

Dear Dr. Yokoi,

I have evaluated the two formal reviews for your paper that focuses on the species composition of diatoms, dinoflagellates, and ciliates in the Chukchi Sea before and after a wind event. I find your detailed responses to the two reviewer comments, either by your accepting them and modifying the manuscript, or justifying why you did not make the changes, overall addressed the reviewers comments and recommendations. Although the concern that this manuscript describes a limited, short-term study, I agree there is value to publishing the results. However, since there was a split on the level of revisions, I specifically evaluated the following concerns and your responses to the specific questions that addressed these concerns. Although I consider this paper close to publication, I will need to review your revised manuscript in relation to statements in your response where you said you made revisions to the paper. Below are the major points in the reviews and my evaluation:

1. Review 3. Need for further discussion on the changing chlorophyll parameters prior to the shift in wind direction.

JG: You state “Concerning such deep-chl. a maximum in this region, we made discussion from viewpoint of nutrient depletion (p8798, Line 12).” You state you have added nutrient information from the Nishino et al. 2015 paper. I will evaluate the revised manuscript before finally approval to publish.

2. Reviewer 3. The variability in success by dinoflagellates and ciliates should be discussed in the context of system patchiness, advection and sample variability that could impact the interpretation of results.

JG: I will evaluate your response to this concern when I see the final, revised manuscript. Your response statement cites Kawaguchi et al. (2015). Please make sure you provide enough detail in the revision about this study to support your conclusions.

3. Reviewers 3. The comment was also made that your findings don't necessarily support a complete shift of a diatom community from a centric to a pennate dominated community, but rather it shifted from centric dominated to one where centrics/pennates are more equal in abundance.

JG: You made revisions to address this comment.

4. Finally, reviewer #3 provided specific comments.

JG: For some of the responses to Reviewer #3 you stated revisions in the manuscript that I haven't seen yet. I need to review your revisions before final decision to publish. You also still need to address the reviewer comment that there was high chl at 30 m prior to the wind event and could have been mixed upward, thus a possible process in addition to you evaluation that the nutrient drawdown in the surface water was the cause. I also need to evaluate you explanation for your assumption that water mass characteristics could be comparable to Matsuno et al. 2014 in a region undergoing change.

5. Reviewer 4 had concerns about the limitation of one station, two week stand-alone study and how those results can be useful to evaluating the Chukchi Sea ecosystem, a stronger statement, but following previous reviewer comments.

JG: The author should consider making a statement in the introduction that the paper has value to understanding plankton dynamics even if just a short-term study. Can the findings be extended to other areas of the

6 Reviewer 4 didn't see a strong variance in the microplankton assemblages prior to and after the SWE wind event, thus you need to provide a stronger evaluation of difference in relation to variability in the system to justify statements about changes in microplankton species response to this wind event. This

reviewer saw no evidence of a mixing event strong enough to have broken the stratification thus increasing nutrients towards the surface to sustain a small fall bloom.

JG: You partially addressed this concern by removing statements and Fig 7 that either didn't support your conclusion or were not that strong. Also, your citing of the findings of Kawaguchi et al. 2015 and Nishino et al. 2015, along with summarizing their conclusions that support the environmental characteristics coincident with your study, responds to the reviewers concerns.

7. Some hydrographic parameters did not change before and after the wind event, whereas chlorophyll did, but you need to strengthen your discussion to address this concern, as the reviewer saw no changes in stratification that could impact the change in chlorophyll standing stock.

JG: Your summary of Nishino's results is useful to support your conclusions and is an important addition to your revised paper.

Figures

JG-Good. You made the recommended modifications that improved the manuscript.

Thank you for your efforts to revise the paper. I will make a final evaluation of the most recent revision of your paper when it is uploaded to the website.

Best regards,

Jackie Grebmeier, Professor
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Co-editor, Biogeosciences special issue