FIG WASPS AND THEIR RELATIONSHIP WITH THE FAMILY MORACEAE IN MIHINTALE, SRI LANKA

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Figs have a close relationship with tiny fig wasps (Hymenoptera: Agaonidae: Agaoninae). These fig wasps are the sole pollinators of fig trees and in turn, fig wasps can breed nowhere else but inside figs, a relationship that is a classic example of an obligate mutualism and each species of fig is known to have its species specific wasp species. Fig wasps are two types according to their function. They are pollinator wasp and non-pollinator wasp. The female pollinator fig wasps enter receptive syconia, where they pollinate female flowers. They also lay eggs into some flowers, where their larvae induce galls. Non-pollinators do not enter the syconium or no contribution to pollination, but use long ovipositors to inject eggs through the fig wall so that their larvae can resulting in galls or parasitize the larva of pollinator wasp. Therefore it will affect the fig-pollinator relationship.

The present study identifies the relationship of fig wasp with two monoecious fig species (*Ficus caulocarpa, Ficus microcarpa*) of Family Moraceae and one gynodioecious fig species (*Ficus hispida*) in Faculty of Applied Sciences premises of the Rajarata University of Sri Lanka. The study was carried out from November 2010 to April in 2011. For *Ficus caulocarpa,* fifty syconia were pluck in the tree, where they are soft and with no exit holes. In the laboratory the diameter of each syconium was measured by using venire caliper and syconia were placed separately in small glass bottle and covered with piece of cloth. All emerged wasps were preserved separately in 70% alcohol. Pollinator fig wasps were identified using keys and description of Wiebes (1992) and non-pollinator fig wasps using Priyadarsanan (2000). The pollinator wasps were more abundant with the mean of 53.92 than non-pollinator wasps. There was no significant relationship between the number of pollinators and two non- pollinator wasps (r = -0.181 and r = -0.318) emerged from the syconia. The sex ratio of the pollinator wasps does not have strong female base in selected *F.caulocarpa.* The pollinator fig wasp *Ceratosolen marchali* and the non-pollinator fig wasp *Philotrypesis pilosa* were identified from the field collection of fig wasps in *Ficus hispida.* The study period was not the fruiting period of selected *F. microcarpa* tree. Therefore, it was unable to record the pollinator and non-pollinator wasps related to the *F. microcarpa.*

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