

Vertical Stratification of Scolytinae and Platypodinae (Coleoptera: Curculionidae) in an Atlantic Forest-Cerrado Transition Area in Southern Brazil

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Scolytinae and Platypodinae beetles (Curculionidae) typically develop in tree and shrub hosts, and several of their species constitute very important forest pests. It is assumed these beetles fly about the height where they find suitable host plant structures. In order to avoid competition over food sources within their guild, the strategy some species use is to fly at various heights. We test here the hypothesis whether these beetles use this strategy in a tropical latifoliated semideciduous fragment in transition with cerrado. The fragment is in an advanced stage of regeneration, ca. 30-ha wide, and situated in Selvíria, state of Mato Grosso do Sul (20°23'01.35"S 51°24'42.36"W). We placed four sets of ethanol-baited flight intercept traps at ground level (0 m), 2-, 4- and 6-m above ground, the latter just below the average tree canopy height; collecting frequency is weekly. Results are based on the period from July 2013 to May 2014. In all, 52 Scolytinae and five Platypodinae species were trapped, in addition to seven Bostrichidae species. In Scolytinae, *Ambrosiodmus opimus* and *Xylosandrus laticeps* were significantly more trapped in 6-m traps, *Cryptocarenum diadematus*, *Hypothenemus crudiae* and *Hypothenemus javanus* in intermediate heights (2- and 4 m), while *Premnobius cavipennis*, *Xyleborus affinis*, *Xyleborus ferrugineus* and *Xyleborus spinulosus* were more trapped in 0 m traps. *Cryptocarenum heveae* and *Cryptocarenum seriatus* were trapped in similar numbers in all trap heights. Bostrichidae usually develop in dry/dead branches, and the three analyzed species, *Micrapate horni*, *Xylopsocus capucinus* and *Xyloperthella picea*, were significantly more trapped in above-ground traps, apparently avoiding flying close to the ground. This pattern was also observed in *Euplatypus parallelus* (Platypodinae). These results indicate that most of the studied species showed a stratificated pattern of flight, which might be an evidence for an attempt to mitigate food competition.

Keywords: ambrosia beetles, Bostrichidae, flight intercept trap