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A New Intertidal Species of the Genus *Medon* (Coleoptera, Staphylinidae, Paederinae) from Kagawa, Japan

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Abstruct A new paederine staphylinid beetle *Medon tomokoae* is described and illustrated from Kagawa prefecture, Japan. The present new species may be easily recognized on its slender body, distinctive coloration of the fore body and having a pair of dark tentrial maculae at the vertex.

Introduction

The genus *Medon* STEPHENS, 1833 belongs to the subtribe Medonina of the tribe Paederini (Paederinae). It is distinguished morphologically from the other members of the family by a combination of the following characters: each mandible provided with three or four teeth; the last segments of maxillary palpi are extremely small and needle-like, and the male genital organ lacks parameres (ASSING & SCHUELKE, 2012). About 110 species are presently known from the Palaearctic Region, and of those eight species are distributed in the Japanese Archipelago. Most of the species live under the bark of dead trees and/or inhabit leaf litters around the natural forests of plains and mountainous regions, but only *Medon prolixus* (SHARP, 1874) is known to be halophilous and thus it inhabits seashores and the neighbouring habitats. *Medon rubeculus* SHARP, 1889 has been also known as a halophilous Paederine species (FRANK & AHN, 2011), but it presently belongs to the genus *Luzea* BLACKWELDER, 1952 (ASSING, 2013).

Through the courtesy of Ms. Tomoko TAKI we had an opportunity to examine an interesting species of the staphylinid beetles which were collected at the stony seashores in Kagawa Prefecture.

After the close examination, it belongs to a new species of the genus *Medon*. Thus, we are going to describe herein it as a new species it under the name of *Medon tomokoae*. This new *Medon* species is characteristic in that the dark tentorial maculae can be observable on the vertex of head, because of its pale body colour (i.e., weakly pigmented body). This may be the first case where the species of this genus *Medon* shows those dark tentorial maculae, although such tentorial maculae can be observable on the head of some species of such Staphylinid subfamilies as Leptotyphlinae, Oxytelinae, Euaesthetinae and Pselaphinae.

Medon tomokoae SHIBATA et FUJIMOTO, sp. nov.

[Japanese name: Kokeshi-togari-hanekakushi]

(Figs. 1–11)

Body length: 2.8–3.5 mm

Body slender, nearly parallel-sided and depressed above, surface closely covered with small pale yellowish pubescence. Colour pale yellow to reddish yellow and somewhat shining, abdomen yellowish brown, partly tinged with black.

M a l e. Head subquadrate, slightly longer than wide (length of head/width of head = 1.04), wid-

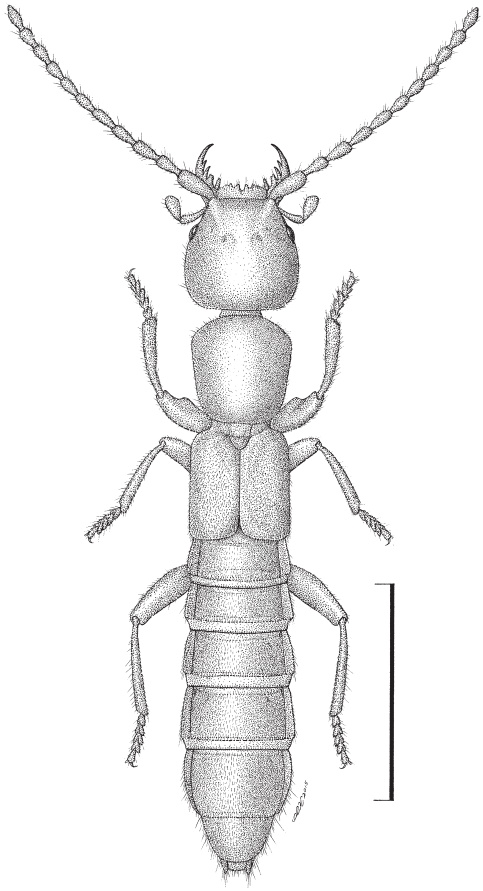
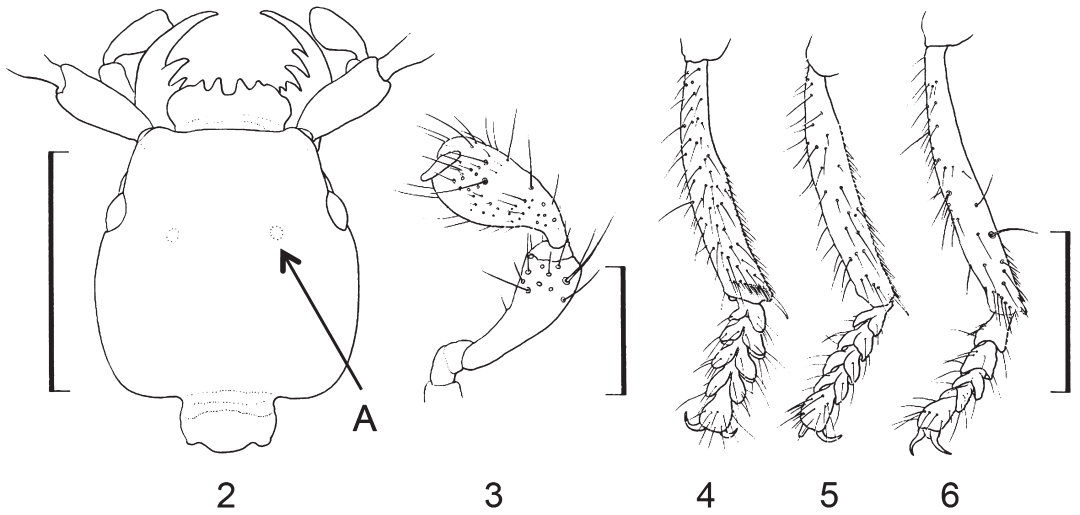


Fig. 1. *Medon tomokoae* SHIBATA et FUJIMOTO, sp. nov. ♂, from Komatsubara-kaigan, Matsubara, Higashikagawa-shi, Kagawa-ken. Scale: 1.0 mm.

est just before posterior angles and indistinctly narrowed anteriad, with lateral sides slightly arcuate; surface covered with microscopic ground sculpture, and short yellowish white pubescence; side margin stuffed with slightly upright long and short black pubescence. Eyes extremely small though feebly protruding from lateral lines of head, its longitudinal diameter a little smaller than the length of postocular area (cl/po = 0.76). Antennae very long, extending a little beyond the middle of elytra, all the segments being longer than wide and hardly thicking towards the apex, with 1st segment the longest and thickest, robust and hardly dilated apicad, 2nd constricted at the base and moderately dilated towards the apex, a little shorter than 3rd, 3rd to 7th equal in length and width to one another, each narrow at the base and slightly widened towards the tip, 8th to 10th each equal in length and width to one another, each elongate and almost eliminated at the base. 11th slightly longer than 10th, with pointed tip. Neck moderately wide, about one-third as wide as head.

Pronotum subquadrate, a little longer than wide (pl/pw = 1.15) and evidently narrower than head (pronotum/head = 0.83), widest just behind the anterior angles, and slightly narrowed posteriad, with lateral sides almost straight; anterior margin broadly and gently rounded though subtruncated at the middle; anterior angles obtuse and not visible from above, posterior angles broadly rounded: Scutellum subtriangular, surface covered with somewhat dense setiferous pubescence.

Elytra subtrapezoidal and depressed above, slightly longer than wide (length/width = 1.04) and



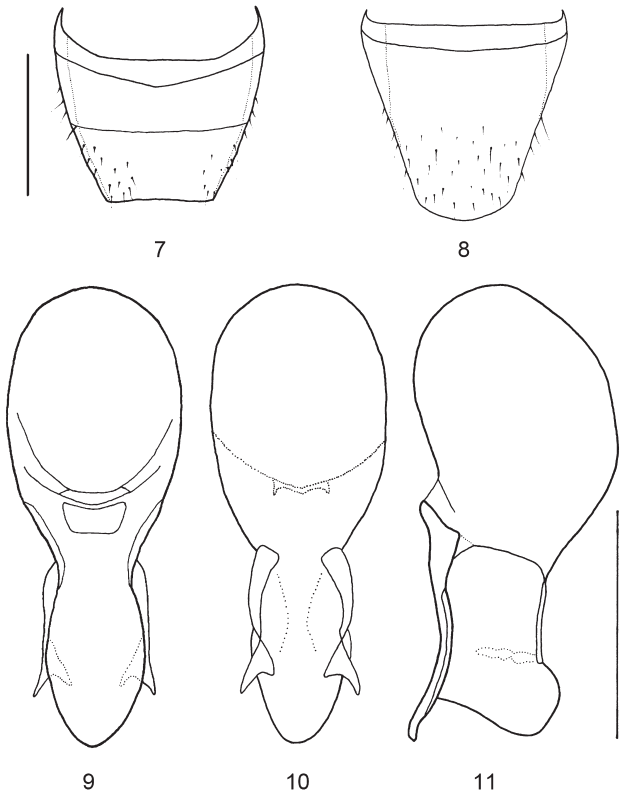
Figs. 2–6. *Medon tomokoae* SHIBATA et FUJIMOTO, sp. nov. —— 2, Upper surface of head (A: dark tentorial maculae); 3, maxillary palpi; 4, tibiae and tarsi, front leg; 5, ditto, middle leg; 6, ditto, hind leg. Scale: 0.5 mm for 2, 0.1 mm for 3, 0.25 mm for 4–6.

almost as long as pronotum (elytra/plonotum = 1.02), somewhat wider than pronotum (elytra/wide of pronotum = 1.12); lateral sides almost straight, posterior angles broadly rounded; surface closely, somewhat coarsely and setiferously punctured. Hind wings are very thin, semi-transparent membrane, and the length 1.8 time as long as the length of the elytra. Legs moderately long; protibia relatively slender, only slightly hollowed in basal half on the inner face, surface of the hollow moderately covered with slightly long pubescence; mesotibia similar to metatibia, except for lack of pubescence in the hollow on inner face, 1st to 4th segment of protarsi each strongly widened, 5th segment strongly protrude like a fig; meso- and metatarsi similar to protarsi, but 1st–4th segments of mesotarsi slightly narrower than those of metatarsi, and both 1st and 2nd metatarsi not widened.

Abdomen narrow and elongate, nearly parallel-sided from 3rd to 6th segments and then abruptly narrowed towards the anal end; 3rd to 6th sternites each shallowly and transversely depressed along the base and closely covered with pubescence, 7th sternite closely covered with pubescence as the preceding segments. 8th sternite subtruncate at the middle of posterior margin, surface of the central area almost impunctate except for lateral parts which are moderately stuffed with short slightly strong setae. 9th sternite with a deep, acute triangular excision at the middle of hind margin, and the tip of sternite densely covered with black and long bristles.

Genital organ nearly pandurate and almost symmetrical. Median lobe with ventral surface composed of about 60 % well sclerotised part and the remaining part thin transparent membraneous and lacks special organ; thin transparent membraneous. A pair of long pole-like bilateral protrusions lie slightly outside of the body, arising from the dorsal surface two-thirds from the end of the body. Protrusions each come to a sagittate-like end with sharp corners. The root of the sagittate-like end twists strongly inward to form a sharp point, and gradually increases in width as it meets the body.

F e m a l e. Similar in general appearance to male, but different from it in the 8th abdominal sternite gradually narrowed towards the subtruncate apex.



Figs. 7–11. *Medon tomokoae* SHIBATA et FUJIMOTO, sp. nov. —— 7, Eighth abdominal sternite, male; 8, ditto, female; 9, male genital organ, ventral view; 10, ditto, dorsal view; 11, ditto, lateral view. Scale: 0.2 mm.

Type series. Holotype: ♂, Komatsubara-kaigan Matsubara, Higashikagawa-shi, Kagawa-ken, 5.VII.2015, T. TAKI leg. Paratypes: 4 ♂♂, 12 ♀♀, same data as for the holotype; 6 ♀♀, same locality and collector as for the holotype,19.IX.2014; 1 ♂, 1 ♀, same locality and collector as for the holotype, 22.III.2015; 3 ♀♀, same data as for the holotype, 1.IV. 2015; 2 ♂♂, 1 ♀, same locality and collector as for the holotype, 19.IV.2015; 1 ♂ (teneral), 1 ♀, same locality and collector as for the holotype, 6.VI.2015; 8 ♂♂, 14 ♀♀, same locality and collector as for the holotype, 11.VIII.2015; 1 ♂, 1 ♀, Koura-kaigan, Koiso, Higashikagawa-shi, Kagawa-ken, 15.VIII.2014, T. TAKI leg.; 1 ♀, same locality and collector as for the holotype, 16.IX.2014; 12 ♂ ♂, 1 ♀, same locality and collector as for the holotype, 1.IV.2015; 2 ♂♂, 2 ♀♀, same locality and collector as for the holotype, 4. V. 2015; 1 ♀, same locality and collector as for the holotype, 7.VI.2015; 3 ♂♂, 1 ♀, same locality and collector as for the holotype, 18.VII.2015; 1 ♀, Hachigaura-kaigan, Kamosyo, Sanuki-shi, Kagawa-ken, 30.IX.2014, T. TAKI leg.; 1 ♀, Matsuo-Kaigan, Tsuda-machi, Sanuki-shi, Kagawa-ken, 14.II.2015, T. TAKI leg.; 1 ♀, Yoshimi-gyokô, Tsuda-machi, Sanuki-shi, Kagawa-ken, 31.VIII.2014, T. TAKI leg.; 1 ♀, Kamano, Aji-chô, Takamatsu-shi, Kagawa-ken, 14.VI.2015, H. FUJIMOTO leg.; 2 ♂♂, Nirohama, Namari, Takuma-chô, Mitoyo-shi, Kagawa-ken, 30.VIII.2014, H. FUJIMOTO leg.; 1 ♀, Hakozaki, Hako, Takuma-chô, Mitoyo-shi, Kagawa-ken, 4.X.2014 H. FUJIMOTO leg.; 1 ♂, Tôde-hama, Fukuda, Shôdoshima-chô, Kagawa-ken, Shôdoshima Is., 14.IX.2014, H. FUJIMOTO leg.; 1 ♂, Yoshino-hama,

Yoshino, Shôdoshima-chô, Kagawa-ken, Shôdoshima Is., 14.IX.2014, H. FUJIMOTO leg.; 1 ♀, Tomari, Honjima-chô, Marugame-shi, Kagawa-ken, Honjima, Is., off Shikoku, 25.VIII.2014, H. FUJIMOTO leg.; 1 ♂, 1 ♀, Aoki, Hiroshima-chô, Marugame-shi, Kagawa-ken, Hiroshima, off Shikoku, 27. IX.2014, H. FUJIMOTO leg.

Type depositories. Holotype and five pairs of paratypes are preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture. And the remaining paratypes are deposited in the private collection of the authors.

Distribution. Japan (Kagawa Prefecture).

Remarks. The present new species may be easily recognised from the congeners by its pale yellow to reddish yellow forebody, elongate and depressed body. Furthermore, dark tentrial maculae can be seen at the vertex of head.

Bionomics. All the type specimens were found in the foreshore of a gravel beach (gravel diameter: 5–10 mm) using the method introduced by HAYASHI (2013). Specifically, gravel dug out from the foreshore was placed in a plastic basket set on a tray of dishwashing, and insects crawled from the basket on the tray were collected. A number of beetles of this new species was collected along with the following staphylinid species, *Myrmecopora* spp., *Halorhadinus* spp., and *Physoplectus reikoae* SAWADA, the last all of which are typical staphylinid beetles seen on gravel beaches. Furthermore, to be a new adult specimens were collected in June as a result of continued investigation by Ms. T. TAKI, who lives in Higashi Kagawa-shi.

Etymology. The present new species is named after Ms. Tomoko TAKI, who kindly supplied us with the type specimens.

Acknowledgements

We wish to express our cordial thanks to Dr. Yasuaki WATANABE, Emeritus Professor of Tokyo University of Agriculture for his continuous guidance and for critical reading the manuscript of this paper. The first author wish to express my hearty thanks to Dr. Shun-Ichiro NAOMI for his kindness extended me in varies ways. And would like to thank Dr. Volker ASSING for his valuable advice on the present study and encouragement. We hearty thanks are also due to Ms. Tomoko TAKI for her kindness in providing us with the invaluable specimens used in the present study. We deep gratitude are also due to Dr. Masakazu HAYASHI for his kindness in sending us large number of literatures on the marine coleoptera of Japan. We wish to express our hearty thanks to Mr. Itsuro KAWASHIMA for his assistance in preparing the illustrations of whole insect and others in the present paper.

要　　約

柴田泰利・藤本博文：香川県から発見された潮間帯性トガリハネカクシ属の 1 新種 (鞘翅目ハネカクシ科). ———— トガリハネカクシ属は旧北区に約 110 種，日本には 8 種が記録されている比較的小さな属である．日本産 7 種は主に山地帯の樹皮下や落葉下に生息し，残りのウミベトガリハネカクシ *Medon prolixus* (SHARP) は主に海浜に見られる．このたび，滝　朋子氏により香川県の礫浜から得られた標本がこの属の新種と判明したので，*Medon tomokoae* SHIBATA et FUJIMOTO コケシトガリハネカクシとして命名，記載した．本種は体全体が細長くほぼ同幅で扁形，頭胸部は淡黄色から赤黄色で同属他種とは容易に識別出来る．更に頭頂部に一対の dark tentorial maculae が見られる．一見ヨツメハネカクシ亜科の単眼に似るが，ヨツメハネカクシの単眼は上皮の表面に突出しているのに対し，dark tentorial maculae は上皮表面から沈んでいる．この，dark tentorial maculae はアリガタハネカクシ亜科では初めての知られるものである．本新種は，香川県の花崗

岩が風化してできた中礫の堆積した礫浜の，比較的浅い土中から発見された．

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