

Serangga 22(2): 83-89
ISSN 1394-5130 © 2017, Centre for Insects Systematic,
Universiti Kebangsaan Malaysia

NEW DISTRIBUTIONAL RECORD OF *Mymar taprobanicum* Ward, 1875 (HYMENOPTERA: MYMARIDAE) FROM MALAYSIAN BORNEO

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ABSTRACT

Knowledge of the microhymenopteran fauna of the Chalcidoid family, Mymaridae of Malaysia is very limited. This report provides a new distributional record of *Mymar taprobanicum* Ward, 1875, from Sarawak, East Malaysian Borneo. Four male specimens were collected through yellow pan traps in a residential area in Kuching in December 2016. Although widely known as an important parasitoid of rice pests, this species has never been reported from East Malaysian Borneo prior to this report.

Keywords: Hymenoptera, Mymaridae, new distributional record, Borneo, Malaysia

ABSTRAK

Pengetahuan tentang fauna mikrohymenoptera Chalcidoid dari famili Mymaridae di Malaysia amat kurang. Kajian ini

melaporkan penemuan rekod baru bagi taburan *Mymar taprobanicum* Ward, 1875, di Sarawak, Malaysia Timor Borneo. Empat spesimen jantan telah disampel melalui perangkap dulang kuning di sekitar perumahan di Kuching pada bulan Disember, 2016. Walaupun terkenal sebagai parasitoid penting bagi serangga perosak padi, spesies ini belum pernah dilaporkan dari Malaysia Timor di Borneo sebelum ini.

Kata kunci: Hymenoptera, Mymaridae, rekod taburan baru, Borneo, Malaysia.

INTRODUCTION

The family Mymaridae, or commonly known as fairy flies, is a large group of Chalcidoid wasps with about 1400 nominal species recognized within 100 genera recorded worldwide (Gibson, 1993). The Mymarids are parasitoids of insect eggs, primarily from the order Homoptera and Hemiptera. Some species are known as potential biocontrol agent of important insect pests such as leafhoppers and planthoppers, and play a role in reducing their populations in Thailand (Yasumatsu *et al.*, 1975). Hosts of the Mymarid species include *Laodelphax striatella*, *Nilaparvata lugens* (Hemiptera: Delphacidae) (Taguchi, 1974; Rao, 1983) and *Nephotettix cincticeps* (Hemiptera: Cicadellidae) (Chandra, 1979).

The most spectacular species of Mymaridae belongs to the genus *Mymar*. They can be identified by having forewings, which are oar-like in shape, and narrow, without membrane for most of the length, while the hindwings are filamentous (Huber *et al.*, 2009). They tend to superficially resemble species from the ancient and rare family, Mymaromatidae in size and general appearance of the forewings (Figure 1a). However, they can be distinguished from the Mymaromatids by the presence of an H-like set of mark between the eyes, ocelli and toruli on the head

(Gibson, 1993). He further noted that the Mymaromatids possess minute bifurcated hind wings, in contrast to longer non-bifurcated hind wings present in the genus *Mymar* (Figure 1c). Currently, the genus is known to consist of eight recognized species worldwide (Triapitsyn & Berezovskiy, 2001).

During a recent study on the faunistic composition of parasitic wasps in Kuching (1°33'50.2"N 110°19'11.1"E), West Sarawak, four male individuals of a Mymarid species, *Mymar taprobanicum* Ward, 1875 were collected in yellow pan traps deployed in a residential area in December 2016. The specimens were preserved and identified to species following Triapitsyn & Berezovskiy (2001).

***Mymar taprobanicum* Ward, 1875** (Figures 1a-d)

Material examined: Malaysia, Sarawak, Kuching, Irfan Razak; 28-30.XII 2016, 4 ♂; ex yellow pan traps.

Diagnosis: Body yellowish-brown; forewing oar-like, with a long, very slender petiole and expanded, membranous apex; hindwing filamentous, with one long apical seta. Male flagellum 11-segmented. Body length 0.7 mm.

Distribution: Worldwide.

Hosts: Not known from this study.

Mymar taprobanicum is almost worldwide in distribution and has been reported from Russia, southern Europe, Japan, Southeast Asia, Africa, Australasia, North and Central America, Colombia (Triapitsyn & Berezovskiy, 2001), Thailand (Yasumatsu *et al.*, 1975), Sri Lanka (Ward, 1875), Puerto Rico (Dozier, 1937), India (Mani, 1942), Egypt (Soyka, 1950), Iran (Moravvej *et al.*, 2016), Malaysia (Peninsular) (Vreden & Ahmadzabidi, 1986) and Philippines (Barrion *et al.*, 1981). Triapitsyn & Berezovskiy (2001) also noted that it is restricted mainly to warmer climates.

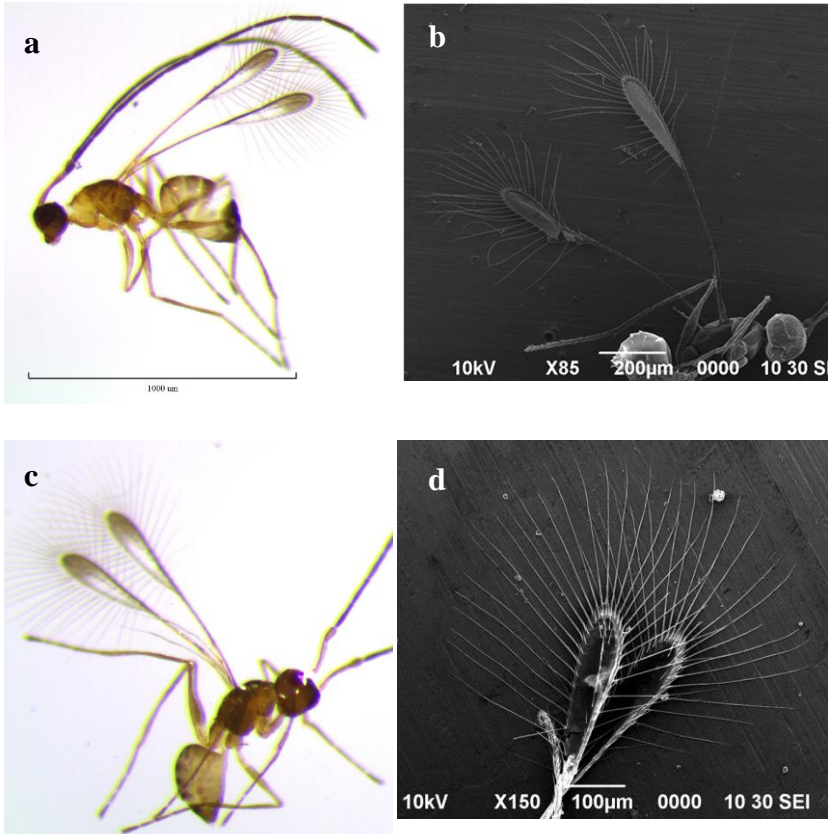


Figure 1 *Mymar taprobanicum* (♂) from Sarawak: a. habitus; b. SEM micrograph of forewings; c. forewings and the filamentous hindwings; d. FOREWINGS

Despite their ubiquitous presence and high diversity, knowledge on the Mymarids, particularly in Malaysia, is very scarce. Shortfall in collections is partly due to their minute size, with body length of usually less than 1.5 mm (Gibson, 1993). Due to their minute size, the Mymarids are often overlooked, and hence, rarely collected and poorly represented in most

collections. Their potential role in reducing the populations of paddy pests through the parasitization of their eggs has not been fully realized in Malaysia.

This report presents a new distributional record of *M. taprobanicum* in Malaysia, and hence, significantly extends our knowledge on the known distribution of this species. Considering the important role of Mymarid species as potential biocontrol agent, advancing our knowledge of the diversity of this group of minute wasps has major economic implications.

ACKNOWLEDGEMENTS

We would like to thank the Faculty of Resource Sciences and Technology and the Institute of Biodiversity and Environmental Conservation, Universiti Malaysia Sarawak (UNIMAS) for providing the lab facilities.

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