

Life table parameters of *Cephalonomia tarsalis* (Hymenoptera: Bethyridae) parasitizing the saw-toothed grain beetle *Oryzaphilus surinamensis* (Coleoptera : Silvanidae)

Eliopoulos, P.A.*¹, Hardy, I.C.W.², Kapranas, A.², Givropoulou, E.G.¹

¹Technological Educational Institute of Thessaly, Department of Agricultural Technologists, 41 110 Larissa, Greece

²University of Nottingham, School of Biosciences, LE12 5RD Sutton Bonington, UK

*Corresponding author, Email: eliopoulos@teilar.gr

#Presenting author, Email: eliopoulos@teilar.gr

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Abstract

The reproductive performance of the larval parasitoid *Cephalonomia tarsalis* (Ashmead) (Hymenoptera: Bethyridae) against its host *Oryzaphilus surinamensis* (L.) (Coleoptera: Silvanidae) was studied in the laboratory. The analysis was based on the comparison of parasitoids' life table parameters related to those of their host. The estimated parameters were the intrinsic rate of natural increase (r_m), the net reproductive rate (R_0), mean generation time (G), the finite capacity of increase (\ddot{e}), the gross reproductive rate (GRR), the doubling time (DT), the reproductive value (V_x) and the life expectancy (ex). In all cases the wasp was supplied with excess of hosts (grown larvae of *O. surinamensis*). The parasitoid demonstrated higher r_m values compared with its host. The findings of the present study are discussed on the basis of improving *C. tarsalis* performance as a biological control agent and improving mass rearing programs and inoculative release applications against *O. surinamensis*. The present study is a part of the research project "Development of modern and novel methods of Integrated Pest Management against stored products pests" and has been co-financed by the European Union (European Social Fund - ESF) and Greek national funds through the Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: ARCHIMEDES III. Investing in knowledge society through the European Social Fund.

Keywords: *Cephalonomia tarsalis*, *Oryzaphilus surinamensis*, life tables, biological control, stored products