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Macrofungi diversity in a National Botanical Garden in Southern Côte d'Ivoire

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ABSTRACT

Objective: Macrofungi are essential to the structure, functioning and dynamics of ecosystems. In Côte d'Ivoire, studies on macrofungi and the impact of habitats in "Centre National de Floristique (CNF)" on macrofungi diversity are little explored. This study aims to assess macrofungi diversity found in some habitats in the botanical garden.

Methodology and results: A mycological inventory was carried out in three habitat types that differ in the level of anthropisation. The surveys were conducted from 2016 to 2018 during rainy seasons, from May- July and October- November and sporophores of 151 morpho-species were collected. They belonged to 5 classes, 12 orders, 26 families and 33 genera. The most abundant species belonging to the Agaricaceae (19.87%) followed by Marasmiaceae (10.60%) and Polyporaceae (9.27%) families. The dominant ecological groups were saprotrophic fungi (82.00%). Specific richness was more important in the least visited habitat with 70 species inventoried, followed by the non-visited and the most visited habitat with 54 and 50 species respectively.

Conclusion and application of results: This first investigation on macrofungi showed that CNF is rich in saprotrophic fungi belonging at the Agaricaceae, Marasmiaceae and Polyporaceae family. These saprotrophic fungi have the ecological importance in the forest ecosystem management and conservation.

Ours finding constitute a database for the future studies on the mycoflora of the botanical garden. These initial data show the importance of botanical garden in the conservation and biodiversity of mycological resources.

Keywords: Macrofungi, Diversity, Botanical garden, *Centre National de Floristique* (CNF), Côte d'Ivoire