

***Interactive comment on “A biomarker record of Lake El’gygytgyn, far east Russian Arctic: investigating sources of organic matter and carbon cycling during marine isotope stages 1–3” by A. R. Holland et al.***

**A. R. Holland et al.**

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Dear Editor Melles,

We carefully considered each of the reviewer’s comments to our manuscript “A biomarker record of Lake El’gygytgyn, Far East Russian Arctic: Investigating sources of organic matter and carbon cycling during marine isotope stages 1-3”. We have incorporated nearly all of the changes suggested by each of the three reviewers. Major

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changes to the manuscript include:

\*An added section in the discussion (Section 4.6) that details Lake El’gygytgyn in a paleoclimate context, with references to other records in the region and an extended discussion on other paleoclimate proxies from Lake El’gygytgyn and Beringia. Adding this section improves the synthesis of the manuscript’s main conclusions, as well as provides an explanation of how this work helps to inform paleoclimate interpretations in the region. This paragraph addresses a concern that reviewer #3 had that the manuscript was not relevant to Climate of the Past. We note that the other two reviewers found the manuscript suitable for publication in Climate of the Past.

\*Section 4.2 has been substantially reworked to improve the flow of the discussion on organic matter sources presented in this study. Additional background on biomarkers commonly associated with particular sources is also provided.

\*The Conclusions (Section 5.0) have been significantly shortened, as suggested. Outstanding questions originally posed in the conclusion have been moved into the discussion section, and the remainder of the conclusions has been revised to be more concise.

We thank all of the reviewers for their thoughtful comments, which have focused the manuscript and better highlighted the paleoclimatic significance of this study. A detailed response to each of the reviewer’s comments can be found in the responses posted to the Climate of the Past Discussion.

Sincerely,

Addie R. Holland

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Interactive comment on Clim. Past Discuss., 8, 4625, 2012.