D3839 Vertical stratification of bark and ambrosia beetles (Curculionidae: Scolytinae and Platypodinae) in two cerrado fragments in southern Brazil

Friday, September 30, 2016
West Hall C (Convention Center)

***Fábio Leonel** , Plant Protection, Universidade Estadual Paulista, Ilha Solteira, Brazil*
Silvia Tanabe , Plant Protection, Universidade Estadual Paulista, Ilha Solteira, Brazil
Carlos Flechtmann , Plant Protection, Universidade Estadual Paulista, Ilha Solteira, Brazil

Several insect species tend to fly at heights where they find their food resources. Food competition might be reduced by flying at different heights. Our objective was to ascertain if bark and ambrosia beetles would show a vertical flight stratification, and if this is influenced by the forest canopy height.
We used two sites, a cerradão fragment in advanced stage or regeneration and bottom canopy limit at 6m height (CE1), and a cerradão fragment 5 km away and canopy height at 8m (CE2) in Selvíria, state of Mato Grosso do Sul. We used 95% ethanol-baited FITs in weekly trappings, from July 2013 to July 2014 (CE1), and from April 2014 to July 2015 (CE2).

Fifty-four species were trapped in CE1, and 63 in CE2. The number of species trapped in each height was similar, averaging roughly above 30 in both sites. For those species who showed statistically significant abundance differences in flight height, they could be divided into two groups. One group congregated species that showed an invariable flight pattern in both sites. *Hypothenemus eruditus*, *Xyleborus affinis*, *Xyleborus ferrugineus* and *Xyleborus spinulosus* were more caught at ground level traps, while *Ambrosiodmus opimus* and *Cnestus laticeps* at the highest traps. The other group encompassed species that varied their flight pattern; *Hypothenemus obscurus* was more trapped at 4m traps in CE1 but at 0m in CE2, while *Premnobius cavipennis* was more trapped at 0-2m in CE1 and at 2-4m in CE2. Shannon diversity was highest 2m below forest canopy.

doi: 10.1603/ICE.2016.112881