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Influence of toposequence and Marantaceae cover on the spatial distribution of *Guarea cedrata* (A. Chev.) Pellegr. and *Guarea thompsonii* Sprague & Hutch. in the central basin forests around Kisangani (Tshopo, DR Congo)

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ABSTRACT

A study on the influence of toposequence and Marantaceae on the distribution of two species of the genus *Guarea* was carried out in the forest massif around Kisangani, in the Tshopo province, in DR Congo.

Objective: The general objective of this study is to characterize the spatial distribution of individuals of two *Guarea* species in relation to toposequence and Marantaceae.

Methodology and results: For this study, two sites of 200 ha each were installed, one in the Yangambi Biosphere Reserve between 0° 38' and 1° 10' N, 24° 16' and 25° 08' E, and the other in the Yoko Forest Reserve between 0° 15' and 0° 20' N, 25° 14' and 25° 20' E. Within two devices, all individuals of two *Guarea* species were measured at 1.30 m above the ground and positioned by x, and y coordinates. After the inventory and data analysis, the population density of the two species was higher in Yangambi than in Yoko and the same was true for basal area values. The spatial distribution of individuals of two species is aggregated in Yoko. While the distribution is significantly random for *G. cedrata*, it is weakly aggregated for *G. thompsonii* in Yangambi.

Conclusion and applications of results: This heterogeneous distribution of two species can be related to the topography of the land as well as to the presence and/or absence of Marantaceae. As for the soil texture, both reserves have sandy-clay soils, characteristic of the soils of the forest massifs of the Kisangani region and its surroundings.

Keywords: Spatial distribution, Yangambi, Yoko, DR Congo