



Reply to “*Ceratolithus acutus* Gartner and Bukry 1974 (= *C. armatus* Müller 1974), calcareous nannofossil marker of the marine flooding that terminated the Messinian salinity crisis” by Popescu et al., 2017

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The sole issue Popescu et al. (2017) address in their comment on our ostracod paper (Stoica et al., 2016) deals with our decision to follow Di Stefano and Sturiale (2010) and Roveri et al. (2008), both of whom argued that the First Occurrence (FO) of the calcareous nannofossil *Ceratolithus acutus* cannot be considered a reliable biostratigraphic event in the Mediterranean. This event is identified in the Atlantic Ocean at an age of 5.345 Ma according to Raffi et al. (2006), very close to the Messinian-Zanclean boundary which is dated at 5.332 Ma (Hilgen et al., 2012). Despite the numerous reports of *C. acutus* in the Mediterranean, so far not a single publication has proven its FO at 5.345 Ma in this satellite basin of the Atlantic. More remarkably, Popescu and co-workers claim to have recorded *C. acutus* in the Mediterranean and Paratethys significantly below the base of the Zanclean (i.e. at levels considered older than 5.345 Ma), but they also state that it is “utopian” to think that their results can be reproduced. Indeed, re-sampling of their key sections in the Dacian basin (Jipa et al., 2011; ter Borgh et al., 2014), the Black Sea basin (Van Baak et al., 2015, 2016), the Apennine foredeep (Roveri et al., 2008) and the Malaga basin (Serrano and Guerra-Merchán, 2015) did not confirm their results, and all of these studies resulted in completely different age assignments (see also Van Baak et al., 2017; Grothe et al., in press). We strongly believe that reproducibility of data and results is essential for all scientific progress, and therefore we will not consider events “reliable” if results cannot be reproduced.

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