Oviposition rates of *Amblyseius aerialis* (Muma) and *Amblyseius chiapensis* DeLeon (Acari: Phytoseiidae) under seven foods—different patterns for the same genus

FELIPE S. R. AMARAL¹, ANTONIO C. LOFEGO² & ANA C. C. CAVALCANTE³

¹Programa de Pós-Graduação em Biologia Animal, UNESP, São José do Rio Preto, 15054-000, SP, Brazil. felipesrama-ral@gmail.com (corresponding author)
²Departamento de Zoologia e Botânica, UNESP, São José do Rio Preto, 15054-050, SP, Brazil. aclofego@ig.com.br
³Instituto de Ciências Exatas e Tecnologia, Universidade Federal do Amazonas, UFAM, Itacoatiara, 69103-128, AM, Brazil. anacris.cavalcante@gmail.com

The study of food habits of species of Phytoseiidae is essential to understand the role of these mites in nature, such as to discover new agents of biological control. The selection of predators for biological control is usually done in steps. The first involves the knowledge of life history through parameters such as predation rate and oviposition rate (mean and/or peak) (Jansen & Sabelis 1992). According to these authors, from these evaluations, it is possible to answer if the predator consumes and reproduces successfully on the target prey.

The phytoseiid genus *Amblyseius* is one of the most diverse in the family, with 364 valid species throughout the world (Demite et al. 2017). There is little knowledge about the biology of many *Amblyseius* species. Out of the 47 species of *Amblyseius* recorded for Brazil, biological studies with indigenous populations have been undertaken for only seven species: *Amblyseius acalyphus* Denmark & Muma, *Amblyseius aerialis* (Muma), *Amblyseius compositus* Denmark & Muma, *Amblyseius herbicolorus* (Chant), *Amblyseius largoensis* (Muma), *Amblyseius neochiapensis* Lofego, Moraes & McMurtry and *Amblyseius tamatavensis* Blommers (Lofego & Moraes 2005; Reis et al. 2007a, 2007b; Castillo & Noronha 2008; Cavalcante et al. 2015).

Many species for which there is little or no information on dietary habits are common and easily found in a variety of environments, such as the species selected for the present study, *A. aerialis* and *Amblyseius chiapensis* DeLeon (Phytoseiidae). The former has 40 records from several regions throughout the world encompassing three continents and 15 countries, while the latter is found throughout much of the American continent, with 24 records from Mexico to southern Brazil (Demite et al. 2014; 2017). Despite the significant amount of records for these two species, there is little or no knowledge about the biology of these species. Only one study has been done regarding the diet of *A. aerialis* (Castillo & Noronha 2008), while for *A. chiapensis* no biological information has been reported in the literature. Thus, the objective of the present study was to analyze oviposition rates in order to better understand the food habits of *A. aerialis* and *A. chiapensis* and to determine possible patterns of food consumption between the species of *Amblyseius* studied.

Specimens of *A. aerialis* and *A. chiapensis* were collected from leaves of *Trichilia casaretti* C. DC. (Meliaceae) in the municipalities of Rondonópolis, state of Mato Grosso (February 2015) and Icém, state of São Paulo (April 2016), respectively. The phytoseiids were kept in breeding units according to McMurtry & Scriven (1965), in an incubator at 25±1°C, 60±10% RH and 12:12h photoperiod, and fed pollen of *Typha domingensis* Pers. (Typhaceae), *Tyrophagus putrescentiae* Schrank (Acari: Acaridae) and *Tetranychus urticae* Koch (Tetranychidae). We tested as food, mobile stages of six possible prey mites: *T. putrescentiae*, *Calacarus heveae* Feres (Eriophyidae),