

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

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Q1. To describe how to measure aboveground biomass and the ratio of root biomass to aboveground biomass in method section, and add a figure or a table for describing the ratio of root biomass to aboveground biomass in result section.

A1: The major aim of this paper was to investigate in details the root distribution and root biomass of karst vegetation, so that the aboveground biomass was not involved in this paper. But the aboveground biomass of all vegetation plots studied in this paper has been estimated in 2008 by a master student in Jian Ni's research group, using the allometric functions established by Zhu et al. (1995). The aboveground biomass listed in Table 3 is a general summary of typical vegetation in the subtropical China, and only the typical, mature karst forest was included. For more clearly presenting

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the ratio of root biomass to aboveground biomass, however, we accept the suggestion made by the Referee 2 to add some simplified information about aboveground biomass measurement.

C1: On page 1216, after line 25, we propose to add a new paragraph: The AGB of all vegetation was estimated (Yuan, 2008) using the allometric functions established by harvesting 30 individuals of 21 standard trees in the same region (Zhu et al., 1995). Such allometric functions took the relationships between biomass of each components (leaf, branch, stem and all above components), and tree height and diameter at breast height into account, with the correlation coefficients (R) between 0.97 and 0.99 (Zhu et al., 1995). To calculate the ratio of RB to AGB, only the typical, mature mixed evergreen and deciduous broad-leaved forest was exemplified corresponding to typical evergreen broadleaved forests in the same subtropical zone. All RB and AGB of the latter were obtained by the similar method as the former. The final RB value of the former is an average of RB measured by Luo et al. (2010) and this study.

References to be added:

Yuan, J. W.: Comparison of composition and Biomass of Karst Vegetation at Different Stages of Rocky Desertification in Guizhou Province, SW China. Master Thesis, Institute of Botany, Chinese Academy of Sciences, Beijing, 53 pp., 2008 (in Chinese).

Zhu, S. Q., Wei, L. M., Chen, Z. R., and Zhang, C. G.: A preliminary study on biomass components of Karst forest in Maolan of Guizhou Province, China, *Acta Phytocologica Sinica*, 19, 358-367, 1995 (in Chinese).

2. Fig. 2 and 3 are not clear and should be improved. The standard errors should be added in the figures.

A2 and C2: We found that the Figure 2 was relatively ok, but Figure 3 and 4 were not acceptable because of their less informative and bad drawing. As we have proposed above in the response to Referee 1, we will completely re-draw the Figure 3 and 4

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(possibly Figure 2) and will add all error bars to the figures.

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

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