

ESURFD-2019-39 (Lazarus, Davenport & Matias)

Preliminary Reply to R3

Reviewer comments in *italics*; authors' preliminary reply in **bold**.

I just have some minor suggestions that the paper could benefit from.

I strongly recommend separating the methods from sections 2 and 3 and having it under a new section as "Methods". Also, there is some useful discussion about vegetation in 3.2 that is more related to the Discussion section. Reconstructing the text for this would ease the reading.

We will consider and revise for clarity. Reviewers 1 & 2 have both recommended amendments to the Introduction and Discussion that will have bearing on this suggestion.

There is no justification why the parameters used in the experiment (e.g., barrier height and infill rate) are reasonable and the results can be comparable with real case scenarios. Also, there is no discussion on limitations of the experiments and uncertainty of the experimental results.

The experiment is described in full in Lazarus (GRL, 2016) and is a generic "analogue" model with no explicit connection to real scenarios in the sense of direct simulation. The scaling behaviour of the morphology, not the parameters, makes the results comparable to real cases. Regardless, we can use this comment to find ways to clarify the experimental description.

Line 25: adding an example of allometry would be helpful.

Noted – will amend.

Line 52: switch the order of examples to match the order of static allometry types in the previous lines.

Noted – will amend.

Line 78: How can the size of the sediment used in the experiment affect the results?

Larger sediment will likely make blunter deposits; finer sediment will tend to make more finger-like deposits. We did not test this directly, but there are reasonable examples from the field to mention – we will consider and revise.

Line 181: Briefly describe what Mosely and Parker (1972) work is about, what they do for those who are not familiar with their work.

Noted – will clarify and revise.

Line 227: remove extra “the”

Noted – will correct.

The last sentence of the first paragraph of Results is out of context. Add h and R2 values in fig 2.

Noted – will amend.

Lastly, I did not find it very useful to quote from many other literature in the second half of the paper. It was very confusing and I had to read the sentences few times to understand the points.

Noted – we will revisit this stylistic choice.