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TWO NEW SPECIES OF *ONTHOPHAGUS* LATREILLE FROM THE PHILIPPINE ISLAND OF SAMAR (COLEOPTERA: SCARABAEIDAE)

by

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Onthophagus dejongi and bistiniocelloides, new species from Samar, are described and illustrated.

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1. INTRODUCTION

During a field trip in 1980 my colleague R. de Jong installed some dungbaited pitfall traps on the Philippine islands of Negros and Samar. The samples he brought home contained a few interesting *Onthophagus* species, including two novelties from Samar. These are described herein, a full review of the Philippine fauna not being in sight, whereas the new species are referable to two most characteristic, easily recognizable species-groups, to be placed formally in the subgenus *Onthophagus* s.str. The location of the trapping site on Samar was in plain multistratal evergreen forest near a lumber camp. It should be noted that Boucomont's 1924 review of Philippine *Onthophagus* species is still useful, possibly more so than Balthasar's 1963 monograph. Few species were described after 1963. The present paper is part of our ongoing studies of the scarab fauna of the Indo-Australian archipelago. Decades of novelties await description.

2. CHARACTERS

To facilitate the identification of *Onthophagus* species I continue to assign them character codes as follows (cf. also Krikken, 1977):

01a. Clypeal margin (male): bidentate, bisinuate, emarginate. 01b. Ditto: simply truncate or rounded off. 01c. Ditto: distinctly lobate, or otherwise projecting (projection in larger individuals longer than eye length).

02a. Clypeus (male): apart from clypeofrontal ridge, entirely devoid of nonmarginal protrusions. 02b. Ditto: with non-marginal protrusions.

03a. Frontovertex (male): entirely devoid of protrusions. 03b. Ditto: with pair of lateral protrusions or with extensive transverse ridge. 03b. Clypeus (male): with single median protrusion or otherwise different from 3a and 3b.

04a. Clypeofrontal ridge (male): absent or obsolescent. 04b. Ditto: curvilinear, anteriorly convex. 04c. Ditto: rectilinear, not reaching genal border. 04d. Ditto: rectilinear, reaching genal border.

05a. Eye shape in dorsal view: more or less luniform to narrowly elliptic. 05b. Ditto: (sub)circular or widely elliptic, very large.

06a. Pronotal general shape (male): evenly convex, unmodified. 06b. Ditto: with distinct impression(s) and/or protrusion(s).

07a. Pronotal derm: smooth or (variously) punctate. 07b. Ditto: distinctly granulate or heavily rugulate.

08a. Elytra: glabrous or with microsetae only (magnif. \times 50 or more). 08b. Ditto: distinctly setose (visible at lower magnifications).

09a. Protibial apex (male): with unmodified apex. 09b. Ditto: with thumblike process or otherwise modified.

10a. Colour of dorsal side: entirely black or dark brown. 10b. Ditto: lighter, but in any case uniform (yellowish, reddish, light- or medium-brown). 10c. Colours of dorsal side: distinctly patterned. 10d. Colour of (at least) pronotum: metallic (usually green, cupreous or reddish).

11a. Total length: less than 6 mm. 11b. Ditto: 6-12 mm. 11c. Ditto: over 12 mm.

12a. Any unusual properties: absent. 12b. Ditto: present – specified under taxon concerned.

Total number of character states: 31. States in codes below separated by commas, hyphen connects intermediate states.

3. DESCRIPTIONS

Onthophagus dejongi spec. nov. (figs. 1-5)

Material examined. – Holotype (male) and paratype (female) from the Philippines: Samar, Basey, Rawis, camp of Basey Lumber Co., 16-20.viii. 1980, R. de Jong (Leiden museum). Named after the collector.

Holotype (male). - Length ca 8.5 mm. Colour blackish, with metallic reflections. Pilosity dense, yellowish-white, on dorsal side more or less appressed. Most of pronotum, elytra and pygidium densely granulate-setose, locally more rugulate. Clypeal margin bidentate anteriorly, denticles rounded off, reflexed; clypeofrontal ridge obsolescent, very feebly arcuate; border at clypeogenal transition slightly uneven. Entire cephalic surface rugulate to granulate. Frons and vertex without any protrusions. Eyes with ca 8 facet rows across widest point. Pronotum strongly convex, with anterolateral angle widely rounded, posterior section of lateral border distinctly sinuate, posterolateral angle indistinct, base finely marginate, medially distinctly angulate; pronotal granulation effaced on small posterolateral area (which is anteriorly fringed with counter-reflexed setae), and rugulate-granulate, glabrous basomedially; granules separated roughly by their diameter. Scutellum indistinct. Elytral striae well-defined, 2, 3, 4 sinuous; striae with very fine punctures, generally separated by 3-5 times their diameter, scarcely crenulating interstriae; interstriae 6-7 laterally somewhat impressed, granulation slightly effaced.



Figs. 1-5. Onthophagus dejongi (1-5, holotype). 1, forebody; 2, head, left half; 3, right protibia; 4, left metatibia; 5, parameres. – Scale lines equal 1 mm, except with 5 (equals 0.5 mm), 2-4 same scale. Areas surrounded by dashes have modified microsculpture (cf. text).

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Antennal club light grey-brown. Anteromedian lobe of metasternum protuberant medially, somewhat prow-shaped (mesosternal declivity steep), metasternal surface densely punctate-setose, except along discal midline. Abdominal sternites with numerous seta-bearing punctures along base. Pygidium moderately convex; marginate along base. Protibia with 4 larger denticles, terminal spur elongate-acuminate. Meso- and metatibiae unmodified, their terminal spurs robust, long (superior spurs longer than tarsal segment 1). Femoral undersides rugulate-punctate-setose. Segment 1 of metatarsus nearly as long as segments 2-5 combined. Parameres, fig. 5.

Measurements in mm. Maximum width of head 2.6. Median length of pronotum 3.3, maximum width 4.5. Sutural length of elytra 3.3, maximum width 4.8.

Sexual dimorphism. – Female 8 mm. Extremely similar to male; protibia more robust.

Identification. – Boucomont repeatedly (1913, 1914, 1925) discussed the variation and synonymy of *Onthophagus rudis* Sharp. The present novelty may well have something to do with the form he recorded first as the "female" of *O. rudis* Sharp (Boucomont, 1914: 272). Whatever the exact situation may be, *O. dejongi* indeed belongs to the *rudis* group, and none of the existing names is applicable. In our case the bidentate head is certainly not a sexual character, being peculiar to both male and female. *O. dejongi* and *rudis* share the nearly entirely granulate, abundantly setose dorsal side and pygidium. Other features they share include: the anterior intercoxal lobe of the metasternum is protuberant medially; the anterolateral angle of the pronotum has a set of three spots (posterolateral and basomedian) with a microsculpture different from the surrounding surface. The two species of this *rudis* group may be separated as follows (there are additional subtle differences in microsculpture).

For the features of *rudis* in the above key I referred to specimens from the Sunda islands, including Sulawesi¹).

¹) The Sulawesi populations may prove to be referable to *O. aper* Sharp, 1875, currently considered a synonym of *rudis*.

Onthophagus bistiniocelloides spec. nov.

(figs. 6-12)

Material examined. – Holotype (male) only, from the Philippines: Samar, Basey, Rawis, camp of Basey Lumber Co., 16-20.viii.1980, R. de Jong (Leiden museum).

Holotype (male). – Length ca 6 mm. Colour brown to black, abdomen brown, base and apex of elytra with vague brownish markings; generally opaque. Dorsal side deplanate. Pilosity yellowish, short, fine, abundant on dorsal side. Clypeal margin shortly bilobate anteriorly, margin narrowly reflexed; clypeal centre very feebly convex; border at clypeogenal transition continuous. Entire clypeofrontal surface densely, distinctly punctate. No ridges, tubercles, or anyother cephalic ornamentation present. Eyes with ca 7 facet rows across widest point. Pronotum without any protrusions; disc strongly deplanate; anterolateral angle distinct, ca 85°; anterior section of lateral border virtually straight, posterior section of lateral border very slightly sinuate, base medially simply arcuate; entire pronotal derm densely punctate,



Figs. 6-12. Onthophagus bistiniocelloides (holotype). 6, forebody; 7, head, left half; 8, right protibia; 9, protibal spur, enlarged; 10, left metatibia; 11-12, parameres, full-face and lateral. – Scale lines equal 1 mm, 7-8 same scale.

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many punctures with more or less erect seta; punctures simple, mostly separated by less than their own diameter, their size scarcely variable, diameters ca 0.07 mm, densities $19\pm2/0.1$ sq.mm; punctures laterally more or less effaced. Elytral striae well-defined, but superficially impressed, with moderately distinct punctures, mostly separated by 2-4 times their diameter, slightly crenulating interstriae; interstriae flat, with abundant, scattered, fine, simple punctation, most punctures with fine, short, semierect seta.

Antennal club light grey-brown. Metasternal disc on either side of midline impression finely, abundantly punctate-setose; lateral wings distinctly opaque, densely vaguely punctate. Abdominal sternites brownish; anal sternite abundantly, finely punctate-setose. Pygidium also brownish, opaque, abundantly, finely punctate-setose; general surface slightly convex; base marginate. Protibia virtually straight, with 4 larger denticles (1 and 4 smaller than 2 and 3), terminal spur dilated, short, its apex angulate, spur entirely conspicuously deflexed. Meso- and metatibiae and their terminal spurs unmodified. Profemoral underside black, densely punctate-setose. Segment 1 of metatarsus longer than segments 2-5 combined. Parameres, fig. 11-12.

Measurements in mm. Maximum width of head 1.9. Median length of pronotum 2.0, maximum width 2.9. Sutural length of elytra 2.6, maximum width 3.3.

Identification. – This is a close relative of the aptly named O. *tiniocelloides* Boucomont from Mindanao in the Philipines, differing mainly in colour and microsculpture. The habitus of both species is strongly deplanate, and, with other features, indeed reminds one of certain African and Indian *Tiniocellus* The two species of this *tiniocelloides* group share the peculiarly shaped protibial spur. They may be keyed as follows.

- 1b. Elytra with yellow-brown markings; some other parts also yellow or brown. Head and pronotum finely, abundantly punctate. Elytral interstriae finely, abundantly simply punctate-setose. Parameral tips elongate, more tapering, strongly divergent. Elytral striae much more superficial and not "micromarginate" bistiniocelloides spec. nov. Identification code (cf. section 2) for bistiniocelloides: 01c, 02a, 03a, 04a, 05a, 06a, 07a, 08b, 09b, 10c, 11b, 12b.

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