Research Note

Malaya leei (Wharton) feeding on ants in Papua New Guinea (Diptera: Culicidae)*

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It is a known fact that some species of the genus *Malaya* live in association with ants of the genus *Cremastogaster*. The beautiful figure of *Malaya* taking food from the mouth of an ant in Barraud (1934) is well known among the students of mosquitoes. However, there are comparatively few records of feeding habits of *Malaya* mosquitoes in nature. The remarkable habits of *Malaya* mosquitoes were first observed by Jacobson (1909, 1911) in Java, Farquharson (1918) in S. Nigeria and Macdonald (1962) in Malaya; Edwards (1932) summarized accounts of their habits. The genus includes 12 species, 6 in the Orient and Pacific areas and the rest in tropical Africa, respectively. Two of them, *Malaya genurostris* Leicester and *Malaya leei* (Wharton), occur in New Guinea (Wharton, 1947; Steffan, 1966). The larvae of *Malaya leei* have been found commonly in the leaf axils of taro plants, *Colocasia* sp. and *Alocasia* sp., but the adults are quite rare (Assem and Bonne-Wepster, 1964) and no specialized feeding habit of *Malaya* species has been recorded in Papua New Guinea.

While surveying mosquitoes at Papua New Guinea from January 13 to February 31, 1979, the author had an opportunity to observe and record by 8 mm movie camera the feeding and mating habits of *Malaya leei*.

In the afternoon of February 21, 1979,

the author encountered very small flies hovering over an ant nest on a tree trunk at Gogol forest of Madan, Papua New Guinea. A close observation revealed that, many ants had advanced toward their nest on tree trunk about a height of 2 m from the ground and 6 to 10 small flies hovering over the advancing ants were *Malaya* mosquitoes. From time to time, one of the mosquitoes alighted in front of an advancing ant, faced each other and then held the ant between the front tarsi. The mosquito thrust the swollen tip of the proboscis into the open mouth of the ant and rapidly absorbed the content of the ant's stomach and then flew upwards a few centimeters and hovered again over the ants. The feeding was repeated several times. While feeding, the wings of the mosquito were vibrating. Many other ants advanced near the feeding mosquito as if nothing had happened and they never attacked the mosquito. After feeding, the engorged mosquito rested on the tree trunk for a few minutes gently swaying the body from side to side and the proboscis was folded backwards under the body. Feeding habits of the male mosquitoes were not recognized. It was often observed that males appeared behind the females and mated with the females hovering over a procession of ants. Mating was generally brief, the act was accomplished within a few seconds.

Eight mosquitoes and several ants were collected by a sucking tube and sweeping net and identified as *Malaya leei* (4 females and 4 males), and *Cremastogaster* sp. by the author, respectively. Six Cecidomyid flies hovering over the same vicinity were collected. The flies were identified as *Farquharsonia* sp. by Dr. J. Yukawa. A series of the feeding habit of the mosquito was photographed fairly well by 8 mm movie camera. The specimens examined and the movie film were preserved in the collection at hand.

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摘 要

蟻より吸蜜するパプアニューギニア産の
カギカ *Malaya leei* (Wharton)
(双翅目：蚊科)

1979年2月21日、パプアニューギニアのマダン市近郊のゴゴールの森で蚊を採集中、樹幹に営巣されたシリアゲアリの1種 *Cremastogaster* sp. の近辺で乱舞し蟻の口より吸蜜中のカギカ *Malaya leei* (Wharton) を発見した。本短報はこれらカギカの吸蜜行動を詳細に記録したものである。