METHODOLOGIES EFFECTIVENESS TO SAMPLE BEES IN A CROP SYSTEM AT THE AMAZON FOREST

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Amazon forest shelters 10% of all known worldwide biodiversity although remain poorly known to many groups, such as bees, especially due the difficulty of sampling in forested areas as flowers are basically on the high canopy. Crop systems close to natural areas generate open and mosaic areas at landscape that could facilitate bee sampling during the crop blooming period. Here we use complementary sampling methods to collected bees in Amazon at different distance points in guarana crops. Six sampling points were established, two in the interior of guarana crops, two in their edges and two in the adjacent forest, each point had one *Malaise* and four pantraps. Samplings were held for four entire days, from September 2012 to February 2013, every fifteen days. A total of 2040 bees belonging to 120 species in 05 families were collected. More than 98% (119 species) were collected with malaise and less than 10% (24 species) with pantraps. Apidae was the most abundant family (75 species), followed by Halictidae (36 species), Megachilidae (6), Colletidae (2) and Andrenidae (1). Most abundant genera were *Aparatrigona*, *Exomalopsis* and *Augochloropsis*. This sampling effort collected approximately 23% from the bee diversity present at INPA bee collection, and thus seems an interesting method to sample biodiversity and improve crop research. Traps close to adjacent forest result in a lower abundance (6% in total). Although malaise traps were more efficient and generated a higher sampling effort, as already reported in other studies, we observed different patterns when analyzing distance related to each trap. Bee diversity in *Malaise* traps was higher close to field edges (45%) and in pantraps the same for crop and adjacent forest (37% each). Concomitant use of traps thus should evidence different ecological patterns and in this manner should be used for bees' inventories in region.

Keywords: survey; biodiversity; Apidae; traps