

Interactive comment on “Effect of ocean acidification on the benthic foraminifera *Ammonia* sp. is caused by a decrease in carbonate ion concentration” by N. Keul et al.

Anonymous Referee #2

Received and published: 15 March 2013

This is an interesting manuscript aimed for investigating the effect of carbonate chemistry parameter on growth of the benthic foraminifera. In my opinion, the discussion part 4.1 and table 2 should be in a separate paper.

The authors should discuss why the effect of carbonate ions might be modified by the presence or absence of the symbionts. It should be noted in the discussion and conclusion that this proxy would apply to this species tested. The corrections of some typos and grammatical errors are needed.

The authors should note the number of samples used in each treatment or experiment.

Page 1148, Line 11 should be “while pH and carbonate ions were varied in one, . . .”.

C339

Page 1148, Line 13 should be “This allows the identification of the parameter of the carbonate system. . .”.

Page 1150, Line 23 should be “pH-stable manipulation”.

Page 1151, Line 18 should be “*Dunaliella salina*”.

Page 1152, Line 1 should be “repeated measurement”.

Page 1153, Line 26 should be “post-hoc tests”.

It would be clearer if the author use Ω_c for the calcite saturation state.

The authors should show the R^2 value for the regression data.

Page 1155, Line 20: The authors should clarify this sentence “The linear regression model reveals that the carbonate ion concentration can explain the highest amount of variability (29%) in average shell weights and pCO_2 the lowest (6%)”. If it is only 29%, why the authors concluded that the carbonate ion concentration can be used as a proxy for the SNW.

From page 1161, Line 5; the author should include the Ca^{2+} concentration in the table 1.

Page 1162, Line 2; Typo: “the inorganic carbon”.

Figure 1 legend should be in more detail.

Figure 2: x-axis of DIC, TA and bicarbonate should be in the same scale and interval.

Figure 3: “sizeclass” should be “size class”, “Growthrates” should be “Growth rates”, and “post hoc test” should be “post-hoc test”.

Interactive comment on Biogeosciences Discuss., 10, 1147, 2013.