

Coprophagous Scarabaeids Related to *Onthophagus orientalis* (Coleoptera, Scarabaeidae) from Southeast Asia

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Abstract A new Thai coprophagous beetle related to *Onthophagus* (s. str.) *orientalis* HAROLD is described: *O.* (s. str.) *maniti* sp. nov. *O. orientalis javaecola* BALTHASAR is raised to the species rank. A key to four relatives of *O. orientalis* is also given.

In my collection of coprophagous beetles from Northwest Thailand, I have found a large number of specimens of *Onthophagus* (s. str.) *orientalis* HAROLD, widely distributed in Southeast Asia though originally described from Hong Kong and Bengal. I have also noticed the existence of two smaller species related to it, and have studied their taxonomic position. The result is that one is *O.* (s. str.) *brutus* ARROW, originally described from Bengal and Burma, and the other is new to science. The former is known from Thailand for the first time and the latter will be described here. Besides, *O.* (s. str.) *orientalis javaecola* BALTHASAR, originally described from "West-Java" and also recorded from Sumatra and Borneo, will be raised to the rank of species.

I express my hearty thanks to Mr. Les JESSOP for his kind arrangement of a loan of materials preserved in the British Museum (Natural History), London, and to Mr. Teruo OCHI for his contribution of specimens and invaluable advice. Special thanks are due to Mr. Kaoru SAKAI for taking photographs inserted in this paper.

The holotype of the new species to be described herein will be deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo.

Onthophagus (s. str.) *maniti* sp. nov.

(Figs. 1, 5, 9, 13)

Blackish brown, with head and pronotum darker, elytra and pygidium yellowish brown, abdomen dark yellowish brown, 6 apical segments of antennae and hairs on surfaces pale yellowish brown; fore body above with dark coppery lustre, elytra moderately shining, ventral surface rather strongly so; pronotum and elytra densely clothed with fairly long hairs. Oblong oval, rather strongly convex above though gently flattened posteriorly, moderately constricted between bases of pronotum and elytra.

Male. Head slightly wider than long, with outer margin feebly angulate at each side of apex, borders between clypeus and genae, and also each side of gena; clypeus finely rugoso-punctate at the anterior part, sparsely scattered with strong punctures in middle; fronto-clypeal border gently ridged; genae rather closely punctate; frons gently inclined forwards, scattered with a few punctures; hind margin of head with parallel, erect, slender horns, united at the base by a lamina, which is distinctly upright in the middle, forming a horn, oblong in frontal view, strongly arcuate forwards in dorsal view.

Pronotum closely, fairly strongly punctate, feebly asperate anteriorly; base dilated triangular, bordered by punctate-groove; front angles narrowly rounded; sides gently, roundly produced; disc strongly convex, a little hollowed behind each cephalic horn, with a medial groove in posterior 2/3.

Elytra finely striate; intervals weakly convex, fairly closely punctate and feebly depressed along striae, sparsely scattered with punctures medially.

Pygidium closely, finely punctate, noticeably clothed with long hairs.

Metasternum rather strongly but not closely punctate, with a median impression.

Female. Body less convex above; clypeus rugoso-punctate, scattered with strong punctures posteriorly; fronto-clypeal border ridged, the ridge feebly arcuate forwards; frons almost impunctate; genae rather closely scattered with strong punctures laterally; vertex with a transverse carina, which is feebly arcuate backwards and prominent at the middle. Pronotum with a transverse ridge apically, which is nearly straight though interrupted medially.

Body length: 8–9 mm.

Holotype. ♂. Fang, Chiang Mai Prov., Northwest Thailand, 25–XI–1988, K. MASUMOTO leg. (in NSMT). Paratypes. 1 ex., Doi Pui, Chiang Mai Prov., 10–V–1985, N. KOYAMA leg.; 1 ex., Phrao Distr., Chiang Mai Prov., 10–VIII–1987, Manit Y. leg.; 1 ex., Phrao–Chiang Dao, Chiang Mai Prov., 14/16–IX–1988, K. MASUMOTO leg.; 5 exs., Doi Pui, 17–VIII–1989, Manit Y. leg.

Onthophagus (s. str.) *javaecola* BALTHASAR, 1960, stat. nov.

(Figs. 2, 6, 10, 14)

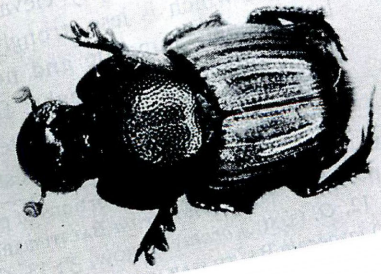
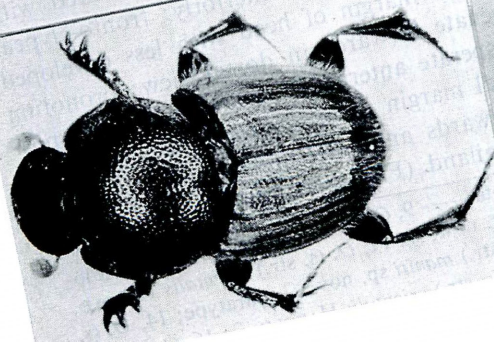
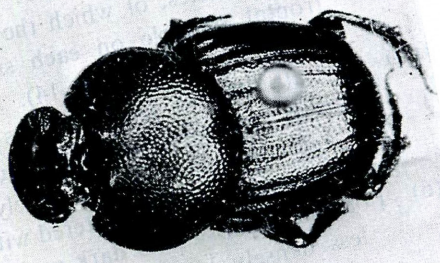
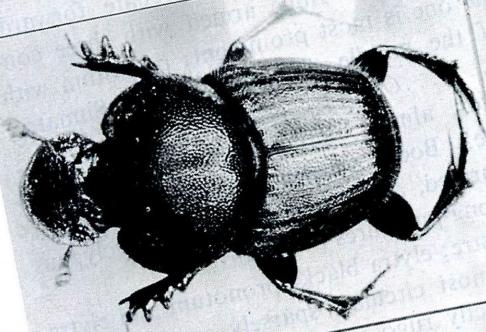
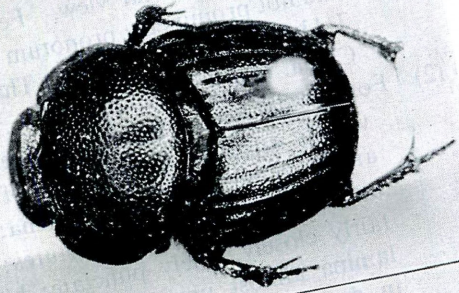
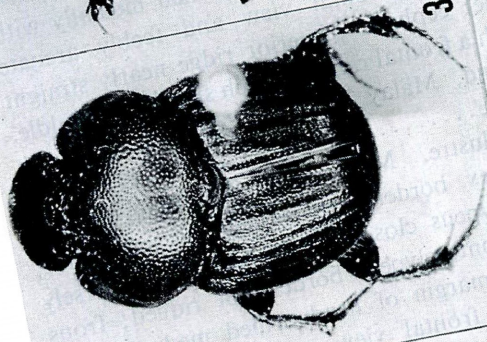
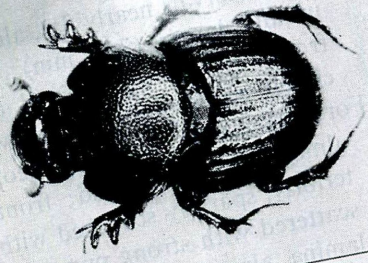
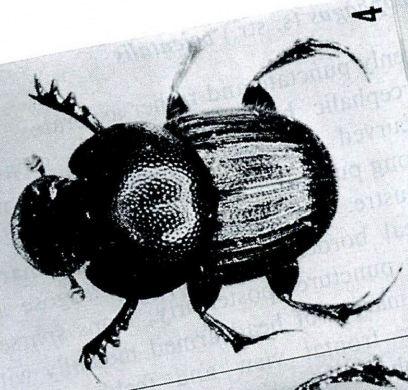
Onthophagus (s. str.) *orientalis javaecola* BALTHASAR, 1960, Ent. Blätt., 55, p. 194.

Distribution. Java, Sumatra, Borneo.

Specimens examined. 6 exs.

Figs. 1–8. — 1, *Onthophagus* (s. str.) *maniti* sp. nov., ♂, holotype; 2, *O.* (s. str.) *javaecola* BALTHASAR, stat. nov., ♂; 3, *O.* (s. str.) *orientalis* HAROLD, ♂; 4, *O.* (s. str.) *brutus* ARROW, ♂; 5, *O.* (s. str.) *maniti* sp. nov., ♀, paratype; 6, *O.* (s. str.) *javaecola* BALTHASAR, stat. nov., ♀; 7, *O.* (s. str.) *orientalis* HAROLD, ♀; 8, *O.* (s. str.) *brutus* ARROW, ♀.

Relatives of *Onthophagus orientalis*



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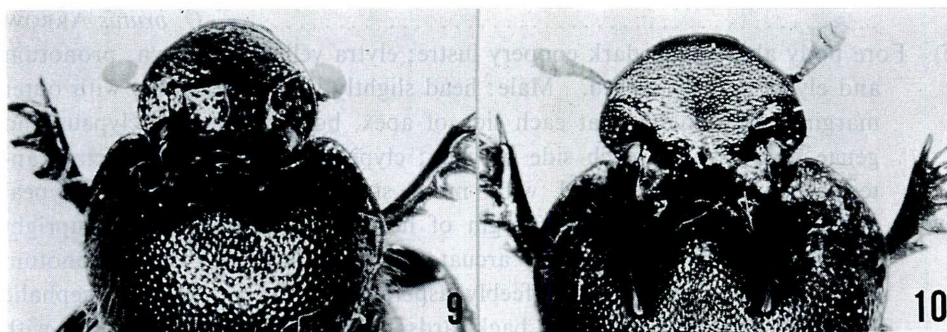
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Key to the Relatives of *Onthophagus* (s. str.) *orientalis*

- 1 (4) Elytral intervals nearly flat, almost evenly punctate and rather asperate. Body usually larger (7–11 mm). Male cephalic horns more widely separated from each other, inclined and incurved apically. Female clypeus more closely rugose, not scattered with strong punctures posteriorly.
- 2 (3) Fore body above with dark coppery lustre. Male: head with outer margin almost evenly rounded; fronto-clypeal border ridged; clypeus rugose anteriorly, sparsely scattered with strong punctures posteriorly; frons sparsely scattered with strong punctures; hind margin of head armed medially with lamina almost upright, rectangular in frontal view and feebly arcuate forwards in dorsal view. Female: cephalic posterior ridge nearly straight and not prominent; pronotum with a frontal ridge on each side of the middle. 7–11 mm. India, Burma, Thailand, Malay Peninsula, Indochina, South China. (Figs. 3, 7, 11, 15). *O. orientalis* HAROLD
- 3 (2) Fore body above without coppery lustre. Male: head with outer margin weakly angulate at each side of apex, borders between clypeus and genae, and also on each side of gena; clypeus closely, finely punctate, sparsely intermixed with large punctures; fronto-clypeal border not ridged; frons fairly closely, finely punctate; hind margin of head armed medially with lamina almost upright triangular in frontal view and arcuate forwards in dorsal view. Female: cephalic posterior ridge armed with three conical tubercles, of which the middle one is most prominent; pronotum with frontal tubercle on each side of the middle. 8–10 mm. Java, Sumatra, Borneo. (Figs. 2, 6, 10, 14). *O. javaecola* BALTHASAR, stat. nov.
- 4 (1) Elytral intervals more or less convex, almost impunctate medially, sometimes sparsely, unevenly punctate. Body usually smaller (6.5–9 mm). Male cephalic horns less widely separated, almost upright. Female clypeus less closely rugose, scattered with strong punctures posteriorly.
- 5 (6) Fore body above with dark greenish lustre; elytra black; pronotum and elytra less densely haired. Male: head almost circular, sparsely scattered with smaller punctures; clypeus less distinctly rugose anteriorly; fronto-clypeal border only obscurely elevated; hind margin of head with less developed lamina, which is less strongly arcuate forwards in dorsal view; pronotum less strongly punctate and not asperate anteriorly. Female: cephalic posterior ridge nearly straight; frontal margin of pronotum with a transverse ridge, which is feebly arcuate forwards and interrupted medially. 6.5–8.5 mm. India, Burma, Northwest Thailand. (Figs. 4, 8, 12, 16).

Figs. 9–16. Heads and anterior portions of pronota. — 9, *O.* (s. str.) *maniti* sp. nov., ♂, holotype; 10, *O.* (s. str.) *javaecola* BALTHASAR, stat. nov., ♂; 11, *O.* (s. str.) *orientalis* HAROLD, ♂; 12, *O.* (s. str.) *brutus* ARROW, ♂; 13, *O.* (s. str.) *maniti* sp. nov., ♀, paratype; 14, *O.* (s. str.) *javaecola* BALTHASAR, stat. nov., ♀; 15, *O.* (s. str.) *orientalis* HAROLD, ♀; 16, *O.* (s. str.) *brutus* ARROW, ♀.



-*O. brutus* ARROW
 6 (5) Fore body above with dark coppery lustre; elytra yellowish brown; pronotum and elytra densely haired. Male: head slightly wider than long, with outer margin feebly angulate at each side of apex, borders between clypeus and genae, and also on each side of gena; clypeus finely rugoso-punctate anteriorly, sparsely scattered with more strong punctures; fronto-clypeal border gently ridged; hind margin of head with more developed upright lamina, which is more strongly arcuate forwards in dorsal view; pronotum more strongly punctate and feebly asperate anteriorly. Female: cephalic posterior ridge feebly arcuate backwards; frontal margin of pronotum with transverse ridge, which is nearly straight though interrupted medially. 8-9 mm. Northwest Thailand. (Figs. 1, 5, 9, 13).*O. maniti* sp. nov.

要 約

益本仁雄: *Onthophagus* (s. str.) *orientalis* (Scarabaeidae) の近縁種について。—— 北西タイに分布する *Onthophagus* (s. str.) *orientalis* HAROLD の近縁種を検討した。本地域には、*O. orientalis* のほかに、*O. brutus* ARROW および1新種が分布していることがわかったので、後者を *O. maniti* MASUMOTO と命名記載した。なお、従来 *O. orientalis* の亜種とされていて、ジャワ、スマトラ、ボルネオに分布する *O. javaecola* BALTHASAR を独立の種と認めた。

Literature

- ARROW, G. J., 1931. The Fauna of British India, including Ceylon and Burma. Coleoptera Lamellicornia, Part III (Coprinae). xii+428 pp., 13 pls. & 1 map. Taylor & Francis, London.
- BALTHASAR, V., 1960. Neue *Onthophagus*-Arten (97. Beitrag zur Kenntnis der Scarabaeidae, Col.). *Ent. Blätt.*, **55**: 186-196.
- 1963. Monographie der Scarabaeidae und Aphodiidae der palaearktischen und orientalischen Region. Band 2, 627 pp., 16 pls. Tschechoslowakischen Akademie der Wissenschaften, Prag.
- HAROLD, E. VON, 1868. Diagnosen neuer Coprophagen vom Herausgeber. *Coleopt. Hefte*, **4**: 79-86.
- PAULIAN, R., 1945. Coléoptères Scarabéides de l'Indochine. *Fn. Emp. franç.*, **3**: 1-228 +1 map. Larose, Paris.