

Benjakhun Sangtongpraow 2007: Relationships Between Fig Wasp Species and *Ficus benjamina* Linn., *F. microcarpa* L.f. and *F. concinna* Miq. in Kasetsart University, Bangkok Campus.
Master of Science (Entomology), Major Field: Entomology, Department of Entomology. Thesis
Advisor: Associate Professor Kosol Charernsom, M.S. 147 pages.

The results from the study on the relationships between fig wasp species and some *Ficus* species in Kasetsart University, Bangkok Campus, Bangkok, showed that there were 6 genera 9 species in *Ficus benjamina* as follows: *Eupristina koningsbergeri*, *Sycobia* sp.1, *Walkerella teneraria*, *Walkerella* sp.1, *Philotrypesis* sp.1, *Philotrypesis* sp.2, *Sycoscapter* sp.1, *Sycoscapter* sp.2 and *Sycophila* sp.1. It was also found 8 genera 15 species in *F. microcarpa* as follows: *E. verticillata*, *Odontofroggatia corneri*, *O. galili*, *Micranisa* sp.1, *W. kurandensis*, *Philotrypesis* sp.1, *Philotrypesis* sp.2, *Sycoscapter* sp.1, *Sycoscapter* sp.2, *Sycophila* sp.2, *Sycophila* sp.3, Agaonid1, *Eurytoma* sp.1, *Sycophila* sp.4 and Torymid1. In *F. concinna*, 9 genera and 11 species were found: *Platyscapa* sp.1, *Acophila* sp.1, *Camarothorax* sp.1, *Otitesella* sp.1, *Philotrypesis* sp.3, *Sycoscapter* sp.3, *Aprostocetus* sp.1, *Sycophila* sp.2, *Sycophila* sp.5, *Ormyrus* sp.1 and *Ormyrus* sp.2. The fig wasps in family Eulophidae, genus *Aprostocetus*, were first found in *Ficus* fruits in this study which had no report elsewhere.

The results also showed that 5 species, 10 species, and 10 species of fig wasps were specifically related to *F. benjamina*, *F. microcarpa*, and *F. concinna*, respectively. The pollinating wasps were also specific to host. One fig wasp species was the pollinator of one *Ficus* species only. The numbers of individuals of pollinating wasps in *Ficus benjamina* and *F. microcarpa* were lesser than the numbers of non-pollinating wasps. The proportion between the numbers of pollinating and non – pollinating wasps in fruits of those two *Ficus* species could be used to indicate the levels of environmental imbalance in *Ficus* areas. The body sizes and numbers of individuals of pollinators, galls and parasitoids had tendency to relate to fruit sizes and nutrition values of the three *Ficus* fruits (especially N and protein), while the ovipositor lengths of parasitoids were related to the thickness of syconium walls. The ripe fruits of *F. benjamina*, *F. microcarpa* and *F. concinna* were consumed by birds and other urban animals. The ripe fruits of those *Ficus* species had potassium and carbohydrate contents of 1.63-1.69% and 40.04-48.11%, respectively. Some of their nutrition values were similar to or higher than those of other fruits. So they might be used to produce feedstuff. The fig wasps and *Ficus* species had mutual relationships. The fig wasps could survive if the *Ficus* species were alive. The benefits from *Ficus* planting were the enhancement of urban green areas and urban ecosystem.

Student's signature

Thesis Advisor's signature

