



ENTOMOFAUNA OF *CHRYSOMYA* SP. (DIPTERA: CALLIPHORIDAE) IN THE BORDER AND INTERIOR OF A FOREST IN THE TINGUÁ BIOLOGICAL RESERVE, RJ, BRAZIL

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INTRODUCTION

Three species of the genus *Chrysomya* (Robineau-Desvoidy, 1830) are found in Brazil: *Chrysomya megacephala*, *Chrysomya putoria* and *Chrysomya albiceps*. *C. megacephala* has a blue or bluish-green coloring with a metallic sheen and grayish-brown anterior spiracles. Occurring very frequently in street markets, chicken farms and garbage dumps, it develops in decomposing organic matter (Guimarães *et al.* 1979; Milward-de-Azevedo *et al.* 1995). According to d'Almeida *et al.* (1983), this species, which is widely present in urban areas, may be replacing autochthonous species thanks to its strong competitive ability which has been proven in laboratory studies of interspecific associations with the native species *Cochliomyia macellaria* (Aguiar-Coelho & Milward-de-Azevedo, 1998). *C. putoria* has a metallic green coloring, anterior spiracles with bristles and pilose calypters on the upper face. It is frequently present in chicken farms and slaughterhouses. Its larvae can cause secondary cutaneous myiasis in sheep, cattle and humans. Its feeding habits are diverse, including feces, garbage, decomposing meat, and fresh foods. *C. albiceps* looks similar to *C. putoria*, with a metallic coloration and white anterior spiracles. Its larvae prefer substrates of animal origin, and they can cause secondary myiasis.

Both rural and urban areas have shown an increasing dispersion of calliphorids due to the growth in garbage production. However, little is known about the behavior and distribution of this dipteran in forest areas.

OBJECTIVES

This paper reports on a study of the entomofauna of *Chrysomya* sp. in the border and interior of a

forest in the Tinguá Biological Reserve from June 2006 to March 2007.

MATERIAL AND METHODS

Specimens were collected monthly in the Tinguá Reserve, using six homemade traps (Ferreira, 1978 and Linhares, 1981) baited with sardines defrosted in the refrigerator 24 hours prior to exposure. The traps were set up at three different sites in the forest, about 1.5 meters from the ground, according to Neto *et al.* (1995). The first site (Site A) was located at the edge of the forest, while the second (Site B) was located 1000 meters and the third (Site C) 500 meters inside the forest along the Estrada do Comércio road. Two traps, five meters apart, were set up at each site. The traps were exposed for 48 hours. The captured insects were killed and taken to the Laboratory of Diptera Studies (LED), Department of Microbiology and Parasitology at the Federal University of the State of Rio de Janeiro (UNIRIO), where the individuals were identified taxonomically based on Mello's identification key (2003).

RESULTS AND DISCUSSION

During the period of this study, 7663 calliphorids were collected, of which 2283 belonged to the genus *Chrysomya*, distributed among *C. megacephala* (798), *C. albiceps* (1473) and *C. putoria* (12). The site with the highest concentration of this genus was A, with 1874 individuals, followed by site B with 303, and site C with 106. The only month when *Chrysomya* specimens were not collected was July, differing from the findings reported by Oliveira (1982), when these populations occurred throughout the year.

In our study, these calliphorids showed peaks in September, November and March, when 806, 778 and 514 specimens collected, respectively. This finding is similar to that of Rodrigues-Guimarães *et al.* (2001) on Campus I of the University of Iguaçú (UNIG), also in the state of Rio de Janeiro, where *Chrysomya* specimens showed population peaks in January and March. Population peaks of *C. megacephala* and *C. putoria* were observed in September (with presence of the latter species recorded only in June, September and November). A peak in *C. albiceps* was observed in November. In collections on the campus of the Federal Rural University of Rio de Janeiro (UFRRJ), Brazil, Carraro & Milward-de-Azevedo (1999) found that *C. megacephala* was the most frequent, with a population peak in November, while *C. albiceps* was more abundant in April.

CONCLUSION

Species of the genus *Chrysomya* were more abundant in the forest border area of the Reserve, which shows evidence of the anthropic effect on the forest environment.

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