Comparative evaluation of floristic composition of riparian forest and adjacent upland vegetation in a Nigeria rainforest.

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Abstract: The floristic composition and structural diversity of a riparian forest and its adjacent upland vegetation (secondary forest) were studied with a view to comparatively examine the species composition and diversity of the two sites. Three contiguous 20 m x 20 m plots were systematically established in each of the two distinct sites located within a Nigeria rainforest. All trees with a diameter at breast height (DBH) greater than 10 cm were enumerated, measured and identified to species level. A total of 231 woody stems which comprised 23 families, 35 general and 37 species were encountered in the riparian forest while 270 woody stems comprising 26 families, 36 genera and 40 species were encountered in the adjacent upland vegetation. Euphorbiaceae and Apocynaceae were the most dominant families in the riparian forest while Apocynaceae is the most dominant in the adjacent upland vegetation. Shanon-Wierner index (H’) showed a higher value for adjacent (2.71) as compared to riparian forest (2.43) indicating a higher diversity of woody species in upland vegetation than riparian forest. Species evenness was quantitively higher in upland vegetation (0.72) than in riparian forest (0.67). Sorensen index of similarity also revealed that there was low similarity in the standing vegetation of the two study sites which could be attributed to differences in edaphic, topography and physiognomy of the sites. Both forest types have been disturbed and will require management intervention to improve and conserve their plant species diversity especially the riparian forest.