

Research Note

A new record of *Fannia prisca* Stein, 1918 (Diptera: Fanniidae) from peninsular Malaysia

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Abstract. *Fannia prisca* Stein, 1918 is newly recorded from peninsular Malaysia. This record is based on 4 male specimens from Mount Berembun, Brinchang, Cameron Highland, Pahang state, peninsular Malaysia. It is previously recorded from China, Mongolia, Korea, Japan, Taiwan, Bonin Island, Thailand and oriental region. The male of *Fannia prisca* can be differentiated from male *Fannia scalaris* by the following features: for *F. prisca*, mid-coxa without spine; mid-tibia normal or without stout triangular ventral projection; and hind tibia usually with 2 *av*, while *F. scalaris* has several stout hook-like spines on the anterior margin; mid-tibia with stout triangular ventral projection and hind tibia usually with 3 *av*. Both *F. prisca* and *F. scalaris* can be differentiated from *Fannia leucosticta* by looking at its hind tibia, which only has 1 *av*.

The fanniid flies are a small, primitive group of Calyptrate flies, largely confined to the holarctic and temperate neotropical regions. There are approximately 300 species belonging to 4 genera, with representatives in the Afrotropical (11), Oriental (29), and Australasian (14) regions.

The genus *Fannia* is placed in the family Fanniidae. But, some authorities formerly considered this group of flies as a subfamily of Muscidae. Flies of the genus *Fannia* resemble house fly but are rather smaller (6–7 mm), and are readily distinguished from house fly and other similar flies by the followings: First anal vein (A1) is very short. By an imaginary extension A1 and A2 would

intersect before wing margin and its arista is bare (Service, 2004).

There are two common species of *Fannia* which are of minor medical importance, namely *Fannia canicularis* (lesser housefly), which occurs worldwide and is commonly encountered in houses, and *Fannia scalaris* (latrine fly), which has an almost cosmopolitan distribution and is less common in houses (Service, 2004). Species such as *F. canicularis* and *Musca domestica* are considered as the most important pest flies in household especially in temperate countries, however, in warmer tropical countries, *Fannia* tend to be of lesser importance (Pont, 1977).

Many of the pathogens transmitted by housefly are probably also spread by *Fannia* species. They have been incriminated in cases of aural and urogenital myiasis, and larvae are sometimes found in stools, but true intestinal myiasis does not occur in humans (Service, 2004). The larvae develop in all kinds of decomposing organic matter, and some species are also found in the nest of birds and of social insects. *Fannia* larvae are characterized by their depressed body, tapering towards both ends and provided with slender, fleshy processes, the number, arrangement and shape of which give good specific features (Zumpt, 1965).

The adult of *Fannia* spp. belong to the non-biting muscoid flies, together with *Musca* spp. The important adult morphological characters are medium size, grayish (dull coloured), vein 4 of the wings is more or less parallel to vein 3. The arista, which arises from the third antennal segment, is completely devoid of hairs (Service, 2004). Habitat of *Fannia* spp. varies from bird nest (*Fannia cana*), mushroom (*Fannia rokkoensis*) to chicken dung (*Fannia pusio*) (Nishida, 2004).

Fannia prisca have been recorded previously in China, Mongolia, Korea, Japan, Taiwan, Bonin Island, Thailand and other oriental regions. Omar *et al.* (2007) reported the occurrence of *F. pusio* (Wiedemann, 1830) from Malaysia. To date, *F. scalaris* (Fabricius, 1794), *F. canicularis* (Linnaeus, 1761), *Fannia leucosticta* (Meigen, 1838) and *F. pusio* (Wiedemann, 1830) have been reported in our country. Herein, we report *F. prisca* Stein, 1918 as a new record in peninsular Malaysia.

During an entomological survey conducted in May 2008 at Mount Berembum, Brinchang, Cameron Highland (ca~1,600m), the second author and his team members collected several specimens of *F. prisca* by using a sweep-net. The specimens were then identified by the second author and confirmed by the third author. Four male specimens of *F. prisca* were sent to Department of Parasitology & Medical Entomology, Faculty of Medicine, Universiti Kebangsaan Malaysia as voucher specimens in our entomology collection.

The male of *F. prisca* can be differentiated from male *F. scalaris* by the following features: For *F. prisca*, mid-coxa without spine; mid-tibia normal or without stout triangular ventral projection; and hind tibia usually with 2 *av*. While *F. scalaris* has several stout hook-like spines on the anterior margin; mid-tibia with stout triangular ventral projection and hind tibia usually with 3 *av*. Both *F. prisca* and *F. scalaris* can be differentiated from *F. leucosticta* in the hind tibia, which has 1 *av* (Tumrasvin & Shinonaga, 1982).

Fannia prisca inhabits the highlands in peninsular Malaysia and only found in elevated altitudes in Thailand such as Doi Pui (1,685 m) and Ban Yang (1,400 m), Doi Inthanon, Chiang Mai (Tumrasvin & Shinonaga, 1982). In our study, *F. prisca* was recovered at Mount Berembum, Brinchang, Cameron Highland, which is about 1,600 m above sea level. Therefore, this species may be restricted to cold temperature and high elevation habitats in our country.

Some *Fannia* spp. have forensic importance due to their behaviors of laying eggs on decomposing carrions or corpses. However, to date, immatures of *F. prisca* have not been found on animal carcasses or human corpses. Thus, more ecological and behavioral studies should be carried out to investigate the possibility of finding *F. prisca* and using it as a forensic indicator in highland localities to solve criminal cases especially in determining postmortem intervals (PMI).

Notes on specimens' localities and collectors:

MALAYSIA: MALAYA, PAHANG STATE, CAMERON HIGHLAND DISTRICT, BRINCHANG, MOUNT BEREMBUM. 4 ♂ 1 V 2008 H. KURAHASHI.

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