

Review of: "Ecological diversity, structure and exploitation of rattan stands according to a disturbance gradient around the Nkoltang forest, Estuary province of Gabon"

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Potential competing interests: No potential competing interests to declare.

The introduction provides a comprehensive overview of the significance of rattan palms, particularly in Southeast Asia and Central Africa. Effectively establishes the context for the study, emphasizing the ecological importance of rattan species and their vulnerability to exploitation. The introduction is informative but slightly lengthy. Thus, consider condensing some information while maintaining the essential details to keep the reader's interest.

The presentation of the study area is well-detailed and provides essential information about the geographic and climatic conditions of the Nkoltang region. The choice of study sites is rationalized effectively based on different levels of environmental disturbance. The data collection methodology is comprehensive, outlining the sampling process and detailing the methods for identifying and quantifying rattan stands. The subsequent section on data analysis and processing is clear, describing the tools and tests used. Here are some specific comments:

The results section is well-organized, and the use of subheadings facilitates clarity. However, consider using clearer transitions between subsections to enhance the flow of information.

While statistical tests are mentioned, the specific tests conducted are not detailed. Consider providing more information about the statistical methods employed, including the rationale for choosing particular tests and the significance levels.

Results are presented in a clear and concise manner. However, consider using more descriptive language to elaborate on key findings. For example, discuss the ecological implications of observed patterns and the potential impact on rattan populations.

While the results are informative, consider adding more context or explanations for certain observations. For instance, discuss why certain species are more abundant in specific environments or the potential ecological significance of the observed regeneration patterns.

It is positive that non-significant results are reported, but consider briefly discussing the implications of these findings. For instance, the lack of significant differences in rattan stem abundances may have ecological or management implications that could be briefly explored.

The section on regeneration patterns is informative, but additional context on why certain species exhibit better

regeneration rates in specific environments would enhance the depth of the discussion.

The discussion section provides a detailed analysis of the study's findings, covering the distribution, abundance, exploitation pressure, regeneration, and vegetative state of rattan stands in peri-urban areas in Gabon. Although the discussion is generally well-organized, consider breaking them down into smaller sections to enhance readability and facilitate the digestion of information.

The application of ecological niche theory to explain the distribution of rattan species is insightful. However, expand on how these findings contribute to our understanding of rattan ecology and the implications for conservation or management strategies.

The discussion on the vegetative state and regeneration provides valuable insights. Clarify how the stability in the age structure of rattan stands, as indicated by the ratio of young to adult plants, contributes to the sustainability of rattan populations. Relate this to the concept of sustainable harvesting.

The application of Connell's intermediate disturbance hypothesis is well-integrated into the discussion of regeneration. Elaborate on how this hypothesis helps interpret the findings and discuss its relevance to the sustainable management of rattan stands.

The analysis of cutting pressure in relation to disturbance levels is interesting. However, discuss the ecological implications of decreasing cutting pressure with increasing disturbance and how this relates to the long-term sustainability of rattan exploitation in the study area.

Emphasize the ecological acceptability of rattan exploitation in the N'Koltang area based on the study's findings. Discuss how the observed abundance, regeneration, and cutting pressure contribute to the overall sustainability of rattan harvesting practices.

Strengthen the connection between the study's findings and their potential application in management policies. Clearly articulate how the results can be utilized by authorities for sustainable rattan resource management in Gabon.

The conclusion is concise and provides a clear overview of the study's main outcomes. Avoid repetition of phrases such as "This study allowed us to" for a more varied and engaging writing style.

The summary of findings related to abundance distribution, exploitation pressure, regeneration, and the vegetative state is well-presented. Emphasize the most significant and novel findings to leave a lasting impression on the reader.

Conclude by highlighting avenues for future research. Identify specific gaps in knowledge or areas where additional studies could build upon the current findings, contributing to a more comprehensive understanding of rattan ecology and management.