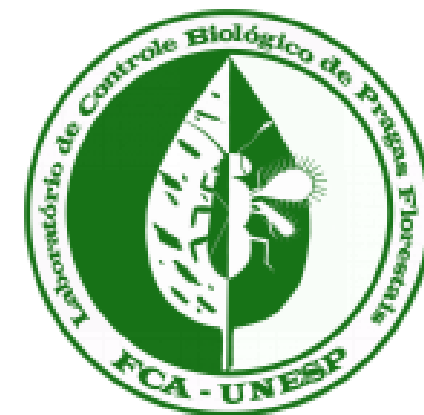


Effects of parasitism by *Tetrastichus howardi* (Hymenoptera: Eulophidae) on *Oxydia vesulia* caterpillars (Lepidoptera: Geometridae)



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Introduction and Aims

Adaptation of dietary habits of native lepidopteran species to eucalyptus plantations has become a treat to productivity in Brazil. Considered as a secondary pest, *Oxydia vesulia* (Lepidoptera: Geometridae) is frequently reported in eucalyptus plantations and associated with outbreaks and economic damages. New methods have been tested to control several lepidopterous-pests, such as *Tetrastichus howardi* (Hymenoptera: Eulophidae), a pupae endoparasitoid that have been reported as efficient for controlling caterpillars on major crops. Despite being a pupae parasitoid, its parasitism was tested in *O. vesulia* caterpillars.



Fig.1. *O. vesulia*, damages in *Eucalyptus* plantations by *O. vesulia* and *T. howardi*.

Material & Methods

Fourth instar caterpillars of *O. vesulia* from laboratory rearing were offered to 24 hours old *T. howardi*, in a density of 10 parasitoids per caterpillar. After the exposure, the caterpillars were transferred to pots with leaves of *Eucalyptus urophylla*, which was changed daily until the pupal stage and kept under controlled conditions (25±1°C, RH: 60±10% and photophase: 12 h).

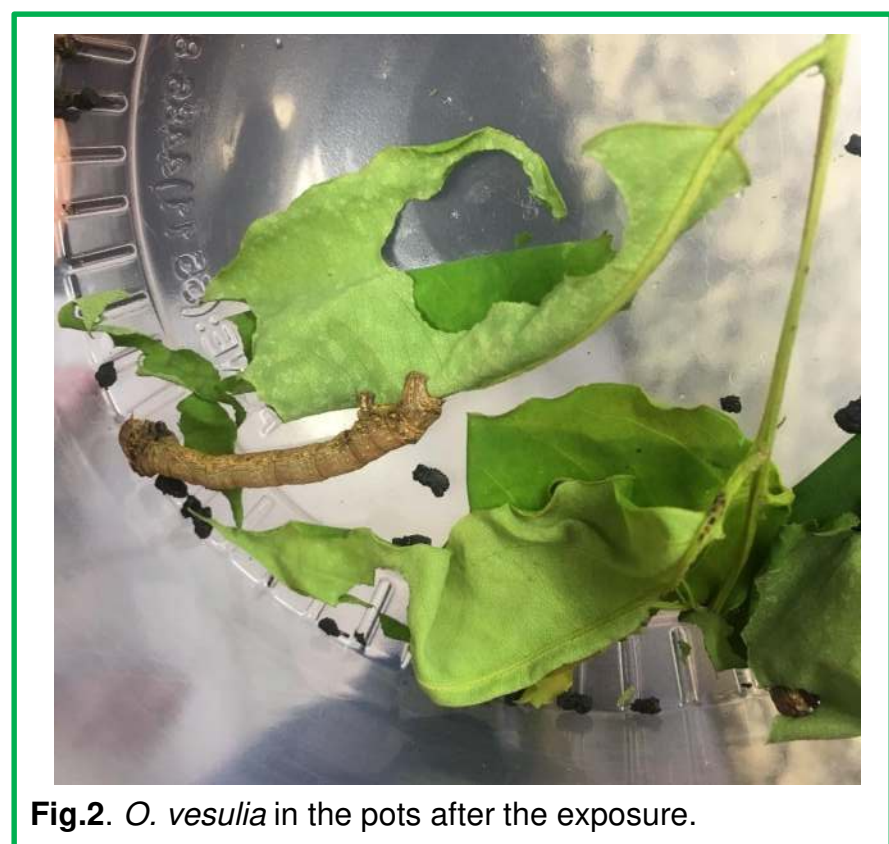


Fig.2. *O. vesulia* in the pots after the exposure.

Results & Discussion

T. howardi did not emerged from parasitized *O. vesulia* caterpillars, however positive results were found for pest control. A total of 40% of the caterpillars died before reaching the prepupal stage, other 40% reached the pupal stage and died due poor formation or problems at emergence and 20% survived. Although the parasitoid has not been able to complete its cycle in caterpillars, it shows itself as promising in controlling the pest in its most critical stage of occurrence.



Fig.3. Results of *O. vesulia* after the exposure to *T. howardi*.

Conclusions

Studies on the potential parasitism of *T. howardi* on *O. vesulia* in the field must be developed to verify the effectiveness of this parasitoid.