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.

I am delighted to see a study on rattans in Gabon, a topic that has received far too little attention. I am also impressed that the authors surveyed rattans in nine 1 ha plots, which is a major accomplishment. The data they collected are valuable, and I believe that when published in a somewhat shortened and clarified manner, the study will receive substantial attention. I do have some suggestions. Note that it would be much easier to provide suggestions if the lines were consecutively numbered.

1. I recommend shortening the manuscript by about 50% by:

a. Removing the long review of rattan studies in Asia. This is a study on rattans in Africa. Perhaps a sentence or two about how much they've been studied in Asia, but not much more. This will eliminate about 2 pages from the draft. Remember that the purpose of the Introduction is to motivate each aspect of the study. There should therefore be something about the deaths of rattan stems and how rattans react to disturbances.
b. Refrain from repeating in the text numbers that appear in tables. The tables are great---use the text to highlight the major findings without burdening it with numbers. This too will serve to substantially reduce the length of the manuscript—think "smart brevity" and note that shorter papers that do not include unnecessary information or redundancies are much more likely to be read and cited.
c. Reducing by 90% the section of the discussion about Connell's 'intermediate disturbance hypothesis' for which this study has little to offer that is convincing or new.

1. For those of us not familiar with Gabon's rattans, include a table in which the principal features of all the species are described. For example, are they all cluster forming? Stem diameters (under the leaf sheaths) can be obtained even from herbarium collections, but this is important information. Also note which species are preferred for artisanal use.
2. What was the minimum size of rattan that was surveyed? I ask because young palm seedlings with a single strap leaf are notoriously difficult to identify to species (for me at least) and can be VERY numerous.
3. Provide the elevation of the study sites.
4. On my page 5 the vegetation is described as anthropogenic—not sure what that means. Are all sites post agricultural? In the 'mature' forest really mature? I question because Musanga is noted as common. For the 'moderately disturbed site', instead of 'more than 11 years old' give an age range---12 is more than 11 but so is 112. In the 'highly disturbed'

forest, saying that it is ‘about 4 years before the crops are replanted’ is confusing and not informative.

5. Page 6: ‘re-ironing”????
6. Some terms need clarification. What are ‘buds’? What are ‘pods’? What are ‘suckers’? What is the ‘skin’ of a rattan stem? What are rattan ‘twigs’?
7. I don’t understand the entire issue of dry or green stems. In the rattans I know, the spiny leaf sheaths are initially green but turn brown and persist on the stem, which can be green or not. If you are seeing lots of dead stems, what is killing them and do they all occur in the same clone/cluster/genet/clump? I am assuming that these rattans are all clump forming, but could be wrong. In the discussion there’s a section about the ‘skin drying out’---does that mean the leaf sheath or the epidermis of the stem?
8. When you say ‘stems’ do you mean ramets or genets? In other words, how do you deal with a clump with many stems? Count them individually?
9. When giving the number of stems per habitat, I think it should be means (N= 3) per habitat, not the overall number in all three hectares in a habitat type.
10. Was there preferential harvesting among species? Saying how many were harvested isn’t informative because there is no way of judging from that information the proportion that was taken. I can imagine a 2 (harvested or not) by 7 (species) chi-squared test of preference. Similarly, Table 2 could be modified to include the total numbers of stems and the chi-squared test for the sites where rattans are harvested.
11. Do farmers kill rattans when they clear forest to plant crops?

I hope these suggestions prove useful in revising what I believe can be an important contribution.