

## Taxonomic Disorder of *Obrium japonicum* (Coleoptera, Cerambycidae) and its Allied Species

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**Abstract** *Obrium japonicum* PIC and its relatives are revised. *Obrium japonicum* is correctly placed under the genus *Stenhomalus* WHITE for the reason of the smooth metepisternum, and recognized as a senior synonym of *S. lighti* GRESSITT as the result of reexamination of the type specimen. Two local races of *Obrium obscuripenne* PIC are recognized, namely, the nominotypical subspecies *obscuripenne*, mainly from the continental sides of Far East Asia including the Tsushima Islands and *takakuwai* nov. from the Japanese main islands, the latter of which has been known as the name *O. japonicum* by misidentification. And also, *Obrium kusamai* TAKAKUWA, 1984, is carefully redescribed based on the holotype specimen in comparison with Taiwanese *O. fuscoapicalis* HAYASHI, 1976, as the closest relative.

### Introductory Review

*Obrium japonicum* PIC, 1904, has so far been recognized as a small reddish brown obriine species showing slight variation both geographically and individually, and widely known from such main islands of Japan as Hokkaido, Honshu, Shikoku, Kyushu and also Sado Island. Its supposed close relative, *O. kusamai* TAKAKUWA, 1984, has so far been known from only the single male holotype collected from Sado Island in 1932, and can be distinguished from *O. japonicum*, according to the original description, by the wider interspace of eyes, the sparser and finer punctation on the occiput and pronotum, and the coarser and sparser punctation on the elytra. On the other hand, *Stenhomalus lighti* GRESSITT, 1935, originally described from a male specimen from Towada Lake of northern Honshu, is at present known as a rather common species occurring mainly in the four main islands of Japan and Far East Russia (S. Primorie).

Recently, I had an opportunity to examine the holotype specimens of *O. japonicum* and *O. obscuripenne* preserved in the Muséum national d'Histoire naturelle, Paris, and that of *O. kusamai* in the National Science Museum (Nat. Hist.), Tokyo, and became aware of some taxonomic disorders as regards the above three obriine species.

The first misleading arose from misidentification of *O. japonicum*. This species was erroneously described by PIC (1904) under the genus *Obrium*, and should be placed correctly in *Stenhomalus* WHITE for the reason of the approximate eyes, the pubescent pronotum and the absence of longitudinal groove on the metepisternum. Besides, the holotype of *O. japonicum* is identical with *S. lighti*, that is, *S. lighti* is a junior synonym

of *O. japonicum*. Second to be clarified is to find out a correct name for the *Obrium* species currently called *O. japonicum*, which became necessary due to the above synonymy. I had firstly surmised that *O. kusamai* is valid for the problematical *Obrium* species until reexamination of the type specimen. This expectation was wrong. *Obrium kusamai* is a quite different species and has closer relationship to the Taiwanese *O. fuscoapicalis* HAYASHI. Therefore, the problematical *Obrium* was an undescribed species and will be introduced newly into science in the present paper. Last to be clarified is the relation between *O. obscuripenne* and the undescribed *Obrium* taxon. They are basically allopatric at the continental side of Far East Asia including the Tsushima Islands and the Japanese main islands, though an intermediate form between the two have been known to occur in northeastern Hokkaido and central Honshu. Besides, the populations in the Japanese main island show slight geographical variation in both the structure of external morphology and the male genital organ. Since it may be difficult to obtain final solution of this problem in near future, I will provisionally propose to regard them as two local populations of a single species.

In the following lines, I will summarize the result obtained by my study about the true statuses of *O. japonicum* and its allied species.

*Abbreviations.* The following abbreviations are used in the measurement of specimens examined (see Table 1): BL – length of body, HW – maximum width of head between eyes, PL – length of pronotum, PA – apical width of pronotum, PB – basal width of pronotum, PW – maximum width of pronotum between lateral tubercles, EL – length of elytra, EW – width of elytra between humeri, M – arithmetic mean.

*Stenhomalus japonicus* (PIC, 1904), comb. nov.

[Japanese name: Towada-mumon-medaka-kamikiri]

(Fig. 1)

*Obrium japonicum* PIC, 1904, Mat. Longic., 5(1), p. 22; type locality: Sado, Japan.

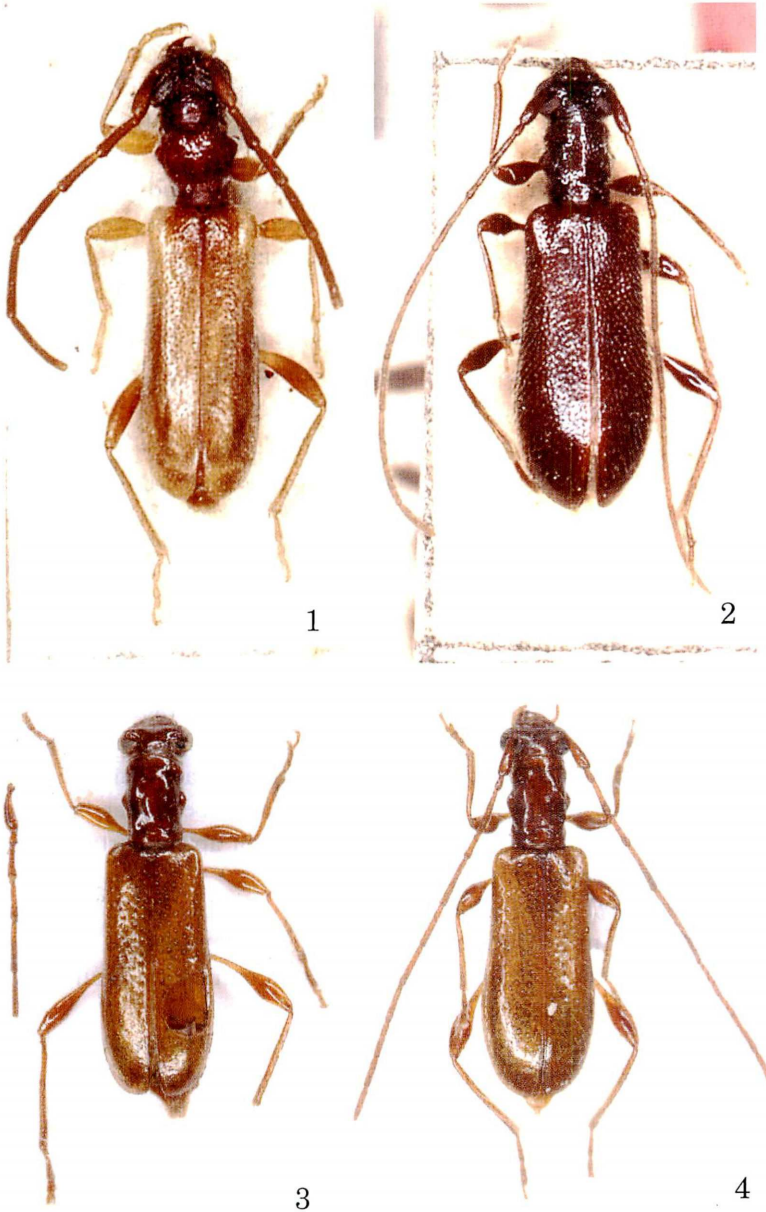
*Stenhomalus lighti* GRESSITT, 1935, Kontyû, Tokyo, 9, p. 170; type locality: Lake Towada, Aomori Pref., Japan. (Syn. nov.)

*Stenhomalus vulcanus* TSHEREPANOV, 1976, Novosti fauny Sibiri, p. 79. figs. a–c; type locality: Kunashir Island.

*Specimen examined.* 1♂ (holotype), “Sado, Japan”. (In coll. Muséum national d’Histoire naturelle, Paris.)

*Distribution.* Hokkaido, Kunashiri Is., Honshu, Sado Is. (type locality!), Shikoku and Kyushu; Far East Russia (S. Primorie)

*Notes.* This is the most problematical species among the Japanese obriine members, since two previous authors erroneously identified it at the genus level. *Stenhomalus japonicus* is a species somewhat various in coloration and rarely shows almost unicolorous body like the true *Obrium* species. PIC (1904) described this species under the genus *Obrium*, since the holotype of *O. japonicum* has relatively reduced body unlike *Stenho-*



Figs. 1-4. Four "Obrium" species. — 1, *O. japonicum* PIC, ♀, from Sado Is. (= *Stenhomalus japonicus* comb. nov.), holotype; 2, *O. obscuripenne* PIC, ♀, from Siberia (Amur), holotype; 3, *O. kusamai* TAKAKUWA, ♀ from Sado Is., holotype; 4, *O. fuscoapicalis* HAYASHI, ♀ from Nanshanchi, C. Taiwan.



*malus* and is yellowish brown in body colour. BATES (1873) also included this species in the type series of *Obrium longicorne* as a variety. BATES' species was at present arranged under the genus *Stenhomalus* as in the case of *O. japonicum*, and the lectotype was designated to the single female specimen which agrees with the original description (NIISATO, 2000).

It seems very strange that *S. japonicus* has so far been recorded from Sado Island only. I believe that this common *Stenhomalus* species will be rediscovered by field surveys in near future from Sado Island, the type locality.

### *Obrium obscuripenne obscuripenne* PIC, 1904

[Japanese name: Tsushima-ameiro-kamikiri]

(Figs. 2, 5, 6 a-c, 7 a-c, 8 a-c & 9 a-c)

*Obrium obscuripenne* PIC, 1904, Échange, **19**, p. 17; type area: Siberia (Amur).

*Obrium gracile* PLAVILSTSHIKOV, 1933, Ent. Anz., **13**, p. 167; type area: SE. Siberia

*Obrium graciliforme* LIPP, 1939, Ent. Bl., **35**, p. 225 (n. n. for *Obrium gracile* PLAVILSTSHIKOV, 1933).

*Obrium tsushmanum* HAYASHI, 1974, Ent. Rev. Japan, **26**, p. 14; type locality: Ariakeyama, Izuhara, Tsushima, Kyushu.

*Obrium japonicum*: LEE, 1987, Longic. Beetl. Korean Pen., p. 96, pl. 10, fig. 96; locality record: Gang-Weon-Do, Gyeong-Sang-Bug.

Body length 3.4–6.0 mm (from apical margin of clypeus to elytral apices).

Distinguished from *takakuwai* nov. in the following characters: 1) colour always dark chestnut brown to dark brown, not quite reddish; 2) body usually slenderer than in *takakuwai* nov. especially in elytra; 3) elytral punctation always dense and conspicuous, and pubescence also dense; 4) median lobe with apical lobe rather broad and simply pointed, usually not constricted or emarginate at sides of apical part; 5) paramere also simply pointed towards apex.

*Specimens examined.* 1♀ (holotype), “Amur” “HOLOTYPE” “*Obrium obscuripenne* Pic”; 1♂, “Amur” “*Obrium obscuripenne* Pic”. (In coll. Muséum national d’Histoire naturelle, Paris.) Additional specimens examined were already listed in a previous paper of mine (NIISATO, 2005, p. 658).

*Distribution.* NE. China, Far East Russia, Sakhalin, Korean Pen., Tsushima Isls.

*Host plants.* *Fraxinus rhynchophylla* and *F. mandschurica* (Oleaceae) in the Ussuri region of Far East Russia (TSSHEREPANOV, 1981).

*Notes.* *Obrium obscuripenne obscuripenne* is a peculiar local race in having an infuscate habitus and occurring at the continental side of Far East Asia including the Tsushima Islands (NIISATO, 2005). It is barely distinguished by such unique coloration and the male genital organ from the populations of the Japanese main islands, and mostly agrees in the other structure. As shown above, I provisionally regarded these local populations as subspecies of the single species.



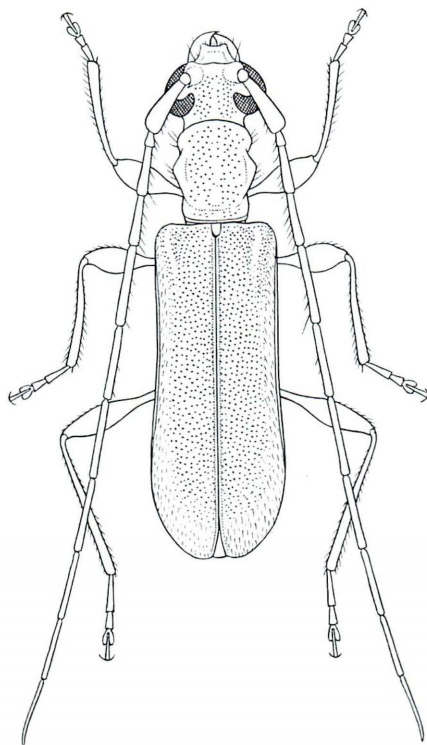


Fig. 5. Habitus of *Obrium obscuripenne obscuripenne* PIC from the Tsushima Isls. off N. Kyushu.

***Obrium obscuripenne takakuwai* subsp. nov.**

[Japanese name: Sado-chibi-ameiro-kamikiri]

(Figs. 6 d-l, 7 d-h, 8 d-h & 9 d-h)

*Obrium longicorne*: OHBAYASHI, 1963, Icon. Ins. Japon. Col. nat. ed., 2, p. 287, pl. 144, fig. 4. — KOJIMA & HAYASHI, 1969, Ins. Life Japan, 1, p. 58, pl. 18, fig. 19. — HAYASHI, 1973, Col. Ill. Ins. Japan (ed. 3), p. 154. — KUSAMA, 1973, List Ecol. Distr. Japan. Ceramb., p. 51 (nec BATES, 1873).

*Obrium japonicum*: KOJIMA & HAYASHI, 1969, Ins. Life Japan, 1, p. 58, pl. 18, fig. 20. — HAYASHI, 1984, Coleopt. Japan Col., Osaka, 4, p. 50, pl. 10, fig. 12. — KUSAMA & TAKAKUWA, 1984, Longic. Beetl. Japan Col., p. 276, pl. 32, fig. 222.

Body length 3.9–6.3 mm (from apical margin of clypeus to elytral apices).

Small to relatively small species with rather broadened body. Colour light reddish brown to dark reddish brown, sometimes dark chestnut brown according to geographical races, slightly darkened in head including antennae and thoraces, lighter in legs and mouthparts, though usually darkened in apical halves of femora, shiny in general.

Head transverse including strongly prominent eyes, though not voluminous, hardly convex, distinctly wider than pronotum, HW/PA 1.44–1.65 in ♂ or 1.35–1.52 in ♀, HW/PW 1.16–1.33 in ♂ or 1.05–1.28 in ♀, sparsely provided with small punctures and

semi-long pale hairs; frons transverse, nearly a half the length of basal width, markedly declivous towards fine median line which is barely reaching vertex, broadly depressed near apical margin; clypeus large, quite trapezoidal,  $2/5$  the length of basal width, provided with fine punctures; genae almost absent in frontal view, only visible as short angulate lobes; vertex widely almost flattened near middle; eyes very large and strongly prominent laterad, deeply emarginate, separated from one another by about  $3/5$  the width of occiput or nearly equal in width of each lobe. Antennae relatively slender, surpassing elytral apices at basal third of segment 9 in ♂, middle of segment 10 in ♀; scape weakly clavate apicad, more or less flattened at ventral side, provided with a few fine punctures, moderately (sometimes sparsely) clothed with short pale hairs, segments 2–4 haired as in scape, segments 3 and 4 subequal in length and  $3/4$  in length to scape, segment 7 the longest, terminal segment gently arcuate.

Pronotum fairly short, not so broad as compared with elytra, slightly longer than wide, PL/PA 1.23–1.55 in ♂ or 1.29–1.51 in ♀, PL/PW 1.04–1.23 in ♂ or 1.05–1.28 in ♀, PB/PA 0.95–1.13 in ♂ or 1.00–1.11 in ♀, PL/EL 0.25–0.30 in ♂ or 0.25–0.29 in ♀; sides weakly rounded behind base, subparallel or gently arcuate in basal  $3/10$ , with rounded lateral tubercles just before middle; disc strongly convex in apical  $4/5$ , provided with oblong longitudinal raised area at middle of basal  $2/5$ , and two pairs of similar ones at the sides of apical and basal  $3/10$ , though usually inconspicuous in posterior pair, rather densely (sometimes moderately) provided with medium-sized punctures and semi-long pale hairs. Scutellum narrow spatulate, smooth, clothed with fine pale pubescence.

Elytra relatively long, slightly wider than pronotum, always less than three times as long as wide though variable according to individuals, EL/EW 2.55–2.92 in ♂ or 2.44–2.75 in ♀, completely rounded at humeri, weakly (sometimes moderately) ample in apical halves; disc weakly evenly convex, though almost flattened above, usually without any impression, rather densely (sometimes moderately) provided with medium-sized punctures and short pale hairs.

Venter of thoraces almost smooth, scattered with a few small punctures, clothed with thin pale pubescence, usually rather densely clothed near fore coxal cavities and base of mesosternum; prosternal process strongly compressed, with small subquadrate apical part; mesosternal process very narrow, pointed at apex; longitudinal groove on metepisternum distinct and remarkably deep, almost reaching both basal and apical margins. Abdomen relatively long and moderately arcuate at sides, slightly shagreened, provided with a few small punctures, scattered with pale hairs; basal ventrite a little less than half the length of abdomen, anal ventrite gently arcuate at apical margin in ♂, slightly emarginate at middle in ♀.

Legs moderate in length, slender, with hind femur moderately clavate in apical half, slightly compressed, 1st hind tarsal segment slightly longer than the following two segments combined.

Male genital organ rather weakly sclerotized, hardly specialized in conformation as in most members of the genus. Tergite 8 subquadrate, weakly narrowed at sides to

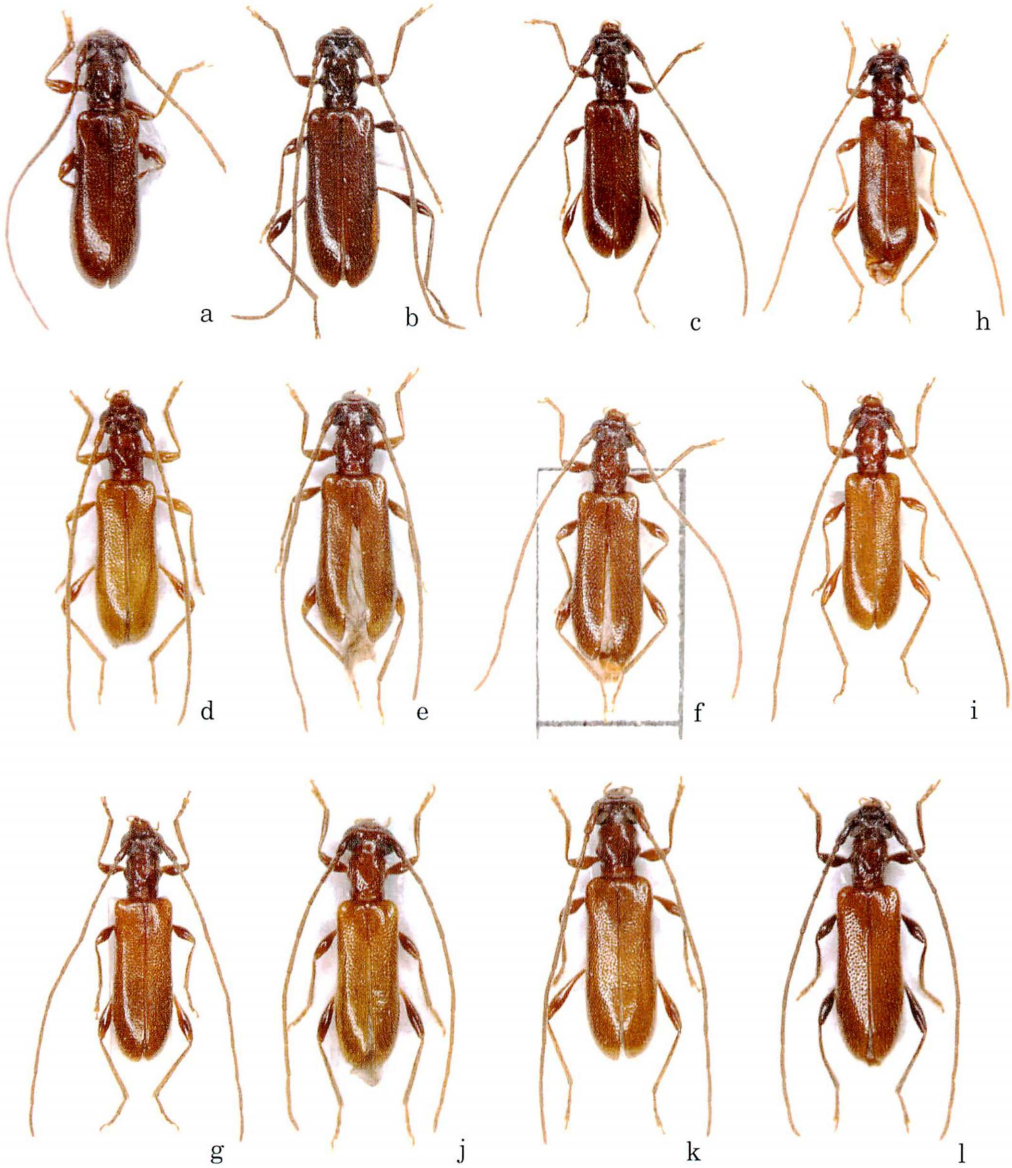


Fig. 6. Habitus of *Obrium obscuripenne obscuripenne* PIC and *O. o. takakuwai* nov., ♂. — a, *O. o. obscuripenne* from the Ussuri region of Russia; b, ditto from Mt. Villa of N. Korea; c, ditto from the Tsushima Isls. off N. Kyushu; d, *O. o. takakuwai* nov. from Shokanbetsu, NE. Hokkaido; e, ditto from the same locality; f, ditto from the same locality; g, ditto from Minamiaizu, Fukushima of NE Honshu; h, ditto from Sugadaira, Nagano of C. Honshu; i, ditto from the same locality; j, ditto from Hirakura, Mie of W. Honshu, holotype; k, ditto from Mt. Ôtaki-yama, Tokushima of Shikoku; l, ditto from Yufu, Ôita of Kyushu.



broadly emarginate at apical margin, which is provided with numerous medium to long-sized setae. Median lobe slender fig-like formed, nearly 3/10 the length of elytra, moderately arcuate in profile; dorsal plate almost straightly narrowed to the truncate apex, usually attaining to apical fourth of ventral plate; ventral plate rather simply narrowed to apex which is rounded or roundly truncate, but variable in form according to geographical races. Tegmen with paramere quite uni-lobed, strongly narrowed towards just before apex, then slightly emarginate to the extremity, which is provided with about 10 long setae and some medium to short-sized ones.

*Variation.* Geographical variation is shown in the coloration. The population from Hokkaido region east of the Ishikari lowland has more or less infusate coloration. The most darkened individuals show the dark chestnut brown body almost like continental *O. o. obscuripenne*. Similar but weaker variation is also known from the highland of the Chûbu District of central Honshu. For instance, the reddish chestnut brown form appears in about 10% of the normal form in the population from Sugadaira Hill of Nagano Prefecture. Besides, somewhat darkened form is sometimes found at known localities in various areas of Honshu and Kyushu.

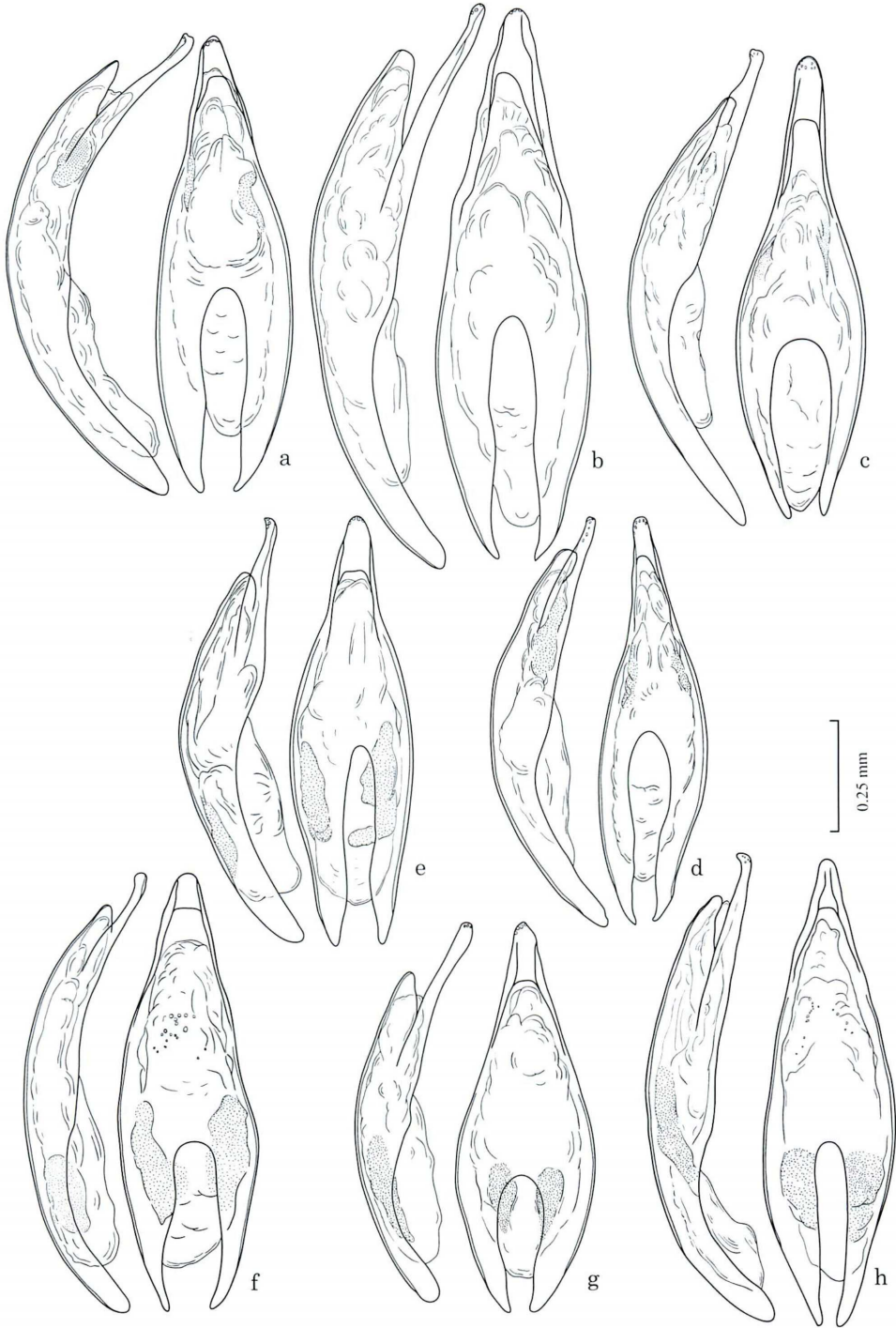
Punctuation on body surface also varies geographically. Though the punctuation on pronotum and elytra is almost always relatively dense and conspicuous, that of the Hirakura population of western Honshu is rather sparse and shallow. The proportion of body parts may vary geographically, but is difficult to analyze because of rather distinct individual variations. Biometric data from the known localities are shown in Table 1 with those of continental *O. o. obscuripenne*.

Male genital organ varies in form according to geographical populations. Median lobe with ventral plate is usually rather simply narrowed to apex, though sometimes strongly narrowed and slightly emarginate at sides. Paramere is always strongly narrowed apicad and provided with setae only at the extremity, though the shape of apical part more or less varies geographically. Though showing such variable morphology, it may be considered that they are intra-subspecific variations of *O. o. takakuwai* nov.

*Type series.* Holotype ♂, Hirakura (600–700 m in alt.), Misugi-mura, Ichishi-gun, Mie Pref., host collected on 28–IV–1996, emerged out on 3–VI–1996, host plant: *Fraxinus longicuspis* SIEB. et ZUCC., K. AKITA leg. Allotype ♀, same data as the holotype. Paratypes (34♂♂, 19♀♀): [Hokkaido] 1♂, Mt. Shokanbetsu, Uryû-gun, 23–VI–1984, K. KUME leg.; 1♂, 2♀♀, same locality as the preceding, 23–VI–1984, K. YOSHIKAWA leg.; 2♂♂, same locality and collector as the preceding, 5–VII–1984; 1♂,

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Fig. 7. Median lobe of *Obrium obscuripenne obscuripenne* PIC and *O. o. takakuwai* nov., lateral view (left) and dorsal view (right). — a, *O. o. obscuripenne* from Ussuri region of Russia; b, ditto from Mt. Villa of N. Korea; c, ditto from the Tsushima Isls. off N. Kyushu; d, *O. o. takakuwai* from Shokanbetsu, NE. Hokkaido; e, ditto from Sugadaira, Nagano of C. Honshu; f, ditto from Hirakura, Mie of W. Honshu; g, ditto from Mt. Ôtaki-yama, Tokushima of Shikoku; h, ditto from Yufu, Ôita of Kyushu.



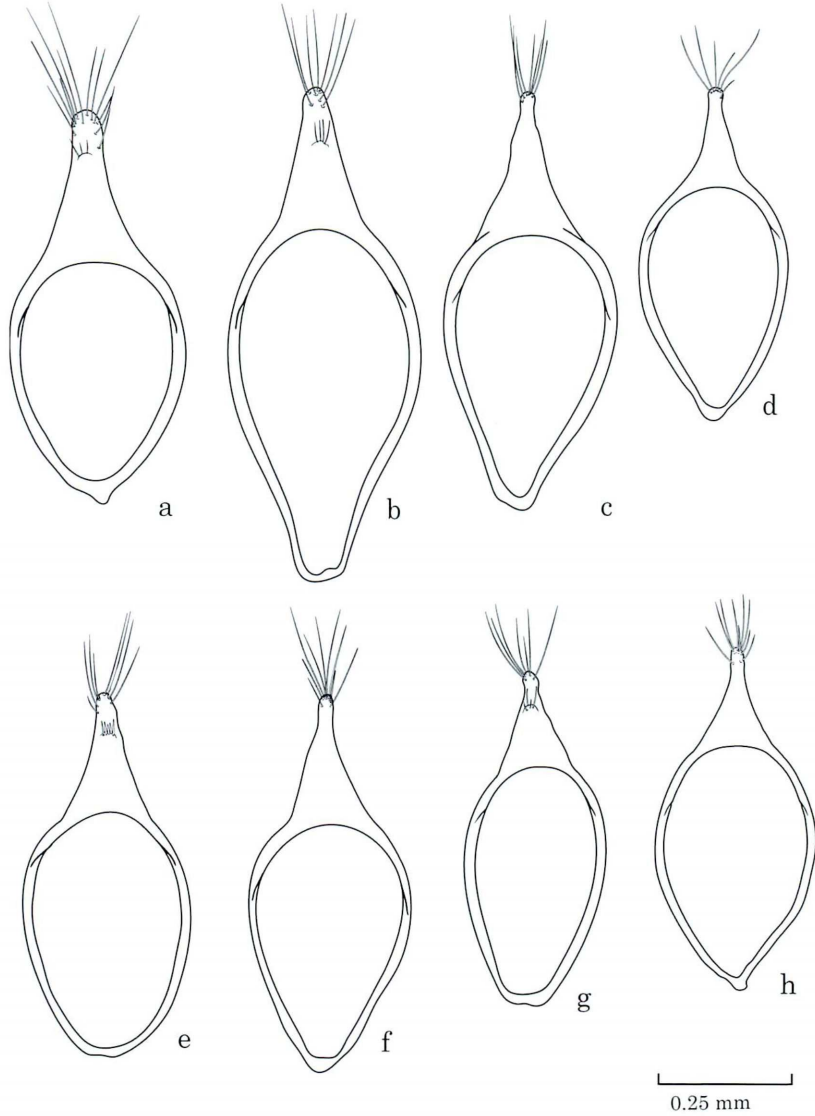


Fig. 8. Tegmen in dorsal view of *Obrium obscuripenne obscuripenne* Ptc and *O. o. takakuwai* nov. — a, *O. o. obscuripenne* from Ussuri region of Russia; b, ditto from Mt. Villa of N. Korea; c, ditto from the Tsushima Isls. off N. Kyushu; d, *O. o. takakuwai* nov. from Shokanbetsu, NE. Hokkaido; e, ditto from Sugadaira, Nagano of C. Honshu; f, ditto from Hirakura, Mie of W. Honshu; g, ditto from Mt. Ôtaki-yama, Tokushima of Shikoku; h, ditto from Yufu, Ôita of Kyushu.

same locality and collector as the preceding, host collected in VII-1985, emerged out on 29-V-1986; 1♂, 2♀♀, Kitamoshiri, Uryû-gun, VII-1985 and emerged out on 16~22-



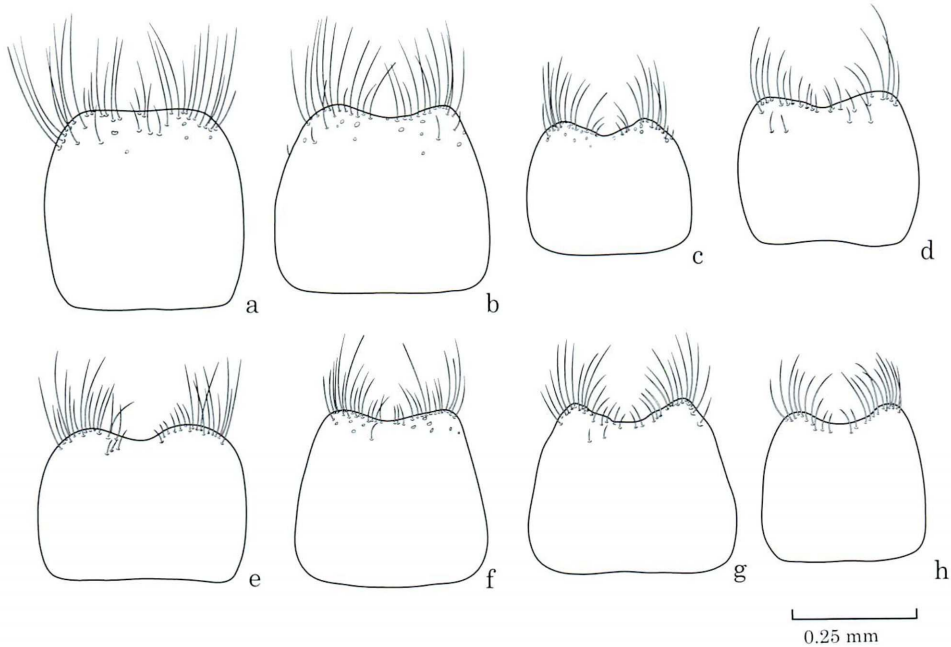


Fig. 9. Tegmen in dorsal view of *Obrium obscuripenne obscuripenne* PIC and *O. o. takakuwai* nov. — a, *O. o. obscuripenne* from Ussuri region of Russia; b, ditto from Mt. Villa of N. Korea; c, ditto from the Tsushima Isls. off N. Kyushu; d, *O. o. takakuwai* nov. from Shokanbetsu, NE. Hokkaido; e, ditto from Sugadaira, Nagano of C. Honshu; f, ditto from Hirakura, Mie of W. Honshu; g, ditto from Mt. Ôtaki-yama, Tokushima of Shikoku; h, ditto from Yufu, Ôita of Kyushu.

V-1986, K. YOSHIKAWA leg.; 1♀, Shôtoshibetsu, host collected in VII-1985, emerged out on 17~22-V-1986, K. YOSHIKAWA leg.; Shari, 19-VII-1974, S. KAWAHARA leg.; 1♀, Mt. Maruyama, Sapporo C., 3-VII-1994, T. NIISATO leg. [Honshu] 1♂, Hinoemata, Minamiaizu-gun, Fukushima Pref., 14-VI-1978, M. TAKAKUWA leg.; 1♀, Mizubashôén, Teteiwa-mura, Minamiaizu-gun, Fukushima Pref., host collected in XI-2003, emerged out on 14-I-2004, host plant: *F. mandshurica* var. *japonica*, T. NIISATO leg.; 1♂, 3♀♀, Sugadaira, Sanda-chô, Nagano Pref., 16-VI-1988, H. KAMEZAWA leg.; 1♂, same locality and collector as the preceding, 22-VII-1988; 12♂♂, 4♀♀, same locality and collector as the preceding, host collected on 20-VII-1989, emerged out on 18-II-1990, host plant: *F. mandshurica* var. *japonica*; 1♀, same locality as the preceding, 19-V-1993; 1♂, 1♀, Hirakura (600-700 m), Misugi-mura, Ichishi-gun, Mie Pref., 4-VI-1983, K. AKITA leg.; 1♂, same locality and collector as the preceding, 2-VI-1985; 1♂, 3♀♀, same locality and collector as the preceding, host collected on 28-IV-1996, emerged out on 3-VI-1996, host plant: *F. longicuspis* SIEB. et ZUCC. [Shikoku] 2♂♂, Mt. Ôtaki-yama, Waki-machi, Tokushima Pref., emerged out on 13-V-1997; 1♂, same locality, emerged out on 16-VI-1998. [Kyushu] 8♂♂, 1♀, Tsukahara, Yufu City, Ôita

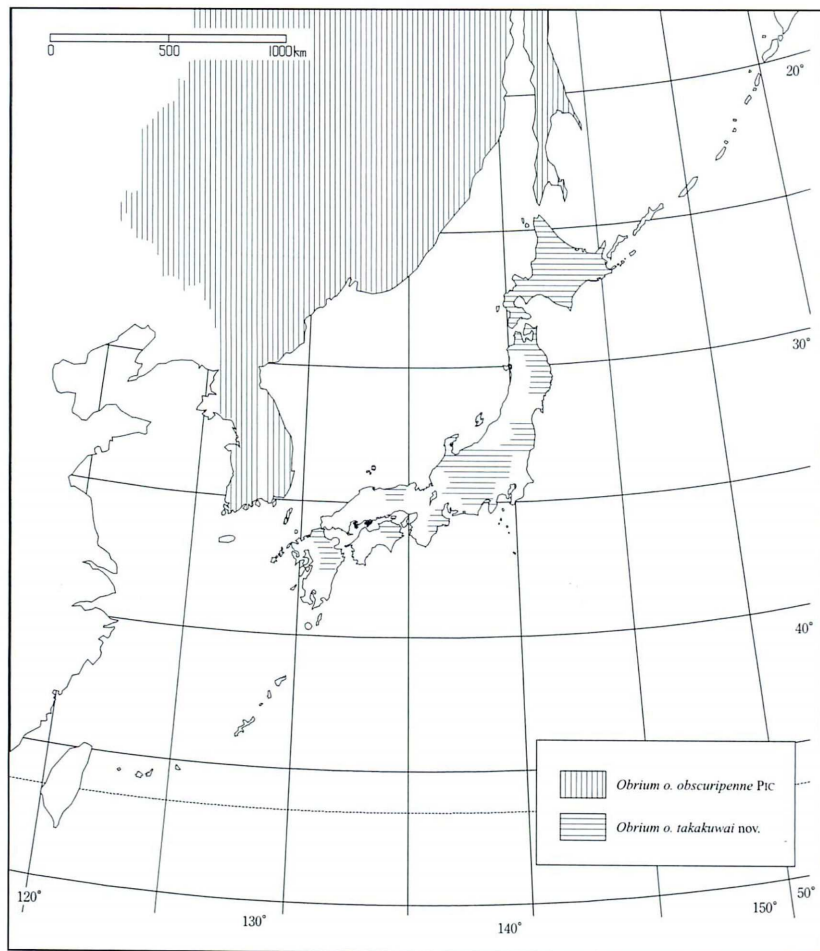


Fig. 10. Distribution of two subspecies of *Obrium obscuripenne*.

Pref., 10-VI-2006, Y. IZUMO leg. The holo- and allotypes are deposited in the National Science Museum (Nat. Hist.), Tokyo, and the paratypes are in the private collections of NIISATO and the above collectors.

*Distribution.* Hokkaido, Honshu, Sado Is., Shikoku and Kyushu.

*Host plants.* *Fraxinus mandshurica* var. *japonica* and *Fraxinus longicuspis* (Oleaceae).

*Notes.* This is the commonest and famous taxon among the Japanese members of the genus *Obrium*. The adult beetles come in flight to various flowers of *Hydrangea*, and the larvae associate with the twigs of *Fraxinus* Ash tree. It has been repeatedly introduced in iconographical books by previous authors under the name "*O. japonicum*". This subspecies is rather widely known to occur in the main islands of Japan including

Table 1. Biometric data of the local populations of *Obrium obscuripenne*.

Subspecies	<i>Obrium o. obscuripenne</i> PIC			<i>Obrium o. takakuwai</i> nov.					
Localities Specimens measured	Ussuri, Russia 3♂♂, 5♀♀	Korean Peninsula 5♂♂, 4♀♀	Tsushima Islands 6♂♂, 3♀♀	NE. Hokkaido 7♂♂, 4♀♀	Sugadaira, C. Honshu 5♂♂, 5♀♀	Hirakura, W. Honshu 5♂♂, 5♀♀	Mt. Ôtaki, Shikoku 3♂♂	Yufu, Kyushu 5♂♂, 1♀	
BL (mm)	♂	3.4–4.6	4.2–5.1	4.2–5.2	4.5–5.6	4.2–4.8	5.0–5.5	4.2–4.9	4.2–4.9
	♀	4.5–5.5	4.7–5.6	4.5–5.7	4.2–6.3	4.6–5.3	4.8–5.6	—	5.2
HW/PA	♂	1.52–1.63 (M 1.57)	1.33–1.63 (M 1.43)	1.52–1.58 (M 1.56)	1.53–1.65 (M 1.60)	1.45–1.58 (M 1.50)	1.45–1.58 (M 1.50)	1.44–1.51 (M 1.49)	1.44–1.51 (M 1.49)
	♀	1.31–1.43 (M 1.39)	1.40–1.50 (M 1.44)	1.39–1.56 (M 1.47)	1.40–1.52 (M 1.43)	1.35–1.51 (M 1.45)	1.35–1.51 (M 1.45)	—	1.51
HW/PW	♂	1.20–1.33 (M 1.25)	1.20–1.25 (M 1.22)	1.14–1.22 (M 1.19)	1.20–1.28 (M 1.23)	1.16–1.26 (M 1.22)	1.16–1.26 (M 1.22)	1.21–1.26 (M 1.24)	1.27–1.33 (M 1.31)
	♀	1.07–1.19 (M 1.14)	1.07–1.16 (M 1.13)	1.13–1.18 (M 1.15)	1.07–1.10 (M 1.09)	1.05–1.28 (M 1.15)	1.05–1.28 (M 1.15)	—	1.24
PL/PA	♂	1.33–1.59 (M 1.46)	1.19–1.59 (M 1.33)	1.34–1.50 (M 1.40)	1.34–1.50 (M 1.42)	1.23–1.38 (M 1.30)	1.23–1.38 (M 1.30)	1.42–1.55 (M 1.47)	1.23–1.34 (M 1.29)
	♀	1.30–1.43 (M 1.35)	1.30–1.62 (M 1.47)	1.03–1.13 (M 1.06)	1.34–1.44 (M 1.39)	1.38–1.51 (M 1.45)	1.38–1.51 (M 1.45)	—	1.29
PB/PA	♂	1.00–1.09 (M 1.05)	0.90–1.09 (M 0.98)	1.00–1.08 (M 1.06)	1.00–1.13 (M 1.06)	0.95–1.04 (M 0.99)	0.95–1.04 (M 0.99)	1.03–1.04 (M 1.04)	0.95–1.00 (M 0.98)
	♀	1.00–1.10 (M 1.03)	1.00–1.03 (M 1.02)	1.03–1.13 (M 1.06)	1.03–1.09 (M 1.07)	1.00–1.11 (M 1.03)	1.00–1.11 (M 1.03)	—	1.00
PL/PW	♂	1.15–1.16 (M 1.16)	1.10–1.18 (M 1.13)	1.02–1.10 (M 1.07)	1.06–1.11 (M 1.09)	1.04–1.10 (M 1.07)	1.04–1.10 (M 1.07)	1.12–1.23 (M 1.16)	1.10–1.17 (M 1.14)
	♀	1.09–1.15 (M 1.11)	1.07–1.47 (M 1.15)	1.05–1.09 (M 1.07)	1.05–1.09 (M 1.07)	1.08–1.28 (M 1.13)	1.08–1.28 (M 1.13)	—	1.10
PW/EW	♂	0.61–0.68 (M 0.65)	0.64–0.68 (M 0.66)	0.64–0.70 (M 0.67)	0.65–0.70 (M 0.67)	0.67–0.71 (M 0.69)	0.67–0.71 (M 0.69)	0.62–0.66 (M 0.64)	0.64–0.69 (M 0.66)
	♀	0.63–0.67 (M 0.65)	0.62–0.65 (M 0.64)	0.64–0.66 (M 0.65)	0.64–0.69 (M 0.67)	0.59–0.67 (M 0.65)	0.59–0.67 (M 0.65)	—	0.68
PL/EL	♂	0.20–0.25 (M 0.23)	0.26–0.29 (M 0.28)	0.26–0.29 (M 0.27)	0.25–0.28 (M 0.26)	0.26–0.30 (M 0.27)	0.26–0.30 (M 0.27)	0.26–0.29 (M 0.27)	0.25–0.28 (M 0.27)
	♀	0.26–0.28 (M 0.27)	0.27–0.29 (M 0.28)	0.26–0.28 (M 0.27)	0.25–0.28 (M 0.26)	0.25–0.29 (M 0.28)	0.25–0.29 (M 0.28)	—	0.27
EL/EW	♂	2.68–2.76 (M 2.72)	2.56–2.78 (M 2.71)	2.43–2.71 (M 2.65)	2.73–2.83 (M 2.76)	2.55–2.79 (M 2.68)	2.55–2.79 (M 2.68)	2.67–2.73 (M 2.72)	2.72–2.92 (M 2.79)
	♀	2.62–2.79 (M 2.68)	2.59–2.73 (M 2.66)	2.48–2.58 (M 2.54)	2.58–2.74 (M 2.66)	2.44–2.75 (M 2.62)	2.44–2.75 (M 2.62)	—	2.61



Sado Island, though the distribution is intermitted.

As was shown above, this species remained unnamed for a long time, since previous authors misidentified it as *O. japonicum*. The commemorating new name is dedicated to Dr. Masatoshi TAKAKUWA who is a pioneer researcher of the Japanese *Obrium* species.

*Obrium kusamai* TAKAKUWA, 1984

[Japanese name: Usuge-ameiro-kamikiri]

(Fig. 4)

*Obrium kusamai* TAKAKUWA, 1984, Longic. Beetl. Japan Col., p. 10, pl. 32, fig. 223; type locality: Aikawa, Sado Is., Niigata Pref.

Body length 3.9 mm (from apical margin of clypeus to elytral apices).

**F e m a l e.** Small and broad species, with widely separated eyes and sparse large punctation on elytra. Colour translucent reddish brown, slightly paler in appendages, yellowish brown in elytra, the peduncles of femora, and mouthparts except for infusate mandibular margins, moderately shiny in general.

Head relatively large and moderately convex, 1.15 times as wide as the apical or 0.85 times as wide as the maximum width of pronotum, scattered with a few small punctures and pale yellow hairs; frons strongly transverse, 1/3 the length of basal width, with a deep median groove, gently arcuate at apical margin; clypeus 1/3 the length of basal width; genae convergent ventrad, 1/4 the depth of lower eye-lobes; vertex flattened, moderately raised towards antennal cavities; eyes distinctly prominent laterad though very deeply emarginate, separated from one another by 3/4 the width of occiput or twice the width of each lobe. Antennae filiform, slightly longer than body; scape distinctly clavate with slender peduncle, subequal in length to segment 3, rather sparsely clothed with medium-sized pale yellow hairs, segment 4 the longest though only a little longer than the preceding.

Pronotum relatively long, 1.36 times as long as the maximum width or 1.58 times as long as the apical width, a little less than 2/5 the length of elytra, with apex as wide as base; sides with conspicuous but rounded lateral tubercles just behind middle, weakly arcuate near apical and basal fourth; disc largely convex near middle, on which provided with slightly raised areas along the median line and at the sides of apical 3/8, transversely depressed behind apex and before basal collar, thinly scattered with small punctures and short pale yellow hairs. Scutellum narrow spatulate, slightly raised, clothed with minute pale yellow pubescence.

Elytra short and broad, 2.5 times as long as the width of humeri which are rounded quadrate, weakly ample in apical 4/9, widest at apical 3/10, with completely rounded apices; disc weakly convex towards sutural line, almost flattened, only slightly impressed near suture behind scutellum, provided with large shallow punctures except for apical fifth, the punctures being arranged in 8–9 irregular rows on each elytron, very sparsely scattered with short pale yellow hairs.

Prosternum slightly emarginate in profile, smooth on surface, provided with a few transverse furrows behind apical margin, clothed with pale yellow pubescence near middle; fore coxae approximate, with strongly compressed prosternal process. Meso- and metathoraces well convex, almost smooth, thinly pale yellow pubescent on mesosternum and mesepimera; mesosternal process very narrow, apical part of which rests on acutely produced anterior margin of metasternum; metepisternum deeply and widely grooved throughout. Abdomen almost smooth, provided with a few small punctures and pale yellow hairs, with 1st ventrite nearly half the length of abdomen.

Legs slender and rather long, with hind femur distinctly swollen in apical half, more or less compressed.

*Specimen examined.* 1♀ (holotype), "Aikawa. Sado / 23. vii. 1932" (in coll. National Science Museum (Nat. Hist.), Tokyo). The holotype is damaged or completely missing in the following parts: posterior part of right elytron, right antenna, apical six segments of left antenna, left mid leg and right hind tarsus.

*Distribution.* Sado Is. off NE. Honshu.

*Notes.* *Obrium kusamai* is a peculiar species among the Japanese congeners of the genus and characterized by the widely separated and deeply emarginate eyes, the subparallel pronotum, and almost smooth and glabrous body except for the large and shallow punctation on the elytra. This species is most closely related to *O. fuscoapicalis* HAYASHI from Taiwan. The Taiwanese species almost completely shares basic characters with *O. kusamai*, though barely discriminated by the smaller size on an average, the infusate apices of the elytra, which are always distinctly ample posteriad and more sparsely provided with smaller punctures. In the same morphological view, this species may be slightly similar in the shape of eyes and the dorsal punctation to *O. semiformosanum abirui* NIISATO et TAKAKUWA described on the basis of a male specimen from Nagasaki of western Kyushu, but clearly distinguished by the short and broad elytra which are 2.5 times as long as the humeral width in contrast to 2.87 times as that in the Kyushu species.

It is very strange that *O. kusamai* has never been rediscovered since the discovery of the holotype female in 1932, in spite of the fact that Sado Island, the type locality, is a famous collecting site and many entomologists have repeatedly researched for the insect fauna.

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important informations used in the present study.

## 要 約

新里達也: *Obrium japonicum* にまつわる分類学的整理. — じゅうらい, サドチビアメイロカミキリと呼ばれてきた種は, 日本本土域に広く分布する, 赤褐色で形態変異のやや大きい小型のムナミゾアメイロカミキリのことで, その名称には *Obrium japonicum* PIC, 1904 が用いられてきた. いっぽう, トワダムモンメダカカミキリ *Stenhomalus lighti* GRESSITT, 1935 は, 青森県十和田湖の標本をもとに記載された種で, おもに日本本土域および極東ロシアに広く分布することが知られている. このたび, パリ自然史博物館に所蔵されている *O. japonicum* と *O. obscuripenne* の正基準標本を再検討した結果に基づき, 上記種およびその類似種に対して, 次のような分類学的変更ならびに再検討を加えた.

- 1) トワダムモンメダカカミキリ *Stenhomalus japonicus* (PIC, 1904), comb. nov.

PIC (1904) の記載した *Obrium japonicum* はメダカアメイロカミキリ属 *Stenhomalus* の一員とするべき種であり, さらに *Stenhomalus lighti* に対する上位同物異名であった. 属の所属変更を行うとともに, これまでにトワダムモンメダカカミキリと呼ばれていた種には, 上記の名称を適用した.

- 2) ツシマアメイロカミキリ *Obrium obscuripenne obscuripenne* PIC, 1904

- 3) サドチビアメイロカミキリ *Obrium obscuripenne takakuwai* subsp. nov.

サドチビアメイロカミキリとツシマアメイロカミキリは, 色彩と雄交尾器の軽微な相違以外で区別することが困難で, 両種は直系の姉妹種あるいは同一種の亜種関係と位置づけられるべきである. 大陸側に暗褐色の前者の集団, 日本列島側に赤褐色の后者の集団が異所的に分布するが, 北海道石狩平野東部や本州中部高地のような一部の地域では両者の中間的な変異集団が知られている. さらに后者は, 日本列島内で前胸・上翅の点刻, 体形や雄交尾器などに軽微な地理的変異も認められ, かならずしも均質な集団とはいいがたいが, その変異傾向に関する満足のいく結論を得るにはいたらなかった. このような厳密に区別できない地域では課題を残すものの, 本論文で大陸と日本列島の各集団を, 同一種の亜種関係にあるものとみなした. なお, *japonicum* は前記のようにトワダムモンメダカカミキリの名称とされることから, サドチビアメイロカミキリの学名については未決定となる. そこで, この日本列島の亜種集団に対して新名 *takakuwai* nov. を命名した.

- 4) ウスゲアメイロカミキリ *Obrium kusamai* TAKAKUWA, 1984

本種は, 新潟県佐渡から戦前に得られた1雌の標本に基づいて記載されたが, これ以外に追加個体がまったく知られていない, 謎の多いムナミゾアメイロカミキリである. 原記載ではサドチビアメイロカミキリと比較されているが, 本属の既知種のなかでは, 台湾に分布する *O. fuscoapicalis* HAYASHI, 1974 に類縁が非常に近い種で, 上翅がより平行で, 大きい点刻を密にそなえ, 全体が黄褐色 (*O. fuscoapicalis* では先端が暗色) である特徴から, かろうじて区別できるにすぎない. 本論文では, *O. kusamai* の正基準標本に基づいて詳細な再記載を行うとともに, その真の分類学的位置を再定義した.



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