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Interactive comment on "The mutually antagonistic effect of drought and sand burial enables the biocrust moss *Bryum argenteum* Hedw. to survive the two co-occurring stressors in an arid sandy desert" *by* Rongliang Jia et al.

Anonymous Referee #1

Received and published: 10 December 2017

Journal: BG Title: The mutually antagonistic effect of drought and sand burial enables the biocrust moss Bryum argenteum Hedw. to survive the two co-occurring stressors in an arid sandy desert Author(s): Rongliang Jia et al. MS No.: bg-2017-402 MS Type: Research article Special Issue: Biological soil crusts and their role in biogeochemical processes and cycling

I found the manuscript by Rongliang Jia et al., interesting and fall within the scope of Biogeoscience Journal - under the sub-title "Plant– soil interactions", although its results, related to the combined effects of drought and sand burial on moss crust, are

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Discussion paper

particular interest to areas such as southeastern fringe of the Tengger Desert.

I have only minor comments:

I found their results sufficient to support the interpretations and conclusions. The title is too long and should be shortened.

Where are the Key words?

Moss not always represents the highest successional stage of the biocrust development. In most cases lichens as a slow growers are representing this stage, especially under dry conditions. However, climate with high rainfall may encourage moss growth in some areas such as the located in the southeastern fringe of the Tengger Desert.

Line 214 - the chlorophyll a content of argenteum was found should be B. argenteum.

Table 1. "Changes in the percentage cover of a biocrust dominated by Bryum. argenteum in response to sand burial depth in spring and autumn" should be " Table 1. Changes in the percentage cover of the soil surface, a biocrust dominated by Bryum argenteum in response to sand burial depth in spring and autumn".

Please also note the supplement to this comment:
https://www.biogeosciences-discuss.net/bg-2017-402/bg-2017-402-RC1-supplement.pdf

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