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# FLORISTIC DISTRIBUTIONAL PATTERNS IN A DIVERSE ECOTONAL AREA IN SOUTH AMERICA

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The Paraguayan territory and region, in centre of South America, is a huge transition area with a succession of various vegetation types. However, this area has received little attention from the researchers, having few published works about their flora and its delimitations. In the present study, we aimed to identify the most important environmental driving forces and delimit floristic patterns in this region, since understand the forces that drives the floristic variations in this ecotonal region can help us to understand the distribution of vegetation not only in this region but throughout South America. For this, we obtained 1,234 tree species occurrence records, 205 geographic coordinates and 23 environmental variables and altitude from the 'NeoTropTree' database and verified the influence and contribution of environmental factors through variance partition. We tested the floristic consistency of the different vegetation types using dendrogram, indicator species analysis and ordination analysis. We also constructed multiple linear models to check the correlation between species distribution and environmental variables. We found eight consistent vegetation types. The spatial variables coupled with environmental variables were more important than individual environmental or spatial variables. Among the environmental variables, the aridity index was the most important one. Despite the importance of spatial factors, due to environmental heterogeneity, we found a gradient related to climate and edaphic variables related to tree flora. Our study also confirms that the Paraguayan territory and region can be considered a diversified and important ecotone area in South America with respect to tree flora.

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