Brief Comunications

Parasitoids of *Chrysomya megacephala* (Fabricius) collected in Itumbiara, Goias, Brazil

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Abstract
This study determined the species of parasitoids associated with Chrysomya megacephala, *collected on bovine kidney baits, in Itumbiara, State of Goias, Brazil. The pupae were obtained by flotation. They were individually placed in gelatin capsules until the emergence of the adult flies or their parasitoids. The overall prevalence of parasitism was 18.6%.* Brachymeria podagrica, Nasonia vitripennis *and* Pachycrepoideus vindemiae *presented frequencies of 8.6%, 8.6% and 1.4%, respectively. This work reports for the first time the occurrence of* Brachymeria podagrica *in pupae of* Chrysomya megacephala.

Pieces of bovine kidney served as the bait for the flies and were placed inside the cans, on a layer of earth. Five traps were utilized, and these were hung from eucalyptus trees (*Eucalyptus* sp.) at a height of 1 meter off the ground and a separation of 2 meters from each other, at a distance of 50 meters from domestic garbage. The adult individuals collected were taken to the laboratory, sacrificed using ethyl ether and preserved in 70% alcohol for later identification.

To obtain the parasitoids, the contents of the traps were placed in plastic receptacles containing a sand layer that served as a substrate for the pupation of the larvae. Fifteen days after placing in the field, the sand was sieved to extract the pupae. These pupae were then placed individually in gelatin capsules (number =00), to obtain the adult flies and/or parasitoids. The percentage prevalence of parasitism was calculated as the number of pupae containing parasites divided by the total number of pupae collected, multiplied by 100.

During the period from March to October 2002, 122 parasite specimens were collected from 70 pupae of *Chrysomya megacephala* (Table 1). The total prevalence of parasitism was 18.6%. This high prevalence of parasitism was probably due to the presence of gregarious parasitoids. The parasitoids collected belonged to three species: *Brachymeria podagrica* (Fabricius) (Hymenoptera: Chalcididae), *Nasonia vitripennis* (Walker) (Hymenoptera: Pteromalidae) and *Pachycrepoideus vindemiae* (Rondani) (Hymenoptera: Pteromalidae), accounting for 8.6%, 8.6% and 1.4%, respectively, within the total prevalence (Table 1).

The specimens of *Nasonia vitripennis* and *Pachycrepoideus vindemiae* were identified in accordance with Legner et al[5] (1976) and *Brachymeria podagrica* in accordance with Burks[2] (1960). The reference material was stored in the Biology Department of Instituto Luterano de Ensino Superior, Itumbiara, GO.

The parasitoid that was collected the most was *Nasonia vitripennis*, because in addition to behaving as a gregarious parasitoid, it was also the species that attacked the greatest number of pupae of *C.*

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Table - Parasitoids of Chrysomya megacephala collected during the period from March to October 2002 in Itumbiara, Goiás.

Area/Substrate Forest Bovine kidney	N pupae/species	Parasitoids	N individuals	Prevalence
	1 *C. megacephala*	*N. vitripennis*	6	8.6%
	1 *C. megacephala*	*N. vitripennis*	15	
	1 *C. megacephala*	*N. vitripennis*	20	
	1 *C. megacephala*	*N. vitripennis*	37	
	1 *C. megacephala*	*N. vitripennis*	19	
	1 *C. megacephala*	*N. vitripennis*	18	
	1 *C. megacephala*	*P. vindemiae*	1	1.4%
	6 *C. megacephala*	*B. podagrica*	6	8.6%
Pupae obtained: 70	13 pupae with parasites	-	122 individuals	18.6%

megacephala. This was probably due to variations in the quality and availability of resources and the host-seeking capacity of this parasitoid or the host density. This species attacks several species of Diptera, particularly those in the families Calliphoridae, Muscidae, Sarcophagidae and Tachinidae.[4]

Brachymeria podagrica (Fabricius) occurs practically worldwide, in association with synanthropic and other Diptera.[2] *Pachycrepoideus vindemiae* is considered to be a solitary parasitoid of numerous Diptera in the families Anthomyiidae, Calliphoridae, Muscidae, Sarcophagidae, Tachinidae and Tephritidae, among others. The geographical distribution of this species extends beyond South America to North America and Africa.[4]

Since the control of flies by means of insecticides may lead to the selection of resistant populations, there is a need for new control methodologies.

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