- The authors say: Vegetation is sparse and adapted to the arid conditions with psammophyte shrubs (Calligonum sp., Ephedra alata subsp. alenda and Retama raetam) 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.

This has been corrected by mentioning only the psammophyte shrubs as forming the main vegetation of the desert. The ecology and plant types of these species follow Le Houérou (1959) and Pottier-Alapetite (1979, 1981).

- 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 Djeffara plain of the Tunisian south.

We thank the referee for these constructive remarks. Current studies of the dynamics of steppic vegetation associations in Tunisia are important in order to throw light on the Holocene records and to explain certain changes in the vegetation structure such as those observed in fossil pollen spectra. The elements suggested by the referee have been inserted into our discussion on the dynamics of *Artemisia* during the Holocene, particularly in relation to the replacement of the *Rhanterium suaveolens* steppe by the *Artemisia campestris* steppe in the Jeffara (Chaieb and Zaâfouri, 2000; Genin et al. 2006).

However, notwithstanding the complementarity between contemporary botanical studies and palaeoecological data produced by pollen analysis, as for example in the case of *A. campestris* and *Rhanterium suaveolens*, we feel that a significant difference exists in approaching vegetation dynamics within a temporal perspective at the scale of the Holocene through pollen analyses. Thus, for *Artemisia*, the pollen data from Sebkha Boujmel indicate a relatively early and progressive development, closely linked to anthropic activity, even though other factors could also have played a role in this development. These data do not support the claim for an exclusively contemporary and very recent development. On the contrary, it is important to place the recent development of *Artemisia* within a long-term dynamic which is also apparent in other pollen diagrams in Tunisia (Brun, 1983 ; Brun and Rouvillois-Brigol, 1985).

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

Salvadora Persica is mentioned with reference to the work carried out by Giraudi and colleagues (2013) who report the occurrence of pollen of this species in the nearby Libyan Jeffara to the south. This species is currently reported from many Saharan mountains such as Hoggar and Tassili (e.g. Ozenda, 2004, p.366). As regards the Holocene palaeo-botanical records, besides the data from the Libyan Jeffara, both pollen (Mercuri, 2008) and charcoal (Neumann and Uebel, 2001) of *Salvadora persica* are reported from Holocene archaeological sites in the Libyan Sahara.

- 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 Floc'h, Boulos & Vela (2010). Finally, authors should consider these remarks on the current flora to claim the publication of this work.

All botanical species names in the text and figure captions have been checked for typing mistakes and have been duly corrected in accordance with Le Floc'h et al., 2010. The latter reference has been added to the paper and inserted in the text (P.3, L.25). However, we still refer to *Artemisia herba-alba* (p.15,l.22) in order to make it easier for readers to follow this work in respect to previous published data and studies, and also because the evidence for *Artemisia saharae* is not yet confirmed with certitude in Tunisia (Le Floc'h et al. 2010).

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