

A New Species of the Genus *Coryphium* (Coleoptera,
Staphylinidae) from Hokkaido, Japan

Yasuaki WATANABE

Laboratory of Insect Resources, Tokyo University of Agriculture,
Atsugi, Kanagawa, 243–0034 Japan

Abstract A new species of the staphylinid genus *Coryphium* is described under the name of *C. yasudai*. It is obtained by sifting dead leaves accumulated in a coniferous forest on Mt. Kurodake of the Daisetsu Mountains in Hokkaido, Japan.

Four species of the *Coryphium atratum* group (ZERCH, 1990, p. 33) have hitherto been reported from the Palearctic Region (LÖBL & SMETANA, 2004, p. 254). Through the courtesy of Mr. Nobuki Yasuda, I had an opportunity to examine an interesting species, which was obtained on Mt. Kurodake of the Daisetsu Mountains in Hokkaido, Japan. This species seems to be placed in the group of *Coryphium atratum* in view of having large head, similar configuration of labrum and abdomen provided with a pair of minute pruinose spots at the middle of the 4th tergite. After a close examination, it has become clear that this species is new to science for reason of disagreement with the known members of this species-group in antennal articulation, obscure crenulation on lateral margins of pronotum and configuration of male genital organ. It will be described in this paper. The type series of the new species is deposited in the collection of the Laboratory of Insect Resources, Tokyo University of Agriculture.

Before going further, I would like to express my deep gratitude to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. My hearty thanks are also due to Mr. Nobuki YASUDA, Sôunkyô Visitor Center, for his kindness in providing me with the invaluable specimens used in this study, and to Mr. Junnosuke KANTOH, Laboratory of Insect Resources of Tokyo University of Agriculture, for taking the photograph inserted in this paper.

Coryphium yasudai Y. WATANABE, sp. nov.

[Japanese name: Zubiro-chibi-yotsume-hanekakushi]

(Figs. 1–10)

Body length: 2.2–2.6 mm (from front margin of head to anal end); 1.6–1.9 mm (from front margin of head to elytral apices).

Body nearly spindle-shaped and somewhat depressed above. Colour black and shining, with mandibles yellow, palpi, antennae and legs reddish brown, labrum and

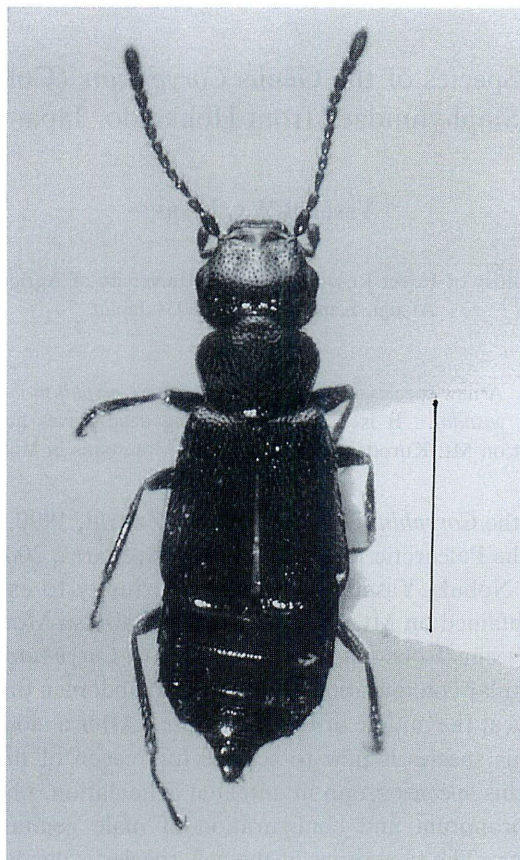
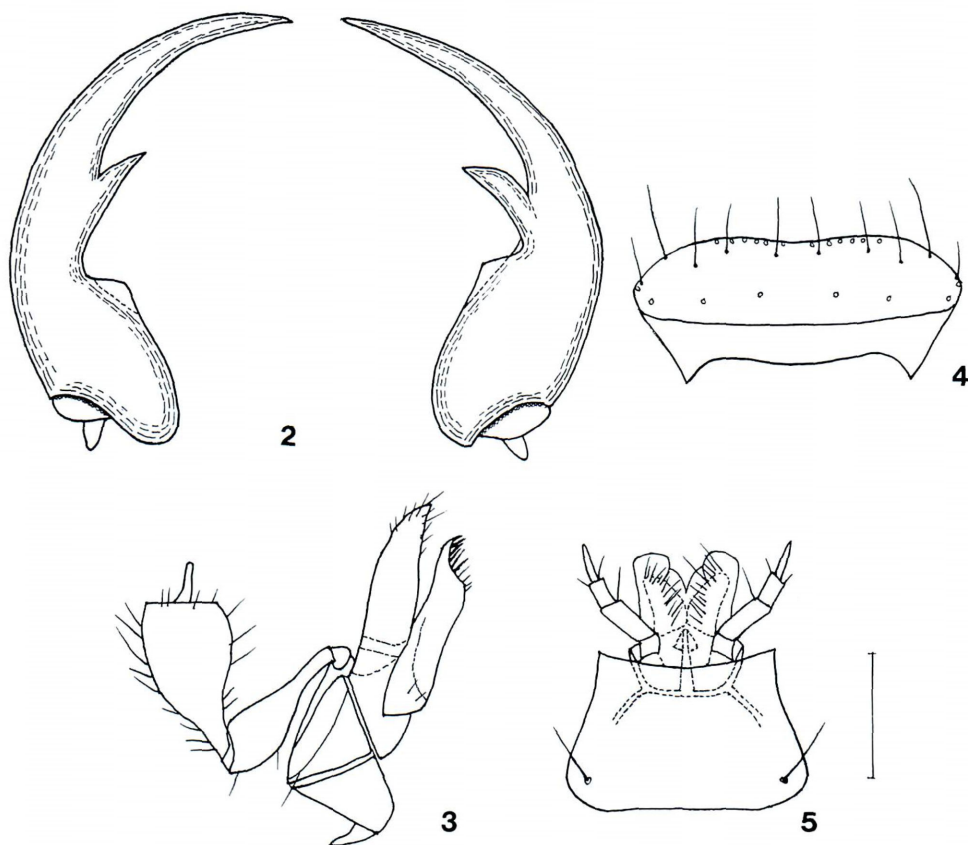


Fig. 1. *Coryphium yasudai* Y. WATANABE, sp. nov., ♂. Scale: 1.0 mm.

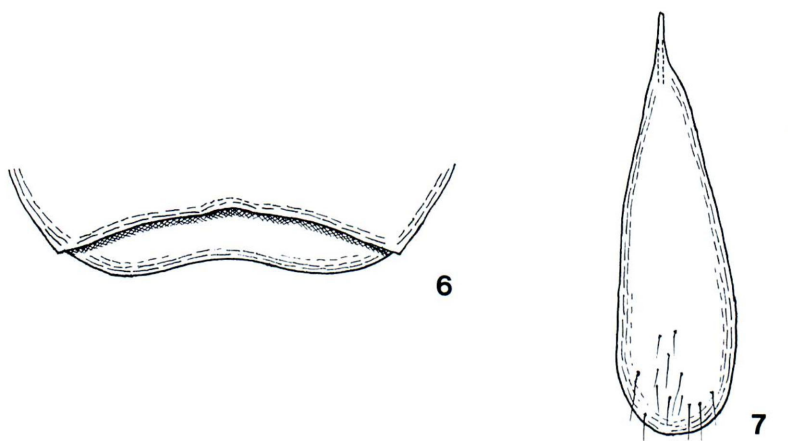
elytra dark brown, epipleura of pronotum and elytra dark yellowish brown.

Male. Head somewhat depressed above and subtrapezoidal, more strongly narrowed anteriorly than posteriorly, apparently wider across compound eyes than long (width / length = 1.35); postocular part arcuate and slightly shorter than the longitudinal diameter of each eye (posterior part / longitudinal diameter of eye = 0.88), which is somewhat prominent laterad; surface moderately closely, coarsely punctured and finely pubescent though without ground sculpture, distance between punctures equal to or slightly larger than their diameter, provided with a depression on each side of the middle behind each antennal tubercle; ocelli minute, the distance between them larger than that from the outside of ocellus to the inner margin of each compound eye. Mandibles slender and strongly curved inwards in apical halves, molar area obscure; each mandible armed with an acute tooth at the middle of inner margin, the right tooth somewhat broader than left tooth. Maxillae relatively narrow; galea somewhat broader than lacinia and narrowed apically, closely fringed with short bristles at the apical part; lacinia



Figs. 2-5. Mouth-parts of *Coryphium yasudai* sp. nov.; mandibles (2), maxilla (3), labrum (4) and labium (5). Scale: 0.1 mm.

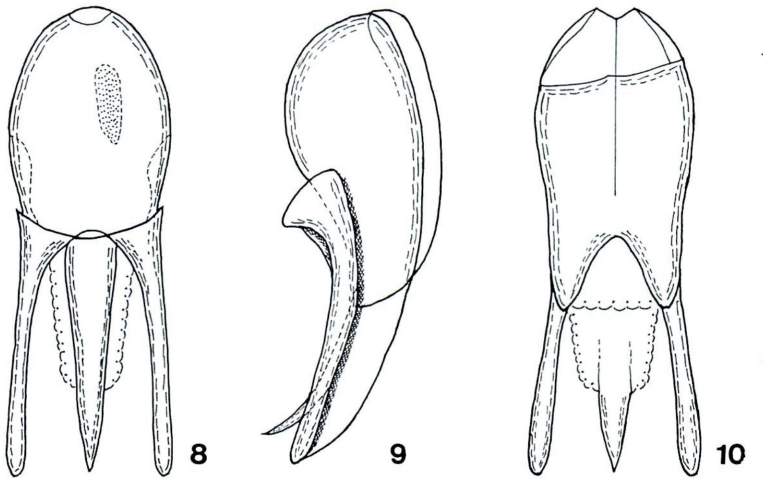
abruptly narrowed apicad in apical fourth, inner margin provided with fine bristles in apical fourth; maxillary palpus four-segmented, 1st segment minute, 2nd strongly dilated towards the apex, more than twice as long as wide, 3rd markedly swollen, wider than long ($\text{width/length} = 1.10$), a little longer ($3\text{rd}/2\text{nd} = 1.25$) and remarkably wider ($3\text{rd}/2\text{nd} = 2.89$) than 2nd, 4th subulate, distinctly longer than wide ($\text{length/width} = 3.0$), but much shorter ($4\text{th}/3\text{rd} = 0.30$) and conspicuously narrower ($4\text{th}/3\text{rd} = 0.09$) than 3rd. Labrum apparently transverse and strongly narrowed towards both anterior and posterior, anterior margin feebly emarginate at the middle, lateral sides arcuate throughout its whole length; surface fringed with a number of long seta on ante-lateral part. Mentum transverse and subtrapezoidal, abruptly narrowed in anterior third, lateral sides arcuate in posterior three-fourths and nearly straight in anterior fourth, provided with a relatively long seta at each lateral side before posterior margin; ligula membranous, deeply notched at the middle of anterior margin and forming two lobes; labial palpus three-segmented, 1st the longest, more than 1.5 times as long as wide, 2nd about 1.5



Figs. 6-7. Last two abdominal sternites in male of *Coryphium yasudai* sp. nov.; 8th abdominal sternite (6) and 9th abdominal sternite (7). Scale: 0.1 mm.

times as long as wide, but distinctly shorter ($2\text{nd}/1\text{st}=0.67$) and somewhat narrower ($2\text{nd}/1\text{st}=0.72$) than 1st, 3rd twice as long as wide, almost equal in length to though a little narrower than 2nd, narrowly rounded at the apex. Antennae elongate, extending slightly beyond the posterior margin of pronotum, three or four proximal segments polished, the remainings opaque, 1st segment robust and widened apicad, 1.5 times as long as wide, 2nd constricted at the base, 1.5 times as long as wide, much shorter ($2\text{nd}/1\text{st}=0.67$) and narrower ($2\text{nd}/1\text{st}=0.67$) than 1st, 3rd somewhat dilated apicad, much longer than wide ($\text{length}/\text{width}=1.84$), a little longer ($3\text{rd}/2\text{nd}=1.17$) but slightly narrower ($3\text{rd}/2\text{nd}=0.95$) than 2nd, 4th to 6th equal in both length and width to one another, each distinctly longer than wide ($\text{length}/\text{width}=1.43$), but somewhat shorter (each of 4th to 6th / $3\text{rd}=0.71$) and slightly narrower (each of 4th to 6th / $3\text{rd}=0.92$) than 3rd, 7th to 11th gradually increasing in width, 7th somewhat longer than wide ($\text{length}/\text{width}=1.25$), as long as and slightly wider ($7\text{th}/6\text{th}=1.14$) than 6th, 8th slightly longer than wide ($\text{length}/\text{width}=1.11$) as long as and somewhat wider ($8\text{th}/7\text{th}=1.13$) than 7th, 9th somewhat longer than wide ($\text{length}/\text{width}=1.20$), a little longer ($9\text{th}/8\text{th}=1.20$) and slightly wider ($9\text{th}/8\text{th}=1.11$) than 8th, 10th somewhat longer than wide ($\text{length}/\text{width}=1.13$), as long as and slightly wider than 9th ($10\text{th}/9\text{th}=1.06$), 11th more than twice as long as wide, twice as long as and slightly wider ($11\text{th}/10\text{th}=1.04$) than 10th, subacuminate at the apex.

Pronotum convex medially and transverse ($\text{width}/\text{length}=1.29$), nearly as long as and almost equal to head, widest at anterior third and more strongly narrowed posteriad than anterior; lateral sides finely bordered and perceptively crenulate, strongly arcuate in anterior halves and almost straight in posterior halves, anterior margin emarginate at the middle, posterior margin nearly truncate, anterior angles rounded, posterior ones rectangular though blunt at the corners; surface slightly more closely and more coarsely punctured than in head, provided with a U-shaped depression at the middle before



Figs. 8–10. Male genital organ of *Coryphium yasudai* sp. nov.; dorsal view (8), lateral view (9) and ventral view (10). Scale: 0.25 mm.

posterior margin, a narrow and longitudinal depression at the middle in anterior half, and a shallow depression inside each lateral side. Scutellum minute and subtriangular, surface impunctate though covered with very fine coriaceous ground sculpture only visible under high magnification. Elytra trapezoidal and somewhat dilated posteriad, a little longer than wide (length/width=1.09), apparently longer (elytra/pronotum=2.12) and 1.5 times as wide as pronotum, lateral sides almost straight, posterior margin nearly truncate, posterior angles broadly rounded; surface closely, coarsely punctured and provided with similar pubescence as on pronotum. Legs moderately long, protarsus not widened, last segment of metatarsus almost as long as the two preceding segments together.

Abdomen relatively broad, gently narrowed from 3rd to 5th segment, and then abruptly narrowed towards the anal end; surface of each tergite moderately closely, superficially punctured and covered with microscopic coriaceous ground sculpture and fine pubescence, 4th tergite with a pair of small pruinose spots at the middle; 8th sternite broadly and shallowly emarginate at the middle of posterior margin, 9th sternite spatulate, gradually dilated towards the broadly rounded apex.

Genital organ trilobed and symmetrical. Median lobe elongate, gradually narrowed posteriad in basal two-thirds and then abruptly so towards the pointed apex seen from the dorsal side, strongly curved dorsad in apical part in profile. Parameres elongate, almost as long as median lobe, each slightly widened before the apex which is narrowly rounded.

F e m a l e. Similar in general appearance to male, but different from it in the 8th abdominal sternite narrowly rounded at the apex.

Type series. Holotype: ♂, allotype: ♀, Kumono-daira, Mt. Kurodake of the

Daisetsu Mts., Hokkaido, Japan, 1-IX-2005, N. YASUDA leg. Paratypes: 2♂♂, 3♀♀, same data as for the holotype.

Distribution. Japan (Hokkaido).

Remarks. This new species is similar in body size and facies to *C. nataliae* SHAVRIN (2001, p. 192) from East Siberia, but differs from the latter in the following points: Third antennal segment distinctly longer than the 4th, and 8th to 10th segments each longer than broad; pronotum more transverse (width/length=1.35); elytra not so long (length/width=1.09) as in *C. nataliae*, much more closely and coarsely punctured and median lobe of male genital organ distinctly narrowed towards the pointed apex.

Bionomics. All the specimens were obtained by sifting dead leaves accumulated in a coniferous forest, *Pinus pumila*, on Mt. Kurodake of the Daisetsu Mountains at an altitude of 1,900 m.

Etymology. The specific epithet of this new species is given after Mr. Nobuki YASUDA, who collected the type series.

要 約

渡辺泰明: 北海道で採集されたズビロチビヨツメハネカクシ属(甲虫目, ハネカクシ科)の1新種。—— *Coryphium* ズビロチビヨツメハネカクシ属(新称)は, ヨツメハネカクシ亜科のズビロヨツメハネカクシ族 *Coryphiini* に含まれ, 旧北区に分布しているが, これまで日本からの記録はなかった。最近, 私は保田信紀氏(層雲峡ビジターセンター)のご厚意で, 大雪山黒岳のハイマツ帯の落葉から採集された微小なハネカクシを検討する機会を得たが, この種は *Coryphium* 属の *C. atratum* 種群に属する種と考えられた。そして, 体長や外部形態が東シベリアから記載された *C. nataliae* SHAVRIN に類似しているが, 触角の第3節が第4節より明らかに長く, また第8節-10節の各節が幅より長いこと, 前胸背板の形状や点刻, さらに雄交尾器の形状も異なることで未記載種と判定し, *C. yasudai* (ズビロチビヨツメハネカクシ) と命名・記載した。

References

- LÖBL, I., & A. SMETANA, 2004. Staphyloidea. *Catalogue of Palaearctic Coleoptera* II. Hydrophiloidea-Histeroidea-942 pp. Apollo Books, Stenstrup.
- SHAVRIN, A. V., 2001. New and little-known species of Omaliinae from the Baikal-Transbaikal area (Coleoptera: Staphylinidae). *Zoosystematica Rossica*, **9**: 189-193.
- ZERCHE, L., 1990. Monographie der Paläarktischen Coryphiini (Coleoptera, Staphylinidae, Omaliinae). 413 pp. Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Berlin.
- 1993. Ditto. Supplementum 1. *Beitr. Ent., Berlin*, **43**: 319-374.