

Interactive comment on “Annual litterfall dynamics and nutrient deposition depending on elevation and land use at Mt. Kilimanjaro” by J. Becker et al.

Anonymous Referee #1

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Becker et al. investigated litterfall dynamics and nutrient deposition on the southern slopes of Mt. Kilimanjaro. Although the study was conducted on only six research sites, namely three natural forest sites, two homegarden sites and one coffee plantation, the authors can draw two main conclusions based on their results and discussion. First, the annual pattern of litterfall is closely related to rainfall seasonality, with decreasing seasonality patterns at higher elevations coinciding with decreasing rainfall seasonality. Second, annual macro nutrient deposition (N, P, K) via litterfall is strongly increased on managed sites (both in the homegardens and the coffee plantation).

Overall, this is a convincing and well presented study appropriate for publication in BG, and I have only some few comments/suggestions.

p. 10032, ll. 7-9: please check and correct the sentence structure/brackets

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p. 10032, ll. 17,18: Unnecessary repetition, please delete the sentence

p. 10035., l. 27: Zech et al. (2011) investigated the northern slopes of Mt. Kilimanjaro. Better refer to Zech (2006, Palaeogeography, Palaeoclimatology, Palaeoecology 242, 303-312), who studied the southern slopes.

p. 10038, ll. 2ff: Not yet clear to me: did you check for seasonality visually or statistically?

p. 10038, l. 6: delete “litter”

p. 10039, ll. 1,2: please check and correct, it should be the other way round.

p. 10042, ll. 20-23. Concerning enhanced N-cycling on the southern slopes of Mt. Kilimanjaro, please compare and include Zech et al. (2011, Isotopes in Environmental Health Studies 47, 286-296) who found respective evidence based on delta¹⁵N.

Table 2: Concerning annual deposition of N and P via litterfall, compare and include Schrupf et al. (2006, Journal of Tropical Ecology 22, 77-89) in your respective result or discussion chapter.

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