

SHORT COMMUNICATION

OCCURRENCE OF THE *Megaselia scalaris* (LOEW, 1866) (DIPTERA, PHORIDAE) AS A PARASITOID OF *Boophilus microplus* IN CAMPO GRANDE, MS, BRAZIL

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ABSTRACT.- ANDREOTTI R., KOLLER W.W., TADEI W. J., PRADO A.P. DO, BARROS J.C., SANTOS F. DOS, GOMES A. **Occurrence of the *Megaselia scalaris* (Loew, 1866) (Diptera, Phoridae) as a parasitoid of *Boophilus microplus* in Campo Grande, MS, Brazil.** [Ocorrência da *Megaselia scalaris* (Loew, 1866) (Diptera, Phoridae) como parasitóide de *Boophilus microplus* em Campo Grande, MS, Brasil.] *Revista Brasileira de Parasitologia Veterinária* v. 12, n.1, p. 46-47, 2003. Embrapa Gado de Corte, Km 4 da BR 262, Caixa Postal 154, Campo Grande, MS 79002-970, Brasil. E-mail: andreott@cnpqc.embrapa.br

This is the first report for the presence of *Megaselia scalaris* as a parasitoid of engorged *Boophilus microplus* tick females. It was observed that this fly can cause reduction on these tick egg production, but the level of this reduction still have to be determined.

KEY WORDS: *Megaselia scalaris*, parasitoid, *Boophilus microplus*, tick, phorid.

RESUMO

A presença da mosca *Megaselia scalaris* como parasitóide de fêmeas ingurgitadas (teleóginas) do carrapato *Boophilus microplus* é relatada pela primeira vez para a região de Campo Grande, MS. Observou-se que esta mosca pode causar redução na produção de ovos desses carrapatos, mas o nível dessa redução ainda está por ser determinado.

PALAVRAS-CHAVE: *Megaselia scalaris*, parasitóide, *Boophilus microplus*, carrapato, forídeo.

Megaselia scalaris is a cosmopolitan species of fly (Borgmeier, 1968). It is found in various environments and has the capacity of exploring a great variety of ecological niches (Robinson, 1975). The females are attracted by fetid odors from wounds exudations and their larvae can cause myiasis in different animals, inclusive in man (James, 1947). The larvae also consume honey and pollen stocked by *Apis*

mellifera, as well as attack this bee larvae and pupae (Zanon, 1991). Specimens of this fly infesting beehives in apiaries of Campo Grande, MS, Brazil, were at the Embrapa Gado de Corte insect collection deposited in Feb.25th, 1985. Rocha et al., (1984) mention that these phorid invade the ticks' through their cuticle, but don't explain if the posture is done inside ticks body or if is the larvae that penetrate it.

Boophilus microplus is an economically important bovine parasite, causing, in Brazil, losses of around two billion dollars per year (GRISI et al., 2002). The control of this parasite has been the objective of many studies, and the use of natural enemies will help to reduce chemical control environment and food safety implications.

Since November of 2000, occasionally, some samples of *B. microplus* engorged females, coming for laboratory incubation, showed the presence of *M. scalaris* larvae. Pupae and adults were obtained some days after maintenance at 29°C temperature and 80% relative humidity. It was observed that the presence of *M. scalaris* larvae in *B. microplus* engorged females can affect the egg production, and that this effect probably will depends on the number of larvae present.

The fly was identified by Dr. Ângelo Pires do Prado, from the Unicamp University, which is an expert for this family. This identification was also confirmed by successful

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crossbreeding among individuals of the isolated local colony with individuals of a reference colony received from the São Paulo State University, from São José do Rio Preto, São Paulo, Brazil. *A.M. scalaris* isolated local colony and the reference colony are been maintained in 250 mL flasks containing culture medium of cornmeal (MOURÃO, 1987) in order to support future investigations.

Although the fly has been mentioned as a natural enemy of *B. microplus* (ROCHA et al., 1984; VERÍSSIMO, 1995) their potential in natural conditions (i.e. percent of number of *M. scalaris* larvae per infested tick; effect on *B. microplus* egg laying and or hatching) have not yet been quantified. Data to quantify these possible effects will be collect in this study progress with the aim to determine the importance of this phorid parasitoids in the cattle tick biological control program.

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