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Interactive comment on "Resilience to temperature and pH changes in a future climate change scenario in six strains of the polar diatom *Fragilariopsis cylindrus*" *by* M. Pančić et al.

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The authors grew a panel of strains of the polar diatom Frailariopsis cylindrus under a range of pH and temperature. They found differential growth rates across the strains, and differential responses to pH and temperature, along with an interaction in the effects of pH and temperature.

I have some minor comments and suggestions: Table 1 The left-most column is not labelled; it is pCO2, I think.

Figure 1: I think the legend is wrong. It says the 3 panels are a 1C, b 5C and c8C, but each panel has curves at each of these temperatures, and is labelled with a strain

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name. Then in the legend is says 6 strains were analyzed, but only 3 strains are labelled on the panels.

Figure 2: has the same legend as Figure 1, but I think it applies only to Figure 2. Pasting error for Figure 1 legend?

Figure 3: pH dilutions is not a good term. Media dilutions to control pH, perhaps? In panel B, the dotted line is labelled 'Expected pH', but the Y axis shows temperature. Pasting error, again?

Materials & Methods: How long/how many cellular generations were cells grown before the growth rate estimates? Were they fully acclimated to the conditions?

Discussion: "...the growth rates of all three strains increased with alkalinity (from pH 7.1 to 8.0), " pH is not the same thing as total alkalinity; given the complexities of marine carbonate systems, it is important to be terminologically and conceptually precise. Did alkalinity increase with increasing pH? Or not? Usually in marine media total alkalinity is fixed.

best regards, Doug Campbell

Interactive comment on Biogeosciences Discuss., 12, 4627, 2015.