

Interactive comment on “Mammal faunal response to the Paleogene hyperthermals ETM2 and H2” by A. E. Chew

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Dear Dr. Huber,

Your response to my question was extremely helpful. I confess to utter ignorance in this matter but from your discussion and the references that you cited, I gather that the error in my extrapolation of future regional (i.e., western North American) warming is due to 1) a starting point of past temperature (both regional and global) that was too low and 2) a rate of warming that was 5-10 times too high. For my purposes, this is relevant only for a bit of arm-waving relating faunal response to these deep time climate events to possible future change, whatever the timeframe of future warming might be. If I understand you correctly, even if we were to burn up all available sources of carbon as rapidly as possible, we still would not achieve the warming that occurred at the

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PETM (or ETM2 and H2) in ~2000 years. Does this mean PETM warming is unlikely ever to be replicated? If so, would you say that there is any point in arm-waving about future biotic change based on this record? In your original comment, you mentioned that the arguments presented in this paper might be relevant for the far future. Did you mean only in a scenario of unlikely circumstances or perhaps too far in the future to be meaningful? In that case, I am happy to remove the arm-waving paragraph entirely and stick to a comparison of faunal change in the past events. I appreciate your time and thoughts on this matter.

Interactive comment on Clim. Past Discuss., 11, 1371, 2015.