Survey and seasonal abundance of mealybug species and its associated predators and parasitoid on guava trees in Egypt.

A survey and seasonal abundance of mealybugs and their associated parasitoid and predator species were conducted on guava trees in Giza Governorate, Egypt for two years, (January 2014 to December 2015). Fifteen plants were randomly chosen and five leaves were biweekly collected, each from the four cardinal directions and the middle of the inspected trees.

**Four pest mealybug species;** *Ferrisia virgata, Icerya seychellarum, Icerya purchasi* and *planococcus citri*.

**Six predator species;** *Scymnus syriacus*, *Cydonia vicina, Chrysoperla carnea* and

*Rodalia*.

Two parasitoids attack predators; *Homalotylus vicinus* and *Homalotyloidea*.

**Four primary parasitoid species;** *Leptomastix, Leptomastidae, Gyranusoidea indica*and*Aenasius*.

**One hyper parasitoid**; *Chartocerus subaeneus*. were recorded.

The most dominant insect species were; the mealybug *Ferrisia virgata* (Ckll.), the predator *Scymnus syriacus* (Mars.), the parasitoid that attacked coccinellids *Homalotylus vicinus* Silvestri, the primary parasitoid of mealybugs, *Gyranusoidea indica* Shafee, Alam and Agarwal in 2014, *Leptomastix dactylopii* Howard in 2015, and the hyperparasitoid, *Chartocerus subaeneus* (Foerester). *F. virgata* is the first record on guava trees in Egypt and the primary parasitoid Aenasius sp. is recorded for the first time in the Egyptian fauna. The present study revealed that the surveyed natural enemies played a weak role in controlling the mealybugs attacking guava trees, due to the effect of the parasitoids attacking predators and the hyperparasitoids. It is suggested that the role played by these bioagents could be enhanced by mass rearing and releasing of the predator *S. syriacus* and the primary parasitoids, *G. indica* and *L. dactylopii*.