

Structure of arboreal component of areas in process of restoration of different ages compared to reference ecosystem

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Workshop Information

I Workshop of Plant Biology (I Workshop de Biologia Vegetal) was held in the Bioscience Institute – UNESP, campus of Rio Claro, Brazil, during August 20 and 21, 2012. Workshop was a scientific event organized by Post-graduate students from that Institute aiming to integrate Post-graduate and Graduate students from different areas related to Plant Biology (Anatomy, Ecology, Evolution, Morphology, Physiology, and transitional areas) from different Universities. Workshop Organization offered a large number of speaking activities, scientific discussions, and extra short-courses to improve the knowledge and formation of students in Plant Biology.

Scientific Committee

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Increasing ecosystems degradation leads to the need of innumerable efforts of recovery. Restoration ecology is a growing field of science that finds support on theoretical ecology. The choice of adequate ecological indicators is, therefore, an essential step to evaluate the development of areas in process of restoration. Vegetation is a good indicator, as it permits usage of simple execution methods and it presents fast response to biotic and abiotic environmental conditions. This study consisted on evaluating vegetation of areas in process of restoration of different ages. Forests planted 8 and 12 years ago were analyzed, as well as a native forest fragment, all of them in Araras-SP, Brazil. In each area, 30 plots of 100 m² were chosen, all arbustive and arboreal individuals that had PBH ≥ 10 cm within the plots were registered, identified and had their height estimated. Our aim was to feature vegetation of areas in process of restoration and to compare their physiognomy with the ones of native forests. In our preliminar results, we obtained densities of 1,100, 1,486 and 1,800 ind ha⁻¹ in the areas of 8, 12 years and native forest, respectively. The values of dominance achieved were 31.4, 21.5 and 22.23 m² ha⁻¹, for the areas of 8, 12 years and

native forest, respectively. Kruskal-Wallis statistical analysis (KW=30.4, p=0.0002401) showed significant difference among densities, as well as ANOVA (F=6.82, p=0.0017) did for the dominance. The lowest tree density, obtained in the eight-year area, may be due to planted individuals not having achieved minimal diameter for inclusion, while the higher dominance reflects the choice of fast-growing species. The only parameter that did not show the actual condition of areas in process of restoration was structure. Thus, we suggest performing other analyses that also include composition.