STINGLESS BEES COLLECTED BY PROF. S. MATSUMURA FROM SINGAPORE

(Hymenoptera, Apidae)[1]

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Trigona* (*Heterotrigona*) *itama COCKERELL

Trigona itama COCKERELL 1918: Ann. Mag. Nat. Hist., (9), II : 387; SCHWARZ 1937: Bull. Amer. Mus. Nat. Hist., 73 : 272, 322, 327.

Trigona (*Heterotrigona*) *itama*, SCHWARZ 1939: Bull. Amer. Mus. Nat. Hist., 76 : 92 & 96.

Specimens examined: 3 workers, Singapore, Sept. 22, 1932. S. MATSUMURA leg.

This species is widely distributed throughout the Malayan Region (Siam, Malaya, Sumatra, Bangka Is., Borneo and Java).

Trigona* (*Tetragona*) *sarawakensis sarawakensis SCHWARZ

Trigona sarawakensis SCHWARZ 1937: Bull. Amer. Mus. Nat. Hist., 73 : 283, 290, 313, 318.

Trigona (*Tetragona*) *sarawakensis sarawakensis*, SCHWARZ 1939: Bull. Amer. Mus. Nat. Hist., 76 : 92, 106.

Specimen examined: 1 worker, Singapore, Sept. 22, 1932, S. MATSUMURA leg.

The single specimen examined differs from the detailed original description by SCHWARZ in the following characters:

1. Besides ferruginous clpyeus and supraclypeus, possessing a narrow dull red stripe along the inner orbits reaching upwards to about

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two thirds of the total eye length.

2. Pronotum and tubercles virturely ferruginous. Mesonotum black, with a distinct brownish tint. Other thoracic sclerites, notably, mesopleura and propodeum nearly dark chestnut brown. Outer surface of tibia II and III much darker.

The specimen shows, therefore, a marked flavinistic tendency in comparison with the typical form. For the scarcity of material and the correlation between pale colouration and callow stage frequently seen in stingless bees, it is here regarded as a mere colour variation of typical form instead of splitting a new varietal name. SCHWARZ (1937) distinguished *T. sarawakensis* from *T. laeviceps* SMITH by the tegulae and legs being ferruginous instead of black. The specimen examined possesses ferruginous tegulae and legs characteristic of *T. sarawakensis*, although it was collected from Singapore, the type locality of *T. laeviceps*, which was later considered by SCHWARZ (1939) as synonymous to *T.* (*Tetragona*) *iridipennis* SMITH. Up to present, *T. sarawakenisis sarawakenisis* is known from Siam, N. Borneo, Sarawak, and W. Java, and another variety, *T. s. drescheri* from Middle and E. Java.

Trigona* (*Tetragona*) *matsumurai sp. nov.

Closely allied to *T.* (*T.*) *moorei* SCHWARZ but distinguished by the following characters:

T. moorei	*T. matsumurai*
Antennae black; socket, base of scape (occasionally whole scape) ferruginous.	Antennae dull red; socket, scape, pedicel and the apex of apical flagellum ferruginous.
Legs black except more or less ferruginous to deep red tarsal joints.	Legs dark brown; trochanters and tarsal joints ferruginous; Basitarsi III dull red brown underneath, with concolorous stripes along the anterior and posterior margins of outer side.
Abdomen black, with a narrow ivory to faint yellowish, transverse stripe at the apex of tergite 1 (occasionally absent). Apical tip of tergite 6 likewise ivory-coloured (occasionally very feasible).	Abdomen ferruginous, 4. to 6. segments gradually darkening to the abdominal tip, where nearly blackish; without any maculation.

Stigma and venation darkish.	Stigma and venation pale brown.
Length 3.25–3.5 mm. Width 1.25mm.	Length 4.0–4.5 mm. Width 1.5 mm.
Wing length 3.75 mm.	Wing length 4.2–4.6 mm.

Specimens examined: 2 workers (Holo- and paratopotype). Singapore, Sept. 22, 1932_c S. MATSUMURA leg.

Except for the differences tabled above, the examined specimens fairly accord with *T. moorei* SCHWARZ in form, relative proportion, sculpture and pubescence, as far as recognized from the original description of the latter species. For the difference of both size and colouration, not only in the intensity but also in the pattern, the specimens are tentatively regarded as an independent species rather than a variety of *T. moorei*, as treated by SCHWARZ in the similar cases. For its distinct flavinism, *T. matsumurai* resembles superficially certain minute species of *Tetragona* such as *T. iridipennis*, *T. fusco-baltheata* and *T. sarawakensis*, from which it is readily distinguishable by the well developed malar space being 1.5 times as long as wide and slightly longer than the width of flagella. Hence, it is not always improbable that further specimens might be discovered, mixed with short malar species, among the material studied by earlier writers.