

Interactive comment on “Foraminiferal species responses to in situ experimentally induced anoxia in the Adriatic Sea” by D. Langlet et al.

Anonymous Referee #1

Received and published: 21 August 2013

Dear Dr Bernhard

Many thanks for giving me the opportunity to review the work of D. Langlet and co-workers concerning an experimental foram-anoxia study performed in the Adriatic Sea. The study concerns a 10 month long experiment where foraminifera and other organisms were subjected to artificial induced anoxia. At specific time points cores were collected and the live foraminifera were determined using celltracker green methodology. In a separate paper, submitted to the same special issue, the authors focus on the overall assemblages whereas in this paper they discuss the response from various species. However, there is quite a bit of overlap between the papers since it is difficult to discuss various species without discussing the overall concentrations and diversity.

The paper is overall a nice contribution, however, I lack a more clear aim why this

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study is performed (this is after all Biogeosciences which has a broader scope) and in particular why at these two sites which from many aspects seem to be far from ideal. At times the manuscript needs to be more structured in particular in the result section where there is a mix of size fractions and different time points which confuses the reader. In the discussion each individual species is then discussed and I'm wondering if that long paragraph would be better off in a table, including all the references. It would make it easier to get an overview of which species belongs to which category of more or less sensitive species.

But my largest criticism is why the authors haven't used the large geochemical data set collected (and published in the same issue) by Metzger et al (also co-author on this paper). As it is now the authors compare concentration, diversity and several diversity measurements with time, $time^2(?)$ and depth using linear modelling and then speculate about the importance of organic matter at a certain time point (1 month). They find out that time is the most important variable in most cases. This isn't particularly surprising. However, they have a lot of geochemistry data and it would be much more interesting to perform linear modelling using all available environmental data. Is there a significant relationship (or not) with Fe, Mn, redoxcline depth and so forth with certain species? This approach would be much more interesting and the data is there.

I have made plenty of comments in the attached pdf as well. The language is in general ok, but it can also be polished and I hope BG provide some text editing service, there is some unnecessary show, show, show repetition and capitalization of Time etc.

To sum it up, it is a study well worth publishing but they can lift this to another more interesting level.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/10/C4465/2013/bgd-10-C4465-2013-supplement.pdf>

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