

## ***Interactive comment on “Environmental changes, climate and anthropogenic impact in southern-eastern Tunisia during the last 8 kyr” by Sahbi Jaouadi et al.***

### **Anonymous Referee #1**

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\* This is a job of a good scientific level. However, substantive comments are important to report. These remarks concern especially the current vegetation of the study area. Most of these remarks is:

\* The authors say: Vegetation is sparse and adapted to the arid conditions with psam-mophyte shrubs (*Calligonum* sp., *Ephedra alata* subsp. *alenda* and *Retama rae-tam*) and desert herbaceous plants such as *Amaranthaceae* (*Cornulaca monacantha*, *Traganum nudatum*), *Boraginaceae* (*Echium* sp., *Moltkiopsis ciliata*), *Zygophyllaceae* (*Fagonia* sp., *Nitraria retusa*), *Brassicaceae* (*Henophyton deserti*) and *Euphorbiaceae* (*Euphorbia guyoniana*). Authors must be careful: all these species are no herbaceous, but woody plants.

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\* The significant increase in *Artemisia* (wormwood) between 1.1 and 0.8 ka (850 – 1150 AD) is linked to intensive pastoral activity, associated with heightened interannual and/or seasonal climatic instability. The appearance of *Artemisia* is newer at the vegetation of southern Tunisia.

Moreover, I invite the authors to read the synthesis the Houérou (1959 & 1969), already mentioned in this work and especially Le Houérou (1994). According to The Houérou, the occurrence of *Artemisia* is very recent, and linked to contemporary and actual human activity. According to this author, as well as all recent studies, the occurrence of *Artemisia herba-alba* is linked to the actual degradation of the steppe of Alfa, which exists on loamy soils, and Glacis. On the other hand, the appearance of *Artemisia campestris* is related to actual clearing steppes *Rhanterium suaveolens*, which exists on sandy substrate of the Djefara plain of the Tunisian south.

*Salvadora persica* is a species of the Middle East and the Persian Gulf, and has never existed in North Africa.

Several scientific plant species names are written with errors. example, *Haloxylon scoparium* not *Holoxylon scoparium* in the legend to Figure 1.

The authors employ often old scientific nomenclature. I invite them to review the names of species according to the new nomenclature, proposed by Le Floch, Boulos & Vela (2010).

Finally, authors should consider these remarks on the current flora to claim the publication of this work.

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