

Interactive comment on “The linkage between hillslope vegetation changes and late-Quaternary fluvial-system aggradation in the Mojave Desert revisited” by J. D. Pelletier

A.J.A.M. Temme (Editor)

arnaud.temme@wur.nl

Received and published: 8 May 2014

Three thorough reviews of prof. Pelletier’s manuscript have now been received. They speak of a very interesting contribution to debates about landscapes’ response to climate change, and one that has been well written and presented. For me, the main points that the reviewers raised, and that I feel that the author should at least include in his changes to the document, are the following: 1. A perceived lack of context about the study site. Why was this site chosen? How does it compare to other sites, in terms of its inferred climate-landscape relations? What makes it interesting from a wider perspective? Which caveats must be taken into account when transferring the paper’s

C94

findings to other worker’s study sites? This point must particularly be looked at from the point of view of an international audience that is unfamiliar not only with the study site itself, but also with its American geographical context. 2. Despite the clear, and clearly appreciated efforts to quantify climate-landscape relations, more attention is due to the effect of choices made in the altitude-climate relation. Reviewers mentioned various potential shortcomings of the assumption that the author makes in this regard. It would be worthwhile to explore the effect of this assumption on the results (i.e. the timing of geomorphic activity across the study site at the end of the LGM). 3. In addition to the effect of my point 1 on the literature that is cited, I feel that more attention is due to the body of literature surrounding the complexity of landscape response to climate change. Reviewers provide examples for this, with the work of the late Stanley Schumm chief among them. More modern examples would include Murray AB, Lazarus E, Ashton A, Baas A, Coco G, Coulthard T, Fonstad M, Haff P, McNamara D, Paola C, Pelletier J, Reinhardt L (2009): Geomorphology, complexity, and the emerging science of the Earth’s surface. *Geomorphology* 103, 496-505 , and Reinhardt L, Jerolmack D, Cardinale B, Vanacker V, Wright J (2010): Dynamic interactions of life and its landscape: feedbacks at the interface of geomorphology and ecology. *Earth Surface Processes and Landforms* 35, 78-101

Next to this, the reviewers have been kind enough to suggest many minor changes to the manuscript, that I trust will also be taken up by the author.

Interactive comment on Earth Surf. Dynam. Discuss., 2, 181, 2014.

C95