

Response to Reviewer Comment 3 (RC3) to

preprint bg-2021-343: “Pioneer biocrust communities prevent soil erosion in temperate forests after disturbances”

Thank you very much for taking the time to revise this manuscript and for giving this positive evaluation with constructive comments. We considered your comments and revised the manuscript accordingly.

Comments	Authors responses
<i>“This is an interesting study examining the importance of biocrust species on soil erosion. The experiments were conducted in an appropriate manner. Unfortunately, it is difficult to understand the contents, especially in the results and discussion section. Detailed information and key messages are mixed. A solution would be that the section is divided into the results section and the discussion section.”</i>	<p>We agree with your concerns about clarity and revised the results and discussion section thoroughly to make the content more comprehensible. We have paid special attention to the clear separation of pure results and interpretation against the background of the relevant literature.</p> <p>However, as other reviews noticed that the manuscript should not gain in length and agreed with the combination of results and discussion, we are afraid that a separation will be contradictory to that. We therefore believe it is more appropriate in this case to keep a combined results-discussion section after our adaptations.</p>
<i>“L109 “newly-established”: When were these skid trails established? Winter 2018/19?”</i>	All skid trails were established in Winter 2018/19. We clarified this again in the text.
<i>“L118 “a loess plateau”: I cannot catch the meaning.”</i>	For clarity, we replaced “plateau” with “deposition”.
<i>“L347 “bare soil ROPs”: The meaning is unclear.”</i>	We deleted this term since it was not necessarily needed at this point.
<i>“Fig.2: I have not understood how to obtain the biocrust coverage. Did the authors remove plants except biocrust before taking photographs for biocrust?”</i>	During our vegetation surveys, we determined total vegetation and bryophyte cover for each ROP, while Braun-Blanquet cover-abundance scale was used to determine coverages at the species level (Braun-Blanquet, 1964).
<i>“Fig.3: Why did not data of vascular plants shown in October and February? I guess the difference between the total and biocrust in Fig.2 came from vascular plants; the differences were not zero in October and February.”</i>	Species richness for vascular plants was only surveyed for the main vegetation period in southern Germany, while species richness for bryophytes was assessed throughout the year.
<i>“Fig.5: Do the dots with gray color indicate?”</i>	The jitter points in Figure 5 indicate the single measurements in each cover class. These were removed in the revised manuscript to increase comprehensibility (see Figure 6).

References

Braun-Blanquet, J.: Pflanzensoziologie. Grundzüge der Vegetationskunde, Springer Verlag, Wien 1964.

Figures

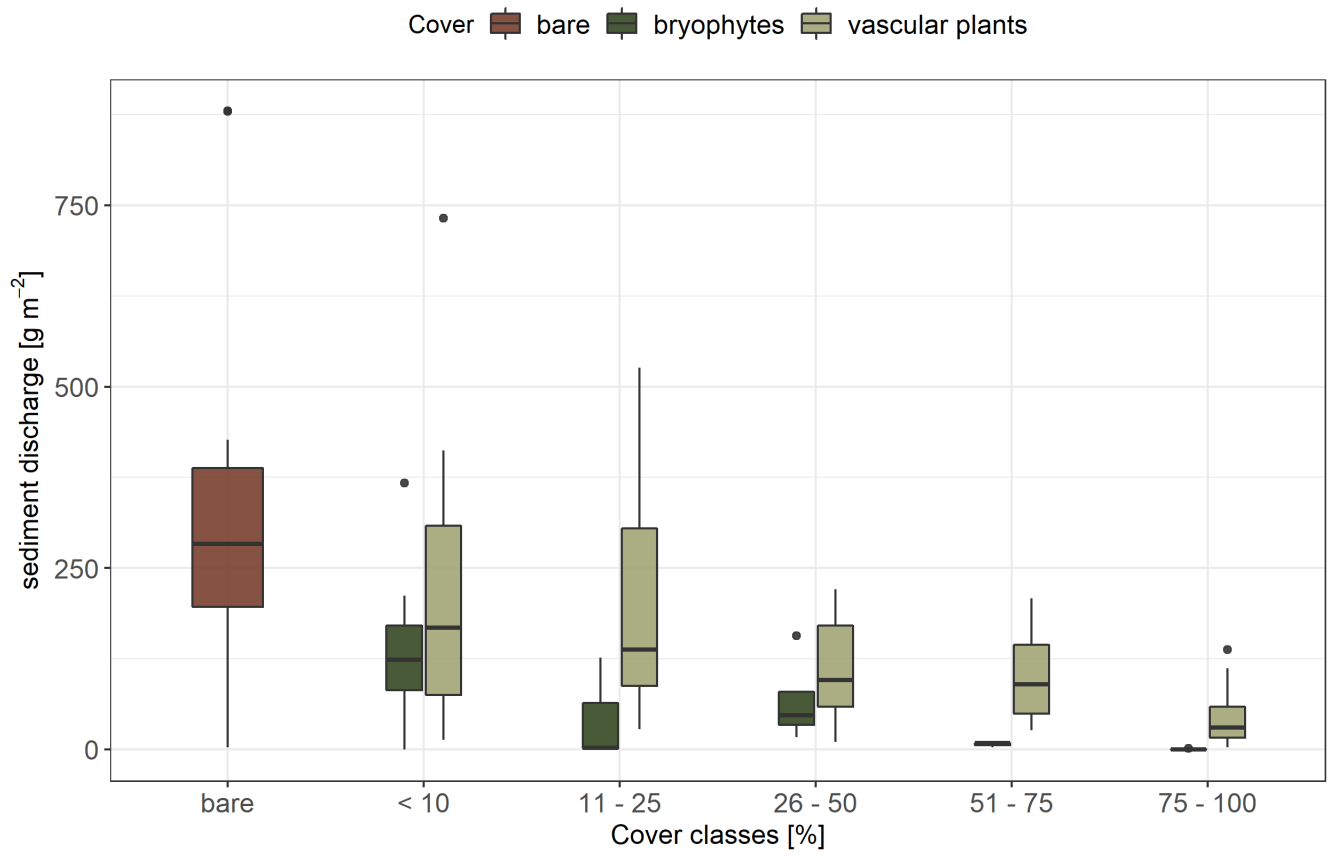


Figure 1: Sediment discharge for bare (n = 14), bryophyte (n = 27) and vascular plant (n = 58) runoff plots (ROPs) categorized into cover classes. The bottom and top of the box represent the first and third quartiles, and whiskers extend up to 1.5 times the interquartile range (IQR) of the data. Outliers are defined as more than 1.5 times the IQR and are displayed as dots.