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Interactive comment on “Pollen, biomes, forest successions and climate at Lake Barombi Mbo (Cameroon) during the last ca. 33 000 cal yr BP – a numerical approach” by J. Lebamba et al.

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GENERAL REMARKS

This could be a very nice paper, but now it is a bit thin. The paper does not go much beyond the description of the results of a statistical analysis of data that are not available to the scientific community. This paper could have been the vehicle to publish the pollen counts of Lake Barombi Mbo, an opportunity which is missed. Please, take this opportunity to finally make available the pollen data from Lake Barombi Mbo!

Without knowing the original data it is impossible for the reader to assess the statistics properly. At least the PFT scores of the fossil spectra should be given in addition to the

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biome scores.

The taxon list of Maley and Brenac 1988 includes taxa that are not in the taxon list of Lebamba et al. 2009 (CP). It, therefore, would be nice to have a table with the specific PFT assignments for Lake Barombi Mbo taxa.

Section 3.3: The description "The index alpha (ratio of actual evapotranspiration versus equilibrium evapotranspiration) was calculated following Prentice et al. (1992) method." is inaccurate and incomplete. The alpha's are ratios; hence they vary between 0 and 1. I assume that you expressed alpha in percentages, which should be noted. More important, the alpha's given in Prentice et al. (1992) are minimum values prescribed to certain PFTs. The PFTs of Prentice et al. (1992) are partly different from the PFTs used in this study. Please, better explain how you calculated the alpha's, or give a table with alpha-assignments to the PFTs.

The result section is a boring summary of the figures. This may be improved by describing the results of both biome, succession, and climate estimates together. Averages mentioned in the result section are given with more precision than can be warranted, as is clear from the error ranges denoted in Figure 6. Better to give ranges. Please, also mention in the results the change around 6500 BP, which is later referred to in the discussion.

The discussion is too much restricted to the local situation. Please, discuss more regional aspects before they turn up out of the blue in the conclusions.

It is not clear from the data shown why the Holocene dry spell should be less severe than the LGM dry spell. Why are the scores on ALL biomes and successions for this period so low? Is this the result of low diversity in these particular pollen spectra? If so, discuss its meaning for the interpretation of the results.

SPECIFIC REMARKS

Section 3.1: The sentence "The pollen spectrum is assigned to the biome to which it

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has the highest affinity." is not applicable to this paper.

Line 20 on Page 2714: PETann values EXCEED 1400 mm between 3000 and 1200 BP in both methods.

Figure 6: Please, express the results of both methods on the same vertical scale and add the units of PETann and Pann (mm).

Interactive comment on Clim. Past Discuss., 6, 2703, 2010.

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