November 25, 2015

New or Little-known Tenebrionid Species (Coleoptera) from Japan

(16) Descriptions of Eight New Species of Genera Allecula and Borboresthes (Alleculinae, Alleculini), and Redescription of the Known Species with Proposal for Two New Synonyms

Katsumi AKITA¹⁾ and Kimio MASUMOTO²⁾

¹⁾Higashitakato-machi 170–2, Tsu City, Mie, 514–1136 Japan ²⁾Kamesawa 3–chôme 14–13–1001, Sumida-ku, Tokyo, 130–0014 Japan

Abstract Five new species of the genus *Allecula* FABRICIUS, 1801 and three new species of the genus *Borboresthes* FAIRMAIRE, 1897 are described from Japan: *Allecula* (*Allecula*) yakushimana AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) okinawana AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) toyoshimai AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) ryukyuensis AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) toyoshimai AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) ryukyuensis AKITA et MASUMOTO, sp. nov.; *A*. (*A*.) toyoshimai AKITA et MASUMOTO, sp. nov.; *B*. satoi AKITA et MASUMOTO, sp. nov.; *B*. aokii AKITA et MASUMOTO, sp. nov.; *B*. satoi AKITA et MASUMOTO, sp. nov.; *B*. aokii AKITA et MASUMOTO, sp. nov.; *B*. aokii AKITA et MASUMOTO, sp. nov. Allecula (Allecula) nipponica MIYATAKE, 1985 is redescribed, and *A*. (*A*.) ontakensis MAEDA et NAKANE, 1988 is regarded as a junior synonym of *A*. (*A*.) nipponica. After examining syntypes of *A*. (*A*.) noctivaga LEWIS, 1895, the lectotype is designated. Furthermore, *A*. (*A*.) akitai HANATSUKA, MASUMOTO et KON, 2006 is regarded as a junior synonym of *A*. (*A*.) noctivaga.

As the sixteenth part of our series concerning the Japanese tenebrionid species, we will deal with two genera, *Allecula* FABRICIUS, 1801 and *Borboresthes* FAIRMAIRE, 1897 of Alleculini, Alleculinae. We describe five new species belonging to the former, and three to the latter. In addition, we redescribe one named species, *Allecula (Allecula) nipponica* MIYATAKE, 1985, and regard *A. ontakensis* MAEDA et NAKANE, 1988 as a junior synonym of *A. (A.) nipponica*. We regard *A. (A.) akitai* HANATSU-KA, MASUMOTO et KON, 2006 as a junior synonym of *A. (A.) noctivaga* after examining syntypes of *A. (A.) noctivaga* LEWIS, 1895 carefully, and designate the lectotype.

We express our cordial thanks to Dr. Kiyoshi ANDO, Dr. Jun-ichi AOKI, Mr. Hisayuki ARIMOTO, Mr. Takuya FUKUZAWA, Mr. Yukihiko HIRANO, Dr. Masashi INAGAKI, Mr. Hiromu KAMEZAWA, Mr. Noboru KANIE, Mr. Akira KASHIZAKI, Mr. Toshiyuki KATÔ, Mr. Hideki KAWAI, Mr. Masafumi MATSUMU-RA, Mr. Masayuki MINAMI, Mr. Takashi MIYAGAWA, Mr. Kôzô MIZUNO, Mr. Shun-ei NAKAZATO, Mr. Yasunori NAMEDA, Mr. Ryô NODA, Mr. Hideo OGAI, Mr. Hiroshi Otobe, Mr. Masahiro SAITÔ, Mr. Hiroki SATÔ, Mr. Akihiro SEKI, Dr. Wataru SUZUKI, Dr. Keiichi TAKAHASHI, Mr. Isamu TANAKA, Mr. Shin-ichi TANAKA, Mr. Kentarô TOYOSHIMA, Dr. Katsuo TSUDA, Mr. Eimon UEDA, and Dr. Takeshi YORO for offering invaluable specimens for this study.

We thank Dr. Masahiro OHARA, Hokkaido University Museum, for loaning types of the NAKANE Collection and Dr. Hiroyuki YOSHITOMI, Ehime University Museum (EUMJ), for loaning types preserved in the Ehime University Museum Collection. We also thank Mr. Maxwell V. L. BARCLAY, the Natural History Museum, London, for permitting to loan the LEWIS types.

Cordial thanks should be expressed to Dr. Makoto KIUCHI for taking clear photographs inserted in this paper, and also to Mr. Shigeaki KONDO for offering various information about the literature. Finally, we greatly appreciate Dr. Vladimír NOVÁK and Dr. Tatsuya NIISATO for reading through this manuscript critically and offering invaluable advice.

The holotypes to be designated will be deposited in the National Museum of Nature and Science,

Tsukuba (NSMT), and the Osaka Museum of Natural History, Osaka (OMNH).

Descriptions of New Species and New Locality Records

Allecula (Allecula) yakushimana AKITA et MASUMOTO, sp. nov.

[Japanese name: Yakushima-usuiro-kuchikimushi]

(Figs. 1, 10, 11)

Body oblong-ovate, strongly convex postero-dorsad; head and elytra dark brown, pronotum and scutellum dark yellowish brown, antennae and legs yellowish brown and partly becoming darker, hairs on surfaces golden yellow; head and elytra moderately, slightly vitreously shining, pronotum and scutellum weakly, slightly sericeously shining; body densely clothed with fine hairs.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus widely oppentagonal, produced and subparallel-sided in anterior part, truncate at apex, slightly convex in medial part, weakly microsculptured, minutely punctate, each puncture with a very fine suberect hair; fronto-clypeal suture gently curved and weakly impressed; genae moderately dilated antero-laterad, weakly raised above basal segment of antennae, depressed in posterior part, microsculptured and sparsely punctulate, with exterior margins weakly sinuous in anterior 3/5; frons weakly convex, microsculptured, closely, irregularly scattered with punctures, each with a suberect hair. Eyes transversely ovate in dorsal view, strongly convex laterad, roundly inlaid into head, with diatone (= space between eyes) about 1.6 times the width of eye diameter. Antennae subfiliform, slightly becoming bolder apicad, tip of terminal segment extending beyond middle of elytra, length from base to apex (in mm): 0.36, 0.17, 0.39, 0.53, 0.47, 0.47, 0.46, 0.45, 0.44, 0.42, 0.48.

Pronotum subtrapezoidal, wider than long (8 : 5), widest at base, gently narrowed anteriad in basal 2/3, roundly narrowed in apical 1/3; apex gently, roundly produced, finely rimmed; base weakly produced in medial 2/5, the producing slightly emarginate opposite to scutellum, and sinuous on both sides, almost entirely rimmed, the rim bolder than that of apex; sides steeply inclined laterad, with lateral margins rounded, punctate-grooved and rimmed, the rims visible from above; front angles widely rounded, hind angles subrectangular with rounded corners; disc gently convex, inclined antero-laterad, very weakly depressed in postero-medial portion, obliquely impressed on both sides close to base, microsculptured, closely, shallowly and somewhat ocellately punctate, each puncture with a subdecumbent hair. Scutellum subcordate, weakly convex in middle, sparsely punctulate and finely haired.

Elytra oblong-ovate, though the basal portion is truncate, 1.8 times as long as wide, 4.1 times the length and 1.5 times the width of pronotum, widest at apical 3/7, very weakly constricted at basal 1/3; dorsum gently convex, highest at middle, very weakly depressed around scutellary strioles; disc punctate-striate, the punctures small, round to ovate; intervals convex, weakly microsculptured, scattered with minute punctures, each with a long subdecumbent hair; sides steeply declined to lateral margins, which are bordered by narrowly explanate spaces and finely rimmed, the rims barely visible from above.

Terminal segment of maxillary palpi large and strongly dilated, with apex 2.2 times the length of interior side, 1.7 times the length of exterior side.

Legs medium-sized in members of the genus, densely clothed with fine hairs; femora noticeably

bold; tarsi with penultimate segments noticeably dilated beneath, length of pro-, meso- and metatarsal ones (in mm): 0.30, 0.17, 0.05 = measured on dorsal face (0.15 = measured on ventral face), 0.02 (0.21), 0.30; 0.65, 0.19, 0.08, 0.03 (0.20), 0.41; 1.03, 0.18, 0.04 (0.16), 0.42.

Genitalia slender, 2.28 mm in length and 0.27 mm in width, the shape as shown in Figs. 10 & 11.

F e m a l e: Body more robust; antennae slightly bolder; terminal segment of maxillary palpi not so strongly dilated apicad; tarsi slightly shorter.

Body length: 6.6–7.8 mm (3, 7.6 mm in holotype), 6.8–8.2 mm ($\stackrel{\bigcirc}{+}$).

Distribution. Japan: Ôsumi Isls. (Yaku-shima Is.).

Type series. Holotype: I, "JAPAN: Yakushima Is. / Hanayama-hodo (1300m) / Yaku-Town, Kagoshima / (FIT = Flight interception trap) / 10-12. VII. 2008 / Katsuo TSUDA leg." // K. AKITA / Collection / KAC 36031." (NSMT). Paratypes: $2 \Im \Im$, Ôkono-taki, 0 m, 14–16.V.2008 (FIT), K. TSUDA leg.; 1 ♀, Koyôji-rindô, 1–4.VII.1998, T. MIYAGAWA leg.; 1 ♀, ditto, 5–7.VII.1998, T. MIYAGAWA leg.; 7 중중, 2 ♀♀, ditto, 3.V.2008, K. ANDO leg.; 2 중중, 4 ♀♀, ditto, 3.V.2008, K. ANDO leg.; 4 중중, 4 ♀♀, Mivanoura, 22–23.IV.2007, T. YORO leg.; 2 33, Ambô to Yakusugi-land, 18.V.2007, S. NAKAZATO leg.; 1 Q, Seibu-rindô, 3–5.V.2001, H. OTOBE leg.; 1 Q, Yoshida, 24–26.VI.2011, H. OTOBE leg.; 1 Q, Kawahara, 15.VII.1989, Н. Отове leg.; 1 ♂, Nagata, 24.IV.2011, J. Аоки leg.; 1 ♀, Onoaida, 3.V.1984, К. MIZUNO leg.; 1 ♂, Hananoegô, 25.VII.1986, T. SUKENAGA leg.; 1 ♀, Kurio, 18.VI.2004, T. MUKOYAMA leg.; 1 Å, 3 ♀♀, Onoaida, 4.V.2008, Y. HAYASHI leg.; 1 ♀, Yudomari, 4–6.V.2000, M. INAGAKI leg.; 4 exs., Han-yama, 250 m, 31.III.–28.IV.2007 (MT = Malaise trap), T. YAMAUCHI et al. leg.; 14 exs., ditto, 28.IV.-1.V. 2007 (MT), T. YAMAUCHI et al. leg.; 10 exs., ditto, 1.V.-5.VI.2007 (MT), T. YAMAUCHI et al. leg.; 3 exs., ditto, 5.VI.-8.VI.2007 (MT), T. YAMAUCHI et al. leg.; 5 exs., ditto, 8.VI.-28.VI.2007 (MT), T. YAMAUCHI et al. leg.; 9 exs., ditto, 28.VI.–30.VII.2007 (MT), T. YAMAUCHI et al. leg.; 1 ♀, ditto, 27–30.VII.2007, T. YAMAUCHI et al. leg.; 1 ♀, Arakawa, 1,200 m, 28.IV.-2.V.2007 (MT), T. YA-MAUCHI et al. leg.; ditto, 1 ♂, 7–28.VI.2007 (MT), T. YAMAUCHI et al. leg.; 2 ♀♀, ditto, 28.VI.–29. VII.2007 (MT), T. YAMAUCHI et al. leg.; 1 3, Aiko-dake, 170 m, 28.VI.-29.VII.2007 (MT), T. YAM-AUCHI et al. leg.

Notes. This new species resembles *Allecula* (*Allecula*) oshimana MAEDA et NAKANE, 1988 (Figs. 2, 12, 13), originally described from Amami-Ôshima Is., particularly in the coloration and punctation on the dorsal surface. It can be distinguished from the latter by the body obviously bolder, the antennae also bolder, and the male genitalia with the basale bolder, and the apicale longer [0.29 to 0.32 times (N = 7, 0.30 times in the holotype) the length of the basale; 0.23 to 0.25 times (N = 7, 0.25 times in the holotype) the length of the basale in *A*. (*A*.) oshimana], and not so abruptly narrowed in the apical part.

Etymology. The specific name is given after the place where the type series were collected.

Allecula (Allecula) okinawana AKITA et MASUMOTO, sp. nov.

[Japanese name: Okinawa-usuiro-kuchikimushi]

(Figs. 3, 14, 15)

Body somewhat oblong-ovate, strongly convex dorsad; major medial portion of head, pronotum and scutellum dark reddish brown, elytra blackish brown, antennae, maxillary palpi and legs yellowish brown and partly becoming darker, hairs on surfaces golden yellow; head and elytra moderately, somewhat vitreously shining, pronotum and scutellum weakly, somewhat sericeously shining; body densely clothed with fine hairs.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; cly-

peus somewhat obtrapezoidal, gently produced and subparallel-sided in anterior part, subtruncate at apex, flattened, weakly microsculptured, minutely punctate, each puncture with a fine suberect hair; fronto-clypeal suture weakly impressed and gently curved; genae moderately dilated antero-laterad, weakly raised above basal segment of antennae, depressed in posterior part, microsculptured and sparsely punctulate, with exterior margins slightly sinuous in anterior 3/5; frons weakly convex, microsculptured, closely scattered with punctures and densely haired, the hairs short and fine in medial part, and becoming longer and bolder laterad. Eyes large and transversely ovate in dorsal view, strongly convex laterad, roundly inlaid into head, with diatone about 1.4 times the width of eye diameter. Antennae subfiliform, tip of terminal segment extending slightly beyond middle of elytra, each segment slightly becoming bolder apicad, length from base to apex (in mm): 0.32, 0.11, 0.39, 0.50, 0.38, 0.40, 0.38, 0.40, 0.41, 0.40, 0.37.

Pronotum subtrapezoidal, wider than long (8 : 5), widest at base, gently, roundly narrowed apicad; apex gently rounded, very weakly produced in medial 2/5, finely bordered and rimmed; base weakly produced in medial 2/5, the producing truncate in middle, and sinuous on both sides, almost entirely, finely bordered by impression, which becomes bolder in lateral portions; sides gently inclined in basal portions and steeply inclined in anterior portions, with lateral margins roundly produced antero-ventrad, bordered by punctate-grooves and fine rims, which are hardly visible from above; front angles widely rounded but invisible from above, hind angles subrectangular; disc weakly convex, inclined antero-laterad, microsculptured, closely, shallowly and somewhat ocellately punctate, each puncture with a subdecumbent hair; hairs short and fine in medial portion, becoming longer and bolder in lateral portions. Scutellum triangular with rounded sides, very weakly convex in middle, microsculptured and weakly wrinkled.

Elytra slightly oblong-ovate, though the basal portion is truncate, about twice as long as wide, 4.3 times the length and 1.3 times the width of pronotum, widest at apical 4/9; dorsum fairly strongly convex, highest at basal 2/9, very weakly depressed around scutellary strioles; disc punctate-striate, the punctures small, round and fairly closely set; intervals convex, weakly microsculptured, scattered with minute punctures, clothed with subdecumbent hairs, those in lateral portions becoming denser and longer; sides steeply declined to lateral margins, which are bordered by narrowly explanate spaces with rows of sparse punctures, and finely rimmed, the rims barely visible from above.

Terminal segment of maxillary palpi large and strongly dilated, with apex 1.5 times the length of interior side, 1.7 times the length of exterior side.

Legs medium-sized, densely clothed with fine hairs; tarsi becoming wider toward each apex, distinctly so beneath in penultimate ones, length of pro-, meso- and metatarsal ones (in mm): 0.19, 0.12, 0.04 (0.09), 0.04 (0.12), 0.27; 0.48, 0.21, 0.08 (0.16), 0.04 (0.17), 0.29; 0.90, 0.20, 0.08 (0.21), 0.31.

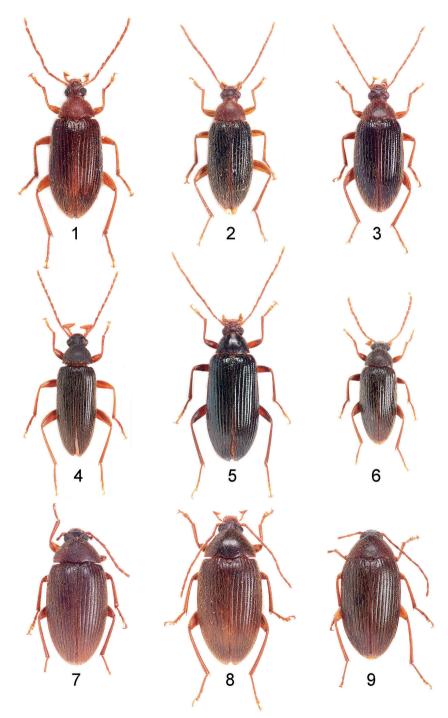
Genitalia slender, 2.37 mm in length and 0.25 mm in width, the shape as shown in Figs. 14 &15.

F e m a l e: Body a little more robust; antennae slightly shorter and bolder; diatone about 1.6 times the width of eye diameter; terminal segment of maxillary palpi not strongly dilated apicad; punctures on pronotum slightly larger and sparser.

Body length: 5.8–7.1 mm (\Diamond , 7.1 mm in holotype), 5.1–7.6 mm (\bigcirc).

Distribution. Japan: The Ryukyus: Amami Isls. (Okinoerabu-jima Is.) and Okinawa Isls. (Okina-wa-jima Is., Iheya-jima Is., Kume-jima Is. and Tokashiki-jima Is.).

Type series. Holotype: ♂, 沖縄県沖縄本島 (Okinawa-jima Is.)/ 名護市羽地大川 (Nago-shi, Haneji, Ookawa)/ 1996年5月12日 / 関章弘採集 (Akihiro SEKI leg.) // K. AKITA / Collection / KAC 32418". (NSMT). Paratypes: Okinoerabu-jima Is.: 1 ♂, Mt. Ôyama, 30.III.1975, H. ARIMOTO leg.; 2 ♂♂, ditto, 5–7.IV.1987, M. MINAMI leg. Okinawa-jima Is.: 1 ♀, same date as for the holotype; 1 ♂, 1 ♀, Aha, 12.III.2009, T. FUKUZAWA leg.; 1 ♂, 1 ♀, Mt. Terukubi-yama, 11.III.2009, T. FUKUZAWA leg.; 1



Figs. 1–9. Male habitus of Allecula (Allecula) spp. and Borboresthes spp. — 1, A. (A.) yakushimana sp. nov., holotype; 2, A. (A.) oshimana MAEDA et NAKANE, 1988; 3. A. (A.) okinawana sp. nov., holotype; 4, A. (A.) ryukyuensis, sp. nov., holotype; 5, A. (A.) toyoshimai sp. nov., holotype; 6, A. (A.) tatsunosukei sp. nov., holotype; 7, B. arimotoi sp. nov., holotype; 8, B. satoi sp. nov., holotype; 9, B. aokii sp. nov., holotype.

3, Ié-rindô, 9.III.2009, H. KAWAI leg.; 1 ♀, Mt. Nago-dake, 17.IV.2006, Y. HIRANO leg.; 1 ♂, 2 ♀♀, Yona, 27.III.1995, S. SUGIMURA leg.; 1 ♂, ditto, 10.IV.1975, N. KANIE leg.; 1 ♀, ditto, 24.III.1975, H. ARIMOTO leg.; 1 \mathcal{Q} , ditto, 20.III.2010, H. OTOBE leg.; 1 \mathcal{Q} , ditto, 19.III.2010, H. KURIHARA leg.; 1 \mathcal{A} , ditto, 19.III.2010, T. KURIHARA leg.; 1 ♀, ditto, 12.III.2010, M. MATSUMURA leg.; 4 ♂♂, 2 ♀♀, ditto, 9.IV.2014, M. MATSUMURA leg.; 2 罕, Kendô-2gô-sen (Kunigami), 14.III.2002, S. TANAKA leg.; 1 👌 Miyazato, 26.V.2013, H. OGAI leg.; 2 ♀♀, Hentona, 15.III.2008, H. KAWAI leg.; 1 ♂, Benoki, 28. III.1987, M. SAWAI leg.; 1 ♂, 2 ♀♀, ditto, 1.IV.1994, H. ONODERA leg.; 1 ♂, Benoki-rindô, 19.III.2010, H. KURIHARA leg.; 1 ♀, Haneji, 16.III.1987, M. SAWAI leg.; 1 ♀, Haneji-gawa, 1.IV.1987, M. MINAMI leg.; 1 \bigcirc , Hiji, 26.III.2000, H. OTOBE leg.; 1 \bigcirc , Yonaha-dake, 14.IV.2001, H. NISHINO leg.; 3 \bigcirc , 1 \bigcirc , Tamatsuji, 21.III.2009, M. MATSUMURA leg.; 1 ♀, Oppa-dake, 21.IV.2009, Y. HIRANO leg.; 1 ♂, Ôgimi, 19.III.2010, H. KURIHARA leg.; 1 ♂, 1 ♀, Kin-chô, Okukubi-dam, 6.III.2015, M. KIMURA leg.; Iheya-jima Is.: 2 ♂♂, Koshidake-rindô, 16.V.2008, I. ТАNАКА leg. Tokashiki-jima Is.: 1 ♀, Tokashiki-rindô, 8.IV.2013, H. OGAI leg. Kume-jima Is.: 13 ♂♂, 14 ♀♀, Mt. Âra-dake, 21.III.2010, K. ANDO leg.; 5 ♀♀, Mt. Daruma-yama, 19.III.2010, K. ANDO leg.; 2 ♀♀, ditto, 20.III.2010, K. ANDO leg.; 1 ♂, ditto, 1–3. V.2006, H. OTOBE leg.; 15 ♂♂, 2 ♀♀, SE slope of Mt. Âra-dake, 170 m, 1–7.V.2015, W. SUZUKI leg.; 4 3∂, Mt. Uegusuku-dake, 301 m, 2–6.V.2015, W. SUZUKI leg.; 31 3∂, 11 99, Daruma-yama Park, 158 m, 2-6.V.2015, W. SUZUKI leg.

Notes. The new species resembles *Allecula* (*Allecula*) oshimana MAEDA et NAKANE, 1988 (Figs. 2, 12, 13), but can be distinguished from the latter by the body obviously bolder and more strongly convex dorsad in lateral view, the terminal segment of maxillary palpi less strongly dilated apicad, the male genitalia with the basale swollen in basal 2/5 in dorsal view, and the apicale longer [0.27 to 0.32 times (N = 7, 0.30 times in the holotype) the length of the basale; 0.23 to 0.25 times the length of the basale in *A*. (*A*.) oshimana], The present new species also resembles *A*. (*A*.) yakushimana sp. nov. (Figs. 1, 10, 11), but can be distinguished from the latter by the body shortened and well-convex dorsad in middle, and the male genitalia with the basale swollen in basal 2/5 in dorsal 2/5 in dorsal view, and the basal part much more strongly curved, and the apicale more strongly narrower in apical part.

Etymology. The specific name is given after the locality where the type series were collected.

Allecula (Allecula) oshimana MAEDA et NAKANE, 1988

[Japanese name: Ôshima-usuiro-kuchikimushi]

(Figs. 2, 12, 13)

Allecula oshimana MAEDA et NAKANE, 1988: 4.

Distribution. Japan: The Ryukyus (Amami-Ôshima Is. and Tokuno-shima Is. [new record]).

Type specimen examined. Holotype: ♂, "HOLOTYPE // Sumi Yô / Amami-ôshima / Japan // 7. IV. 1981 / Coll. M. Maeda // Allecula / oshimana / Maeda & m. / Det. T. Nakane // NAKANE Coll. / SEHU(=Sys. Ent. Hokkaido Univ.) JAPAN / 1999 // 0000003971 / Sys. Ent / Hokkaido Univ. / Japan [SEHU]".

Other specimens examined. Amami-Ôshima Is.^{*}: 84 exs. Tokuno-shima Is.: 1 ♂, Isen-chô, Itokina, 21.IV.2008, Y. HIRANO leg.

^{*}Detailed collecting data (place, date and collector) is omitted to save space since the locality record is already known.

Allecula (Allecula) ryukyuensis AKITA et MASUMOTO, sp. nov.

[Japanese name: Ryûkyû-hosoaka-kuchikimushi]

(Figs. 4, 16, 17)

Body elongated ovate, gently convex longitudinally; blackish brown, antennae and legs mostly brownish yellow, partly becoming darker in color, hairs on surfaces golden yellow; anterior portion of head, scutellum and elytra moderately, somewhat vitreously shining, posterior portion of head and pronotum weakly, somewhat sericeously shining, antennae and legs moderately shining; each surface densely clothed with fine hairs.

M a l e: Head somewhat transversely elliptical, though the anterior margin produced apicad in medial portion; clypeus subquadrate with base gently curved, produced antero-ventrad, truncate at apex, weakly depressed in basal part, weakly microsculptured, finely punctate, each puncture with a minute decumbent hair; fronto-clypeal suture finely impressed; genae moderately dilated, weakly raised above basal segment of antennae, irregularly rugulose and microscopically punctate, with exterior margin slightly emarginate; frons weakly convex, microsculptured, coarsely punctate and decumbently haired. Eyes somewhat comma-shaped in dorsal view, strongly convex laterad, gently inlaid into head, with diatone about 1.4 times the width of eye diameter. Antennae subfiliform, tip of terminal segment extending beyond middle of elytra, each segment slightly becoming bolder apicad, length from base to apex (in mm): 0.29, 0.15, 0.54, 0.51, 0.43, 0.41, 0.40, 0.39, 0.37, 0.35, 0.35.

Pronotum subtrapezoidal, wider than long (3 : 2), widest at base, very weakly narrowed anteriad in basal portion, roundly so in medial portion, rather strongly so in apical portion, and weakly sinuous before hind angles in dorsal view; apex gently, roundly produced, finely grooved and rimmed; base weakly produced in medial 2/5, sinuous on both sides, finely rimmed; sides steeply inclined laterad, roundly extending ventrad, with lateral margins finely punctate-grooved and rimmed, the rims absolutely invisible from above; front angles rounded, hind angles subrectangular; disc gently convex, microsculptured, closely, shallowly and somewhat ocellately punctate, each puncture with a long subdecumbent hair. Scutellum subcordate, nearly flat, sparsely punctulate.

Elytra elongated ovate, though the basal portion is truncate, 2.2 times as long as wide, 4.4 times the length and 1.3 times the width of pronotum, widest at basal 3/8; dorsum gently convex, highest at basal 1/8, very weakly flattened in medial portion, very weakly compressed from sides at basal 1/4; disc punctate-striate, the punctures closely set; intervals slightly convex, weakly microsculptured, often transversely aciculate, scattered with minute, granulated punctures, each with a long decumbent hair; sides steeply declined to lateral margins, which are bordered by punctate-grooves and finely rimmed, the rims barely visible from above.

Terminal segment of maxillary palpi noticeably large and strongly dilated, with apex 1.7 times the length of interior side, 1.8 times the length of exterior side.

Legs medium-sized, densely clothed with fine hairs; femora bold; tarsi with 3rd and 4th segments of pro- and mesotarsi, and penultimate of metatarsi dilated beneath, length of pro-, meso- and metatarsal ones (in mm): 0.28, 0.16, 0.07 (0.09), 0.04 (0.15), 0.30; 0.58, 0.26, 0.14 (0.17), 0.04 (0.16), 0.28; 0.90, 0.36, 0.05 (0.18), 0.32.

Genitalia slender, 1.32 mm in length and 0.14 mm in width, the shape as shown in Figs. 16 & 17. F e m a l e: Body more robust; antennae shorter; eyes smaller; terminal segments of maxillary palpi not so strongly dilated apicad; legs shorter.

Body length: 5.7–6.6 mm ($\stackrel{\wedge}{\bigcirc}$, 6.6 mm in holotype), 6.5–7.2 mm ($\stackrel{\bigcirc}{\ominus}$).

Distribution. Japan: The Ryukyus: Amami Isls. (Amami-Ôshima Is., Uke-jima Is. and Toku-

no-shima Is.) and Okinawa Isls. (Okinawa-jima Is.).

Type series. Holotype: 3, "Japan: Ryukyus / Amami Isls. / Uke-jima Is. / 21. III. 2004 / Keiichi Takahashi leg. // Tatsunosuke / KIMOTO / Collection" (NSMT). Paratypes: Amami-Ôshima Is.: 2 9, Sumiyô-chô, Ishihara, 15–22.VI.2014 (LFIT = Flight interception trap with light), M. NISHI leg.; 1 9, ditto, 8–14.VI.2014 (LFIT), M. NISHI leg.; 1 9, Nase-shi, Akasagi-kôen, 7.V.2010, K. TAKAHASHI leg.; 1 9, Yamato-son, Yamatohama, 26–29.IV.2008, H. OTOBE leg.; 1 9, Amami-shi, Kinsakubaru, 320 m, 11.VII.2009, R. NODA leg.; Uke-jima Is.: 1 3, same data as for the holotype. Tokumo-shima Is.: 1 3, Amagi-chô, Ujigami-jinja, 20.IV.2008, J. AOKI leg. Okinawa-jima Is.: 1 3, Chinen-jôshi, 4.IV.1987, M. MINAMI leg.; 1 3, Nago-shi, Nangusuku, 9.V.2014, H. OGAI leg.

Notes. The present new species resembles *Allecula* (*Allecula*) *tenuis* MARSEUL, 1876, originally described from "Hiogo", but can be distinguished from the latter by the antennae slightly shorter (tip of terminal segment reaching 2/3 of elytra in male of *A*. (*A.*) *tenuis*), and bolder, the pronotum more strongly widened basad, the elytra a little wider and the male genitalia obviously shorter [1.42 to 1.57 mm in length in *A*. (*A.*) *tenuis* (N = 7)].

The new species also resembles A. (A.) ishigakiensis MAEDA et NAKANE, 1988, originally described from Ishigaki-jima Is., but can be distinguished from the latter by the male antennae longer (tip of terminal segment not reaching middle of elytra in A. (A.) ishigakiensis), the elytra less strongly convex, the punctures in the striae slightly smaller, the male protibiae nearly straight (weakly angulate in basal 1/3 of interior face in A. (A.) ishigakiensis), the male meso- and metatibiae nearly straight (weakly curved in A. (A.) ishigakiensis), and the male genitalia smaller [1.59 to 1.70 mm (N = 2, 1.70 mm in the holotype) in length in A. (A.) ishigakiensis].

Etymology. The specific name is given after the place where the type series were collected.

Allecula (Allecula) tenuis MARSEUL, 1876

[Japanese name: Hosoaka-kutikimushi]

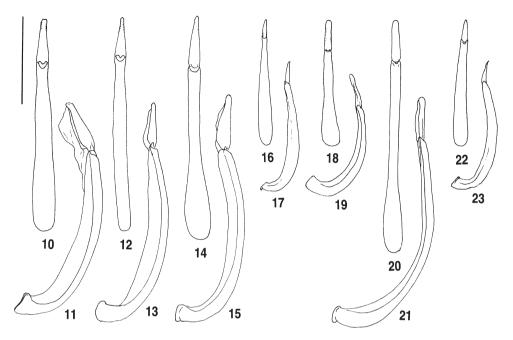
Allecula tenuis MARSEUL, 1876: 326. Type locality: Hiogo.

Distribution. Japan: Hokkaido [new record], Honshu, Shikoku [new record], Kyushu, Tsushima Isls. and Yaku-shima Is. [new record].

Specimens examined. Hokkaido: 1 Å, Koshimizu-chô, Sôei, 18.VI.2014, T. KATÔ leg.; 1 \bigcirc , Hidaka, Tomikawa to Monbetsu, 1.VI.2011, J. AOKI leg. Honshu^{*}: 1 \bigcirc , Iwate-ken; 3 ÅÅ, 2 \bigcirc , Fukushima-ken; 1 Å, Tochigi-ken; 2 ÅÅ, Gumma-ken; 1 Å, Ibaraki-ken; 2 ÅÅ, 5 \bigcirc , Yamanashi-ken; 2 ÅÅ, Chiba-ken; 1 Å, 1 \bigcirc , Kanagawa-ken; 1 Å, Nagano-ken; 1 \bigcirc , Gifu-ken; 2 ÅÅ, Aichi-ken; 3 ÅÅ, 5 \bigcirc , Mie-ken; 12 ÅÅ, 16 \bigcirc , Nara-ken; 2 \bigcirc , Okayama-ken; 1 Å, Shimane-ken; 2 ÅÅ, Yamaguchi-ken. Shikoku: 2 \bigcirc , Kagawa-ken; 2 ÅÅ, Tokushima-ken; 2 ÅÅ, Ehime-ken. Kyushu^{*}: 1 Å, 1 \bigcirc , Nagasaki-ken; 2 ÅÅ, 1 \bigcirc , Ôita-ken; 1 Å, Miyazaki-ken; 1 Å, 4 \bigcirc , Kagoshima-ken. Tsushima Isls.^{*}: 3 ÅÅ, 3 \bigcirc , Yaku-shima Is.: 1 Å, Miyanoura, 24–26.V.2011, H. OTOBE leg.; 1 \bigcirc , Yoshida, 24–26.V.2011, H. OTOBE leg.; 1 \bigcirc , Nagata, 24–26.V.2011, H. OTOBE leg.; 1 \bigcirc , Yodogawa, 14.VII.2012, R. NODA leg.

> Allecula (Allecula) ishigakiensis MAEDA et NAKANE, 1988 [Japanese name: Ishigaki-hosoaka-kuchikimushi]

Allecula ishigakiensis MAEDA et NAKANE, 1988: 3. Type locality: Mt. Bannadake, Ishigaki Is.



Figs. 10–23. Male genitalia of Allecula (Allecula) spp. — 10–11, A. (A.) yakushimana sp. nov., holotype; 12– 13, A. (A.) oshimana MAEDA et NAKANE, 1988; 14–15, A. (A.) okinawana sp. nov., holotype; 16–17, A. (A.) ryukyuensis, sp. nov., holotype; 18–19, A. (A.) toyoshimai sp. nov., holotype; 20–21, A. (A.) aeneipennis HARO-LD, 1878; 22–23, A. (A.) tatsunosukei sp. nov., holotype. Scale: 1.0 mm.

Distribution. Japan: The Ryukyus: Sakishima Isls. (Ishigaki-jima Is. and Iriomote-jima Is. [new record]).

Type specimen examined. Holotype: ♂, "HOLOTYPE // Banna-Dake / Ishigaki Is. / 12. V. 1974 / J. Okuma // Allecula / ishigakiensis / Maeda & m. / Det. T. Nakane // NAKANE Coll. / SEHU JAPAN / 1999 // 0000003934 / Sys. Ent / Hokkaido Univ. / Japan [SEHU]".

Other specimens examined. Ishigaki-jima Is.: 1 3, 15.IV.1986, K. TAKAHASHI leg.; 1 3, Mt. Ara-dake, 29.IV.1999, K. TAKAHASHI leg.; 2 99, Mt. Yarabu-dake, 20.IV.2010, I. TANAKA leg. Irio-mote-jima Is.: 1 3, Haimida, 26.III.2005, T. KITANO leg. (EUMJ); 2 99, Mt. Tedou-san, 22.III.2015, R. NODA leg.

Allecula (Allecula) toyoshimai AKITA et MASUMOTO, sp. nov.

[Japanese name: Toyoshima-aoba-kuchikimushi]

(Figs. 5, 18, 19)

Body elongated ovate, strongly convex dorsad; anterior portion of head, scutellum, major parts of femora and tibiae dark reddish brown, postero-medial portion of head, pronotum, apical parts of femora blackish brown, elytra black with feeble brownish tinge, antennae, maxillary palpi and tarsi yellowish brown and partly becoming darker, hairs on surfaces golden, partly slightly reddish yellow; head and pronotum moderately, weakly vitreously shining, scutellum weakly, sericeously shining, elytra strongly, metallically shining with dark greenish reflection; body densely clothed with fine hairs. M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus semicircular, gently produced anteriad, subtruncate at apex, flattened in major basal and anterior parts, weakly bent ventrad in apical part, weakly microsculptured, minutely punctate, each puncture with a fine subdecumbent hair; fronto-clypeal suture weakly impressed and rounded; genae moderately dilated antero-laterad, gently raised above basal segment of antennae, depressed in posterior part, weakly microsculptured and sparsely punctulate, with exterior margins slightly sinuous in anterior 1/3; frons gently convex, microsculptured, closely punctate, haired, the hairs becoming longer in anterior and lateral parts. Eyes large and somewhat transversely comma-shaped in dorsal view, strongly convex laterad, transversely, roundly inlaid into head, with diatone about 1.4 times the width of eye diameter. Antennae subfiliform, tip of terminal segment extending slightly beyond middle of elytra, each segment slightly becoming bolder apicad, length from base to apex (in mm): 0.30, 0.23, 0.41, 0.59, 0.50, 0.52, 0.46, 0.44, 0.43, 0.41, 0.63.

Pronotum subtrapezoidal, wider than long (4 : 3), widest at base, gently narrowed anteriad in basal 2/3, roundly so in apical 1/3; apex gently roundly produced, finely rimmed; base weakly produced in medial 2/5, the producing truncate opposite to scutellum and sinuous on both sides, entirely impressed and rimmed, the rim clearer than apical rim; sides somewhat obliquely inclined, with lateral margins roundly produced ventrad, punctate-grooved and finely rimmed, the rims barely visible from above; front angles widely rounded, hind angles subrectangular in dorsal view; disc weakly convex, weakly depressed in medio-basal and latero-basal portions, very weakly microsculptured, shallowly and somewhat ocellately punctate, each puncture with a fine subdecumbent hair; hairs in lateral portions becoming longer and more noticeable. Scutellum triangular with rounded sides, slightly convex in middle, weakly microsculptured, closely punctulate, and densely, finely haired.

Elytra elongated ovate, though the basal portions are truncate, about twice as long as wide, 4.6 times the length and 1.5 times the width of pronotum, widest at middle; dorsum strongly convex, highest at basal 1/3, very weakly depressed around scutellary strioles; disc punctate-striate, the punctures small, round and closely set; intervals well convex, weakly microsculptured, scattered with minute punctures, densely clothed with fine subdecumbent hairs, those in lateral and posterior portions becoming longer and more noticeable; sides steeply declined to lateral margins, which are bordered by narrowly explanate spaces with rows of punctures and finely rimmed, the rims visible from above.

Terminal segment of maxillary palpi large and strongly dilated, with apex 2.5 times the length of interior side, 1.6 times the length of exterior side.

Legs medium-sized, densely clothed with fine hairs; tarsi slender, 2nd to 4th segments of protarsi, 3rd and 4th of mesotarsi, and the penultimate of metatarsi becoming wider toward each apex, length of pro-, meso- and metatarsal ones (in mm): 0.24, 0.11 (0.14), 0.04 (0.16), 0.06 (0.23), 0.40; 0.64, 0.21, 0.06 (0.14), 0.04 (0.19), 0.49; 0.98, 0.31, 0.04 (0.20), 0.55.

Genitalia slender, 1.32 mm in length and 0.18 mm in width, the shape as shown in Figs. 18 & 19.

F e m a l e: Head a little more produced apicad, eyes smaller, with diatone about 1.4 times the width of eye diameter, terminal segment of maxillary palpi with interior side not so shortened; pronotum more strongly produced anteriad, punctures on pronotum slightly larger and sparser; legs slightly bolder and feebly shorter.

Body length: 7.6–8.0 mm (3, 8.0 mm in holotype), 8.0 mm (4, 9.0 mm).

Distribution. Japan: C. Honshu.

Type series. Holotype: ♂, "岐阜県 (Gifu-ken) 高山市 (Takayama-shi) / 高根町 (Takane-chô) 千間 樽 (Sengendaru) / 19. SEP. 2009 / 豊島健太郎採集 (Kentarô Toyoshima leg.)" (NSMT). Paratypes: 1 ♀, same locality as for the holotype, 16.VIII.1999 (LT = Light trap), K. Toyoshima leg.; 1 ♀, Gifu-ken, Takayama-shi, Asahi-chô, Kurumijima, 1.IX.2009, K. Toyoshima leg.; 1 ♂, Nikkô-shi, Yumo-

to, 28-30.VIII.2013, K. MASUMOTO leg.

Notes. The present new species resembles *Allecula* (*A.*) *aeneipennis* HAROLD, 1878 (Figs. 20 & 21), originally described from "Tokio", in having dark bluish elytra, but can be distinguished from the latter by the body slenderer, hairs of the elytra and the pronotum noticeably shorter, the elytra more clearly punctate-striate, the punctures obviously finer and closer, and the male genitalia about a half the length of the latter species, the basale much more strongly curved, and the apicale 0.34 to 0.37 times (N = 2, 0.37 times in the holotype) the length of the basale [0.19 to 0.23 times the length in *A*. (*A.*) *aeneipennis* (N = 5)].

Etymology. The specific name is given in honor of Mr. Kentarô TOYOSHIMA who collected the holotype and two paratypes.

Allecula (Allecula) tatsunosukei AKITA et MASUMOTO, sp. nov.

[Japanese name: Momobuto-hosoaka-kuchikimushi]

(Figs. 6, 22, 23)

Body elongated ovate, strongly convex dorsad; dorsal surface almost blackish brown, head, pronotum and scutellum slightly lighter in color, antennae, femora, tibiae and basal parts of tarsi brown, maxillary palpi and apical parts of tarsi brownish yellow, hairs on surfaces mostly golden yellow, partly darken in color; head, pronotum and scutellum weakly, somewhat sericeously shining, elytra strongly, vitreously shining; each surface densely clothed with fine hairs.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus somewhat transversely hexagonal, weakly produced and inclined anteriad, truncate at apex, flattened in major posterior part, very weakly microsculptured, closely, minutely punctate, each puncture with a fine decumbent hair; fronto-clypeal suture inconspicuous, weakly curved; genae somewhat obliquely semicircular, flattened in anterior and medial parts, depressed in posterior part, gently microsculptured and sparsely punctulate, with exterior margins weakly sinuous in anterior 3/5; frons gently convex, microsculptured, closely punctate and haired, the hairs in medial part short, those in anterior and posterior parts becoming longer and bolder. Eyes large, strongly convex laterad, obliquely, roundly inlaid into head, with diatone about 0.9 times the width of eye diameter. Antennae subfiliform, tip of terminal segment reaching before middle of elytra, each segment slightly becoming bolder apicad, length from base to apex (in mm): 0.22, 0.12, 0.36, 0.33, 0.30, 0.29, 0.27, 0.27, 0.25, 0.26, 0.29.

Pronotum subtrapezoidal, wider than long (3: 2), widest at base, weakly, sublinearly narrowed anteriad in basal 2/3, strongly, roundly narrowed in apical 1/3; apex weakly, roundly produced, finely rimmed; base very weakly produced in medial 1/3, sinuous on both sides, almost entirely, finely rimmed; sides steeply, obliquely inclined laterad, with lateral margins rounded, finely punc-tate-grooved and rimmed, the rims barely visible from above; front angles widely rounded, hind angles subrectangular; disc gently convex, inclined antero-laterad, microsculptured, closely, shallowly and somewhat ocellately punctate and haired, the hairs subdecumbent and fine in medial portion, and becoming longer and bolder in lateral portions. Scutellum nearly triangular with slightly rounded sides, very weakly convex in middle, weakly microsculptured, ruguloso-punctulate and sparsely, minutely haired.

Elytra elongated ovate, though the basal portion is truncate, 2.1 times as long as wide, 4.0 times the length and slightly less than 1.5 times the width of pronotum, widest at basal 1/7; dorsum strongly convex, highest at basal 1/3, very weakly depressed around scutellary strioles; disc punctate-striate,

the punctures small, round to subquadrate, and closely set; intervals gently convex, transversely rugulose, minutely granulo-punctate, each puncture with a long subdecumbent hair; sides steeply declined to lateral margins, which are bordered by narrowly explanate and punctate spaces and finely rimmed, the rims barely visible from above.

Terminal segment of maxillary palpi large and strongly dilated, with apex about 1.6 times the length of interior side, 1.7 times the length of exterior side.

Legs bold, densely clothed with fine hairs; femora noticeably bold; tarsal segments weakly dilated toward each apex, length of pro-, meso- and metatarsal ones (in mm): 0.29, 0.12, 0.08, 0.02 (0.22), 0.32; 0.46, 0.17, 0.8 (0.14), 0.04 (0.20), 0.30; 0.80, 0.29, 0.05 (0.16), 0.34.

Genitalia slender, 1.31 mm in length and 0.12 mm in width, the shape as shown in Figs. 22 & 23.

F e m a l e: Body a little more elongate; eyes smaller, with diatone 1.6 times the width of eye diameter; pronotum less strongly narrowed apicad; elytra more clearly punctate-striate.

Body length: 5.0–5.8 mm (\bigcirc , 5.8 mm in holotype), 6.1–7.0 mm (\bigcirc).

Distribution. Japan: Honshu and Shikoku.

Type series. Holotype: 3, "JAPAN: Ibaraki-ken / Kitaibaraki-shi / Sadanomi / 6. VIII. 1994 / Tatsunosuke Kimoto leg. // Tatsunosuke / KIMOTO // Collection" (NSMT). Paratypes: 1 2, Tokyo-to, Okutama-machi, Nippara, Mt. Kintai-zan, 28.VII.2007, T. KIMOTO leg.; 1 ♀, Tokyo-to, Okutama-machi, Nippara, Takasakanomaru, 10.VIII.2007, Т. Кимото leg.; 1 3, Tokyo-to, Okutama-machi, Nippara, Isseki-san to Ningyô-yama, 1,000–1,100 m, 9.VII.2011, H. KAMEZAWA leg.; 2 ♀♀, ditto, 800–1,100 m, 28.VII.2013, H. KAMEZAWA leg.; 1 3, 2 99, ditto, 1,000 m, 24.V.2014 (larva; emerged on 18. VI.2014), H. KAMEZAWA leg.; 1 ♂, 1 ♀, ditto, 1,000–1,100 m, 24.V.2013 (larva; emerged on 9. VI.2013) H. KAMEZAWA leg.; 1 3, ditto, 1,000 m, 21.VI.2014 (larva from dry hollow of tree; emerged on 5.VII.2014), H. KAMEZAWA leg.; 1 Q, Shizuoka-ken, Honkawane-chô, Yamainudan, 4.VIII.2001, T. Кимото leg.; 1 🖓, Gifu-ken, Neo-mura, Nukumi-tôge, 15–16.VIII.1998 (LT), К. Тоуознима leg.; 1 🖏 Gifu-ken, Shirakawa-mura, Ôshirakawa, 22–23.VII.1999 (LT), K. TOYOSHIMA leg.; 1 ∂, ditto, 19.VII.1998 (LT), K. TOYOSHIMA leg.; 1 ♀, ditto, 11.VIII.2000, K. TOYOSHIMA leg.; 1 ♂, ditto, 14.VIII.2000 (LT), K. TOYOSHIMA leg.; 1 3, ditto, 30.VII.2001 (LT), K. TOYOSHIMA leg.; 1 3, Mieken, Misugi-mura, Hirakura, 550–900 m, 16.VII.1994, K. AKITA leg.; 2 ♀♀, ditto, 19.VII.1998, K. AKITA leg.; 2 ♂♂, 1 ♀, Nara-ken, Nara-shi, Kasuga-yama, 140–200 m, 13.VI.2004, K. AKITA leg.; 1 ♂, ditto, 100–200 m, 31.V.2009, K. AKITA leg.; 1 ♀, Tokushima-ken, Mt. Tsurugi-san, Nishijimaichinomori, 13.VIII.1989, Y. NAMEDA leg.

Notes. The present new species somewhat resembles *Allecula (Allecula) tenuis* MARSEUL, 1876, originally described from "Hiogo", but can be very easily distinguished from the latter by the body shorter and more strongly convex, the antennae noticeably shorter (tip of terminal segment reaching 2/3 of elytra in male of *A*. (*A*.) *tenuis*) and bolder, the eyes noticeably larger and more strongly convex laterad, the terminal segments of the maxillary pulpi less strongly dilated apicad, the legs noticeably shorter and the femora bolder, and the basale of the male genitalia much more strongly curved in the basal part.

Etymology. The specific name is given in honor of Mr. Tatsunosuke KIMOTO who collected the holotype.

Borboresthes arimotoi AKITA et MASUMOTO, sp. nov.

[Japanese name: Arimoto-tobiiro-kuchikimushi]

(Figs. 7, 24, 25)

Body subovate, strongly convex dorsad; color almost wholly dark brown, antennae and tarsi brownish yellow, femora and tibiae brown with feeble reddish tinge; dorsal surface weakly, sericeously shining, four basal segments of antennae and legs moderately shining, seven apical segments of antennae almost mat; body almost wholly, densely clothed with fine mostly brownish yellow hairs.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus somewhat transversely elliptical, gently produced and inclined anteriad, subtruncate at apex, flattened in major posterior part, very weakly depressed in basal part, microsculptured, closely, minutely punctate, clothed with long decumbent hairs in basal and lateral parts; fronto-clypeal suture finely impressed and gently curved; genae subrectangular, flattened in anterior and medial parts, depressed in posterior part, microsculptured and closely punctate, with exterior margins sinuous in anterior 2/3; frons slightly convex, microsculptured, closely punctate, clothed with hairs in lateral parts. Eyes large and slightly obliquely set, strongly convex laterad, roundly inlaid into head, with diatone about 1.1 times the width of eye diameter. Antennae slightly boldly filiform, each segment becoming bolder apicad, length from base to apex (in mm): 0.26, 0.11, 0.40, 0.42, 0.40, 0.40, 0.41, 0.42, 0.33, -, -, (two apical segments missing in holotype).

Pronotum somewhat semicircular, wider than long (5 : 3), widest at base, roundly narrowed anteriad; apex rounded and finely rimmed; base finely impressed and rimmed, very weakly produced in medial 1/3 and truncate opposite of scutellum, sinuous on both sides; sides steeply, obliquely inclined antero-laterad, with lateral margins rounded ventrad, punctate-grooved and finely rimmed, the rims barely visible from above; front angles widely rounded, hind angles obtusely angular; disc gently convex, microsculptured, depressed in medio-posterior portion, weakly impressed on both sides close to base, closely, shallowly and somewhat ocellately punctate and decumbently haired, the hairs short and fine in medial portion, and becoming longer and bolder in lateral portions. Scutellum subcordate, nearly flat, weakly microsculptured, punctulate and minutely haired in lateral parts.

Elytra slightly oblong-ovate, though the basal portion is truncate, 1.7 times as long as wide, 3.9 times the length and slightly less than 1.2 times the width of pronotum, widest at basal 2/7; dorsum strongly convex, highest at basal 1/9, very weakly depressed in area around scutellary strioles; disc punctate-striate, the punctures small, round to subquadrate, and closely set; intervals gently convex, very weakly, somewhat transversely wrinkled, minutely granulo-punctate and haired, the hairs long, subdecumbent, and becoming longer and bolder laterad and posteriad; sides steeply declined to lateral margins, which are bordered by narrowly explanate and punctate spaces and finely rimmed, the rims barely visible from above.

Terminal segment of maxillary palpi dilated, with apex about 2.2 times the length of interior side, 1.3 times the length of exterior side.

Legs bold, densely clothed with fine hairs; femora noticeably bold, particularly so in metafemora; tarsal segments dilated toward each apex, length of pro-, meso- and metatarsal ones (in mm): 0.25, 0.11, 0.08 (0.19), 0.03 (0.28), 0.41; 0.51, 0.14, 0.07 (0.26), 0.03 (0.29), 0.45; 0.82, 0.14, -, - (two apical segments missing in holotype).

Genitalia subfusiform, 1.43 mm in length and 0.29 mm in width, the shape as shown in Figs. 24 & 25.

Body length: 7.3 mm (♂, holotype).

F e m a l e: Unknown.

Distribution. Japan: The Ryukyus: Sakishima Isls. (Yonaguni-jima Is.)

Type specimen. Holotype: ♂, "Tendabana / Yonaguni-Is. / 6-VII 1974 / H. Arimoto leg." // K. AKITA / Collection / KAC 32419" (NSMT).

Notes. This new species resembles Borboresthes hiraii AKITA et MASUMOTO, 2008 (Figs. 26, 27),

originally described from Amami-Ôshima Is., but can be distinguished from the latter by the body shorter and less strongly convex dorsad, the eyes a little smaller with the diatone wider, the elytra more finely punctate-striate, with the intervals less strongly convex and more finely haired, the legs shorter and bolder, and the male genitalia obviously longer (1.25 mm in holotype of *B. hiraii*).

Etymology. The specific name is given in honor of Mr. Hisayuki ARIMOTO who collected the holotype.

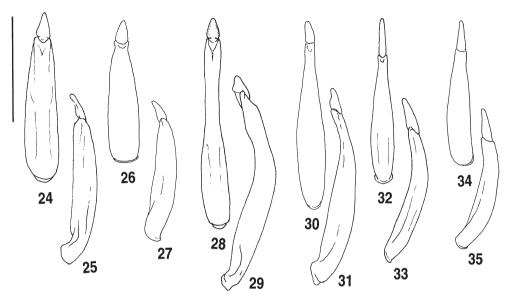
Borboresthes satoi AKITA et MASUMOTO, sp. nov. [Japanese name: Satô-tobiiro-kuchikimushi] (Figs. 8, 28, 29)

Body subovate, strongly convex dorsad; color almost wholly dark brown, antennae, mouth parts, anterior portion of head and tarsi brownish yellow; head and scutellum weakly, sericeously shining, pronotum strongly, weakly vitreously shining, elytra moderately, slightly sericeously shining, basal parts of antennae and legs moderately shining, apical parts of antennae mat; surface densely clothed with mostly golden yellow, partly darkened haires.

Ma l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus strongly produced and subparallel-sides, flattened in posterior part, weakly bent ventrad in anterior part, subtruncate at apex, very weakly microsculptured, closely, shallowly punctate, each puncture with a fine decumbent hair; fronto-clypeal suture clearly, roundly impressed; genae subrectangular, flattened in anterior and medial parts, depressed in posterior part, microsculptured and moderately punctate, with exterior margins weakly sinuous in anterior 3/5; frons slightly convex, microsculptured, closely punctate, clothed with subdecumbent hairs. Eyes large and slightly obliquely set, strongly convex laterad, roundly inlaid into head, with diatone about 1.3 times the width of eye diameter. Antennae slightly boldly filiform, tip of terminal segment extending beyond middle of elytra, each segment very slightly becoming bolder apicad, length from base to apex (in mm): 0.34, 0.11, 0.49, 0.57, 0.52, 0.47, 0.43, 0.41, 0.40, 0.39.

Pronotum semicircular, wider than long (3: 2), widest at base, roundly narrowed anteriad; apex rounded and finely rimmed; base entirely rimmed, very weakly produced in medial 1/3, truncate opposite of scutellum, sinuous on both sides; sides gently inclined in posterior portion, steeply, obliquely inclined in medial and anterior portions, with lateral margins weakly rounded ventrad, finely bordered and rimmed, the rims barely visible from above; front angles widely rounded, hind angles subrectanglar; disc gently convex, weakly microsculptured, depressed in medio-basal portion, weakly, obliquely impressed on both sides close to base, closely, somewhat ocellately punctate and densely haired, the hairs short and fine in medial portion, and becoming longer and bolder in lateral portions. Scutellum subcordate, nearly flat, weakly microsculptured, punctulate and densely clothed with decumbent hairs.

Elytra oblong-ovate, though the basal portion is truncate, 1.7 times as long as wide, 3.0 times the length and slightly less than 1.4 times the width of pronotum, widest at basal 1/3; dorsum moderately convex, highest at basal 1/4; disc punctate-striate, the punctures small, round to subquadrate, closely set in interior portion, becoming sparser in lateral portions; intervals gently convex, weakly microsculptured, minutely granulo-punctate and haired, the hairs subdecumbent, becoming longer and bolder laterad and finer and denser posteriad; sides steeply inclined laterad, moderately so posteriad, with lateral margins bordered by narrowly explanate and punctate spaces, and finely rimmed, the rims easily visible from above.



Figs. 24–35. Male genitalia of *Borboresthes* spp. — 24–25, *B. arimotoi* sp. nov., holotype; 26–27, *B. hiraii* AKITA et MASUMOTO, 2008, holotype; 28–29, *B. satoi* sp. nov., holotype; 30–31, *B. ohmomoi* AKITA et MASUMOTO, 2008, holotype; 32–33, *B. aokii* sp. nov., holotype; 34–35, *B. amamianus* MAEDA et NAKANE, 1988. Scale: 1.0 mm.

Terminal segment of maxillary palpi strongly dilated, with apex about 1.7 times the length of interior side, 1.3 times the length of exterior side.

Legs medium-sized, densely clothed with fine hairs; femora bold; tarsal segments dilated toward each apex, particularly noticeably lobed in 3rd and 4th segments of pro- and mesotarsi, length of pro-, meso- and metatarsal ones (in mm): 0.32, 0.12, 0.10 (0.20), 0.04 (0.27), 0.44; 0.55, 0.19, 0.09 (0.17), 0.03 (0.25), 0.49; 1.07, 0.51, 0.10 (0.20), 0.47.

Genitalia slender, 1.83 mm in length and 0.21 mm in width, the shape as shown in Figs. 28 & 29.

F e m a l e: Head less strongly produced apicad, eyes slightly smaller, antennae shorter, terminal segments of maxillary palpi less strongly dilated, elytra less strongly punctate-striate, legs a little bolder and shorter.

Body length: 8.0 mm (\circlearrowleft , holotype), 7.9–8.6 mm (\updownarrow).

Distribution. Japan: The Ryukyus: Sakishima Isls. (Yonaguni-jima Is.).

Type series. Holotype: ♂, "JAPAN / Ryukyus / Yonaguni-jima Is. / Mt. Kubura-dake / 19. IV. 2004 / Hiroki Satô leg. // K. AKITA / Collection / KAC 35102" (NSMT). Paratypes: 1 ♀, Mt. Donan-dake, 2.IV.2007, Y. TAKESHITA leg.; 1 ♀, Mt. Kubura-dake, 3.IV.2007, Y. TAKESHITA leg.; 1 ♀, Urabu, 5.V.2009, H. OTOBE leg.

Notes. This new species resembles *Borboresthes ohmomoi* AKITA & MASUMOTO, 2008 (Figs. 30, 31), originally described from Ishigaki-jima Is., but can be distinguished from the latter by the body less strongly convex dorsad, and the genitalia with the basale fairly strongly curved in anterior 2/5.

Etymology. The specific name is given in honor of Mr. Hiroki SATÔ who collected the holotype.

Borboresthes aokii AKITA et MASUMOTO, sp. nov.

[Japanese name: Daitô-tobiiro-kuchikimushi]

(Figs. 9, 32, 33)

Body subovate, strongly convex dorsad; anterior portion of head, pronotum and scutellum brown with feeble reddish tinge, posterior portion of head black, elytra dark brown, antennae and legs mostly yellowish brown; hairs on surfaces mostly golden yellow; head, pronotum and scutellum gently, feebly vitreously shining, elytra weakly, sericeously shining, basal segment of antennae and legs moderately shining, remaining segments of antennae almost mat; surface densely haired.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus strongly produced and subparallel-sided in anterior part, flattened in posterior part, inclined apicad, widely rounded at apex, weakly microsculptured, closely, shallowly punctate, weakly, somewhat transversely rugulose, clothed with subdecumbent hairs; fronto-clypeal suture roundly, inconspicuusly impressed; genae triangularly dilated, flattened in anterior and medial parts, depressed in posterior part, microsculptured, scattered with punctures, which are often fused with one another in interior parts, with exterior margins weakly sinuous in anterior halves; frons slightly convex, microsculptured, ruguloso-punctate, clothed with decumbent hairs. Eyes somewhat transversely set, roundly convex laterad, with diatone about 1.6 times the width of eye diameter. Antennae slightly boldly filiform, tip of terminal segment reaching middle of elytra, each segment very slightly becoming bolder apicad, length from base to apex (in mm): 0.25, 0.10, 0.41, 0.61, 0.39, 0.45, 0.44, 0.44, 0.43, 0.44, 0.43.

Pronotum subtrapezoidal, wider than long (5 : 3), widest at base, gently narrowed anteriad; apex weakly, roundly produced and very finely bordered and rimmed; base bordered by fine rim, very weakly produced in medial 1/3, truncate opposite of scutellum, and weakly sinuous on both sides; sides somewhat obliquely inclined laterad, with lateral margins roundly produced antero-ventrad, fine-ly bordered and rimmed, the rims barely visible in posterior 1/4 from above; front angles widely rounded, hind angles slightly obtuse-angular; disc gently convex, weakly microsculptured, weakly depressed in medio-posterior portion and on both sides close to base, closely, somewhat ocellately punctate and densely haired, the hairs decumbent, becoming longer and bolder in lateral portions. Scutellum triangular with rounded sides, slightly raised posteriad, weakly microsculptured, ruguloso-punctulate, and clothed with fine decumbent hairs.

Elytra subovate, though the basal portion is truncate, 1.8 times as long as wide, 3.6 times the length and slightly less than 1.3 times the width of pronotum, widest at basal 1/3; dorsum moderately convex, highest at basal 3/8; disc punctate-striate, the punctures small, round to subovate, and closely set; intervals gently convex, microsculptured, minutely granulo-punctate and densely haired, the hairs mostly decumbent, short in antero-interior portion, becoming longer laterad and posteriad; sides steeply inclined laterad, moderately so posteriad, with lateral margins bordered by narrowly explanate and punctate spaces and finely rimmed, the rims easily visible from above.

Terminal segment of maxillary palpi dilated, with apex about 2.2 times the length of interior side, 1.6 times the length of exterior side.

Legs medium-sized; femora bold; tarsal segments dilated toward each apex, particularly noticeably lobed in 3rd and 4th segments of pro- and mesotarsi, length of pro-, meso- and metatarsal ones (in mm): 0.27, 0.11, 0.10 (0.15), 0.03 (0.16), 0.35; 0.57, 0.17, 0.09 (0.14), 0.03 (0.14), 0.34; 0.99, 0.25, 0.03 (0.20), 0.40.

Genitalia slender, 1.54 mm in length and 0.19 mm in width, the shape as shown in Figs. 32 & 33. *Body length.* 7.0 mm ($^{\circ}$, holotype).

Female: Unknown.

Distribution. Japan: Daitô Isls. (Kita-daitô-jima Is.)

Type specimen. Holotype: ♂, "北大東島西港南方 (Kitadaitô-jima Is., South of Nishi-kô Port) / 2008.5.27. / 青木淳一 (Jun-ichi Аоки leg.)" (К. Миzимо Collecton, OMNH).

Notes. This new species resembles *Borboresthes amamianus* MAEDA et NAKANE, 1988 (Figs. 34, 35), originally described from Amami-Ôshima Is., but can be distinguished from the latter by the body more robust, the hairs on surfaces longer, the eyes a little smaller with the diatone wider (1.4 times the diameter of eye in *B. amamianus*), the pronotum more coarsely punctate, the scutellum narrower, the elytra more strongly punctate-striate, with the intervals a little more strongly convex, and the male genitalia longer [1.25 to 1.32 mm in *B. amamianus* (N = 3)], with the basale more strongly narrowed apicad in dorsal view, and the apicale narrower.

Etymology. The specific name is given in honor of Dr. Jun-ich AOKI who collected the holotype.

Redescription, Lectotype Designation and New Synonym Proposals

Allecula (Allecula) nipponica MIYATAKE, 1985

[Japanese name: Hime-kuroô-kuchikimushi]

(Figs. 36-39)

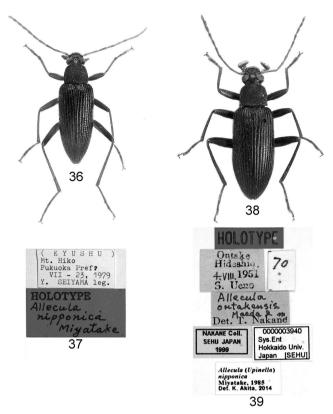
Allecula nipponica MIYATAKE, 1985: 347, figs. 36, 37. Type locality not mentioned. Allecula ontakensis MAEDA & NAKANE, 1988: 2, figs. 38–39. [Syn. nov.].

Redescription based on the holotype. Body subfusiform, strongly convex dorsad; head and elytra black, pronotum and scutellum black with feeble brownish tinge, antennae, mouth parts and legs dark yellowish brown; hairs on surfaces pale yellow, partly darkened; head and elytra moderately, somewhat vitreously to slightly sericeously shining, pronotum and scutellum nearly mat, antennae and legs moderately to weakly shining; body clothed with fine hairs.

M a l e: Head subhexagonal, though the posterior portion is concealed under the pronotum; clypeus somewhat obtrapezoidal, weakly depressed in basal part, slightly convex in medial part, produced and inclined anteriad, rounded at apex, weakly microsculptured, minutely aciculate-punctulate, clothed with suberect hairs, which become longer and more noticeable in the apical part; fronto-clypeal suture curved but inconspicuus; genae gently dilated antero-laterad, nearly flat in anterior and interior parts, strongly depressed in posterior part, microsculptured, aciculate-punctulate, with exterior margins very weakly produced; frons weakly convex in anterior part, slightly concave in posterior part, weakly microsculptured, irregularly scattered with punctures. Eyes large, strongly convex laterad, roundly, obliquely inlaid into head, grooved along intero-posterior margins, with diatone about 0.6 times the width of eye diameter. Antennae subfiliform, tip of terminal segment almost reaching apical 1/3 of elytra, each segment slightly becoming bolder apicad, length from base to apex (in mm): 0.39, 0.14, 0.68, 0.67, 0.53, 0.49, 0.47, 0.45, 0.37, 0.36, 0.42.

Pronotum subquadrate with rounded sides, wider than long (7 : 6), widest at middle; apex very slightly produced, finely bordered and rimmed; base weakly produced in medial 2/5 and sinuous on both sides, almost entirely rimmed, the rim with a row of haired punctures; sides steeply declined to lateral margins, which are roundly produced ventrad, wholly bordered and very finely rimmed, the rims barely visible from above; front angles widely rounded, hind angles obtusely angular; disc weakly convex, weakly, longitudinally depressed on midline and slightly undulate, impressed on both side close to base, distinctly microsculptured, sparsely, indistinctly punctulate and clothed with long decumbent hairs. Scutellum tri-angular, raised posteriad, microsculptured, punctulate and minutely haired.

Elytra subovate with basal part truncate, 2.3 times as long as wide, 4.3 times the length and 1.3



Figs. 36–39. Allecula spp. — 36–37, Allecula nipponica MIYATAKE, 1985, holotype, ♂. — 36, Habitus; 37, labels; 38–39, Allecula ontakensis MAEDA et NAKANE, 1988, holotype, ♂ (= Allecula (Allecula) nipponica MIYATAKE, 1985). — 38, Habitus; 39, labels.

times the width of pronotum, widest near base; dorsum convex, highest at basal 3/8, weakly depressed around scutellary strioles; disc punctate-striate, the punctures round to ovate, notching intervals; intervals convex, microsculptured, scattered with granulo-punctures, each with a fine, long subdecumbent hair; sides steeply inclined and enveloping hind body, with lateral margins bordered by punctate-grooves and fine rims, which are invisible from above.

Terminal segment of maxillary palpi large and extremely dilated, with apex with weakly lobed ventral face and 1.4 times the length of interior side, 1.9 times the length of exterior side.

Legs slender, densely clothed with fine hairs; 3rd and 4th segments of pro-, and mesotarsi dilated beneath, length of pro-, meso- and metatarsal ones (in mm): 0.41, 0.25, 0.13 (0.20), 0.04 (0.25), 0.54; 0.85, 0.30, 0.07 (0.14), 0.04 (0.16), 0.56; 1.42, 0.42, 0.11 (0.31), 0.59.

Genitalia (together with abdominal ventrites) missing in holotype.

Body length: 8.3 mm (\mathcal{E}).

Distribution. Japan: Hokkaido, Honshu, Shikoku and Kyushu.

Type specimens (designated by MIYATAKE) of *A. nipponica*: Holotype: ♂, "(KYUSHU) / Mt. Hiko / VII – 23. 1979 / Y. SEIYAMA leg. // HOLOTYPE / Allecula / nipponica / Miyatake" (EUMJ). Paratype: 1♀, "Hokkaido / Asahimura / Jun. 22. 1950 / T. Hasegawa // PARATYPE / Allecula / nipponica / M. Miyatake" (EUMJ).

Type specimen of A. ontakensis: Holotype: 3, "HOLOTYPE // Ontake / Hideshio / 4. VIII. 1951

/ S. Ueno // 70 // Allecula / ontakensis / Maeda & n. / Det. T. Nakane // NAKANE Coll. / SEHU JA-PAN / 1999 // 0000003940 / Sys. Ent / Hokkaido Univ. / Japan [SEHU]"

Other specimens examined. Honshu: 1 \mathcal{S} , Ibaraki-ken, Hitachioota-shi, Mt. Nantai-san, 27. IX.2013, K. TAKAHASHI leg.; 1 \mathcal{Q} , Hachiôji-shi, Mt. Takao-san, Tokyo-to, 26.VII.2009, E. UEDA leg.; 1 \mathcal{S} , Gifu-ken, Neo-mura, Nukumi-tôge, 1,000 m, 14.VIII.1997, N. KANIE leg.; 1 \mathcal{S} , ditto, 31.VIII–1. IX.1997 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , Gifu-ken, Shirakawa-mura, Ôshirakawa, 26.VIII.1993, N. YU-ZAWA leg.; 1 \mathcal{S} , ditto, 2–3.IX.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 2–3.IX.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2000 (LT), K. TOYOSHIMA leg.; 1 \mathcal{S} , ditto, 29.VII.2003, H. KAMEZAWA leg.; 1 \mathcal{S} , Kyoto-fu, Maizuru-shi, Yoboro, 28.VII.1993, N. KANIE leg.; 1 \mathcal{S} , Kyoto-fu, Kyoto-shi, Sakyô-ku, Ôhara, 18.X.2008, J. AOKI leg.; Nara-ken: 1 \mathcal{S} , Nara-shi, Kasuga-yama, 140–200m, 28.V.2007, K. AKITA leg.; 1 \mathcal{S} , ditto, 7.VI.2008, K. AKITA leg.; 1 \mathcal{S} , 1 \mathcal{S} , ditto, 21.VI.2013, K. AKITA leg.; 1 \mathcal{S} , ditto, 3.V.2014, K. AKITA leg.; 1 \mathcal{G} , ditto, 15.VI.2014, H. ARIMOTO leg.; 1 \mathcal{S} , Kyoto-fu, Kamikitayama-mura, Mt. Wasamata-yama, 1,150m, 11.VIII.2005, K. AKITA leg.; 1 \mathcal{S} , Kaga-wa-ken, Kotohira-chô, Mt. Zôzu-san, 21.VIII.1993, N. SANO leg.; 2 $\mathcal{S}\mathcal{S}$, Fukuoka-ken, Mt. Shaka-da-ke, 20.VIII.2009, R. NODA leg.; 1 \mathcal{S} , 1 \mathcal{Q} , Kagoshima-ken, Minamiôsumi-chô, Sugiyama-dani, 19–20. VII.2014, R. NODA leg.; 1 \mathcal{S} , ditto, 16–17.VIII.2014, R. NODA leg.

Notes. Through the courtesy of Dr. Masahiro OHARA, Hokkaido University Museum, we could have an opportunity examining the holotype of *Allecula ontakensis* MAEDA et NAKANE, 1988, originally described from Mt. Ontake, Nagano Pref., and consequently concluded that *A. ontakensis* is a junior synonym of *A. (A.) nipponica*.

Allecula (Allecula) noctivaga LEWIS, 1895

[Japanese name: Hosokuro-kuchikimushi]

Allecula noctivaga LEWIS, 1895: 251. Type locality: Kashiwagi.

Allecula akitai HANATSUKA, MASUMOTO et KON, 2006: 179, figs. 1, 3–4. Type locality: Nara-ken, Nara-shi, Kasuga-yama, 140–200 m. [Syn. nov.].

Distribution. Japan: Hokkaido [new record], Honshu and Shikoku.

Lectotype designation. Lectotype: ♀, "22. 6. 81 // Type / H. T. // Japan. / G. Lewis. / 1910—320. // Kashiwagi. / 15. VI.- 24. VI.81. / Allecula / noctivaga / Lewis / Type // LECTOTYPE / Allecula / noctivaga / Lewis, 1895 / Design. by K. Akita / et K. Masumoto, 2015". Paralectotype: ♀, "22. 6. 81 // Japan. / G. Lewis. / 1910—320. // Kashiwagi. / 15. VI.- 24. VI.81. / Allecula / noctivaga / Lewis // PARALECTOTYPE / Allecula / noctivaga / Lewis, 1895 / Design. by K. Akita / et K. Masumoto, 2015".

Type specimen of *A. akitai*: Holotype: ♂, "JAPAN: Nara-ken / Nara-shi / Kasuga-yama, 140- / 200m, 19. V. 2002 / Katsumi Акіта leg. // Holotype / *Allecula akitai* / HANA., MASU. & KON".

Other specimens examined. 1 \mathcal{C} , 1 \mathcal{Q} , Hokkaido, Kimobetsu-chô, Nakayama-tôge, 5.VII.2015, A. KASHIZAKI leg.; 27 $\mathcal{C}\mathcal{C}$, 26 $\mathcal{Q}\mathcal{Q}$, Nara-ken, Nara-shi, Kasuga-yama, K. AKITA leg.; 1 \mathcal{C} , Fukushima-ken, Hirono-chô, Mt. Gosha-yama, 16.VI.2003, T. KIMOTO leg.; 1 \mathcal{C} , Ibaraki-ken, Kanasya-gô-chô, Mt. Nishikanasha-san, 7.VI.1997, T. KIMOTO leg.; 2 $\mathcal{C}\mathcal{C}$, Fukui-ken, Takahama-chô, Mt. Aoba-san, 30.VI.2013, M. SAITÔ leg.; 1 \mathcal{C} , 1 \mathcal{Q} , Kagawa-ken, Kotohira-chô, Mt. Zôzu-san, 24–25.VII.1993, N. SANO leg. (EUMJ); 1 \mathcal{C} , ditto, 30.V.1994, N. SANO leg. (EUMJ); 1 \mathcal{Q} , ditto, 7.VI.1994, N. SANO leg. (EUMJ).

Notes. NOVÁK (2014) defined the species of the subgenus *Upinella* MULSANT, 1856, differing from those of the subgenus *Allecula* FABRICIUS, 1801 by the body surface glabrous and mat black, the

elytral intervals flat, with microgranulation and impunctate, the 1st metatarsal segment as long as the remaining tarsal segments combined, the pronotum with sides rounded and the antennae with the 3rd segment distinctly longer than 4th, and three apical segments each distinctly shorter than each of 4th to 8th. Meanwhile, the species of the subgenus *Allecula* differ from those of the subgenus *Upinella* by the body surface finely setaceous, moderately shining, elytral intervals finely punctate, first metatarsal segment longer than the remaining metatarsal segments combined, the pronotum with sides parallel in posterior half, rounded in anterior half, the antennae with 3rd segment shorter than 4th, and the last three antennal segments each not distinctly shorter than each of 4th to 8th antennal segments.

In the course of this study, we have carefully examined many Japanese specimens of *Allecula nipponica* MIYATAKE, 1985, and *Allecula noctivaga* LEWIS, 1895. Although there are a small number of unsuitable characteristics to the above definitions, we concluded that those two Japanese species should belong to the subgenus *Allecula* FABRICIUS, 1801. We strongly think that further detailed examination concerning Asian alleculine taxa should continue hereafter.

要 約

秋田勝己・益本仁雄:日本産ゴミムシダマシ科甲虫の新種・希少種.(第16報) Allecula 属と Borboresthes 属 (クチキムシ亜科クチキムシ族) の8新種, 1再記載および2シノニム. ――― 日本産クチキムシ亜科ク チキムシ族を検討し、Allecula 属の5新種と Borboresthes 属の3新種を命名記載した。 ヤクシマウスイロク チキムシ Allecula (Allecula) yakushimana AKITA et MASUMOTO, sp. nov. (屋久島) とオキナワウスイロクチキムシ A. (A.) okinawana AKITA et MASUMOTO, sp. nov. (沖縄島,伊平屋島,渡嘉敷島,久米島)は、オオシマウスイロ クチキムシ (オオシマクチキムシ) A. (A.) oshimana MAEDA et NAKANE, 1988 に酷似するが, 主に♂交尾器形態 で区別することができる。トヨシマアオバクチキムシ A. (A.) toyoshimai AKITA et MASUMOTO, sp. nov. (本州中 部山岳地帯)は、本州、四国、九州の低山地から亜高山帯にかけて広く分布し、混生するハロルドアオバク チキムシ (アオバクチキムシ) A. (A.) aeneipennis HAROLD, 1878によく似ているが、背面の毛が著しく短いこと, ♂交尾器のサイズがおよそ半分ほどしかなく基片が強く湾曲することなどで区別することができる。また、 出現期が異なり、本種は晩夏から初秋にかけて出現するようである。 リュウキュウホソアカクチキムシ A. (A.) ryukyuensis AKITA et MASUMOTO, sp. nov. (奄美大島, 請島, 徳之島, 沖縄島) は, ホソアカクチキムシA. (A.) tenuis MARSEUL, 1876 (本州,四国,九州) およびイシガキホソアカクチキムシA. (A.) ishigakiensis MAEDA et NAKANE, 1988 (石垣島) に近縁な種である. モモブトホソアカクチキムシA. (A.) tatsunosukei AKITA et MASU-MOTO, sp. nov. (本州,四国)も附節が拡がらないことや♂交尾器の形態から,このグループに含まれるものと 思われるが、体が短く、強く膨隆し、複眼が大きく、足が短く、特に腿節が太短いので容易に区別できる. アリモトトビイロクチキムシ Borboresthes arimotoi AKITA et MASUMOTO, sp. nov. (与那国島), サトウトビイロ クチキムシ B. satoi AKITA et MASUMOTO, sp. nov. (与那国島) およびダイトウトビイロクチキムシ B. aokii AKITA et MASUMOTO, sp. nov. (北大東島)は、主に♂交尾器形態で同属既知種と区別される。 ヒメオオクチキムシ Allecula (Allecula) nipponica MIYATAKE, 1985 は、原色日本甲虫図鑑(III)(保育社)に掲載されているが正式な 命名記載がないので, ホロタイプとされる標本に基づいて再記載をおこなった. また, オンタケクチキムシ A. ontakensis MAEDA et NAKANE, 1988のホロタイプ標本を検討した結果,前種のシノニムとして処置した. さら にホソクロクチキムシA. (A.) noctivaga Lewis, 1895のシンタイプ標本群を調査して、レクトタイプ標本を指 定するとともに,アキタクチキムシA. (A.) akitai HANATSUKA, MASUMOTO et KON, 2006 は,これと同種であるこ とが判明したので、シノニム処置をおこなった.

References

- AKITA, K., & K. MASUMOTO, 2008. New or little-known tenebrionid beetles (Coleoptera) from Japan (7). Entomological Review of Japan, Osaka, 63: 109–120.
- HANATSUKA, M., K. MASUMOTO & M. KON, 2006. Two new alleculine species (Coleoptera, Tenebrionidae, Alleculinae) from Japan. *Elytra*, *Tokyo*, **34**: 179–183.
- HAROLD, E. von, 1878. Beiträge zur Käferfauna von Japan. (Viertes Stück). Deutsche Entomologische Zeitschrift, 22: 65-88.
- LEWIS, G., 1895. On the Cistelidae and other heteromerous species of Japan. *The Annals and Magazine of Natural History*, (6), **15**: 250–279, 1 pl.
- MAEDA, M., & T. NAKANE, 1988, New or little-known Coleoptera from Japan and its adjacent regions, XL. Family Alleculidae. *Review of Miyazaki Sangyô-Keiei University*, 1: 1–10.
- MARSEUL, S. A. de, 1876, Coléoptères du Japon recueillis par M. Georges LEWIS. 2^e. mémorie. Énumération des Hétéromères avec la description des espèces nouvelles. 2. Partie. *Annales de la Société Entomologique de France*, (5) 6: 315–349, 447–464.
- MIYATAKE, M., 1985. Alleculidae. Pp. 346–348. [incl. pl. 59]. *In* KUROSAWA, Y., S. HISAMATSU & H. SASAJI (eds.), *The Coleoptera of Japan in Color*, **3**. iii–x + 500 pp. Hoikusha, Osaka. (In Japanese, with English book title.)
- NOVÁK, V., & R. PETTERSON, 2008. Alleculinae. Pp. 319–339. In LÖBL, I., & A. SMETANA (eds.), Catalogue of Palaearctic Coleoptera, 5. Tenebrionidea. 670 pp. Apollo Books, Stenstrup.

Manuscript received 3 August 2015; revised and accepted 7 August 2015.