

CONGRESSO IBÉRICO DE
ENTOMOLOGIA

“OS INSETOS E O HOMEM”

LIVRO DE
RESUMOS



A realização do XIX Congresso Ibérico de Entomologia “OS INSETOS E O HOMEM” foi possível graças à generosa contribuição das seguintes entidades:



ORGANIZADORES



Local and landscape effects on the *Eucalyptus* weevil

Ricardo S. Ceia ⁽¹⁾; Nuno Faria ^(1,2); Pedro B. Lopes ⁽¹⁾; Joana Alves ⁽¹⁾; António Alves da Silva ⁽¹⁾; Carlos Valente ⁽³⁾; Catarina I. Gonçalves ⁽³⁾; Vanessa A. Mata ⁽⁴⁾; Sónia A. P. Santos ⁽⁵⁾; Henrique M. V. S. Azevedo-Pereira ⁽¹⁾; José P. Sousa ⁽¹⁾; Luís P. da Silva ^(1,4)

1 - Centre for Functional Ecology – Science for People & the Planet, of Life Sciences, Portugal; 2 - InnovPlantProtect Collaborative Laboratory, Portugal; 3 - RAIZ – Forest and Paper Research Institute, Portugal; 4 - CIBIO-InBIO, Research Centre in Biodiversity and Genetic Resources, University of Porto, Portugal; 5 - Barreiro School of Technology, Polytechnic Institute of Setúbal, Portugal

The weevil *Gonipterus* *platensis* is among the most important eucalypt (*Eucalyptus* spp.) pest species worldwide. In Portugal, weevil-induced damage has great economic significance and efforts are being taken to find adequate alternatives to the biological control of this defoliator by its parasitoid *Anaphes nitens*, which is ineffective at altitudes above 400 m. With the aim of improving current knowledge on the ecology of *G. platensis*, we evaluated its interactions with local and landscape factors through the application of generalized linear mixed models for (1) the probability of weevil occurrence in sampling points, and (2) the relative abundance of each of its two annual generations on eucalypt trees. Our models confirmed the significant positive effect of elevation, here found to come off just above 360 m a.s.l., on both the occurrence and the abundance of *G. platensis*. Moreover, our results denoted that stand-level variables can likewise affect this pest, with points located more than 400 m deep into the stands and, less significantly, those comprising smaller (yet mature) eucalypt trees, showing an increased probability of *G. platensis* occurrence. Concordantly, significantly higher abundances of both weevil generations were observed on 3–8 years-old eucalypt trees. In addition, there was a negative effect of coppiced stands on *G. platensis* abundance which was only significant for the first annual generation and is probably related with weevil's recent colonization of stands ravaged by wildfires which were coppiced two years before our field surveys. Weevil populations were not influenced by the density of stand canopy and the presence of other tree species, neither by understory structure and composition, nor by bare soil cover, hence it is not expected that thinning, shrub removal and soil scarification practices can affect *G. platensis* attacks in eucalypt stands.

Palavras chave: Bivoltine species; Defoliation; *Eucalyptus globulus*; Forest stands; Pest