



SDI Review Form 1.6

Journal Name:	Journal of Agriculture and Ecology Research International
Manuscript Number:	Ms_JAERI_30953
Title of the Manuscript:	Effect of Environmental factors on the frequency and density of three functional groups of woody species in Ghana
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Comments The authors focus on the effects of environmental factors on the frequency and density of woody species in a Ghanaian forest. The study is of interest to the journal. However, I have made comments outlined in two sections; the general comments section stating important areas requiring major revisiting and specific/minor section pointing to areas needing minor corrections. GENERAL COMMENTS Abstract: Comment 1: There are no conclusions on the effect of environmental factors on woody species. The abstract should be wholesome such that a reader can get a brief of what the study is all about. Introduction Comment 2: Page 1 line 25 seems to contradict with the previous statement, e.g. the authors first state in line 23 that in the forests in the tropics have higher tree species or diversity, but then go on to say that 'many species are rare and occur at low density.' Review this statement and remove contradictions. Comment 3: It would be interesting to base the study on some theoretical framework so that it can be more solid. Comment 4: In line 48, no assumptions have been suggested, e.g. by posing a question, 'Do functional groups differ in the proportion of species that can be classified as rare?' do authors assume that species composition is the same in the three functional groups? If so	We appreciated the reviewers' for the insightful and constructive comments. The comments were relevant and important to improve our manuscript. Hence, we provided responses accordingly (below). All corrected parts are highlighted in yellow color. Response 1: This comment is accepted and corrected accordingly. Please see page 1, line 25-27, in the revised manuscript. Response 2: This comment is accepted and corrected accordingly. Please see page 2, in the introduction part.



SDI Review Form 1.6

	then this assumption should be included and its validity stated. Methods Comment 5: Under study area line 58, the authors make mention of seven main forest types, but names 5 types only. Comment 6: Can the resolution for Fig 1 on page 2 be enlarged to be readable. Comment 7: Page 3 Data sources: perhaps this is data sources and collection, but the data collection methods are not coming out clearly, e.g. what did the authors do to collect data? It would appear they relied on historical sources, but then line 76 there is mention of the 'nested design' where 2205 plots were established. Authors should simply state clearly how many methods were used and for what. The nested design should also be described in detail to allow for replication of the study. Comment 8: On line 85 the authors state that 'Threshold density <1 individual/ha, were considered to be rare for this study.' Where did they get this, e.g. is this a new threshold measure? If not they should make reference to a source for the threshold(s) to be more credible. Comment 9: Figure 2 is difficult to read and yet it is supposed to show the data collection design. Comment 10: Some vegetation attributes like DBH were collected, but not analysed. What could be the reasons behind that? Comment 11: The use of multiple regression analysis needs to be justified, currently it's not clear why this analysis was used, e.g. what trends needed to be identified? Results Comment 12: Line 115 there are results from an ANOVA test, but this test is not included in the data analysis section and one wonders	Response 3: This comment is accepted and corrected accordingly. Please see page 2, the introduction section. Response 4: This comment is accepted and corrected accordingly. please see page 3, line 68-70, in the revised manuscript . Response 5: This comment is accepted and corrected accordingly. Please see page 3, line 78-79, in the revised manuscript. Response 6: This comment is accepted and we tried to enlarge the figure. Please see page 4, in the revised manuscript. Response 7: Thank you for this comment. However, the details on data collection
--	--	--



SDI Review Form 1.6

	where these results came from. Comment 13: Lines 152-155 should be put under Analysis section as this is a description of analysis methods. Discussion Comment 14: In line 176 there is mention of formulated hypotheses, but where are these hypotheses? Hypotheses should first appear in the introduction if they are needed. Comment 15: Lines 179 & 180, discussion should start with the results of the study and not literature. Literature should be used only to relate one's results where possible. Comment 16: Line 182 the hypothesis mentioned does not exist in the introduction; therefore it tends to shock the reader. Comment 17: Line 187-190 should go to justification. This is not part of the discussion. Comment 18: Line 230 authors state that, ' Our findings also indicated that climatic variable and soil condition significantly explain the distribution of tree species in Ghanaian forest', but then were the soil condition test done by the authors and if so where are the results? Authors should discuss their results and only relate their results to other studies. Comment 19: Line 234 'implications for conservation', the implications are not stated. There is a mix of discussion and results but not implication of the results to conservation. Conclusion and recommendations- Comment 20: what are the conclusions of the study? Lines 256-258 are laden with questions, but then who should answer these questions? I would rather expect the authors to convert these	methods and the size of nested plots and it design are described in detail. Please see page 4, line 95-98, in the revised manuscript. Response 8: Thank you for this comment. We took the threshold density <1individual/ha taken from 'Black <i>et al.</i> 1950'. Please see page 5, line 106, in the revised manuscript Response 9: This comment is accepted and we tried to enlarge the figure. Please see page 5, in the revised manuscript. Response 10: Thank you for this comment. Using DBH data is not the scope of this study. We used DBH data for other paper. Response 11: Thank you for this comment. Then we accepted and corrected. Please see page 6, line 123-125 in the revised manuscript.
--	---	--



SDI Review Form 1.6

	questions to recommendations.	Response 12: Thank you for this comment. This is typing error and forgets to delete while producing different version of the paper. Then we accepted and corrected. Please see page 6, in the revised manuscript. Response 13: This comment is accepted and corrected accordingly. Please see page 6, lines 123-125. Response 14: This comment is accepted and corrected accordingly. Please see page 3, line 66-73, in the introduction section. Response 15: This comment is accepted and corrected accordingly. Please see page 10, line 187-189. Response 16: This comment is accepted and corrected accordingly. Please see page 2, line 66-67, in the introduction section. Response 17: Thank you for this comment. We deleted this part. Response 18: This comment is accepted and corrected accordingly. The rain fall range and soil fertility range were calculated from the collected data of the driest and wettest region
--	-------------------------------	---



SDI Review Form 1.6

		of the study area. Response 19: This comment is accepted and corrected accordingly. The implication of this study is stated in page 12, line 252-253, in the revised manuscript. Response 20: This comment is accepted and corrected accordingly. Please see page 12, lines 266-271.
--	--	---



SDI Review Form 1.6

Minor REVISION comments	Abstract Comment 1: Line 9 there is mention of three plant functional groups; it would be more informative to state the 3 groups here. Comment 2: Line 11 the term 'environmental range' should be defined elsewhere to avoid confusions. Comment 3: Lines 17-18, what are the three components of rarity and seven forms of rarity? State them here so that the reader is not left hanging. Introduction Comment 4: Line 26 starts with 'These needs....', but then what are these? Comment 5: Line 49 should be revised, its vague e.g. what is being measured here, is it the measures of commonness and rarity or the association between some variable. After all how can two completely different variables be associated? Comment 6: Lines 50-52, I suggests these go after first sentence on line 38 for the flow of ideas to be logical. Materials and methods Comment 7: Line 56, it must be clear what the 21.7% of the total land mass is, i.e. is it for the whole of Ghana or just the study area? Also on annual rainfall ranges include the units. Comment 8: Line 80, revise, not reading well especially the last part. Comment 9: Lines 106-108, revise the statement not reading well. Comment 10: Lines 112 replace the word 'higher' with 'highest' because there are 3 groups.	Abstract Response 1: This comment is accepted and corrected accordingly. Please see page 1, line 10, in the revised manuscript. Response 2: This comment is accepted and corrected accordingly. Please see page 1, line 16, in the revised manuscript. Response 3: This comment is accepted and corrected accordingly. For three components of rarity Please page 1 line 23-24, for seven forms of rarity we described in page 7, the caption of figure 4. Introduction Response 4: This comment is accepted and corrected accordingly. Please see page 2, line 41, in the revised manuscript. Response 5: This comment is accepted and corrected accordingly. Measures of commonness and rarity means the association among the three variables (frequency, density and environmental range). Please see page 3, line 71, in the revised manuscript. Response 6: This comment is accepted and corrected accordingly. Please see page 2, line 54-56, in the revised manuscript.
---------------------------------------	---	---



SDI Review Form 1.6

	Comment 11: Line 160, what is the '@' standing for? Comment 12: Lines 198, revise the statement not reading well. Comment 13: Line 209, what is meant by 'super rare'? Can this be explained? Comment 14: Instead of starting with [22] I suggest you state the author, e.g. 'Pitman et al. [22] concluded that.....' the same with line 218. Comment 15: Line 218 makes reference to a previous study, but which one is this? Conclusion and recommendations Comment 16: The authors instead of making recommendations on incentives leaves that open to management; I suggests the authors should come up with recommendations on incentives that can be adopted by management to address issues raised. Appendices Comment 17: All appendices should be referred to in the text and in all the appendices there is mention of aspects of rarity, but these are not stated in the Tables. General Comment 18: Authors should start their sentences with words and not numerical values, e.g. lines 78, 132, 209, 214, etc. Also remove 'bold' on Table and Figure captions.	Material and methods Response 7: This comment is accepted and corrected accordingly. The percentage is from the whole Ghana. Please see page 3, line 77, in the revised manuscript. Response 8: This comment is accepted and corrected accordingly. Please see page 4, line 100-101, in the revised manuscript. Response 9: This comment is accepted and corrected accordingly. Please see page 5-6, line 121-125, in the revised manuscript. Response 10: This comment is accepted and corrected accordingly. Please see page 6, line 129, in the revised manuscript. Response 11: This comment is accepted and corrected accordingly. Please see page 8, line 169, in the revised manuscript Response 12: This comment is accepted and corrected accordingly. Please see page 10, line 207-209. Response 13: This comment is accepted and corrected accordingly. We described in detail in bracket. please see page 11, line 221-222 Response 14: This comment is accepted and corrected accordingly. Please see page 11, line 231.
--	---	---



SDI Review Form 1.6

		Response 15: This comment is accepted and corrected accordingly. Please see page 11, line 231. Response 16: This comment is accepted and corrected accordingly. Please see page 12 and 13, lines 266-271. Response 17: This comment is accepted and corrected accordingly. Please see page 12, line 252-253 and aspects of rarity is described in page 16, line 361-364 Response 18: This comment is accepted and corrected accordingly. Please see line 98, 143, 221,226 in the revised manuscript. In addition we removed all 'bold' on tables and figures in the revised manuscript.
<u>Optional/General</u> comments		