

DO TROPHOBIOSIS OR PREDATION OCCUR BETWEEN *LINEPITHEMA MICANS* (HYMENOPTERA: FORMICIDAE) AND THE VINE MEALYBUG *PLANOCOCCUS FICUS* (HEMIPTERA: PSEUDOCOCCIDAE) IN VINEYARDS?

A. N. GUINDANI^{1,2}, A. NONDILLO¹, V. C. P. D. SILVA¹, S. ANDZEIEWSKI¹, W. S. A. FILHO², O. C. BUENO³ & M. BOTTON¹

¹Laboratório de Entomologia, Embrapa Uva e Vinho, Rua Livramento, 515, CEP 95701-008 Bento Gonçalves, RS, Brazil, email: aline_quin@hotmail.com, ²Laboratório de Entomologia, Universidade de Caxias do Sul, Rua Alameda João Dal Sasso, 800, CEP 95705-266, Bento Gonçalves, RS, Brazil, ³Centro de Estudos de Insetos Sociais, Universidade Estadual Paulista, Avenida 24 A, 1515, CEP 13506-900, Rio Claro, SP, Brazil

The mutualistic relationship involving ants (Hymenoptera: Formicidae) and honeydew-producing insects is called trophobiosis, and is usually beneficial to both organisms, resulting in increase of both insects in a certain area. In this relationship, the hemipterans might receive protection against predators and parasitoids. Besides protecting them, ants can transport the hemipterans to new protected feeding places, as well as, clean and remove dead individuals. In viticulture, the vine mealybug *Planococcus ficus* (Signoret) (Hemiptera: Pseudococcidae) is one of the main species that cause damage to the crop, being recently identified in vineyards in the southern region of Brazil. In this region, *Linepithema micans* (Forel) is the main ant species associated with the dispersion of *Eurhizococcus brasiliensis* (Wille) (Hemiptera: Margarodidae). Due to the recent introduction of *P. ficus* and the frequency of *L. micans* in this region, the aim of this study was to evaluate the ecological interactions (dispersal and predation) between *P. ficus* and *L. micans*. For the evaluation of the dispersal of *P. ficus* by *L. micans*, in a greenhouse, two seedlings of 'Paulsen 1103 rootstock' (*Vitis berlandieri* x *Vitis rupestris*) were planted in pots and united by a fabric bridge. The treatments were: (1) plant infested by *P. ficus* adult females; and (2) plant infested by *P. ficus* adult females and *L. micans*. The evaluation was carried out by counting the number of mealybugs in all plants. In order to evaluate the predation of *P. ficus* by *L. micans*, two experiments were conducted in the laboratory. In the first, sprouted potatoes were infested by *P. ficus* ovisacs first instar nymphs and adult females and offered to ants in three different conditions: (1) *L. micans* fed with carbohydrates and proteins; (2) *L. micans* without other source of food; and (3) without ants. In the second, sprouted potatoes were infested with *P. ficus* first instar nymphs and offered in 2 treatments: (1) *L. micans* without any source of food; and (2) without ants. The evaluation in both experiments was carried out by counting the remaining mealybugs with and without ants. As a result, in the dispersal experiment the number of mealybugs in all plants was smaller in treatment with ants. In the predation experiment, the number of mealybugs in all conditions was smaller in treatment with ants. In conclusion, *L. micans* have not influenced *P. ficus* dispersal, however this species has an important role as a predator of *P. ficus* first instar nymphs. (CNPq, CAPES, FAPERGS).