

Two New Species of *Eusphalerum* (Coleoptera, Staphylinidae) from the Southern Japanese Alps in Central Honshu, Japan

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Abstract Two new species of the staphylinid genus *Eusphalerum* are described from central Japan under the names *E. (E.) komatsudakense* and *E. (E.) floricola*. They were obtained from flowers on the Southern Japanese Alps in central Honshu, Japan.

Forty-one species of the genus *Eusphalerum* have been recorded by SMETANA (2004) as the Japanese species. However, *E. torquatium* (MARSHAM) was reported from Mt. Tsurugi-san in Shikoku by CHŪJŌ and LAST (1958). Since then, seven species of the genus have been described from Japan by WATANABE (2003), WATANABE and SHIMADA (2006), HAYASHI (2007) and ZERCHE (2007).

Recently, I have an opportunity to examine a number of specimens of the genus obtained from the northern part of the Southern Japanese Alps in central Honshu, Japan. These specimens were classified into two different species-groups. Of these, one belongs to the group of *E. pollens* and the other may be placed in the group of *E. japonicum*.

After a close examination, it has become clear that these two species are new to science. They will be described in the present paper.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UENO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to the late Mr. Keijirō TAKAHASHI, Tokyo, for his kindness in providing me with the specimen used in this study, and to Mr. Junnosuke KANTOH, Laboratory of Entomology, Tokyo University of Agriculture, for taking the photograph inserted in this paper.

Eusphalerum (Eusphalerum) komatsudakense Y. WATANABE, sp. nov.

[Japanese name: Komatsudake-hanamuguri-hanekakushi]

(Figs. 1–4)

Body length: 2.4–2.6 mm (from front margin of head to anal end); 1.7–1.8 mm (from front margin of head to elytral apices).

Body elliptical and moderately elevated medially. Colour reddish yellow and moderately shining, with palpi, five proximal antennal segments, and legs yellow, five or six apical antennal segments reddish brown, abdomen brownish black in both sexes except for two apical segments which are yellowish brown.

Male. Head subtrapezoidal and depressed above, much wider across compound eyes than long (width/length=1.83), postocular part well constricted at neck and considerably shorter than longitudinal diameter of compound eye (postocular part/longitudinal diameter of compound eye=0.21) which is prominent; surface sparsely, obscurely punctured and covered with fine coriaceous ground sculpture all over, provided with a vague fovea just before each ocellus; ocelli relatively distinct, distance between them somewhat larger than that from the outside of ocellus to inner margin of each compound eye (distance between ocellus/distance between ocellus and compound eye=1.11). Antennae moder-

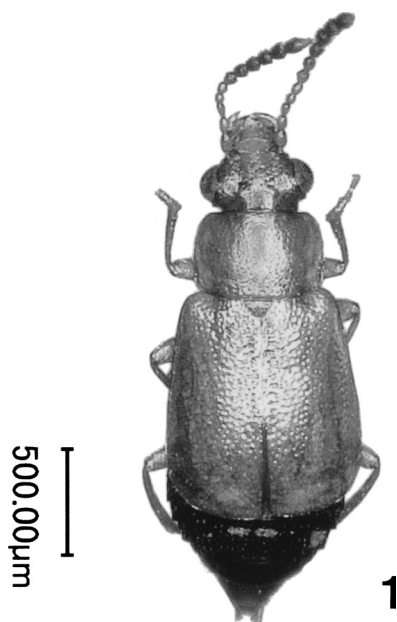
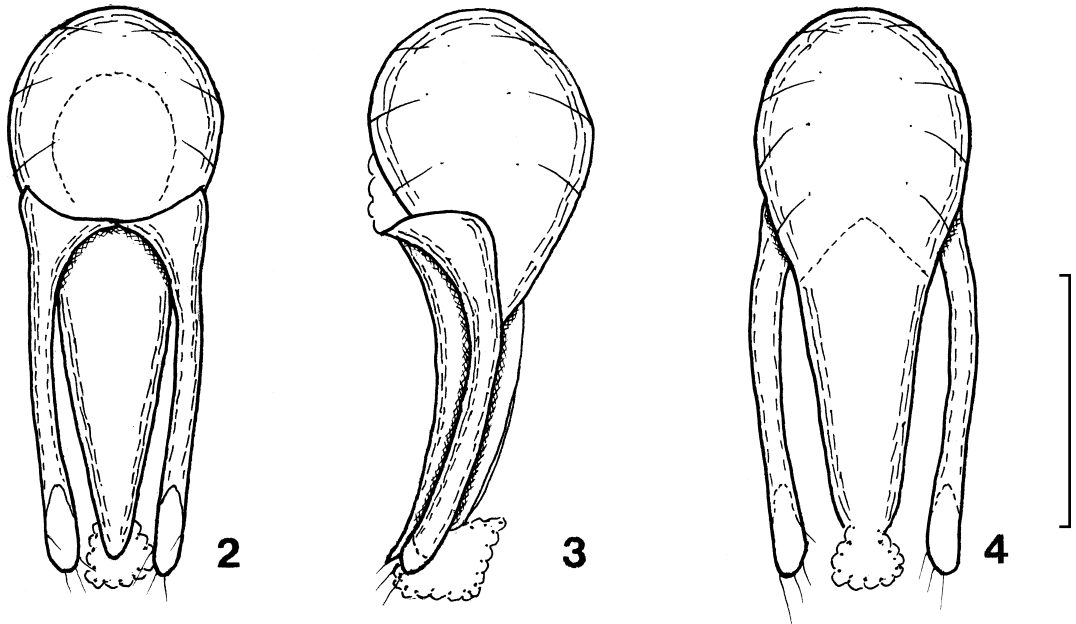


Fig. 1. *Eusphalerum (Eusphalerum) komatsudakense* Y. WATANABE, sp. nov., ♂, from Mt. Komatsudake of the Southern Japanese Apls in central Honshu, Japan.

ately long, reaching posterior margin of pronotum when reclined, somewhat thickened from 6th to the apical segment, with five proximal segments polished and remaining segments opaque, 1st segment robust, more than 1.5 times as long as wide, 2nd elliptical, 1.5 times as long as wide, distinctly shorter (2nd/1st=0.75) and narrower (2nd/1st=0.80) than 1st, 3rd clearly longer than wide (length/width=1.76), as long as though somewhat narrower than 2nd (3rd/2nd=0.85), 4th a little longer than wide (length/width=1.18), distinctly shorter (4th/3rd=0.67) than though as wide as 3rd, 5th a little longer than wide (length/width=1.25), somewhat longer (5th/4th=1.25) and wider (5th/4th=1.18) than 4th, 6th slightly longer than wide (length/width=1.08), slightly longer (6th/5th=1.08) and distinctly wider (6th/5th=1.25) than 5th, 7th a little longer than wide (length/width=1.11), as long as though slightly wider than 6th (7th/6th=1.08), 8th slightly longer than wide (length/width=1.07), as long as though slightly wider than 7th (8th/7th=1.04), 9th and 10th equal in both length and width, each as wide as though slightly wider than 8th (each of 9th and 10th/8th=1.07), 11th oval, distinctly longer than wide (length/width=1.67), apparently longer (11th/10th=1.67) than though as wide as 10th, apex bluntly pointed.

Pronotum subtrapezoidal and moderately elevated medially, strongly transverse (width/length=1.44), 1.5 times as wide as head, widest near middle and more strongly narrowed posteriorly than anteriorly; sides gently arcuate in anterior half and straight or slightly emarginate in posterior half, anterior margin slightly emarginate though nearly straight at middle, posterior margin slightly arcuate though subtruncate at middle, all margins finely bordered, anterior angles rounded, posterior angles more distinctly angulate than anterior angles; surface covered with similar punctures and ground sculpture to those on head, bearing a shallow depression inside each lateral margin in posterior half. Scutellum small and triangular, surface covered with similar ground sculpture to that on pronotum. Elytra subtrapezoidal and dilated posteriorly, distinctly longer than wide (length/width=1.26), re-



Figs. 2-4. Male genital organ of *Eusphalerum (Eusphalerum) komatsudakense* sp. nov. — 2, dorsal view; 3, lateral view; 4, ventral view. Scale: 0.25 mm.

markedly longer (elytra/pronotum=2.67) and wider (elytra/pronotum=1.46) than pronotum, posterior margin slightly arcuate; posterior angles broadly rounded; surface densely and coarsely punctured. Legs moderately long, apical segments of meso- and metatarsi each slightly longer than four preceding segments combined.

Abdomen narrowed towards anal end; surface of each tergite practically impunctate, though covered with much finer ground sculpture than that on pronotum; 8th sternite semicircularly emarginate at middle of posterior margin. Genital organ trilobed and symmetrical. Median lobe relatively broad and strongly narrowed towards pointed apex. Parameres elongate and relatively robust, slightly extending beyond apex of median lobe, each paramere slightly widened at apical part which is membranous and fringed with a number of fine setae.

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

Type series. Holotype: ♂, allotype: ♀, Mt. Komatsudake, S. Jpn. Alps, Honshu, Japan. 28-VII-1980, Y. WATANABE leg. Paratypes: 3 ♂♂, 4 ♀♀, same data as for the holotype.

Type depository. All type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (Southern Japanese Alps in central Honshu).

Remarks. The present new species is similar in facies to *E. (E.) yukiguni* Y. WATANABE, 1990 from Niigata Prefecture, but different from it in the following points: head and pronotum more distinctly punctured, elytra more densely, less coarsely punctured, abdomen brownish black in female, parameres of male genital organ shorter and extending only slightly beyond the apex of median lobe. Male genital organ is more similar in configuration to *E. (E.) shibatai* Y. WATANABE, 1990 than to that of *E. (E.) yukiguni*, but differs from it in relatively broad median lobe and much shorter parameres.

Bionomics. The type specimens were found on flowers of alpine plants at an altitude of about 2,600 m.

Etymology. The specific epithet of this new species is derived from Mt. Komatsudake, the type locality.

Eusphalerum (Eusphalerum) floricola Y. WATANABE, sp. nov.

[Japanese name: Miyama-hanamuguri-hanekakushi]

(Figs. 5–7)

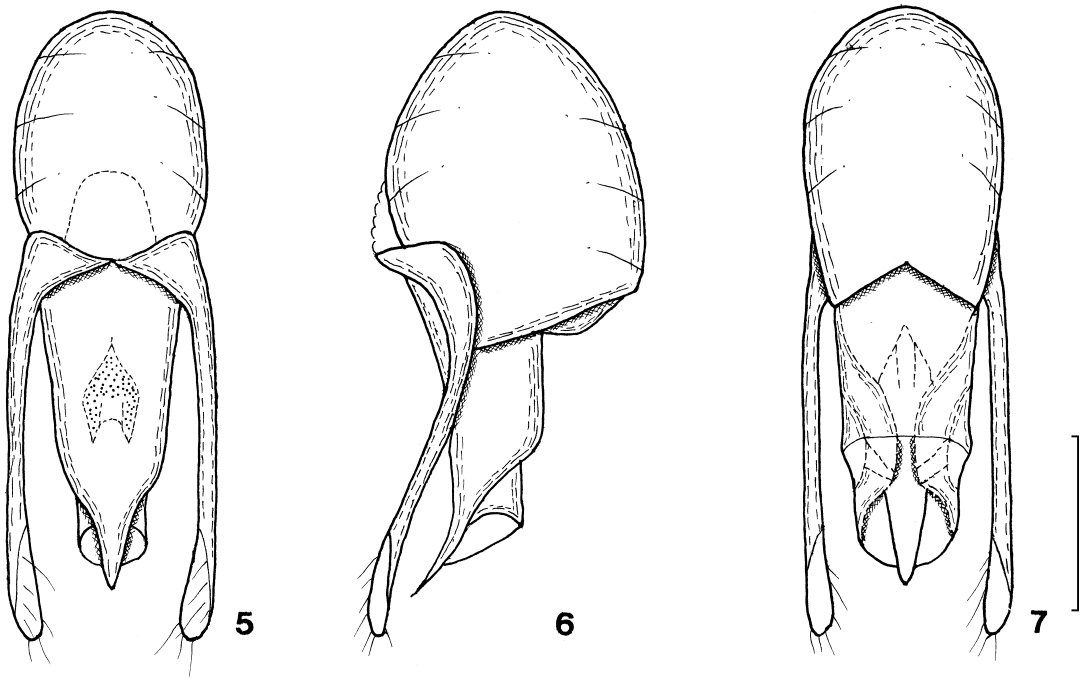
Body length: 3.2–3.4 mm (from front margin of head to anal end); 2.1–2.2 mm (from front margin of head to elytral apices).

The present new species belongs to the group of *E. (E.) japonicum* BERNHAUER on account of having peculiar configuration of male genital organ.

Body more or less spindle-shaped and gently convex above, covered with fine pubescence on whole surface. Colour dark reddish brown and moderately shining, with mouth parts as well as frontal area of head, five basal antennal segments, elytra and legs brownish yellow; pronotum and five apical antennal segments reddish brown; abdomen blackish in both sexes with exception of two yellowish terminal segments.

Male. Head subtriangular and somewhat depressed above, markedly wider across compound eye than long (width/length=1.56), postocular part remarkably shorter than longitudinal diameter of compound eye (postocular part/longitudinal diameter of compound eye=0.24) which is prominent; surface relatively closely, distinctly punctured and covered with distinct coriaceous ground sculpture all over, provided with a vague fovea just before each ocellus; ocelli relatively distinct, distance between them distinctly larger than that from outside of ocellus to inner margin of each compound eye. Antennae moderately long, extending to posterior margin of pronotum when reclined, 7th to 11th segments gradually increasing in width, with five proximal segments polished and remaining segments opaque, 1st segment robust, clearly longer than wide (length/width=1.60), 2nd elliptical, 1.5 times as long as wide, distinctly shorter (2nd/1st=0.75) and narrower (2nd/1st=0.80) than 1st, 3rd remarkably longer than wide (length/width=2.67), clearly longer (3rd/2nd=1.33) but distinctly narrower (3rd/2nd=0.75) than 2nd, 4th and 5th equal in both length and width, each distinctly longer than wide (length/width=1.25) and clearly wider than 3rd (each of 4th and 5th/3rd=1.33), 6th as long as wide, as long as though somewhat wider than 5th (6th/5th=1.25), 7th to 9th equal in length to one another, 7th as long as wide, a little longer (7th/6th=1.20) and wider (7th/6th=1.20) than 6th, 8th slightly wider than long (width/length=1.07), as long as though slightly wider than 7th (8th/7th=1.07), 9th somewhat wider than long (width/length=1.17), as long as though slightly wider than 8th (9th/8th=1.09), 10th a little wider than long (width/length=1.14), somewhat longer (10th/9th=1.17) and wider (10th/9th=1.14) than 9th, 11th oval, 1.5 times as long as wide, apparently longer (11th/10th=1.71) than though as wide as 10th, apex bluntly pointed.

Pronotum subtrapezoidal and moderately elevated medially, markedly transverse (width/length=1.36), distinctly wider than head (pronotum/head=1.20), widest at middle and slightly more strongly narrowed anteriorly than posteriorly; sides gently arcuate in anterior half and almost straight in posterior half, anterior margin slightly arcuate at median part, posterior margin arcuate, all margins finely bordered, anterior angles more distinctly angulate than posterior ones which are broadly rounded; surface covered with similar punctures and ground sculpture to those on head, though former becoming much sparser at middle in posterior half. Scutellum triangular, surface impunctate though covered with similar ground sculpture to that on pronotum. Elytra trapezoidal and widened



Figs. 5–7. Male genital organ of *Eusphalerum (Eusphalerum) floricola* sp. nov. — 5, dorsal view; 6, lateral view; 7, ventral view. Scale: 0.25 mm.

posteriad, a little longer than wide (length/width=1.18), remarkably longer (elytra/pronotum=2.36) and wider (elytra/pronotum=1.47) than pronotum, posterior margin truncate, posterior angles broadly rounded; surface densely and coarsely punctured. Legs moderately long, last segment of metatarsus somewhat longer than four preceding segments combined.

Abdomen narrowed towards anal end; surface of each tergite practically impunctate, though covered with extremely fine ground sculpture; 8th sternite semicircularly excised at middle of posterior margin.

Genital organ trilobed and symmetrical. Median lobe broad, gradually narrowed apicad in basal two-thirds and abruptly so in apical third, apical part produced into a spearhead, apex bluntly pointed. Parameres elongate, distinctly extending beyond apex of median lobe, each paramere slightly widened at apical part, which is membraneous and fringed with several fine setae.

F e m a l e. Similar in general appearance to male, but different from it by abdomen distinctly wider than elytra and 8th abdominal sternite narrowly rounded at middle of posterior margin.

Type series. Holotype: ♂, Hirogawara, Yamanashi Pref., Honshu, Japan, 6–VI–1964, Y. WATANABE leg.; allotype: ♀, same locality and collector as for the holotype, 11–VI–1966. Paratype: 1 ♀, Mt. Nyūgasa, Nagano Pref., Honshu, Japan, 2–VI–1961, K. TAKAHASHI leg.

Type depository. All type specimens are deposited in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Distribution. Japan (central Honshu).

Remarks. This new species is similar to *E. (E.) hirtellum* (FAUVEL, 1901) in colour and external features, but separable from it by somewhat larger body and different configuration of median lobe of male genital organ.

Bionomics. The holotype and allotype were found on the flowers of a deciduous broadleaved tree at an altitude of 1,600 m.

Etymology. The specific epithet is Latin *floricola* (flower dweller), a noun in apposition. It reflects the habit of this species to visit flowers.

要 約

渡辺泰明：南アルプスから採集されたハナムグリハネカクシ属（コウチュウ目ハネカクシ科）の2新種。——ハナムグリハネカクシ属は、これまで日本から41種が記録されている。ただし、CHŪJŌ & LAST (1958) によって日本から記録された *Eusphalerum torquatum* FAUVEL は、SMETANA (2004) のカタログでは、日本を分布地として取り上げられていない。私は手許に保有している南アルプスで採集された、この属に含まれる個体を再検討している過程で、2未記載種を見出したのでコマツダケハナムグリハネカクシ *E. (E.) komatsudakense* およびミヤマハナムグリハネカクシ *E. (E.) floricola* と命名・記載した。

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