

Interactive comment on “The effect of salinity, light regime and food source on C and N uptake in a kleptoplast-bearing foraminifera” by Michael Lintner et al.

Michael Lintner et al.

michael.lintner@univie.ac.at

Received and published: 10 October 2020

Thank you very much for your input and your ideas. Major Concerns: We added some SEM pictures and clarified this. Discussion: The part with Lopez was rephrased; also we added this suggested literature; we used this algae because we had stable cultures from both algae at our laboratory. Therefore we were able to produce isotopic labelled food sources. Another argument was, that *D. tertiolecta* is frequently used in other studies and so we were able to compare and discuss these results better. We fed with 5 mg algae per cristallisation dish and used a light intensity of 30 $\mu\text{mol photons m}^{-2}\text{s}^{-1}$. We added this information to the text. All minor-comments were considered in the

Printer-friendly version

Discussion paper



new manuscript version.

Materials: Line 106: Light penetration depth was added. Line 131: The experiments started 4 days after the sampling of the sediment. Line 142: Food addition was 5 mg per cristallisation dish at the beginning of the experiments. After the experiments sufficient food still remained in the dishes so food was not a limiting factor. Line 145: We used 30 $\mu\text{mol photonen m}^{-2} \text{ s}^{-1}$ from a fluorenscent tube. Line 151: 20 foraminifera were used for 1 data point. At each combination of time and salinity we produced 3 data points (triplicates). We noticed no breakup of the tests during the washing steps, therefore we could say there was no loss of C and N.

Results: We increased the size and added the information to tab. 2.

Discussion: Line 321/331: Text was adapted. Line 336: We agree that we cannot state this, but that's the reason why we "assumed" it – to avoid misunderstanding, we rephrased this part. Line 353: The number of chloroplasts plays a minor role for food uptake – we changed the text here. Line 368: At this point we were just discussing the food preference of *E. excavatum*. Of course they are not able to obtain kleptoplasts from dead diatoms. Foraminifera can just use chloroplasts from living benthic diatoms.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2020-306>, 2020.

BGD

Interactive
comment

Printer-friendly version

Discussion paper

