

Interactive
Comment

Interactive comment on “On the spatial organization of the ridge slough patterned landscape” by S. T. Casey et al.

Anonymous Referee #1

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The present manuscript provides several analyses on the pattern characteristics of ridge-slough patterned landscape. These kinds of ecosystems have been deeply modified and it is mandatory to study their physical characteristics in order to define new strategy of restoration. Authors analysed a number of features of ridge-slough spatial patterning such as: ridge density, patch perimeter, elongation, patch-area scaling, and spatial periodicity. Among all presented results, I consider the observation of a robust scale-free patterning the most intriguing argument of the paper. Nevertheless, I think that the authors should improve the paper trying to be more consistent with the arguments posed in the introduction. In particular, the study should not be limited to presentation of the results, but should also put more effort in addressing the implications of these elaborations.

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As consuetude, I have summarized in the following a number of critical points:

1) I have particularly appreciated the intro of the manuscript that is well organized and provides a good overview of the topic. In particular, a number of issues are introduced and as reader would like to have comments on the significant questions posed. Nevertheless, it is my feeling that the paper does not contain a good discussion about the implications of the results. How do we use these results in restorations actions? What is the impact of human activities on the observed spatial patterns?; What are the driving factors controlling specific configurations?

2) It is my feeling that the length of the manuscript may be reduced. Some of the analyses presented are less relevant (significant) of others. I would suggest focusing mainly on the most relevant of the research. For instance, the relationship observed between elongation and water depth is definitely not a strong one as stated in the manuscript and similarly the relationship observed for the edge density have a significant scattering. It is not clear to me what is the impact of these results in the economy of the manuscript. I suggest removing figure 3 and 4.

3) All regression must include the level of significance of the correlation.

4) Figure 5 - line a: the authors observed a positive correlation (although very weak $R=0.10-0.00$) of the patch elongation with patch size. From my point of view, this weak correlation may be influenced by sampling errors due to the difficulty to correctly measure the elongation at very small scale. Please include a comment on this.

Minor Points

The reference to Scanlon et al. (2007) is missing in the reference list.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 2975, 2015.

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