

## Two New Species of the Genus *Laccobius* (Coleoptera, Hydrophilidae) from Japan

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**Abstract** Two new species of the hydrophilid genus *Laccobius* are described from Honshu, Japan, under the names of *L. masatakai* and *L. moriyai*. These are the first records of the subgenera *Cyclolaccobius* and *Glyptolaccobius* from Japan.

The genus *Laccobius* is one of the largest and widespread genera of the family Hydrophilidae, consisting of nine subgenera and more than 200 species (HANSEN, 1999; SHORT & HEBAUER, 2006). The species of the genus found in China and neighbouring areas were revised by GENTILI (1995, 2003, 2006). He dealt with six subgenera and 74 species in his papers including many new species which were described and illustrated.

The subgenus *Cyclolaccobius* was established by GENTILI (1991) on the basis of *L. rectus* SHARP. Until now, this subgenus contains 27 species from Asia, Arabia and Southeast Africa (GENTILI, 1995, 2003). The subgenus *Glyptolaccobius* was established by GENTILI (1989) on the basis of *L. affinis* KNISCH. Until now, this subgenus contains 12 species from Asia (GENTILI, 2006). Recently, we examined two new species from Japan which represent the first records of these subgenera from the country. These species were collected together with torridincolid *Satonius kurosawai* (SATÔ) in hygropetric habitats. In this paper, we are going to describe these two new species.

The holotypes are preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Ehime University, and the paratypes are preserved in Ehime University and our collections.

This paper is dedicated to the memory of the late Dr. Masataka SATÔ who led us to the study of aquatic insects and has always given us expert advice. I thank Dr. Shun-Ichi UÉNO (National Science Museum), Dr. Masahiro SAKAI (Ehime University), Dr. Elio GENTILI (Varese-Rasa, Italy) and Mr. Andrew E. Z. SHORT (Cornell University, New York) for their kindly help in many ways. Thanks are also due to Mr. Hirofumi MORIYA (Sagamihara City Museum) for his kind support in the material.

*Laccobius (Cyclolaccobius) masatakai*

KAMITE, OGATA et HIKIDA, sp. nov.

[Japanese name: Komaru-shijimi-gamushi]

(Figs. 1, 3-6, 11-12, 15-16)

Body short oval, convex, shining in dorsal aspect. Color of head and pronotum black; sides of pronotum brownish. Antenna yellowish brown; 6th to terminal segment somewhat darkened. Mouthparts yellowish brown; apices of maxillary and labial palpi somewhat darkened. Elytra black or blackish brown; yellowish at the apices. Legs yellowish brown; coxa, trochanter and femur somewhat darkened. Ventral surface black or blackish brown; sides of prothorax and elytral epipleura brown.

Head convex, sparsely punctate and pubescent, about five times as wide as one eye. Eyes relatively small; reniform in frontal aspect.

Pronotum transverse, convex, about 2.5 times as wide as long, widest at the base, narrowing to apex, sparsely punctate and pubescent, each margin with a row of punctures. Scutellum subtriangular, somewhat longer than wide, surface sparsely punctate.

Elytra oval, convex, about 1.2 times as wide as pronotum, each elytron about 1.6-1.7 times as long as wide, widest at basal third, furnished with nearly twenty longitudinal rows of punctures and pubescent. The rows of elytral punctures alternating more or less strong.

Prosternum transverse, tectiform, pubescent, longitudinal keel at the middle. Mesoventrite pubescent, also with longitudinal keel at the middle; subtriangular in lateral aspect; the latter more raised anteriorly and apex somewhat rounded. Metaventricle pubescent, not pubescent in the central area.

Legs short; profemora densely pubescent at the basal area, meso- and metafemora sparsely punctulate; tarsi short with weak claws.

Abdominal ventrite 1st to 4th sparsely pubescent, 5th moderately and 6th densely pubescent.

Aedeagus as illustrated (Figs. 11, 12); penis slightly shorter than parameres and longer than phallobase; slightly dilated at apex; parameres slightly curved inwards at the apices.

Length: 1.8-2.5 mm; width: 1.2-1.5 mm.

*Type series.* Holotype: ♂, Kobodihana, Ohmika-machi, Hitachi-shi, Ibaraki Pref., 22-VII-2006, N. HIKIDA leg.

Paratypes: 34 exs., same data as the holotype; 24 exs., Ohsawa, Irimagata, Magata, Mishima-machi, Ohnuma-gun, Fukushima Pref., 25-VI-2006, N. HIKIDA leg.; 3 exs., Kaname-gawa, Kaname, Oguni-machi, Yamagata Pref., 14-X-2002, T. OGATA leg., 5 exs., ditto, H. MORIYA leg.; 8 exs., Mouchi, Tana, Sagamihara-shi, Kanagawa Pref., 1-XII-1998, H. MORIYA leg.

*Distribution.* Honshu, Japan.

*Remarks.* This species resembles *L. politus* GENTILI, 1979, but is distinguishable from it by the penis, which is narrowed at basal fourth.

*Etymology.* The specific name is dedicated to the late Dr. Masataka SATÔ.

### *Laccobius (Glyptolaccobius) moriyai*

KAMITE, OGATA et HIKIDA, sp. nov.

[Japanese name: Mizo-shijimi-gamushi]

(Figs. 2, 7-10, 13-14)

Body oval, convex, shining in dorsal aspect. Color of head, pronotum and elytra black; sides of pronotum and apices of elytra somewhat brownish. Legs reddish brown; coxa, trochanter and femur somewhat darkened. Ventral surface black; sides of prothorax and elytral epipleura brown.

Head convex, sparsely punctate and pubescent, about five times as wide as one eye.

Pronotum about 2.5 times as wide as long, narrowed from base to apex, sparsely punctate and pubescent. Scutellum somewhat longer than wide, sparsely punctate.

Elytra oval, convex, about 1.1 times as wide as pronotum, each elytron about 1.7-1.8 times as long as wide, widest at basal 3rd, each puncture relatively distinct.

Prosternum and mesoventrite pubescent, longitudinal keel at the middle. Metaventricle pubescent except at the center.

Legs short; basal portion of profemora densely pubescent, meso- and metafemora sparsely punctulate; tarsi short with weak claws.

Aedeagus as illustrated (Figs. 13, 14); penis slightly shorter than parameres and longer than phallobase; widely dilated at apical 2/7; parameres slightly curved inwards at the apices.

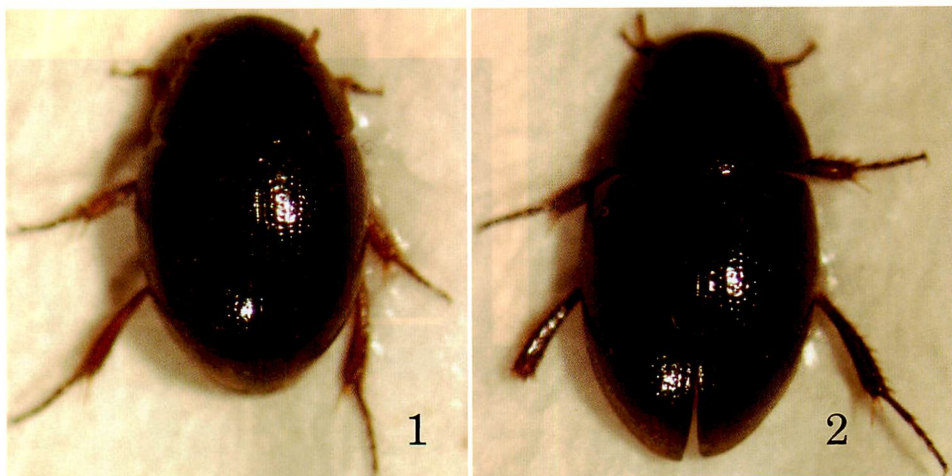
Length: 2.3-2.5 mm; breadth: 1.4-1.5 mm.

*Type series.* Holotype: ♂, Arasawa, Asahi-mura, Yamagata Pref., 23-IX-2004, H. MORIYA leg.

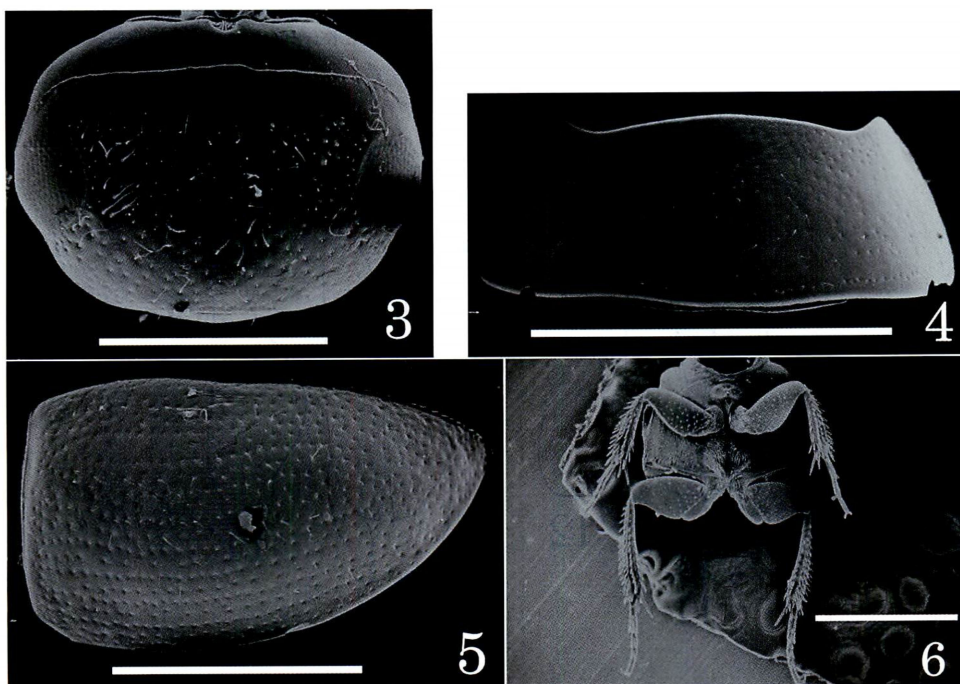
Paratypes: 4 exs., same data as the holotype.

*Distribution.* Honshu (Yamagata Pref.), Japan.

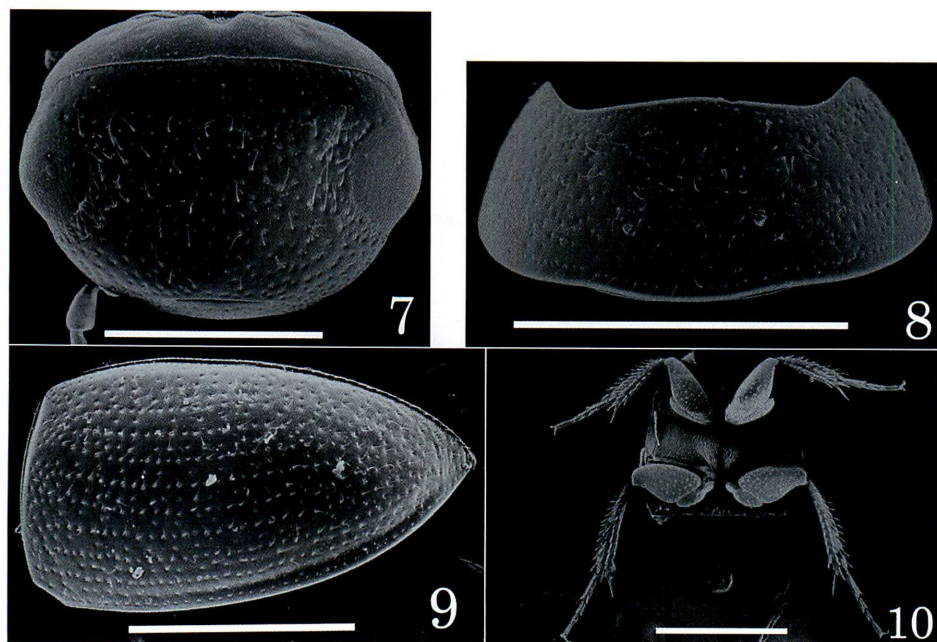
*Remarks.* This new species resembles *L. silvester* GENTILI, 2006, but is distinguishable from the latter by having the following characteristics: body large; apex of penis widely dilated at apical 2/7. Within the Japanese fauna, this new species also resembles *L. masatakai*, but distinguishable from it by the elytra, which have parasutural furrow (Fig. 9).



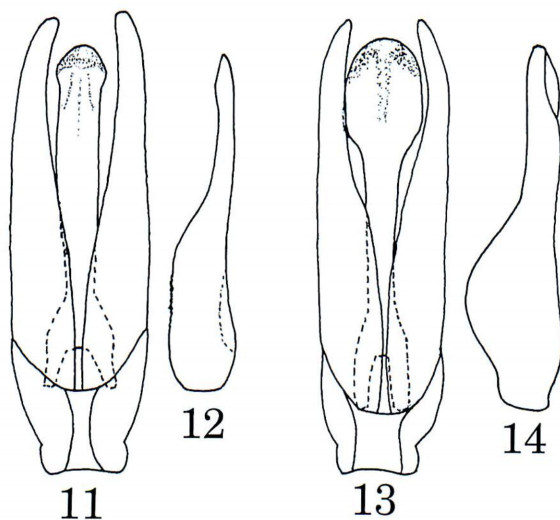
Figs. 1-2. Habitus of *Laccobius* species. — 1, *Laccobius (Cyclolaccobius) masatakai* sp. nov.; 2, *L. (Glyptolaccobius) moriyai* sp. nov.



Figs. 3-6. *Laccobius (Cyclolaccobius) masatakai* sp. nov. — 3, Head; 4, pronotum; 5, elytron; 6, meso- and metaventrites, meso- and metalegs. (Scales: 0.5 mm for Fig. 3; 1.0 mm for Figs. 4-6)



Figs. 7–10. *Laccobius (Glyptolaccobius) moriyai* sp. nov. — 7, Head; 8, pronotum; 9, elytron; 10, meso- and meta-ventrites, meso- and metalegs. (Scales: 0.5 mm for Fig. 7; 1.0 mm for Figs. 8–10.)



Figs. 11–14 Aedeagus of *Laccobius* species. — 11–12. *Laccobius (Cyclolaccobius) masatakai* sp. nov.; 11, dorsal view; 12, penis lateral view. — 13–14. *Laccobius (Glyptolaccobius) moriyai* sp. nov.; 13, dorsal view; 14, penis lateral view. (Scale: 0.2 mm)



Figs. 15–16. A habitat of *Laccobius* (*Cyclolaccobius*) *masatakai* sp. nov., at Mouchi, photographs by H. MORIYA on 1-I-2003 (Fig. 15) and 6-VI-2003 (Fig. 16). — 15, Habitat; 16, *Laccobius* (*Cyclolaccobius*) *masatakai* sp. nov.

*Etymology.* The specific name is dedicated to Mr. Hirofumi MORIYA who offered interesting specimens.

### Key to the Subgenera of *Laccobius* in Japan

1. Elytral longitudinal rows of punctures alike and intervals equally arranged. 2.8–3.3 mm.....*Laccobius* s. str.: ERICHSON  
— Elytral longitudinal rows of punctures not alike and intervals irregularly arranged. 1.7–2.8 mm. ....2
2. Elytra yellowish brown or brown; some parts blackish. Eyes oval in frontal aspect. Head and pronotum microreticulate or not microreticulate. Mesotarsi longer than mesotibiae. Metatarsi almost as long as metatibiae. ....*MicroLaccobius* GENTILI  
— Elytra almost black or blackish brown. Eyes reniform in frontal aspect. Head and pronotum not microreticulate. Mesotarsi almost as long as mesotibiae. Metatarsi shorter than metatibiae. ....3
3. Elytra furnished with parasutural furrow. ....*Glyptolaccobius* GENTILI  
— Elytra lacking parasutural furrow. ....*Cyclolaccobius* GENTILI

### 要 約

上手雄貴・緒方 健・疋田直之：日本産シジミガムシ属の2新種。——日本産シジミガムシ属の2新種 *Laccobius masatakai* および *L. moriyai* を日本から初記録の亜属であるマルシジミガムシ亜属 *Cyclolaccobius* およびミゾシジミガムシ亜属 *Glyptolaccobius* としてそれぞれ記載した。*Laccobius masatakai* は *L. politus* GENTILI, 1979 に類似するが、雄交尾器の形態により、*L. moriyai* は *L. silvester* GENTILI, 2006 に類似するが、大型であることと、雄交尾器の形態により区別することができる。種小名 *masatakai* は水生甲虫界に多大な功績を残された故佐藤正孝博士に献名したものである。

### References

- GENTILI, E., 1989. Alcune novità sul genere *Laccobius* (Coleoptera, Hydrophilidae). *Annu. Osserv. Fisica Terrestre e Mus. Antonio Stoppani Seminar. Arciv. Milano*, (n.s.), **10** [for 1987]: 31–39.
- 1991. Elementi per una revisione del genere *Laccobius* (Coleoptera, Hydrophilidae), *G. ital. Ent.*, **5**: 381–389.
- 1995. The genus *Laccobius* ERICHSON in China and neighbouring areas (Coleoptera). In JÄCH, M. A., & L. Ji (eds.), *Water Beetles of China*, **1**: 245–286. Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, Wien [410 pp].
- 2003. Additional notes on the genus *Laccobius* ERICHSON in China and neighbouring areas (Coleoptera). In JÄCH, M. A., & L. Ji (eds.), *Water Beetles of China*, **3**: 411–429. Zoologisch-Botanische Gesellschaft in Österreich and Wiener Coleopterologenverein, Wien [572 pp.].
- 2006. Revisional notes on the genus *Laccobius*. I. Subgenus *Glyptolaccobius* (Coleoptera: Hydrophili-

- dae). *Acta ent. Mus. nat. Pragae*, **46**: 57–76.
- HANSEN, M., 1999. Hydrophiloidea (Coleoptera). *World Catalogue of Insects*, **2**: 1–416. Apollo Books, Stenstrup.
- SHORT, A. E. Z., & F. HEBAUER, 2006. World Catalogue of Hydrophiloidea—additions and corrections, 1. (1999–2005) (Coleoptera). *Koleopt. Rdsch.*, **76**: 315–359.