

## ***Interactive comment on “Late Holocene vegetation changes in relation with climate fluctuations and human activities in Languedoc (Southern France)” by J. Azuara et al.***

**J. Azuara et al.**

jazuara2@mnhn.fr

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Dear editor, Thank you very much for you comments.

Both text and figures were not clear on this point so we modified both to clarify our conclusions.

In short, during the late Holocene increasing anthropisation and decreasing humidity (both highlighted in many previous studies) are difficult to separate because they can have similar effects on the vegetation. To do this we compared our record with both climatic proxies and archeological archives. We found that while changes in Fagus

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abundances well coincide in time with climate changes they poorly correlates with human activities. This is why we interpreted variations in *Fagus* proportions (and thus in *Fagus*/*dec. Quercus* ratio) in term of climate changes. On the contrary evergreen *Quercus* and arboreal pollen proportions poorly correlate with climate changes while they fit well with historical and archeological archives. This is why we interpreted them in term of anthropisation indicators.

Using our pollen data to demonstrate climate changes and afterward compared these climate changes with the same data to highlight the anthropogenic impact would have been circular. On the contrary we compared our pollen data with known climate changes and known changes in human land use (both from previous studies). This comparison with independent data prevent us against a circular argument.

Thank you again.

Best regards.

J. AZUARA and co-authors.

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