

**PATCHY MOSAICS OF *CALATHEA COMMUNIS* WAND & S. VIEIRA
(MARANTACEAE) AND NATURAL REGENERATION IN ATLANTIC
FOREST - CARLOS BOTELHO STATE PARK, SP, BRAZIL**

Theme: Biodiversity conservation indicators

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The present study was conducted in the Atlantic Montane Rain Forest at south-eastern region of São Paulo (Brazil), in the Carlos Botelho State Park (24°20' S, 47°44' W), a reserve with an area of 37,645 ha that has one of the most preserved remains Atlantic Forest in Brazil, with an average annual rainfall of 1683mm and a mean monthly temperature varying from 14.5° to 22.4°C. The aim of this study was to evaluate the natural regeneration inside and outside *Calathea communis* Wand & S. Vieira (Marantaceae) coverage, as well as to verify the effect of topography on seedling and sapling abundance and diversity. We tested the hypothesis that the micro-site occupation by *C. communis* affects qualitatively and quantitatively the regeneration composition. Each one of six transects (with about 1 km of extension) was divided into 20 sections of 50m and 120 plots (1x1m) were randomly assigned to show the regeneration. Thirty plots had involved micro-sites with *C. communis* in environment of hillside, and 30 in valley. The same was done for the areas without *C. communis* (60 plots). All the plants of 10cm to 150cm in height were sampled. For the analysis of habitat structure it was considered luminosity, declivity, canopy coverage and percentage of *C. communis* cover. Although *C. communis* patchiness and the topography have shown a significant interference on the abundance of seedlings and saplings, indicated by a Two Way Anova and using the Tukey's test, regeneration as a whole is much more sensible to the condition of presence and absence of *C. communis* ($p < 0.001$), than to the topographical variations ($p < 0.05$). The greatest differences in the values of diversity (H' ; nits/individual) have occurred between plots with presence and absence of *C. communis* ($p < 0.001$), with a smaller interference of hillside and valley environments ($p < 0.05$). Using a cluster analysis (dissimilarity of Gower; UPGMA), and considering parameters of habitat structure, species number and density of regenerants, two main groups were formed in a level of dissimilarity of 40%, separating plots with and without *C. communis*. The evidences, once more, corroborate that the presence of this specie interferes on the natural regeneration pattern, whereas topographical variations have a secondary effect on the distribution of the young individuals.