

Interactive comment on “Vegetation in karst terrain of southwestern China allocates more biomass to roots” by J. Ni et al.

J. Ni et al.

nijian@vip.skleg.cn

Received and published: 17 May 2015

Q1: Although the paper is in general well written, there are some minor mistakes in the English language (prepositions, commas allocation). Please check throughout the manuscript.

A1 and C1: We will carefully check and modify the mistakes in the English language.

Q2: Abstract P1210 L7: I understand that not all the stages are degraded, since forest is the climax stage.

A2: Yes, that is why we said on page 1210 line 7, “five degraded (successional) stages”.

C2: We propose to use the term “land cover type” throughout the manuscript instead

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of the stages of degradation, or restoration, or succession if such stages could not be clearly distinguished or clarified.

Q3: Introduction P1211 L9-19: I think that the names of the regions presenting karst geomorphology are not necessary. Please summarise this section of the introduction. P1213 L9: Two decimal positions are enough.

A3: We realized that those names are difficult to foreigners, so we are trying to make the region more clearly described.

C3: We don't want to remove the province names included in southwestern China on page 1211 line 11-12 because this is a more precise definition of SW China in this paper, but we propose to add the following new text starting from line 10 after “in its southwestern political divisions”: where are close to the Tibetan Plateau in the west and to Burma, Laos and Vietnam in the south.

Two examples of tourist resorts in line 14-16 will be deleted: “such as the Lijiang River 15 in Guilin of Guangxi Autonomous Region and the Stone Forest in Kunming of Yunnan Province”.

On page 1213, line 9: We will change “89.198” to “89.20”.

Q4: Material and methods P1214 L10: What is the meaning of “rich rainfall” here? P1214 L19: Change “nutrition” to “nutrients”. P1215 L10-13: This sentence is too long. P1216 L8: Change “representative” to “representativeness”. P1216 L10-12: This sentence is confusing. It seems that 10 soil pits have been excavated in 50x50 cm. Please rephrase. P1216 L26. I miss some information about the statistical analysis. Was it done pairwise? Were all the factors included in a single ANOVA? A one-way ANOVA was done for each factor? What was the post-hoc analysis?

A4 and C4: On page 1214 “rich rainfall” means enough rain water for plant growth. We will change “nutrition” to “nutrients”.

On page 1215 line 10-13, there are two sentences, which are thought to be not too

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long.

On page 1216 Line 8: We will change “representative” to “representativeness”.

Line 10-12: That means 10 soil pits have been excavated but each pit in 50x50 cm². At line 11 we have said that “in an area of 50cm x 50cm each”.

Line 26: We only used the F-test to statistically analyze the significant differences of root biomass in various root types, vegetation types, habitats and soil layers (on page 1218-1219, Figure 3-4), so we propose to add the following new text starting from the end of line 26: “for analyzing the significant differences of root biomass in various root types, vegetation types, habitats and soil depths”.

Q5: Results There is too much information and the text should focus in the main results, and refer to the figures for detailed results and exceptions. Figures must include more information, e.g. letters to denote significant differences and error bars. P1217 L6. Please define “top layers”. Do you mean the first 10 cm, 20 cm? If you mean the first 10 cm, there is a contradiction between this results and the one reported in P1217 L4 (65%).

A5 and C5: Yes, the root biomass section had too more details. We will only keep the main results in the text and will completely re-draw the figures. We propose to: delete all p values on page 1217 to 1219 and to add letters in figures to denote significant differences; to shorten three paragraphs on page 1218-1219.

On page 1217 line 6: The “top layers” meant the first 20 cm. We will change the “top layers” to “top 20 cm”.

Q6: Discussion P1222 L13-14: Please rephrase this sentence. P1222 L16: What do you mean with “better natural environment”?

A6 and C6: We propose to change this sentence on page 1222 line 13-14 “The degradation or destruction of karst forest results in restoration difficulty of the original vegetation” to “The harsh karst landscape makes the degraded forest difficult to be restored

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to its original condition”.

Line 16: The “better natural environment” meant more rainfall and soils in Maolan than in Guanling. We will change “better natural environment” to “more rainfall and soils”.

Q7: Conclusions P1223 L9-12: The first four lines of the conclusions are a summary of the introduction, please remove them.

A7 and C7: We will delete the first sentence on page 1223 line 9-10. The root biomass change presented later should be a part of the results.

Q8: Figures Please be consistent in the legends. Root categories should be represented by the same colours in the figures 2 and 3.

A8 and C8: We will replace the colors for coarse and fine roots in Figure 2 and 3.

Interactive comment on Solid Earth Discuss., 7, 1209, 2015.

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