

## ***Interactive comment on “Bryophyte-dominated biological soil crusts mitigate soil erosion in an early successional Chinese subtropical forest” by Steffen Seitz et al.***

**Anonymous Referee #3**

Received and published: 2 May 2017

The topic of this paper is likely to have a substantial impact. However, it is very difficult to follow the numbers of sample replicates across the study. Perhaps a table would help where the hierarchy of sampling is broken down and all in one place. The authors also put a lot of influence on canopy cover dictating cover of biocrusts but their abiotic variables are likely influencing the canopy cover. These things should be addressed together or the abiotic setting should be controlled for when looking at canopy cover. The disturbance that is mentioned, that is the reason for the development of biocrusts is not described.

Specific comments: Line 114: The hypotheses could be stated more clearly. (1) “Biocrusts ARE widely developED (2) “The development of biocrust is influenced by

C1

BOTH the surrounding vegetation cover AND THE soil and terrain attributes.” Line 173- It is not clear is the analyses met the assumptions of ANOVA. Line 185- “Than” should be “then”. Line 239- I thought that this paper was primarily about soil erosion and biocrusts but that it not clear from the first paragraph of the discussion. Line 240- It is confusing to state hypotheses by numbers but quickly paraphrasing the hypothesis would make interpretation easier for the reader. Line 241- Is there any pre-disturbance data? It is hard to understand the connection between interspaces and disturbance without some description of the pre-disturbance structure of the vegetation. Line 271- Cite Condon and Pyke 2016, who have been able to restore a great deal of moss cover very quickly. Line 321- You would have a stronger close if you finished with the sentence that ends here. It’s also unclear given your findings if there is much of a need to restore biocrusts since you saw recovery of bryophytes really quickly. Line 335- You should remind the reader here of your scale as this likely influenced the effects of soil attributes. The authors need to work on the storyline of the paper as well.

---

Interactive comment on Biogeosciences Discuss., doi:10.5194/bg-2017-99, 2017.

C2