

A New Species of *Quedius* (Coleoptera, Staphylinidae) Obtained from a Nest of *Vespa mandarinia* in Kobe, Japan

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Abstract A new staphylinid species, *Quedius (Microsaurus) koukatoi* sp. nov., is described. It was obtained from a nest of *Vespa mandarinia* in western Honshu, Japan.

Small number of species of the genus *Velleius* which was treated as a junior synonym of the genus *Quedius* by SOLODOVNIKOV (2012), are often found in the nest of *Vespa* (Hymenoptera, Vespidae). In Japan, they are also found in the nests of *Vespa mandarinia* (WATANABE, 1977, 1990; NAOMI, 1981, 1986), *Vespula schrencki* (TAKAMIZAWA, 1981 a), *Vespula shidai* (TAKAMIZAWA, 1981 b) and *Vespa crabro* (IWATA & FUKADA, 2011).

Recently, we had an opportunity to examine many staphylinid specimens obtaining from a nest of *Vespa mandarinia* through the courtesy of Mr. S. KOUKATA. These specimens were recognized as belonging to a single species which may be placed near *Q. simulans* SHARP (1874) in having normal hind wings and punctured scutellum. After a close examination, it was become clear that this species is new to science on account of defferent external features and configuration of male genital organ of *Q. simulans* and other previously known species of *Quedius*.

Before going further, we wish to express our hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Mr. Yasutoshi SHIBATA, Machida, for his kindness in consulting literature, and Mr. Satoshi KOUKATA, Higashiosaka, for his kindness in giving us the specimens used in this study, and to Mr. Naoya ITO, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

***Quedius (Microsaurus) koukatoi* sp. nov.**

[Japanese name: Koukata-tsuyamunehanakakushi]

(Figs. 1–5)

Body length: 10.5–11.8 mm (from front margin of head to anal end); 5.0–5.4 mm (from front margin of head to elytral apices).

Body elongate and nearly parallel-sided. Colour brownish black and moderately shining, with labrum, palpi and apical abdominal segment brownish yellow, mandibles, antennae and legs reddish brown.

Male. Head subquadrate and gently elevated medially, somewhat transverse (width/length = 1.18), postocular part gently arcuate and slightly narrowed posteriad, not so strongly contracted at neck, nearly 1.5 times as long as the longitudinal diameter of an eye; frontal area obliquely and shallowly depressed inside each antennal tubercle, and provided with an obscure depression behind the frontal depression; temporal part extensively provided with numerous setiferous punctures, the bris-

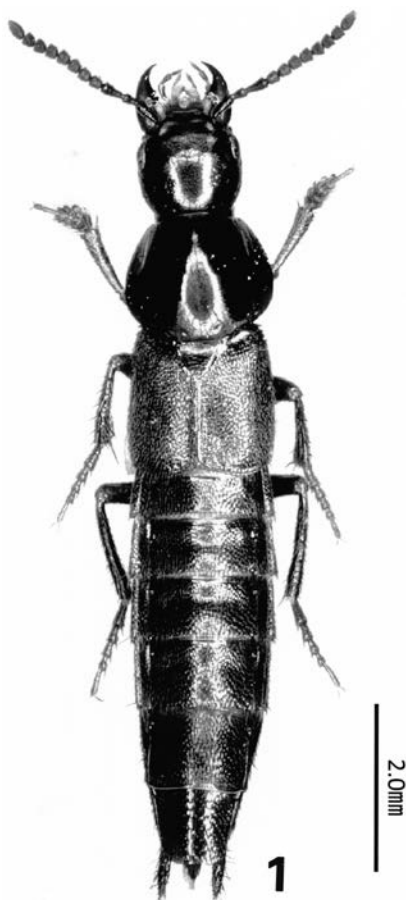
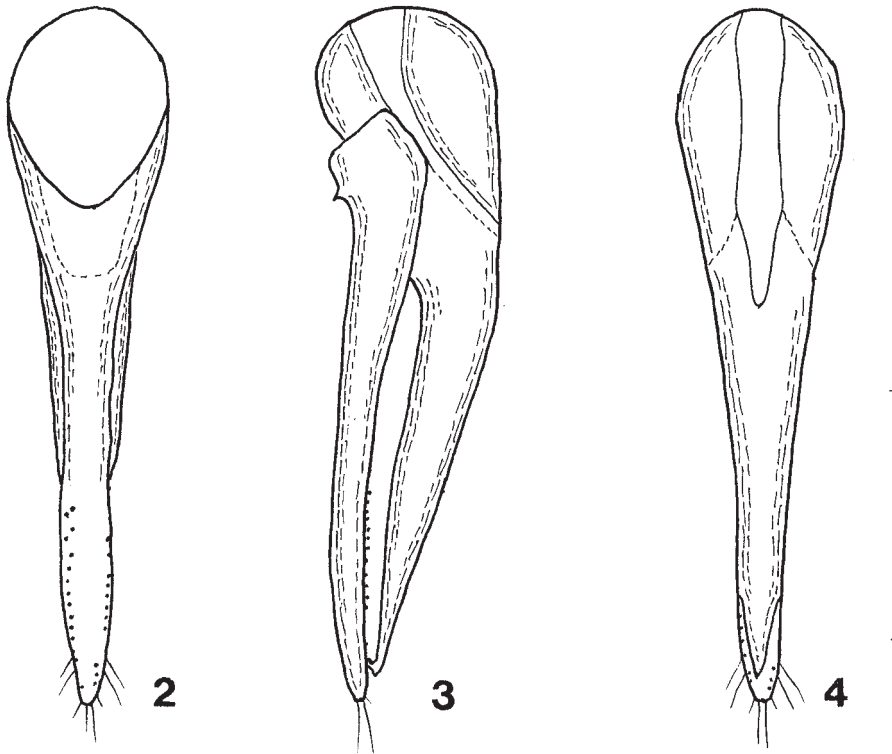


Fig. 1. *Quedius (Microsaurus) kaukantai* sp. nov., ♂, from Ôte, Suma-ku, Kobe-shi of western Honshu, Japan.

gles being blackish and decumbent forwards; surface smooth, though covered with microscopically coriaceous ground sculpture and sparsely scattered with extremely minute punctures visible under high magnification. Cephalic chaetotaxy as follows: one postantennal seta just behind postero-external corner of each antennal tubercle, one supraorbital seta inside infraorbital crest, two or three internal temporal setae arranged in longitudinal series inside temporal bristled part, two temporal setae in each temporal bristled part, though they are sometimes missing. Antennae relatively short, not extending to the posterior margin of pronotum, with three proximal segments polished, each dilated apicad, the remainings opaque, 1st segment robust and more than 2.5 times as long as wide, 2nd distinctly longer than wide (length/width = 1.67), much shorter (2nd/1st = 0.63) than though as wide as 1st, 3rd more than twice as long as wide, distinctly longer (3rd/2nd = 1.40) than though as wide as 2nd, 4th to 10th subequal in length to one another and only slightly thickened towards 10th which is slightly transverse (width/length = 1.14), 11th distinctly longer than wide (length/width = 1.75), twice as long though almost as wide as 10th, subacuminate at the tip.

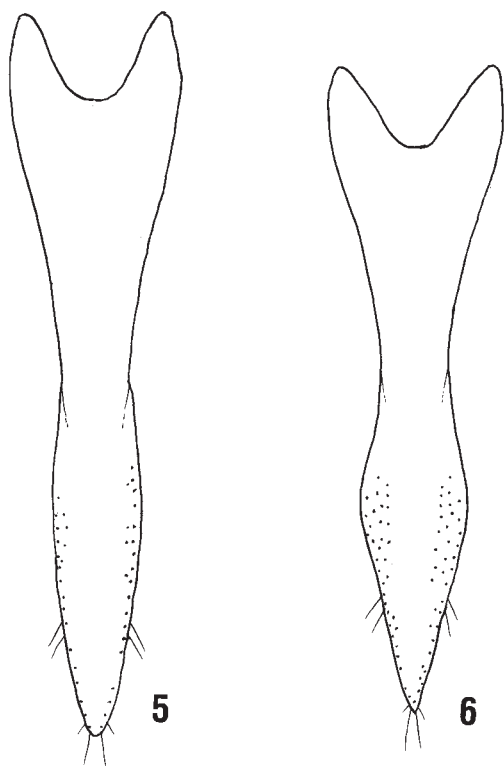
Pronotum strongly elevated medially and more or less horse-shoe in form, distinctly transverse (width/length = 1.10), widest near the middle and more strongly narrowed anteriorly than posteriorly; lat-



Figs. 2–4. Male genital organ of *Quedius (Microsaurus) koukantai* sp. nov. — 2, Dorsal view; 3, lateral view; 4, ventral view. Scale: 0.5mm.

eral parts deflexed in front though more or less deplanate in posterior halves just inside lateral margins, each lateral margin finely bordered, nearly straight or slightly emarginate in anterior half and gently arcuate in posterior half, anterior margin nearly straight though slightly arcuate at the middle, posterior margin finely bordered like lateral margin and rounded, strongly produced posteriad at the median part, anterior angles rectangular though blunt at the corners, posterior one obviously rounded at the corners; surface smooth though much more microscopically punctured than on head and covered with extremely fine ground sculpture like that of head, provided with a longitudinal series of three small setiferous punctures in anterior half on each side of the median line; each lateral side sparsely scattered with small setiferous punctures and with two outstanding long blackish setae, one at anterior third and the other in front of posterior margin, and also with a pair of setiferous punctures in front of the middle before posterior margin. Scutellum subtriangular and relatively large; surface covered with distinct setiferous punctures. Elytra square; slightly transverse (width/length = 1.02), somewhat longer (elytra/pronotum = 1.05) though slightly narrower (elytra/pronotum = 0.98) than pronotum, each lateral margin nearly straight or slightly arcuate, provided with an outstanding long-blackish seta at anterior fourth though it is sometimes missing, posterior margin emarginate at the middle and forming a re-entrant angles, posterior angles rounded; surface densely, coarsely punctured and covered with brownish pubescence. Legs relatively robust, protarsi widened in basal four segments, apical segment slender and shorter than four preceding segments combined.

Abdomen elongate and nearly parallel-sided from third to sixth segment and then distinctly narrowed towards anal end, basal four visible tergite each transversely and shallowly depressed above



Figs. 5–6. Fused parameres of *Quedius* (*Microsaurus*) spp. — 5, *Q. (M.) koukatoi* sp. nov.; 6, *Q. (M.) simulans* SHARP from Monomi-tôge of Kanagawa Pref. in central Honshu. Scale: 0.5 mm.

along the base, and fringed with a conspicuous long black seta on each lateral side of posterior margin, though they are sometimes missing; surface of each tergite moderately, closely, somewhat coarsely punctured and covered with brownish pubescence; 8th sternite subtriangularly excised at the middle of posterior margin, and flattened before the excision, surface of the flattened part glabrous.

Genital organ elongate and almost symmetrical. Median lobe gradually narrowed towards slightly constricted part, and then strongly so towards the pointed apex which forming a minute denticle and upturned as seen from lateral side. Fused paramere slender, slightly longer than median lobe, somewhat constricted at median part, apex narrowly rounded; internal face scattered with twenty or so black sensorial tubercles at each side in apical half.

F e m a l e. Similar in general appearance to male, but different from it by the following points: Head less transverse (width/length = 1.12), 8th abdominal sternite slightly arcuate or almost straight at the apical margin and protarsi less widened in basal four segments.

Type series. Holotype: ♂, allotype: ♀, Ôte, Suma-gun, Kôbe-shi, Hyogo Pref., Honshu, Japan, 1–5.IV.2013, S. KOUKATA leg. Paratypes: 4 ♂♂, 7 ♀♀, same data as for the holotype.

Type depositories. The type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture, with the exception of some paratypes are distributed to ARAI's and KOUKATA's private collection.

Distribution. Japan (western Honshu).

Remarks. The present new species is similar to *Q. (M.) simulans* SHARP in colour and external features, but can be separable from it in the following points: Body somewhat larger, head and abdo-

men more closely punctured, elytra more closely and more finely punctured, and different configuration of genital organ in the male.

Biology. All specimens were obtained from a nest, *Vespa mandarinia*, which was found in Ôte (alt. 110m) of Kôbe-shi, 16.II.2013 by M. YAMASHITA.

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

要 約

渡辺泰明・新井浩二：神戸市のオオスズメバチの廃巢から得られたツヤムネハネカクシ属(鞘翅目ハネカクシ科)の1新種。——最近ツヤムネハネカクシ属のジュニアシノニムとされたクシヒゲハネカクシ類のなかには、従来からスズメバチ類の廃巢から得られることが知られ、日本からもいくつかの例が報告されている。最近、筆者等は東大阪市在住の幸形 聡氏から神戸市須磨区大手で得られたオオスズメバチの廃巢から採集された多数のハネカクシを送付して頂いた。これらを検討した結果、小楯板に明らかな点刻が認められることからツヤムネハネカクシ亜属に含まれる *Q. (M.) simulans* ナミツヤムネハネカクシに近縁の種と思われる。しかし、この種を含め *Microsaurus* 亜属の既知種とは外部形態や雄交尾器の形状が異なり未記載種と判定したので、*Q. (M.) koukatoi* コウカタツヤムネハネカクシと命名・記載した。

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