

# Edge Effect and Biodiversity of Scolytinae and Platypodinae (Coleoptera, Curculionidae) in a Mixed Ombrophilous Forest Fragment in Southern Brazil

Ester Foelkel<sup>1</sup>, Eduardo C. Brugnara<sup>2</sup>, Alexandre M. Pellicoli<sup>3</sup>, Sérgio L. Luchese<sup>4</sup>, Silvia Y. Tanabe<sup>5</sup>, Carlos A.H. Flechtmann<sup>6</sup>

<sup>1</sup>UFPR, Setor de Ciências Agrárias, R. dos Funcionários 1540, 800350-050 - Curitiba/PR, Brazil, ester.foelkel@eucalyptus.com.br

<sup>2</sup>EPAGRI, Centro de Pesquisa para Agricultura Familiar, CP 791, 89801-970 - Chapecó/SC, edubrugnara@ibest.com.br

<sup>3</sup>UNOESC, R. Getúlio Vargas 2125, 89600-000 - Joaçaba/SC, ampellicoli@yahoo.com.br

<sup>4</sup>UNOESC, R. Getúlio Vargas 2125, 89600-000 - Joaçaba/SC, spluchese@hotmail.com

<sup>5</sup>Department of Plant Protection, FEIS/UNESP, Av. Brasil 56, 15385-000 - Ilha Solteira/SP, Brazil, siltanabe@gmail.com

<sup>6</sup>Department of Plant Protection, FEIS/UNESP, Av. Brasil 56, 15385-000 - Ilha Solteira/SP, Brazil, flechtma@bio.feis.unesp.br

Forest fragments are the predominant form of forest habitats in southern Brazil. Ultimately, these areas respond for large part of the conservation of various species of fauna and flora. One factor that chiefly affects the biodiversity of a fragment is the edge effect, at the expense of interior areas. Scolytinae beetles (Curculionidae) are an important group of forest insects, and might be indicators of disturbance. We are interested in evaluating the biodiversity of these species in a forest fragment in southern Brazil, while using them to estimate the edge effect in the fragment. We are using 95% ethanol-biased flight intercept traps in a 14-ha well preserved mixed ombrophilous forest fragment (27°00'31"S 51°30'56"W) in Água Doce, state of Santa Catarina, Brazil, to collect this beetle groups. Traps are disposed in a single 240-m long transect, spaced 20 m apart, extending from the edge to the center of the fragment. Collections are biweekly, and started in August 2011; partial results here presented correspond to 4 months of trapping. A total of 42 Scolytinae species were trapped, in the genera *Ambrosiodmus*, *Amphicranus*, *Bothrosternus*, *Cnesinus*, *Coccotrypes*, *Corthylus*, *Cryptocarenum*, *Hylocurus*, *Hypothenemus*, *Microcorthylus*, *Monarthrum*, *Scolytus*, *Pityophthorus*, *Xyleborus*, *Xyleborinus* and *Xylosandrus*. Platypodinae were represented by 4 species, in the genera *Euplatypus* and *Teloplatus*. It is striking the low abundance of *Cryptocarenum* and *Hypothenemus* specimens (less than 1% total); species in these genera are abundant mostly in disturbed environments. *Scolytus* beetles on the other hand, common mostly in well preserved areas, were frequent. Members of Xyleborina, usually abundant in southern Brazil, were trapped in low numbers, while Corthylina beetles predominated. Results are preliminary, but they suggest that the border effect is not larger than 20 m; *Microcorthylus quadridens* and *Hylocurus dimorphus* stood out as with a clear interior species behavior.

**Keywords:** flight intercept trap; ambrosia beetles; ethanol.