

***Interactive comment on “Top-down, bottom-up and physical controls on diatom-diazotroph assemblage growth in the Amazon River Plume” by M. R. Stukel et al.***

**M. R. Stukel et al.**

mstukel@umces.edu

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We would like to thank our reviewers for their insightful comments and suggestions. Both reviewers suggested that we give more discussion to the topic of comparative nutrient-limitation and competition between phytoplankton, and we have added two new figures and extended text to our discussion that highlights the different niches of our diazotrophic population.

Referee #1 also points out that throughout our manuscript, plume communities are often compared to salinity, which does not directly impact the plankton. This is an important point and we do not intend to mislead readers, so we have made several

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alterations to make this clearer. Salinity does not interact with the planktonic communities in our model. However, salinity is a conservative tracer for the physical dilution processes that shape much of the biogeochemistry (and hence ecology) of the Amazon River Plume. Hence it is useful to show the evolution of various populations and rates in the salinity domain.

In a pdf supplement we respond to each of the specific comments of our referees.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/10/C7523/2013/bgd-10-C7523-2013-supplement.pdf>

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Interactive comment on Biogeosciences Discuss., 10, 13931, 2013.

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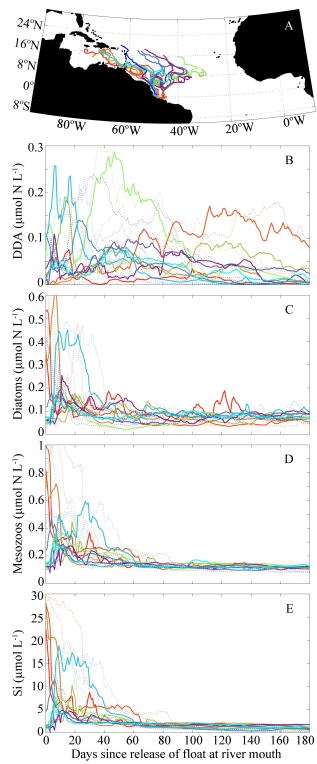


Fig. 1. New Fig. 6

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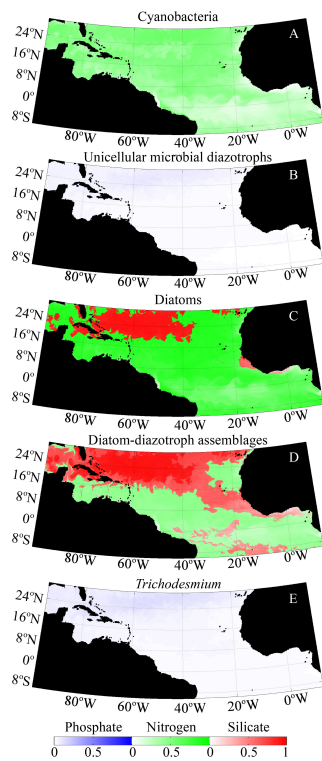
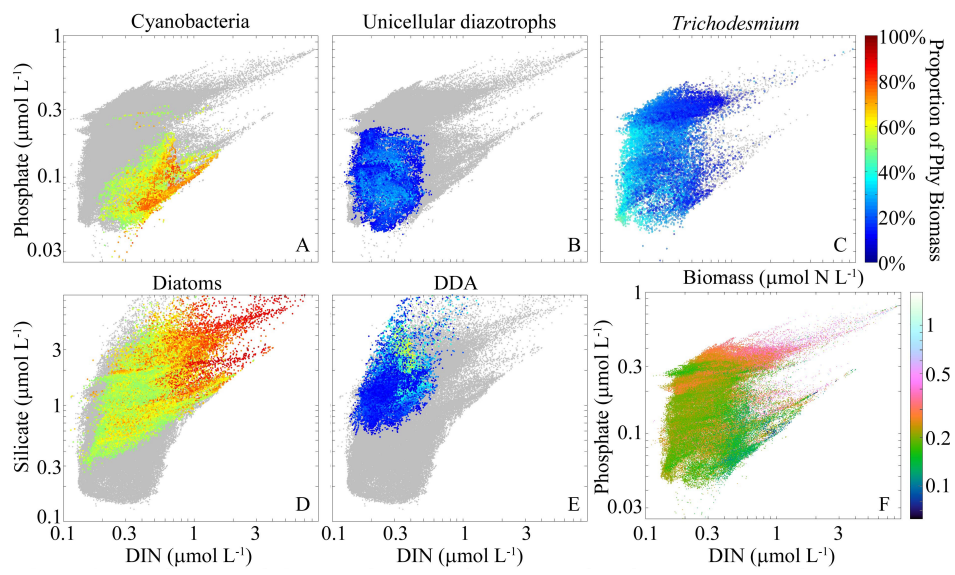


Fig. 2. New Fig. 11

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**Fig. 3.** New Fig. 12

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