

## **Controlling Ambrosia Beetle (Curculionidae, Scolytinae and Platypodinae) Attacks in Rubber Trees (*Hevea brasiliensis*) in São Paulo Northwest, Brazil**

**Lucas T. Trombeta<sup>1</sup>, Heitor D. Silva<sup>1</sup>, Jean C.P. Silva<sup>1</sup>, Carlos A.H. Flechtmann<sup>2</sup>**

<sup>1</sup>FEIS/UNESP, Av. Brasil 56, 15385-000 Ilha Solteira/SP. <sup>2</sup>FEIS/UNESP, Av. Brasil 56, 15385-000 Ilha Solteira/SP. Email: flechtma@bio.feis.unesp.br

Southern Brazil, mainly the northwestern region of the state São Paulo, has the largest plantations of rubber trees, *Hevea brasiliensis*. This tree is considered to oppose a formidable resistance to boring beetles, due to its characteristic latex exudation when their vessels are cut. Surprisingly though, in the last five years the number of reports of trees killed by ambrosia beetles (Scolytinae and Platypodinae) increased dramatically. Beetles show the ability of killing from young to mature trees, associated or not with phytopathogenic fungi, such as *Ceratocystis*, *Fusarium*, *Colletotrichum* and *Lasodiopodia*. In October 2012 we visited a plantation where large number of trees were being killed by an association of fungi and beetles (F&B) in Sud Mennucci (São Paulo). One stand had 2,054 clones PB235 and GT1 trees, 16-yr old and homogeneous in crown formation; of those, 180 trees (9%) were killed by F&B. The other and nearby stand had 9,439 clones RRIM600 and PB235 trees, 21-yr old, and with many dominated trees; 1,067 trees (11%) were killed by F&B. Our recommendation was to cut, remove and burn those trees, which was done in March 2013. Afterwards, we deployed five ethanol-baited flight intercept traps in each stand, and monitored both with weekly trappings for one year (April 2013 to May 2014), to verify the efficacy of the recommended control measure, in addition to frequent visual inspections to trees. We trapped 32 species of Scolytinae, in the genera *Ambrosiodmus*, *Cnesinus*, *Coptoborus*, *Cryptocarenum*, *Dryocoetoides*, *Hypothenemus*, *Premnobius*, *Pseudochramesus*, *Theoborus*, *Xyleborinus*, *Xyleborus* and *Xylosandrus*, and another three species in Platypodinae, genera *Euplatypus* and *Tesserocerus*. The great majority of the trapped species were secondary, not able to attack live/healthy trees, while aggressive species were trapped in very low numbers, and no trees were killed. This clearly showed that the "slash-and-burn" technique was efficient in controlling the beetles.

**Keywords:** primary species, secondary species, slash-and-burn