

## Two New Species of the Genus *Geodromicus* REDTENBACHER (Coleoptera, Staphylinidae, Omalinae) from Japan

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**Abstract** *Geodromicus takabai* sp. nov. and *G. watanabei* sp. nov. are described from Ishikawa and Nagano Prefectures, Japan, respectively. These new species are closely related to *G. sinuatus* (SHARP).

More than 120 species of the omaliine genus *Geodromicus* REDTENBACHER, 1856 are distributed in Holarctic and Oriental Regions (HERMAN, 2001). Fifteen species are known from Japan at present (SHIBATA *et al.*, 2013; WATANABE, 1990, 2016). Recently, two unspecified species of the genus were found in my cabinet. These species are very similar to *Geodromicus sinuatus* (SHARP, 1889) in the general appearance, blackish color, immaculate elytra and similar structure of the male genitalia. After careful examination I concluded that these are new species. In this paper I describe these species.

I am grateful to Mr. Hideo KAWASE, Ishikawa Prefecture, for his kindly offering the interesting materials. I would like to thank Dr. Kiyoshi ANDO, Faculty of Agriculture, Ehime University, for his critically reading the manuscript.

The materials treated in this study are deposited in the following collections.

OMNH: Osaka Museum of Natural History, Osaka, Japan

EUMJ: Ehime University Museum, Matsuyama, Japan

NMNS: National Museum of Nature and Science, Tsukuba, Japan

CYHH: Private collection of Yasuhiko HAYASHI, Hyôgo, Japan

The main terminology and abbreviations used herein are as follows: HW — head width; HL — head length; E — length of eye; T — length of temple; PW — pronotal width; PL — pronotal length; EW — elytral width; EL — elytral length.

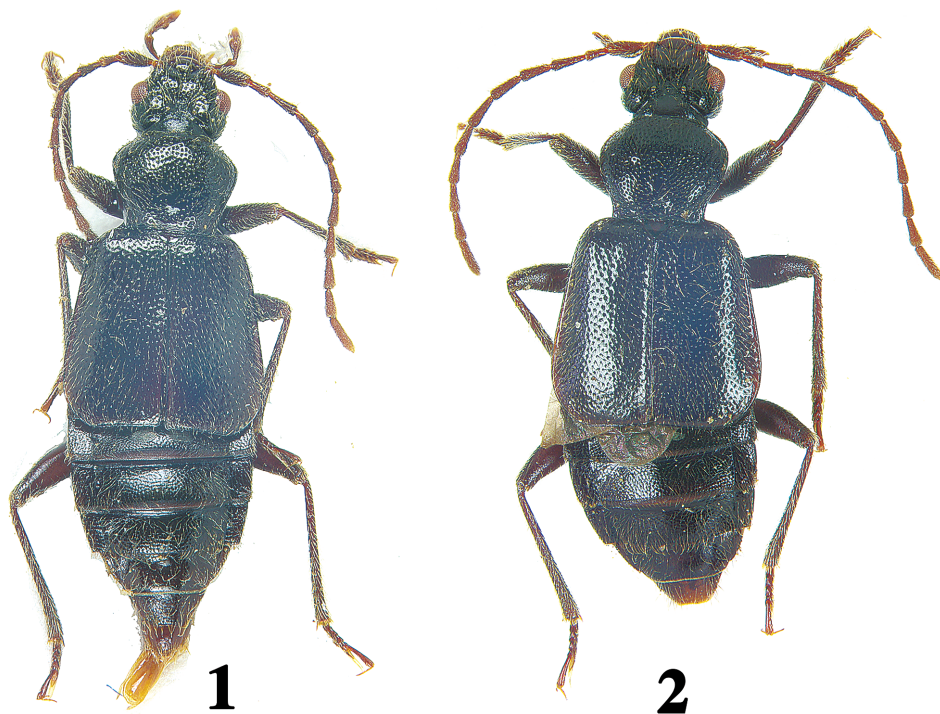
### *Geodromicus takabai* sp. nov.

(Figs. 1 & 3)

Body subfusiform, rather convex, black, and clothed with fine brownish pubescence; mouth parts pitchy brown; 2nd and 3rd antennomeres with reddish basal portions; elytra narrowly obscurely reddish along suture and on posterior margin; coxae, trochanters and tarsi brownish; derm without microsculpture on fore body except interocellar fovea and neck. Length: 5.60–6.80 mm.

**M a l e.** Head subpentagonal, a little wider than long (HW/HL = 1.17), considerably narrower and shorter than pronotum (HW/PW = 0.72; HL/PL = 0.85); dorsal surface coarsely and sparsely punctured except clypeal portion and interocellar fovea; clypeus deeply depressed and impunctate; interocellar fovea deep, V-shaped, impunctate and strongly strigulate at the bottom of fovea. Eyes large, moderately convex, a little longer than temples (E / T = 1.28) in dorsal view. Antennae rather long, reaching near the posterior margins of elytra; each antennomere much longer than wide, and with the following relative length from base to apex: 1.20 : 0.76 : 1.10 : 1.00 : 1.00 : 0.98 : 0.98 : 0.98 : 0.98 : 0.86 : 1.40. Neck covered with strong reticulate microsculpture.

Pronotum subcordate, widest at anterior third (PW/PL = 1.38), considerably narrower and shorter



Figs. 1–2. Habitus of *Geodromicus* spp. — 1, *G. takabai* sp. nov.; 2, *G. watanabei* sp. nov.

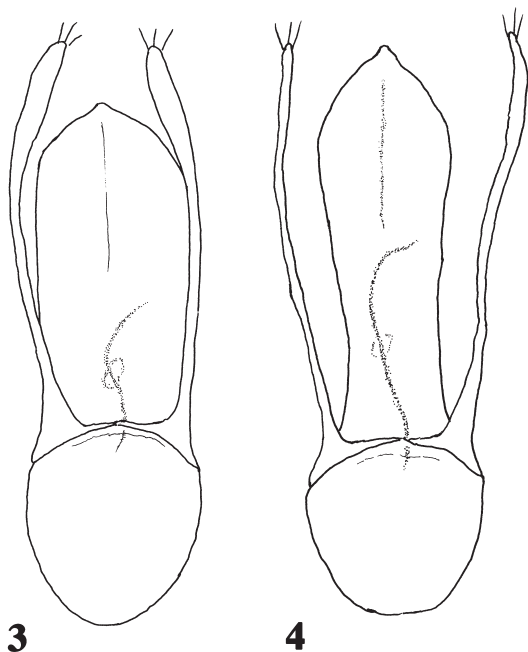
than elytra ( $PW/EW = 0.75$  &  $PL/EL = 0.52$ ); sides widely rounded in anterior two-thirds, then gently narrowed posteriad, and weakly emarginate before posterior angles, which are rectangular; apical and basal margins nearly straight; disc strongly convex, somewhat flattened medially, obscurely and longitudinally impressed, and bearing a large, deep and transversely elliptic fovea just before basal margin, with punctures similar but slightly denser than on head except impunctate triangular space just before the fovea. Scutellum flattened and glabrous.

Elytra trapezoidal, gently convex, rather strongly raised along suture, slightly longer than wide ( $EL/EW = 1.06$ ), gently dilated posteriad, and straight at sides; surface a little more coarsely and sparsely punctured than on pronotum.

Abdomen arcuately narrowed toward subacute apex; tergites very finely sparsely asperate-punctate, with fine coriaceous microsculpture; ventrites a little more coarsely and sparsely punctured than on tergites; 4th tergite bearing a pair of transversely oblong-oval tomentous patches in middle; 7th tergite slightly emarginate at apex with whitish apical seam of palisade setae; 8th subtruncate at apex; 10th rounded at apex; 8th ventrite very weakly emarginate at apex, which is fringed with numerous setae.

Legs slender and long; profemora considerably thick; tibiae gently thickened apicad; first protarsomeres weakly dilated; meso- and metatibiae hardy curved dorsad.

Male genitalia (Fig. 3) symmetrical; penis, in ventral view, wide, parallel-sided, shallowly depressed in both sides along median line, rapidly convergent to acute apex in apical portion, with a median ridge in apical half; penis, in lateral view, strongly bulbous in basal portion, thin in shaft, weakly curved ventrad; parameres slender, long, tumid in apical fourth, considerably extending beyond the apex of penis, each with two or three setae at apex.



Figs. 3–4. Male genitalia (ventral view) of *Geodromicus* spp. — 3, *Geodromicus takabai* sp. nov.; 4, *G. watanabei* sp. nov.

**F e m a l e.** Protarsomeres slightly slenderer than in male; 8th ventrite truncate at apex; meso- and metatibiae slightly curved dorsad.

**Type series.** Holotype: ♂, Utsuo, Kawachi-mura, Ishikawa Pref., 15.VI.1997, E. KAWASE leg. (OMNH). Paratypes: 3 ♂♂, 3 ♀♀, same data as the holotype (1 ♂, 1 ♀ in OMNH; 2 ♂♂, 2 ♀♀ in CYHH); 5 ♂♂, 5 ♀♀, Mt. Iozen, Kanazawa, Ishikawa Pref., 7.VI.1964, Y. HAYASHI leg. (1 ♂, 1 ♀ in OMNH; 1 ♂, 1 ♀ in NMNS; 1 ♂, 1 ♀ in EUMJ; 2 ♂♂, 2 ♀♀ in CYHH).

**Remarks.** The new species is very similar in general appearance to *Geodromicus sinuatus*, but distinguishable from the latter by the shape of male genitalia and the relatively larger head. The penis in the new species is more transverse, parallel-sided, with the ventral face finely ridged in the middle of apical half, and the head is nearly three-fourths as wide as the pronotum, while in *G. sinuatus* the penis is gently tapered apicad, with the ventral face finely ridged at the middle throughout, and the head is a half as wide as the pronotum.

**Etymology.** The specific name is dedicated to Mr. Shôji TAKABA, who is an eager coleopterist, and made up catalogue of Coleoptera from Ishikawa Prefecture.

***Geodromicus watanabei* sp. nov.**

(Figs. 2 & 4)

Body elongate subfusiform, black and well shiny; mouth parts and antennae dark brown to brown except pale apical two or three antennomeres; elytra slightly pale at apices; legs dark brown to blackish; microsculpture absent on fore body except interocellar fovea and neck. Length: 5.60–6.70 mm.

**M a l e.** Head subhexagonal, a little wider than long (HW/HL = 1.30), a little narrower and shorter than pronotum (HW/PW = 0.85 & HL/PL = 0.81); dorsal surface coarsely and rather densely punc-

tured though the punctures a little smaller on median line; clypeal area subpentagonal, rather deeply depressed, smooth in middle, shiny, coarsely and sparsely punctured in lateral sides; interocellar fovea deep, nearly V-shaped, with strong striate microsculpture at the bottom of fovea. Eyes large, strongly convex, slightly longer than temple in dorsal view ( $E/T = 1.11$ ). Antennae long, not becoming thickened apicad, reaching the apices of elytra, each antennomere longer than wide, with the following relative length from base to apex: 1.20 : 0.70 : 1.00 : 1.00 : 1.00 : 1.10 : 1.10 : 1.00 : 1.00 : 0.70 : 1.25. Neck with strongly reticulate microsculpture.

Pronotum subcordate, widest at anterior third, a little wider than long ( $PW/PL = 1.25$ ), considerably narrower and shorter than elytra ( $PW/EW = 0.62$  &  $PL/EL = 0.47$ ); sides widely rounded in anterior two-thirds and weakly emarginate in basal third, and posterior angles rectangular; disc distinctly convex, shallowly and obscurely impressed at middle, deeply foveate just before the middle of basal margin, coarsely but somewhat more densely punctured than on head, and the fovea transversely subquadrate and large. Scutellum weakly depressed and impunctate.

Elytra trapezoidal, moderately convex, obscurely depressed beside shoulders, almost as wide as long ( $EW/EL = 0.94$ ), gently dilated posteriad, nearly straight at sides, widely rounded at posterior angles, and nearly straight at posterior margin; surface a little more finely and sparsely punctured than on pronotum. Hind wings well developed, functional.

Abdomen steeply retracted toward subacute apex; tergites finely and very sparsely punctured, with obscurely and transversely striate microsculpture, the punctures on ventrites a little larger and denser than on tergites; 4th tergite bearing a pair of transversely suboval tomentous patches; 7th tergite with apical seam of whitish palisade setae; 8th truncate at apex; 10th rounded at apex, with numerous setae in apical third; 8th ventrite weakly emarginate at apex; 9th slightly dilated apicad in basal four-fifths and rounded at apex.

Legs slender; tibiae almost straight; protarsi weakly dilated.

Male genitalia (Fig. 4) symmetrical; penis, in ventral view, wide, gradually dilated apicad, gently emarginate at sides, steeply convergent to pointed apex in apical fifth, with ventral face ridged medially in apical half and shallowly depressed in both sides of median line; penis, in lateral view, strongly bulbous in basal part, thin in shaft, gently curved ventrad; parameres slender, weakly tumid in apical portion and slightly extending beyond the apex of penis.

*F e m a l e.* Eighth ventrite faintly emarginate at apical margin; legs somewhat shorter than in male, protarsomeres much less dilated than male, and mesotibiae faintly sinuate.

*Type series.* Holotype: ♂, Senami, Ishikawa Pref., 17.V.1964, Y. HAYASHI leg. (OMNH). Paratypes: 15 ♂♂, 8 ♀♀, same data as the holotype (2 ♂♂, 2 ♀♀ in OMNH; 2 ♂♂, 2 ♀♀ in EUMJ; 2 ♂♂, 2 ♀♀ in NMNS; 9 ♂♂, 2 ♀♀ in CYHH); 2 ♂♂, 2 ♀♀, Mt. Togakushi, Nagano Pref., 5.VII.2008, Y. HAYASHI leg. (1 ♂, 1 ♀ in OMNH; 1 ♂, 1 ♀ in CYHH); 2 ♀♀, Riv. Tenryu, Ina-shi, Nagano Pref., 15.VII.1959, Y. HAYASHI leg. (CYHH).

*Remarks.* The present new species is very similar in general appearance to *Geodromicus takabai* sp. nov. It is barely distinguishable from the latter in the following points: penis distinctly emarginate at sides, and 6th antennomeres slightly longer than 5th, while in the latter species penis parallel-sided, and 6th antennomere slightly shorter than 5th. The new species is well similar to *G. sinuatus* (SHARP) in general appearance, but it is readily separable from the latter by the relatively larger head and the different shape of male genitalia.

*Etymology.* The specific name is dedicated to Dr. Yasuaki WATANABE, who is one of the most excellent researchers of the family Staphylinidae in Japan.

## 要 約

林 靖彦：日本産ミズギワヨツメハネカクシの2新種(鞘翅目ハネカクシ科)。——本州中部地方から *Geodromicus* 属の2新種を報告した。2種ともに *G. sinuatus* (SHARP) にきわめてよく似ているが、雄交尾器の形態や内部構造に差が見られ、それぞれ独立種と認めた。*Geodromicus takabai* sp. nov. タカバミズギワヨツメハネカクシ(新称)は雄交尾器の側片が中葉より明らかに長く、中葉は両側平行である点で *G. sinuatus* (SHARP) から区別できる。*Geodromicus watanabei* sp. nov. ワタナベミズギワヨツメハネカクシ(新称)は雄交尾器中葉両側が浅くえぐられることで *G. sinuatus* から区別できる。前種とは雄交尾器の形態および触角第6、7節が第5節より少し長いことで区別できる。

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