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D3143: Development and emergence of *Cleruchoides noackae* (Hymenoptera: Mymaridae) in *Thaumastocoris peregrinus* (Hemiptera: Thaumastocoridae) eggs at different temperatures

Monday, September 26, 2016

09:00 AM - 05:00 PM

📍 *Convention Center - West Hall C*

Introduction: The bronze bug *Thaumastocoris peregrinus* is a serious pest of eucalyptus trees and the egg parasitoid *Cleruchoides noackae* (Hymenoptera: Mymaridae) is a potential agent of biological control for this insect. The effectiveness of the *C. noackae* as biocontrol agent is dependent of several factors, mainly its adaptation to the climatic conditions of the region where it will be released.

Methods: Thus, the aim of this study was to evaluate the development and parasitism of *C. noackae* on *T. peregrinus* eggs at 15, 18, 21, 24, 27 e 30°C, 60±10% RH and 12:12 h (D:L) photoperiod. Ten fresh eggs of *T. peregrinus* were offered to a parasitoid couple (12 hour old) in polystyrene vials for 24 hours at the proposed temperatures. The honey solution (50% honey/water) was used to feed the parasitoid adults.

Results/Conclusion: Temperature affected significantly the development time (egg – adult) and the emergence of *C. noackae*. The development was slower at 15°C (42 days) than at 27 and 30°C (14 and 15 days, respectively). Emergence (%) per treatment significantly differed between 15 and 21°C, being highest at 21°C (45.9%) and lowest at 15°C (17.6%). At the remaining temperatures (18, 24, 27 and 30°C) studied, emergences varied from 22 to 41% and were not significantly different. These results show *C. noackae* can adapt to almost all Brazilian regions where there are *Eucalyptus* plantations, being important to biological control program of *T. peregrinus*.

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