. quercicola* and *A. subtropicus*); 2) 1st and 2nd abdominal sterna with linear setal tufts mesially in male (lacking in other species); 3) inferior edge of each metathoracic femur with long brush at apical third in male (lacking in other members; row of pubescence almost uniform in length); and 4) apex of aedeagus sub-rhombic (simple spindle-shaped, pointed apically in other members).

This new species, broadly sympatric with *S. nakagawayui*, inhabits the laurel forest.

**Etymology.** The specific name is given in honor of Mr. Shigeru TAKEDA who rendered services to this research and the above new species.

### Key to the Genera of Japanese Aderidae

Since the contribution and key provided by SAKAI (1985), several changes of the generic names and concepts for the fauna of Japan have been proposed: *Gompelia* ALONSO-ZARAZAGA, 2010 for *Otolelus* MULSANT & REY, 1866 by ALONSO-ZARAZAGA, 2010; *Picemelinus* NAKANE, 1987 was established new genus for *Emelinus flabellicornis* (PIC, 1910) by NAKANE, 1987; *Aderusincertae* for *Hylophilus singularicornis* PIC, 1910 was including incertae sedis by NARDI, 2008; *Tokiophilus* PIC, 1921 for incorrect spelling of *Tokiophylus* by NARDI, 2007. These changes together with those proposed in the present contribution are reflected below.

1. Head partially inserted into prothorax, not entirely visible in dorsal view; without cranial neck. .... Phytobaenini, *Phytobaenus*
- Head completely bared from prothorax, entirely visible in dorsal view; usually with cranial neck.



- ..... 2
2. Fifth to 10th antennomeres (♂) pectinate, each with a long branch. .... Emelinini, *Picemelinus*  
 — Antennomeres without long branches in male. .... 3
3. Elytral disc with setae suberect, lacking fine, appressed setae (Euglenini). .... 4  
 — Elytral disc with both suberect and fine, appressed setae (Aderini). .... 7
4. Third antennomere longest. .... *Aderusincertae*  
 — Third antennomere not longest. .... 5
5. Antennomeres distinctly subspherical apically; temples invisible. .... *Tokiophilus*  
 — Antennomeres not or very weakly subspherical apically; temples somewhat visible. .... 6
6. Antennae inserted in or near emarginations of eyes; metathoracic femora with long yellow setal tufts in male. .... *Pseudolotelus*  
 — Antennae inserted outside emarginations of eyes; metathoracic femora without setal tuft. ....  
 ..... *Pseudanidorus*
7. Third antennomere distinctly longer than 4th. .... *Syzeton*  
 — Third antennomere shorter than or as long as 4th. .... 8
8. Antennae inserted in or near emarginations of eyes. .... 9  
 — Antennae inserted outside emarginations of eyes. .... 10
9. Antennae inserted in emarginations of eyes; 1st prothoracic tarsomeres without distinct sexual dimorphism; aedeagus without lateral appendages. .... *Aderus*  
 — Antennae inserted on outline of eyes; 1st prothoracic tarsomeres with distinct sexual dimorphism; aedeagus with lateral appendages. .... *Shigaderus* gen. nov.
10. Eyes large, subspherical; temples very narrow, invisible. .... *Mixaderus*  
 — Eyes moderate in size, protruding; temples broad, well visible. .... 11
11. Head distinctly narrower than prothorax; elytra very coarsely punctate at sides. .... *Gompelia*  
 — Head almost as wide as prothorax; elytra evenly punctate in whole. .... *Ariotus*

(The characteristics pointed out in the key were referred to the follows: BAGUENA, 1948; BLACKBURN, 1891; GOMPEL, PEREZ & BENSUSAN, 2010; KASZAB, 1969; PIC, 1921)

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### 要 約

斎藤昌弘・Daniel K. YOUNG：本州産ナガニセクビボソムシ属 *Ariotus* 1新種 (鞘翅目ニセクビボソムシ科) とニセクビボソムシ科1新属新種の記載，および日本産属への検索表。——本州より採集された1新種に対して新属，シガニセクビボソムシ属 *Shigaderus*, gen. nov. を設立するとともに，ヨツモンシガニセクビボソムシ *Shigaderus nakagawayui* sp. nov. として命名記載した。また，ナガニセクビボソムシ属の1新種をキバネナガニセクビボソムシ *Ariotus takedai* sp. nov. として命名記載した。加えて日本産ニセクビボソムシ科の属への検索表を示した。

## References

- Alonso-ZARAZAGA, M. A., 2010. *Gompelia*, a replacement name for *Otolelus* MULSANT & REY, 1866 (Coleoptera, Aderidae). *Notes nomenclurales / nomenclatural notes. Graellsia*, **66**(2): 299–301.
- CASEY, T. L., 1895. Coleopterologica Notices. VI. *Annals of the New York Academy of Sciences*, **8**: 435–838.
- BAGUENA, C. L., 1948. Estudio sobre los Aderidae. Consejo Superior de Investigaciones Científicas, Instituto de Estudios Africanos. 547 pp. Madrid. (In Spanish.)
- BAGUENA, C. L., 1962. Nueva ordenación de las tribus y reagrupación de las subtribus. Pp. 9–11. Consideraciones sobre algunas tribus, géneros y especies de Aderidae. *Exploration du Parc National de la Garamba – Mission H. De SAEGER, Fascicule 26 Aderidae (Coleoptera, Heteromeroidea)*. Institut des Parcs Nationaux du Congo et du Ruanda-Urundi. 135 pp. Bruxelles.
- BLACKBURN, T., 1891. Further notes on Australia Coleoptera, with descriptions of new genera and species. X. *Transactions and Proceedings and Report of the Royal Society of South Australia*, **14**: 292–345.
- COLLADO, J., & M. A. Alonso-ZARAZAGA, 1996. BÁGUENA-CORELLA's genera of Aderidae (Coleoptera): nomenclatural corrections and validations. *Coleopterists Bulletin*, **50**: 96–98.
- GOMPEL, N., 2012. The genus *Mixaderus* COLLADO & Alonso-ZARAZAGA, 1996 in Madagascar and the Mascareignes Archipelago, with description of three new species (Coleoptera: Aderidae). *Boletín de la Sociedad Entomológica Aragonesa*, **50**: 77–88.
- GOMPEL, N., & E. BARRAU, 2002. Les aderidae de la faune de France (Coleoptera). *Annales de la Société Entomologique de France*, **38** (3): 211–238.
- GOMPEL, N., C. PEREZ & K. BENSUSAN, 2010. On the Aderidae of Gibraltar, with notes on the systematics of the genus *Otolelus* KLINGER, 2000 and *Cobosasia* COLLADO & Alonso-ZARAZAGA, 1996 (Coleoptera). *Boletín de la Sociedad Entomológica Aragonesa*, **46**: 527–531.
- KASZAB, Z., 1969. Aderidae. Pp. 103–106. In FREUDO, H., K. W. HARDE & G. A. LOHSE (eds.), *Die Käfer Mitteleuropas*, **8**. 388 pp. Goecke & Evers Verlag, Krefeld, Germany. (In German.)
- LAWRENCE, J. F., A. SLIPINSKI, A. E. SEAGO, M. K. THAYER, A. F. NEWTON & A. E. MARVALDI, 2011. Phylogeny of the Coleoptera based on morphological characters of adults and larvae. *Annales Zoologici, Warszawa*, **61**(1): 1–217.
- NAKANE, T., 1987. Notes on some little known beetles (Coleoptera) in Japan. *Kita-Kyūshō no Konchū, Kokura*, **34**: 171–176, 1 pl.
- NARDI, G., 2007. Nomenclatorial and faunistic notes on some world Aderidae (Coleoptera). *Zootaxa*, **1481**: 21–34.
- NARDI, G., 2008. Aderidae. Pp. 455–458. In LÖBL, I., & A. SMETANA (eds.), *Catalogue of Palaearctic Coleoptera*, **5** (Tenebrionidae). 670 pp. Apollo Books, Denmark.
- PIC, M., 1905. Contribution à l'étude générale des Hylophilidae. *Annales de la Société Entomologique de France*, **74**: 181–286.
- PIC, M., 1921. Coléoptères nouveaux de la famille des hylophilides. *Bulletin du Muséum National d'Histoire Naturelle, Paris*, **27**: 415–418.
- SAKAI, M., 1985. Aderidae. Pp. 423–424, pl. 72. In KUROSAWA, Y., S. HISAMATSU & H. SASAJI (eds.), *The Coleoptera of Japan in Color*, **3**. iii-x + 500 pp. Hoikusha, Osaka. (In Japanese.)
- SCHWARZ, E. A., 1878. The Coleoptera of Florida. *Proceedings of the American Philosophical Society*, **17**: 353–472.
- WERNER, F. G., 1990. Revision of the Aderidae of Eastern North America. *Journal of the New York Entomological Society*, **98**(2): 187–232.
- Wikipedia, 2011. Aderidae. 38 pp. Books LLC, Wiki Series.

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