

SCIENTIFIC NOTE

Seasonal abundance of *Montandoneilla moraguesi* Puton (Hemiptera: Anthocoridae), the predator of *Gynaikothrips ficorum* Marchal (Thysanoptera: Phloethripidae) on *Ficus nitida* Thunb. at Giza, Egypt

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ABSTRACT

Montandoneilla moraguesi Puton (Hemiptera: Anthocoridae) is a specific predator of the laurel thrips, *Gynaikothrips ficorum* Marchal, infesting *Ficus nitida* Thunb. trees. In Egypt, the predator was found at Giza region throughout the year. Populations of its nymphs and adults assured its role in suppressing the population of the thrips, *G. ficorum*. Both the predator and the prey showed 4 peaks/ year, with much higher populations in autumn, winter and spring than in summer.

Key words: *Ficus nitida*, *Gynaikothrips ficorum*, *Montandoneilla moraguesi*, Seasonal abundance, Egypt.

INTRODUCTION

The laurel thrips, *Gynaikothrips ficorum* Marchal (Thysanoptera: Phlaeothripidae) is an economic thrips species damaging the foliage and young shoots of *Ficus nitida* Thunb. It causes necrosis of shoot tips, silverying and rolling of leaves to form gall-like structures (El-Husseini *et al.*, 2006). Morcos (1944) was the first observed *G. ficorum* on the trees of *F. nitida* in Egypt in 1941. Main natural enemies associated with this thrips species were previously recorded by several investigators (Tawfik and Nagui, 1965; Tawfik, 1967 and Paine, 1992)

The anthocorid, *Montandoneilla moraguesi* (Puton) is an oligophagous predator of thrips. In 1964, it was introduced from Philippine islands to control the Cuban laurel thrips, *G. ficorum* in Bermuda and then in Hawaii and in other countries.

The two predators; *M. moraguesi*, *Chrysoperla carnea* Steph., and the parasitoid species *Pleurotopis* sp. were recorded in the leaf rolls of *G. ficorum*, attacking the immature stages of this thrips species at Giza, Egypt (Tawfik, 1967).

The present study aimed to highlight on *M. moraguesi* abundance in relation to its prey *G. ficorum* under natural conditions.

MATERIALS AND METHODS

To study the seasonal abundance of *G. ficorum* and its predatory insect, 50 leaf-rolls from *F. nitida* (five leaves per tree) were collected at weekly intervals from different trees located at parks of Faculty of Agriculture, Cairo University at Giza, Egypt for one year, started from October 2008 to September 2009. Leaf rolls were carefully examined

and numbers of nymphs and adults of *G. ficorum* and wandering adults and nymphs of the predator *M. moraguesi* were determined and recorded.

RESULTS AND DISCUSSION

Seasonal abundance of *M. moraguesi* and its prey *G. ficorum* at Giza region is illustrated in (Fig. 1). Seasonal abundance of the prey (*G. ficorum*) showed four peaks of population per annum. The first peak (3466 individuals/ 50 leaves) was recorded in November, 2008, the second was (3768 individuals/50 leaves) in January, 2009, the third (3560 individuals/ 50 leaves) was in March, 2009 and the fourth (1394 individuals/50 leaves) was marked in May, 2009. The former peaks of the thrips were mostly associated by the predator, in less numbers, as the increase of the predator's population was followed by a decrease in the population of the prey (Fig.1).

The anthocorid bug, *M. moraguesi* was the main predatory insect species found in the rolled leaves of *F. nitida*, preying mostly on the immature stages of the laurel thrips, *G. ficorum*. The predator had relatively 4 peaks of abundance per annum; in October, January, April and May, respectively.

The first recorded peak (41 individuals/ 50 leaves) of *M. moraguesi* appeared in January. The second (66 individuals/ 50 leaves) was recorded by the end of March and it exceeded that of the prey. Such peak could relatively suppress the pest population throughout the period from March to April and then both decreased further to August. By early September, the pest's population started to increase, while that of the predator being in decline, but it built up its population again to form a peak in January. Obtained results suggest that both the pest

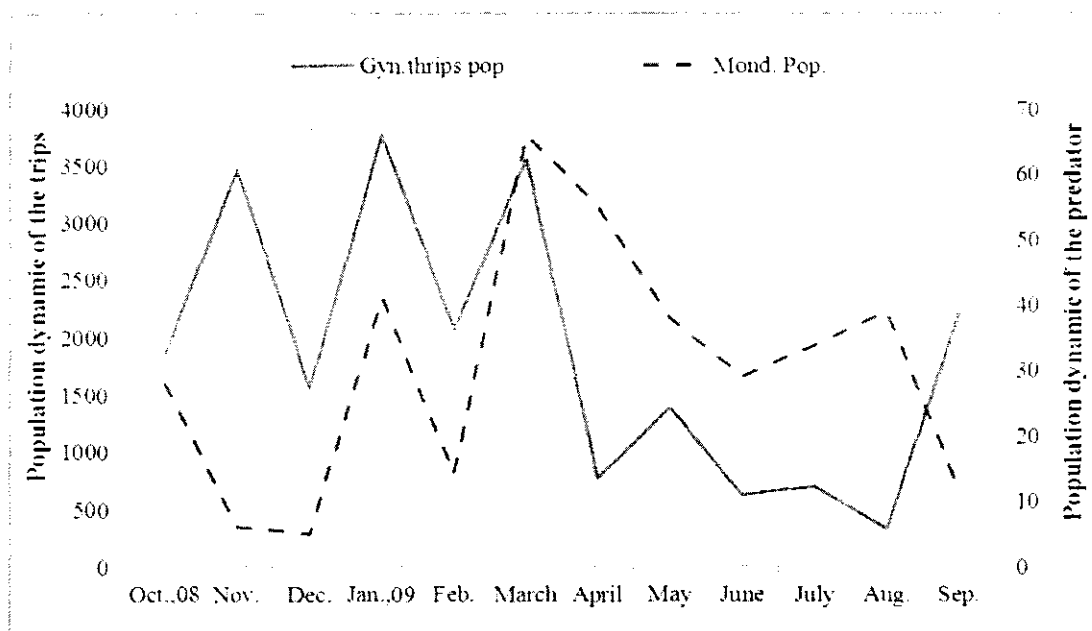


Fig (1): Seasonal abundance of the predator, *M. moraguesi* (adults and nymphs) and its prey *G. ficorum* on trees of *F. nitida* at Giza region, Egypt from Oct. 2008 to Sept. 2009.

and the predator were active in autumn, winter and spring under relatively low and moderate temperatures, while their activities were affected by the summer temperature. Tawfik and Nagui (1965) recorded six generations per year for *M. moraguesi* at Giza region. Ragab (1991) reported also seven peaks per year for it at Mansoura region, Northern Egypt.

Moreover, population dynamics of the pest and its predator showed the efficient role of *M. moraguesi* as a dominant biocontrol predatory species in controlling the laurel thrips, *G. ficorum* on trees of *F. nitida*. Tawfik and Nagui (1965) reported that *M. moraguesi* was a predator that strictly limits its activity mostly to a single prey.

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