

## **Answer to reviewer 2 (P.Biagi)**

The paper is a major contribution to the study of the cultural and climatic changes that took place in the Eastern and Central Mediterranean region during a key period of prehistory. Though based on the study of only four main areas, the paper is extremely important and should be published as it is. The notes that follow might contribute to the general discussion and might be utilised in some cases according to the will of the authors.

Line 283: I think that a reference is necessary for Odmut Cave. See for instance Kozłowski et al 2004 published in Warsaw (1994)  
[Reference added.](#)

2.2. At this point I would mention the importance of Mavropigi and the westernmost part of Western Macedonia as a whole. See also below.

[We recalled the importance of this site recently excavated in context of rescue archaeological excavation and its very old chronology at a regional scale.](#)

Line 610: There is a paper with important data (especially at page 26) on the Arabian Sea monsoons and their effects. See Yoganandan V. et al 2013 In *Climate Change and Island and Coastal Vulnerability*, pages 21-30. This might be mentioned.

[We have a look to this important paper for the Indian Ocean region \(Yoganandan, V., Krishnaiah, C., Selvaraj, K., Prasad, G. R., & Dutta, K. \(2013\). Monsoonal Fluctuations vs Marine Productivity during Past 10,000 Years—A Study Based on Sediment Core Retrieved from Southeastern Arabian Sea. In \*Climate Change and Island and Coastal Vulnerability\* \(pp. 21-30\). Springer Netherlands\), but the chronological precision of this marine core is not enough sufficient for our purposes, with 2/3 measures per millennium.](#)

4.1 heading. I would put somewhere under this heading a few words about Dispilio (Lake Kastorià) from which we have lots of almost unknown known archaeological data. It is the only Greek pile dwelling excavated in a proper way. Although mostly Late Neolithic the pollen cores etc.. would cover a lot earlier periods.

[Multi-proxies analysis has established a complex occupational pattern at the lakeside site of Dispilio from the Middle Neolithic to Chalcolithic Period, and only a very small part of the littoral phase of the settlement has been excavated, but unfortunately the current chronology of this very interesting and promising site is not adequate with the chronology of our paper. We mention this site as having strong potential to advance in future research on palaeohydrological changes in North Greece in the 4.2. paragraph.](#)

Line 693, following: I think that the same instability recurs also from the Trieste and Istrian Peninsula caves. See cave Edera for instance. This is a fact that makes the Early Holocene and especially the Early Atlantic sequences of some regions of the Balkans and the Alpine arc of problematic interpretation. Little work has ever been carried out on the topic.

[We add that like in Caves and Rockshelter sites on the Trieste karst and in Istria, postdepositional processes mainly from anthropogenic origin are sometimes again into question. They show a temporal gap between the latest Mesolithic and the earliest Neolithic occupations \(Mlekuz 2005, Forenbauer and Miracle 2005\), but for them a lack of radiocarbon evidence, erosional surfaces by anthropogenic modifications and sedimentary hiatuses could explain these gaps, inversion of radiocarbon dates and presence of castelnovian microliths in Neolithic deposits \(Mlekuz et al. 2008\).](#)

The same can also be observed in the long sequences of the Crimean mountains (Shan-koba, Murzak-koba etc..) See the papers by Cordova on the pollens and forest covers in the Crimean mountains and a rediscussion of the sequence in Biagi (Tuebingen 2016)

[In the paper of Cordova, C. E., & Lehman, P. H. \(2005\). Holocene environmental change in southwestern Crimea \(Ukraine\) in pollen and soil records. \*The Holocene\*, 15\(2\), 263-277, we observe](#)

precise climatological changes around 9.5-9.0 ka BP that represent an arid period. We add this information and reference in the paper. But no precise data document the 8.2 ka event in Crimea on the 2 pollen series discussed in this paper. The radiocarbon dates series of Mesolithic sites seem indicate a hiatus in Shan-koba occupation around 8.4-8.0 ka, which confirms other regional data more to the West (Biagi 2016).

Line 748: I would mention here the Western Macedonian site Mavropigi and the others in the region. The Mavropigi radiocarbon dates have been published recently on Antiquity Projects and also in Eurasian Prehistory 2015. This is a key area for the interpretation of the origin of the south-west Balkan and also the Adriatic Neolithic as a whole (in my opinion). Most data are unpublished unfortunately.

We use in the fig.8 the currently published radiocarbon dates of this very important site, extensively excavated in a multi-proxy intra-site study, but as sublined by the reviewer, most data are still unpublished, and a part of radiocarbon dates are published in Greek.

Another important topic is the little knowledge we have of the Late Mesolithic in the Balkan Peninsula as a whole: its origin and its end. Almost no step forward since the seminal paper by JGD Clark, 1958, on the Blade and Trapeze assemblages. We know almost nothing of the Early Atlantic period in the entire Balkan Peninsula (and Greece). Are the many radiocarbon dates from very restricted regions, like the Iron Gates for instance, mostly unrelated to well defined cultural complexes so important in this respect??

We are totally agree with this reflexion about Aegean and Balkan Mesolithic that one of us recently discussed (Berger in press). We know almost nothing of the Late Mesolithic (Blade and Trapeze assemblages) in the Balkan Peninsula. Only very restricted regions like the Iron Gates are documented, but far from the Egean coast. The same observation has also been done by Özdoğan (2007) in western Turkey. The hiatus also seem to be bridged in part by systematic surveys as in the mountains of Pindus between Macedonia and Epirus (Efstratiou et al. 2006) or by geoarchaeological explorations further in deep floodplains and the vast sedimentary basins of the Aegean and Balkan world (Berger in press).