

Impact of *Gyranusoidea tebygi* Noyes (Hymenoptera: Encyrtidae) on the Mango Mealybug *Rastrococcus invadens* Williams (Homoptera: Pseudococcidae) in Nigeria

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Abstract

This study investigated the impact of released exotic mango mealybug parasitoid *Gyranusoidea tebygi* on mango mealybug *Rastrococcus invadens* in Nigeria. Observations were also made on the occurrence of the mealybug on other host plants in the surveyed areas. The monitoring exercise started in 1991 about 2 years after the first release in Ibadan. By 1997 and 1998, *G. tebygi* was found to have crossed all agro-ecological barriers to colonize the entire area of infestation nationwide on mango as well as other host plants. During this period, the populations of *R. invadens* had greatly decreased from between 11.0 and 98.0 mealybugs per leaf in 1991 to between 0.0 and 18.2 mealybugs per leaf in 1998. This fall was attributed to the activities of the released parasitoid. At many sampling sites in 1998, mealybugs were virtually absent on both mango and other host plants. Predators that were observed during the survey, were the coccinellids: *Exochomus promptus* Weise, *Chilocorus nigritus* (F) and *Nephus* spp. Larvae of chrysopid species, *Ceratochrysa autica* (Walker) and *Plesiochrysa* sp. The hyperparasitoids reared from mummies were *Marietta leopardina* Motsch (Aphelinidae), *Chartocerus hyalipennis* Hayat and *Chartocerus subaeneus* (Forster) (Signiphoridae).

Keywords: Biological Control; Mango; Mango Mealybug; Nigeria; *Rastrococcus Invadens*; *Gyranusoidea Tebygi*