

Interactive comment on “Contrasting patterns of climatic changes during the Holocene in the Central Mediterranean (Italy) reconstructed from pollen data” by O. Peyron et al.

Anonymous Referee #1

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The manuscript represents a substantial contribution to scientific progress in the Mediterranean debate. The authors used a multi-method approach to provide a robust quantitative reconstruction to validate the hypothesis of a north-south partition in the Central Mediterranean during the Holocene. The overall presentation of the data is well structured and clear. Finally, my believe is that the paper addresses important scientific question within the scope of Climate of the Past and it needs to be published with minor changes. Few suggestions are listed to improve the manuscript: 1) Title: “Contrasting patterns of climatic changes during the Holocene in the Central Mediterranean (Italy) reconstructed from pollen data”. Considering the location of Lake Ledro, I suggest the authors to reconsider the title of the manuscript. An option might be: Con-

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trasting patterns of climatic changes during the Holocene across the Italian Peninsula, reconstructed from pollen data. 2) The Introduction is well structured and it is possible for the reader to follow the scope of the manuscript. I would only suggest to expand the section of the complexity of the Mediterranean climate (lines 5, 6), explaining why is so complex and citing more papers. 3) Sites and data. Diagrams of mean temperature and precipitation of each locations would help to synthesize these data and to compare them more easily.

4) Climate reconstruction methods. This section is well organized and it is possible to fully understand the methods used by the authors. However, I noticed that no words are spent to disentangle an important issue.

As the authors stated in the description of the paleoecological history of the sites, from the Mid to the Late Holocene a strong human impact affected the natural vegetation around at least three sites.

At Lake Ledro “human land-use activity and forest exploitation begins at ca 7500 cal BP. . . .The Lake Accesa core indicates human presence since the Neolithic, but cereal cultivation and pasturing becomes more pronounced at ca. 4300 yr BP. . .The Trifoglietti pollen record shows only a weak signal of human impact, apart from those indicating pastoralism beneath forest cover. The selective exploitation of *Abies* appears to have been the strongest human impact in the region surrounding Lake Trifoglietti”.

Considering that other factors than climate might have influenced the pollen assemblage variations, I would like the authors to spend some words to explain how this is relevant and if this can somehow affect the pollen-based climate reconstruction.

Interactive comment on Clim. Past Discuss., 8, 5817, 2012.

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