

Interactive comment on “Comment on “Growth responses of trees and understory plants to nitrogen fertilization in a subtropical forest in China” by Tian et al. (2017)” by Taiki Mori

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Thank you very much for your comment. Here are my answers.

First, the author suggests that the reduced understory plant growth is caused by “fertilizer burn”. If this is the case, there must be lots of “burned leaves” for the understory plants. However, Tian et al. didn’t report any “burned leaves” in the paper.

Answer Thank you for your comment. But I just could not understand why you are sure there are no fertilization burn just because it was not written in the article.

Second, the author argues “The canopy cover did not increase in their experiment,

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indicating that the reduced light availability is not likely to explain the reduced understory.” I don’t agree on this. “The canopy cover did not increase” does not necessarily lead to the unchanged “light availability”. Understory vegetation itself can cause light competition.

Answer Thank you very much. I also could not understand. Do you mean understory vegetation was stimulated by N addition and created shadow? If so, why understory vegetation decreased after N addition?

Third, the author argued that “soil total N content and understory biomass were not corrected”, so “the elevated N content in their experiment does not necessarily explain the decrease in understory”. In Aber et al. (1989), the N saturation concept is not defined using soil total N content, but N input rate. Based on the above reasons, I don’t think Mori’s questions make sense

Answer Thank you very much for your comment. Yes, this hypothesis may be possible as I wrote in the main text. I just discussed that fertilization burn could explain the situation better. Since data are very limited in Tian et al. (2017)’s manuscript, I guess soil total N can be one indicator to check the author’s hypothesis. If possible, please could you explain your evidence to support the author’s idea? I also want to know it. Thank you.

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