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Research Note

A new record of *Bengalia emarginata* Malloch, 1927 (Diptera: Calliphoridae) from Malaysia

Heo Chong Chin[1], Hiromu Kurahashi[2], Mohamad Abdullah Marwi[1], John Jeffery[1], Chen Chee Dhang[3], Raja Mohd. Zuha[4] and Baharudin Omar[5*]

[1]Department of Parasitology & Medical Entomology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

[2]International Department of Dipterology, Hikawadai 1-2-21, Higashikurume City, Tokyo 203-0004 Japan.

[3]Institute of Biological Science, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia.

[4]Forensic Science Program, Faculty of Allied Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

[5]Department of Biomedical Science, Faculty of Allied Health Sciences, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

*Corresponding author email: bahar@fskb.ukm..my

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Abstract. During a forensic entomological study conducted at an oil palm plantation in Tanjung Sepat, Kuala Langat, Selangor, a *Bengalia emarginata* Malloch, 1927 (Diptera: Calliphoridae: Calliphorinae: Bengalini) was collected for the first time. Two adults were collected nearby the pig carcass by the first author and identified by the second. Prior to this finding, nine species of *Bengalia* were recorded from peninsular Malaysia or Borneo. Male of *B. emarginata* are different from *Bengalia varicolor* Fabricious by the following characters: Sternite 5 projection rounded with small identation and mid tibia double-fringed in ventral surface.

During a forensic entomological study conducted in an oil palm plantation in Tanjung Sepat, Selangor, Malaysia (2.6°N, 101.6°E) on September 2007, two adult of *Bengalia* sp. were sighted around a pig carcass and were collected by the first author. The specimens were then labeled, pinned and preserved as a voucher specimen in the entomological collections of the Department of Parasitology & Medical Entomology, Faculty of Medicine, Universiti Kebangsaan Malaysia. The specimens were then sent to the second author and identified as *Bengalia emarginata* Malloch, 1927 (Diptera: Calliphoridae) in March 2008.

The genus, *Bengalia*, is included in the subfamily Calliphorinae and tribe Bengaliini. Nine species of *Bengalia* were previously recorded from peninsular Malaysia or Borneo: *Bengalia bezzii* Senior-White, *Bengalia concava* Malloch, *Bengalia escheri* Bezzi, *Bengalia hobbyi* Senior-White, Aubertin et Smart, *Bengalia jejuna* (Fabricius), *Bengalia labiata* Robineau-Desvoidy, *Bengalia recurva* Malloch, *Bengalia varicolor* (Fabricius) and *Bengalia xanthopyga* Senior-White (Kurahashi *et al.*, 1997). In Thailand, other species have also been recorded such as *Bengalia asymmetria* Kurahashi, *Bengalia chiangmaiensis* Kurahashi, *Bengalia pseudovaricolor* Kurahashi, *Bengalia siamensis* Senior-White and *Bengalia torosa* (Wiedemann) (Tumrasvin *et al.*, 1979).

Bengalia emarginata Malloch has not been recorded from Malaysia until now, however, it was recorded from China (Fujian, Guanxi, Hainan Island), Taiwan, Thailand

and Singapore (Tumrasvin *et al.*, 1979; Kurahashi *et al.*, 1997).

The specimens consisted of one male and one female, which can be recognized by the following features: prealar knob rounded; sternite 4 without strong bristle in male; abdomen slightly to heavily tessellated; body median to large sized; tergite 5 with 1 pair of discal setae; hind tibia more or less fringed in male; sternite 5 projection in male rounded with small indentation; mid tibia double fringed in male; tergite 5 in female without indentation in median part of posterior margin (Kurahashi *et al.* 1997). *Bengalia emarginata* is almost similar in appearance to *B. varicolor*, however, *B. varicolor* has two-branched projection at sternite 5 and its mid tibia are not fringed in male; tergite 5 in female has a small indentation.

The genus is entirely Oriental and Ethiopian. In India, the adult flies are frequently found sitting on plants, usually in the shade, and not uncommonly entering houses, very little is known on the life history of this fly. The adults are notable for their extremely silent flight. One of the rare available information on the habits of these flies is that they pounce on ants carrying larvae on the march and they suck termites, which is correlated with their strong and powerful proboscis. Dissection shows that this species is oviparous, but nothing appears to be known of the breeding habits, though on one or two occasions adults have been bred from puparia found in soil (Senior-White *et al.*, 1940).

Several adults of *B. labiata* Robineau-Desvoidy and *B. varicolor* were also collected at the same study site. They usually rested on the shaded ground in the plantation. There is a lack of knowledge of *Bengalia* bionomic, however, oil palm plantation is included as natural habitat of some *Bengalia* spp. From our observations, there were wandering cattle and cow dung strewn all over in the plantation and the pig farms nearby could serve as sources for rich organic material for the survival of these flies. Forensic entomologist in Malaysia should be more vigilant on the probability of this species having a role in forensic investigation, by virtue that this fly has been found to be attracted to a decomposed animal, as highlighted by this study.

Notes on specimens, localities and collectors:

Specimens examined. MALAYSIA (MALAYA): 1 male 1 female, Selangor, Tanjung Sepat, 12.ix.2007, Heo C.C.

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