

Interactive comment on “Soil microbial nutrient constraints along a tropical forest elevation gradient: a belowground test of a biogeochemical paradigm” by A. T. Nottingham et al.

Anonymous Referee #1

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1 Summary

This study presents evidence for the hypothesis that there is a shift in nutrient limitation from tropical lowland to highland forest. I enjoyed reading the paper because it is well written:

- Background and hypothesis are clearly stated. The results are expected, however, it is good to do have it confirmed empirically.
- The indirect nature of the evidence (compared to a fertilization experiment) is well
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discussed.

- Study site and methods are described in sufficient detail.
- Results and figures are mostly clear.
- The discussion puts the results in context.

2 Detailed comments

I only ask for several small clarifications:

The text could be clarified better why and for whom the studied hypothesis is important.

Fig 1 presents results of global meta-analysis for comparison. A discussion in the text would be appreciated.

Fig 3 presents total mineralized N using log scale. I get the impression that it does not change. However, the actual significant decrease is one of the main arguments for increasing N limitation with elevation.

Figure caption of Fig. 4 states "maximum potential enzyme activities determined" What is the meaning of the "maximum"?

The statements of p-values hampers a fluent reading of the text. If allowed by the journal, I suggest to provide the values only when significance is marginal and when the reader is helped by the values to evaluate the results.

Interactive comment on Biogeosciences Discuss., 12, 6489, 2015.