

Interactive comment on “Global analysis of seasonality in the shell flux of extant planktonic foraminifera” by L. Jonkers and M. Kučera

Anonymous Referee #1

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First of all, sorry for being late with my review.

I don't really know what I should say on that excellent paper. Indeed, the day before when Howard Spero posted his comment "This paper should be required reading for researchers and graduate students working on any aspects of foraminifera geochemistry or ecology in paleoceanographic fields" I myself gave the article to my master student for reading!

It is a great paper, which will be certainly highly cited. There are a lot of remarks I've listed in the margins of my printed version of the article and supplementary figures, but I realize while re-reading my notes that they simply reflect the high amount of "food for thoughts" contained in the article. It seems that the paleoceanographic community was just missing this kind of analysis, and that someone just had to do the job at some

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point. I feel and hope there will be some other papers following on that topic, so I will refrain to list my own notes that probably reflect my own scientific prism - which is obviously subjective/skewed/biased.

I have two minor remarks that, to me, do not require any other round of review:

1/ There is little information on how incorporating species known to thrive within the thermocline have been dealt with. *N. dutertrei*, for example, is within group A but known to thrive within the deep chlorophyll maximum (Fairbanks et al., 1980, Science; Fairbanks et al., 1982, Nature). In sediment traps from the Panama Basin, its maximum flux seems to occur in F-M-A-M while *ruber* flux maxima are occurring during J-J-A-S (Thunell et al., 1983, EPSL). I feel there is perhaps some oversight WRT thermocline-dwelling species in the article, especially given that both *dutertrei* and *ruber*, belonging to the same groups, have been reported to have maximal fluxes during late winter/early spring vs. summer, respectively, in the given example. Could the authors briefly comment on that, and/or add a small paragraph on that point?

2/ Even the large-size version of the figures are sometimes hard to visualize (e.g. figures 7 and 9). I suggest the authors to double-check that the published version of the figures will be readable once printed.

In brief, I feel there is a strong baseline with this article to start tidying the interpretations of paleo-records published so far. I wish the authors good luck with this and hopefully other articles in the future.

Interactive comment on Biogeosciences Discuss., 12, 1327, 2015.